

Introduction

Practitioner research ‘involves a practitioner or a group of practitioners carrying out enquiry in order to better understand their own practice and to improve service effectiveness’ (Mitchell, Lunt, & Shaw, 2009, p. 1). Although there is a burgeoning research literature about practitioner research in a range of contexts (such as education, social work and nursing), the literature tends to focus on the production of research and the building of research capacity; there is limited direct exploration of practitioner research as a vehicle for knowledge mobilisation.

Knowledge mobilisation (KM) is an imperfect and occasionally confusing term which is used to describe “moving knowledge” (Fenwick & Farrall, 2012, p. 1) and making knowledge ready for action. This can be understood as making “knowledge available for real-time use in a form which is adapted to the context” (Carlsson, Mezei, & Brunelli, 2013, p. 52). The knowledge mobilisation literature often focuses on research and turning “research into action” (Phipps & Shapson, 2009, p. 213) though some authors also highlight that other forms of knowledge exist and can be mobilised, such as experiential knowledge and practice wisdom (Davies, Powell, & Nutley, 2015). A range of related notions cluster in this field, such as knowledge translation, knowledge exchange (KE), knowledge transfer (KT), knowledge co-production and knowledge brokerage. It is suggested here that knowledge mobilisation is a helpful catch all term which encapsulates the range of processes and activities identified and implied by these other labels. The commonality across all of this knowledge related activity is the expectation that the process of mobilising knowledge into action will be complex and messy (Graham et al., 2006). This echoes our experience during a KM project focused on practitioner research funded by the ESRC (ES/J010820/1) called PROP (Practitioner Research: Older People) which focused on health and social care (<http://blogs.iriss.org.uk/prop/>). In this project health and social care practitioners were supported to undertake research projects related to their work, and to then disseminate and use the research findings to inform their work.

Practitioner based knowledge can involve both ‘craft knowledge’, which is knowledge embodied in an applied skill, and ‘practice wisdom’ the ability to apply knowledge to a specific situation or case. In practitioner research, practitioners bring with them these craft and wisdom practice knowledge forms, and then also engage with research knowledge. In so doing, the field of practitioner research moves beyond the idea of the ‘two worlds’ of research evidence and practice. Practitioner research can potentially involve blending knowledge types (i.e. the bi-directional integration and application of practitioner knowledge and research evidence). Practitioner research can also encourage recognition and respect for practice-based knowledge as well as research knowledge. With one foot in practice and one in research, and so operating in an in-between space, practitioner research can be a useful vehicle for reflecting about knowledge which traverses the traditional boundaries of research or practice wisdom (for a useful distinction of knowledge models and metaphors, and their relationship with practice, see Greenhalgh & Wieringa, 2011, pp. 504-505). Through the PROP project we operated in such an in-between space which, we argue here, helped us better understand and support knowledge mobilisation. However, the experience also highlighted that more could be done to recognise and utilise the different knowledges of all the actors involved.

The PROP project achieved impressive advances at the individual level, with gains in skills, confidence and knowledge for those involved. However, some of the project’s wider ambitions for process and organisational change were not as successful. We started to ask why that was and whether even more could have been achieved by taking a different approach. In this paper we present key findings from our research on practitioner-led inquiry (Stocks-Rankin,

Lightowler, & Wilkinson, 2014), exploring how practitioner research projects can contribute to knowledge mobilisation. We share our analysis of and reflections about the particular successes of this project, and explore the areas where it could have had greater impact.

In analysing our findings, we came to the realisation that current models of knowledge mobilisation tend to look at parts of the picture (individual level change, the knowledge brokerage role, organisational context and so on), rather than the interaction of these elements. This leads us to conclude that a more holistic model of KM is required to inform both the planning and evaluation of KM initiatives. The new model for KM that we have developed takes account of the actors involved, their environmental context, the content and type of knowledge at the heart of the process, the mechanisms through which the knowledge is mobilised, and the principles and values which underpin the endeavor. We suggest that it is the relationships and interactions between these five elements as a whole system that are critical in KM.

In this paper, we begin by connecting the evidence on practitioner-research with the broader KM literature, showing the particular strengths that a comparison and integration of these fields of inquiry can offer. The integration of these two fields of inquiry forms the basis for our study. In the next section we provide details about the PROP project, sharing the logic model which underpins the approach taken and the evaluation methodology that was deployed. Our findings highlight the impacts of the practitioner research programme, and discuss some of the barriers and enablers to impact. We explore the significance of these barriers in the discussion section, and use them as a prompt for further theoretical work. Finally, we present a KM model which builds on the extensive theoretical and empirical work in this field, drawing together a range of other frameworks which have focused on particular elements of the KM process. We suggest that the planning, process and evaluation of KM activity would be significantly strengthened if these different elements were brought together in one over-arching framework.

Connecting practitioner-research with knowledge mobilisation

Despite growing attention being paid to both ‘knowledge mobilisation’ and ‘practitioner research’ across various literatures, the two concepts and literatures have rarely been linked (Exceptions being: Casey, 2013; Smith et al., 2012; Wilkinson, Gallagher, & Smith, 2012). Practitioner-research operates in a space between practice-wisdom and research-evidence. It involves the interplay between the generation of formalised empirical and theoretical research knowledge and a practitioner’s emergent understanding of people, services and support (Gabbay and le May, 2004). Given this interplay, we suggest that there is significant untapped potential to think about practitioner-led inquiry as a vehicle of knowledge mobilisation. We draw comparisons between the two literatures to show some of the strengths that can be drawn from an integration of these approaches.

There is a burgeoning field of evidence, experience and theory around the practice of knowledge mobilisation – particularly in relation to the health system (Buchanan, 2013; Cooper, 2014; Ellwood, Thorpe, & Coleman, 2013; Ferlie, Crilly, Jashapara, & Peckham, 2012; Kislov, Waterman, Harvey, & Boaden, 2014; Moss, 2013; Phipps & Shapson, 2009). Knowledge mobilisation initiatives often take the form of relatively short-term projects dependent on limited funding, which raises issues about the long-term sustainability of KM” (Kislov, Waterman, Harvey, & Boaden, 2014, p. 166). In exploring the literature about what knowledge mobilisation initiatives focus on we identified that significant attention was paid to capacity building, at the individual and organisation levels. In work focused on the health sector several commentators note a development of KM over time, moving from single short-term KM initiatives to a

recognition of the need to build organisation capacity (Kislov et al., 2014; Dobbins et al., 2009). However, as Kislov and colleagues highlight, such capacity building tends to focus on developing skills to do rather than apply research, indicating there is still some way to go to develop specific capacity for KM (Kislov et al., 2014, p. 167).

Investigations of knowledge mobilisation processes have been dominated by discussions of boundary spanning and knowledge brokering (Bielak, Campbell, Pope, Schaefer, & Shaxson, 2008; Cooper, 2014; Currie & White, 2012; Dobbins et al., 2009; Frost et al., 2012; Hargadon, 2002; Kislov, Hodgson & Boaden, 2016; Knight & Lightowler, 2010; Lomas, 2007; Meyer, 2010; Schlierf & Meyer, 2013; Ward, House & Hamer, 2009; Waring, Currie, Crompton, & Bishop, 2013; Ziam, Landry, & Amara, 2012). In much of the literature knowledge brokers are characterised as being ‘in between worlds’. For example, Lomas uses the language of “the in-between world of knowledge brokering” (Lomas, 2007), Ward et al. describe how “(knowledge brokers are) positioned at the interface between the worlds of researcher and policy decision makers” (Ward et al, 2009, p.268), and Bielak et al. define knowledge brokers as “translators or interpreters between the two worlds (of science and policy) (Bielak et al., 2008, p.7). While ‘worlds’ may not always be the right concept – the theme of ‘inbetween-ness’ is dominant. Meyer, for example, argues that it is more fruitful to think about brokers as being ‘in between’ peripheries rather than worlds (Meyer, 2010) and Nutley et al. speak of communities; “(knowledge brokers) effectively construct a bridge between the research and policy communities” (Nutley et al, 2007, p. 63). Despite this interest in the boundary spanning and brokering nature of these ‘inbetween’ roles, Bornbaum and colleagues (2015) highlight the lack of clear evidence on the effectiveness of the brokering role for knowledge translation.

The attributes of those who broker and mobilise knowledge are also explored in the literature on KM. A number of qualities are highlighted as significant for those operating as a boundary spanner. Networking skills (Friend 1974, Hosking and Morley 1991) are commonly highlighted as central to the role given that the individual is often tasked with bringing disparate groups together to work towards a shared purpose. Entrepreneurial skills are also thought to be key resources for boundary-spanners (Williams 2002, Leadbeater and Goss 1998).

More recently, research has begun to address the context for KM and explore the different barriers and enablers to successful KM in different environments. For example, Cooke (2005) discusses the need for financial resources and ensuring that individuals have dedicated time to undertake this work. Other authors, such as Long, Cunningham and Braithwaite (2013) talk about the qualitative features of an environment such as ‘trust’. McWilliam and colleagues (2009) identify the need for equality and a ‘level playing field’ so that KM can occur. Evidence suggests the relationships and the dynamic between actors matters in knowledge mobilisation (Walter, Nutley, & Davies, 2003; Phipps, Jensen, & Myers, 2012; Lavis et al., 2002). Therefore, it is perhaps unsurprising that collaborative interventions and high quality interaction between those with different forms of knowledge are commonly identified as favourable conditions for KM, KT or research utilisation (for instance, (Walter et al., 2003).

The PROP project focused on practitioner research as a mechanism for improving knowledge mobilisation. There is a burgeoning literature on practitioner-research in health and social care sectors (Arkins, 2011; Elliott, 2011; Gallagher et al., 2011; Harvey, Plummer, Pighills, & Pain, 2013; Mitchell, Lunt, & Shaw, 2010; Orr & Bennett, 2012; Pilkington, 2014; Shaw & Lunt, 2012; Skattebol & Arthur, 2014). However, it is rare for the literature about practitioner-research to explicitly refer to KM, KE or KT, or explore the contribution of practitioner-research approaches to KM (Exceptions being: Casey, 2013; Smith et al., 2012;

Wilkinson, Gallagher, & Smith, 2012). Mitchell et al. estimate that ‘practitioner research in social work probably occupies a major part of the total volume of research activity in this (social work) field’ (2010, p. 8). This literature tends focus on the learning processes which enable practitioners to gain research skills and improve their individual capacity (Beddoe and Harrington, 2012; Boddy et al, 2012; McCrystal, 2000; Bond and Walton, 1998). Capacity development might include increased ability to produce peer-reviewed writing (Boddy et al, 2012), increased research confidence (Beddoe and Harrington, 2012) and research specific skills (Lunt and Fouche, 2009). So in parallel to the KM literature, the work on practitioner research pays greatest attention to the individual’s capacity, and specifically to the development of their research and analytical capacity, rather than their capacity to mobilise knowledge per se.

Practitioner research programmes tend to make an assumption that practitioners who are also researchers can help close the ‘theory to practice’ gap, and can primarily do so through their individual capabilities. Where the literature explores the impact of practitioner research on wider environmental capacity, the focus tends to be on the organisational level (as opposed to, for instance, the sector or field). The benefits of practitioner research for practice organisations have been identified as ‘helping an organisation develop the capacity for critical inquiry and a learning orientation’ (Roper, 2002, p. 344) and supporting a wider research-mindedness in order to improve the use of research undertaken by ‘outsiders’ (Anderson & Jones, 2000, p. 430).

In general, the benefits of practitioner research for academic partners is less well articulated in the literature. Current conceptualisations of the exchange process focus primarily on ‘upskilling’ practitioners to ensure that they gain knowledge of the research process for the benefit of them as individuals and their organisations. Therefore, the focus is on the one-directional transfer of knowledge from the academic to the practice community, rather than as a multi-directional exchange or a joint enquiry endeavour (Skattebol & Arthur, 2014 being a notable exception here). It is worth noting that the elevated attention accorded to ‘research impact’ in the academy may be accompanied by a raised value for approaches like practitioner research, which strengthen the relationships and understanding between the academy and practice. This is indicated by Wilkinson, Gallagher and Smith who identify practitioner research as having “particular value for forging relationships between academics and practitioners” (2012: 311) and potentially bring together two groups that are commonly viewed as separate ‘worlds’ of research, practice and policy (Shonkoff, 2000, p181).

As discussed, where the literature about practitioner research considers its role in KM (though it rarely articulates this explicitly) it has a tendency to focus on how practitioners and their organisations can build their research capacity. We go on to suggest that this is an oversimplification of what happens, or can happen, through practitioner research in relation to KM.

The PROP project

The PROP project aimed to improve services and support for older people in Scotland through the vehicle of practitioner-led inquiry. Like other projects of this kind, we initially conceptualised the issue to be addressed as a ‘research utilisation’ problem and set out to (1) improve the volume and quality of research produced by those delivering health and social care for older people, (2) increase awareness of, and improve access to, research created by those involved in providing care for older people and (3) increase collaboration between researchers and practitioners in the production of new knowledge about health and social care for older people.

The PROP project brought together a team of practitioners in health and social care as well as academics and specialists in evidence-use and knowledge mobilisation. Our aim was to use practitioner research as a vehicle to improve KM, thus strengthening the use of knowledge in practice in order to support improvements for people accessing services and support. The project involved supporting a group of practitioners to undertake small work-based research projects and, as part of that, encouraging the mobilisation of the newly generated knowledge. Thirteen practitioners were recruited from a mix of public and third sector organisations across Scotland, and nine completed the project. These thirteen practitioners were recruited from a range of practice organisations across Scotland: Alzheimer’s Scotland, Glasgow City Council, Midlothian Council, NHS Lothian, VOCAL and West Lothian Council.¹ Delivery of the project was between May 2012 and September 2013 and involved a partnership between the University of Edinburgh and IRISS (a third sector organisation which supports the use of knowledge and innovation across the social services in Scotland).²

The project process involved identifying organisations with a focus on the delivery of services for older people and carers and an interest in improving practice through research; supporting the organisation to identify individual practitioners to undertake research projects; and helping these practitioners and their organisations to identify research priorities, formulate a research question, carry out a research project and mobilise research findings into practice.

The support we provided included matching practitioners with a research mentor (from academia or practice), delivering research and knowledge exchange training sessions and supporting the practitioner to do research and engage with their organisation to mobilise the emerging evidence and knowledge. The project also involved facilitating the dissemination of the practitioner’s research findings outwith their organisation; sharing the knowledge generated about practitioner research; and evaluating the overall impact of the PROP project.

The details of this activity, and the outcomes it generated, are articulated in the accompanying logic model (Figure 1).

[figure 1 here]

Figure 1: PROP Logic Model

Methods

We adopted a process of evaluation called contribution analysis to evaluate our work (Mayne, 2001; Mayne, 2012; Morton, 2012). Contribution analysis (CA) is part of a family of theory-based evaluations (Weiss, 1998) and seeks to reveal the logic within a project and the implicit assumptions at work in both its design and delivery. CA uses a six-step process to develop and test a theory of change: (1) define the cause-effect issue to be addressed; (2) develop a theory of change and risks to its success; (3) generate evidence in response to the theory of

1 Colleagues from the Joint Improvement Team (JIT) and Scottish Care joined senior managers from some of the partner organisations to form a project steering group. Barchester Care and NHS Greater Glasgow and Clyde needed to step down from the project due to unforeseen circumstances for the practitioners they had identified to be involved in the project.

2 The project was jointly led by Claire Lightowler (then employed by IRISS) and Heather Wilkinson (University of Edinburgh), and Catherine-Rose Stocks-Rankin was appointed as the research fellow for the project; collectively referred to as the project management team.

change; (4) assemble the contribution story, and outline the challenges to it; (5) seek out additional evidence; (6) revise and strengthen the contribution story.

Our cause and effect questions were: (a) what was the impact of the research-training programme on the practitioners who took part and (b) what was the impact of the knowledge mobilisation process (designed to mobilise new research evidence into practice) within the participating organisations? We developed a two-part, nested, theory of change to answer these questions (see Diagram 1 for the associated logic model). Part one, describes the impact journey of the practitioner-research programme, including the research training, mentorship and support for practitioner-researchers. Part two describes, the impact journey of the knowledge mobilisation process, including development of knowledge exchange networks and engagement strategies which might support the use of the research and enable a culture of research in the partner organisations on this project.

Data were gathered in line with this nested theory of change. We employed a mixed-method approach and applied a range of data collection strategies. To capture impact outcomes, we focused on changes in individual practitioner capacity and used a baseline and follow-up questionnaire (with a mix of open and closed questions) to understand practitioner's understanding of, and confidence with, research, as well as any changes which seemed to occur as a result of the programme. To capture process outcomes, we used a questionnaire (with open questions) and a follow-up focus group to capture inputs (skills and capacity), activities (research and knowledge mobilisation processes), the kind and quality of engagement and any additional changes that occurred as a result of the programme. Process outcomes were also captured through participant feedback at each of the six training events we delivered. Feedback included group reflection (on progress and needs) and questionnaires (on the success of the training sessions). Organisational perspectives on research and evidence were captured through group discussion at our knowledge exchange events and an additional organisational questionnaire. Process outcomes were also augmented by a series of questionnaires for the mentors on this project, which were delivered at three intervals.

These data are augmented by our own reflective practice, which we developed on three writing retreats, each of which enabled the project team to reflect on the design, delivery and short-term impacts of the programme. We captured our reflections through two internal questionnaires designed to test our assumptions and reveal risks and enablers. Further, we have reflected on our initial account of the impact of PROP (See Stocks-Rankin, Lightowler, Wilkinson, & Morton, 2014; Stocks-Rankin, Wilkinson, Lightowler, & Morton, 2014), which we have revisited in light of our understanding of the literature on knowledge mobilisation. We suggest that this approach of drawing on a range of forms of knowledge, including our own experience and reflection, has been a critical element in enabling the development of this more holistic model of KM.

Each of the nine practitioners who participated in PROP undertook an ethics approval process. Four practitioners received approval from the University of Edinburgh, one practitioner received approval from NHS Scotland's ethics approval board, and four additional practitioners gained approval from their own organisation. We supported two of these partner organisations to design and implement an ethics policy, and approval process, for research.

Reflection is a core part of the ethics process we applied to this research. KM is an emergent field requiring an iterative approach that is responsive to the actors involved, their context, the mechanism they deploy and the knowledge form that is being mobilised. In the spirit of that complexity, we used reflective practice to "make sense of uncertainty" and ensure

we had the “courage to work competently and ethically at the edge of order and chaos” (Ghaye 2000, p7). Drawing on Schön (1999), we suggest that reflective practice is an approach that ensures robust sensemaking and ethical action. We adopted this approach in place of the University of Edinburgh ethics process, which we note was not required as part of our KM work. Knowledge mobilisation projects – even those that include an element of research – seem to be situated outside traditional research ethics frameworks. As the field of KM grows, the particular ethics of KM will need to be developed.

The CA evaluation methodology encourages reflection as it requires partners to collaboratively develop the theory of change and openly discuss process and progress along the way. This collaboration is one of the more valued aspects of the contribution analysis methodology (Wimbush, Montague and Mulherin, 2012). Coupled with robust evidence-gathering, we have found that this reflective approach to evaluation can also generate new theoretical understandings of the change process. This paper is evidence of that theory-building. The PROP theory of change was developed abductively, using the evidence from existing practitioner-research programmes to define process and impact outcomes and the experiential knowledge of people involved in the delivery of the PROP project (participants, project leads, mentors and the advisory group) to develop these outcomes and refine the mechanisms for change. Due to the reflexive nature of this theory-building process, we were able to test the assumptions inherent in the practitioner-research model and identify gaps in the existing theory around the impacts of practitioner-research programmes like PROP. In this paper, we present the output of that reflective process and abductive theory-building, in the form of a new holistic model for KM.

Findings

The evidence generated through the PROP project adds weight to the argument about practitioner research having an important role to play in developing the individual capacity of practitioners. Nine practitioners completed the PROP project. All nine reported increased confidence in using and producing research; an increase in their ability to do research; and increased capacity for reflective practice. However only two of the six partner organisations reported changes within their organisation. It is this gap between individual gains and the mobilisation of knowledge into practice that we explore in this section.

Practitioners reported that they had acquired a range of new skills to carry out their own research (e.g. knowledge of research design, ethics, methods, consent, analysis and writing research reports) as well as skills to share their knowledge (e.g. social media and presentation skills). Prior to joining the PROP project, seven of the nine practitioners had direct experience of engaging with research. Despite a high level of experience in the form of MSc qualifications, or specialist training, most of the practitioners did not feel confident in their ability to undertake a research project. Only two of the nine practitioners were reasonably, or very confident, in their research abilities. This highlights that skills development is only one part of a successful practitioner research programme. Energy needs to be directed towards providing the practitioner with opportunities to utilise research skills within their organisation, combined with a supportive environment to explore the barriers and issues along the way.

The production of the eight completed research projects is the most convincing evidence of the practitioners’ actual research skills (with one of the projects being joint research by two practitioners). Collectively, this research provides valuable new evidence to health and social care practice in Scotland. These research projects explored: older people’s attitudes towards the

label of vulnerability; outcomes-focused approaches to working with carers; early stage support for people with dementia; the experience of patients who are moved from ward to ward in a hospital; the impact of music on people with a diagnosis of dementia; reablement training for staff working with older people; the introduction of an assessment at home pathway for older people leaving acute care; and the knowledge about the comprehensive geriatric assessment process amongst nurses working in admission and assessment (for further information about each project see <http://blogs.iriss.org.uk/prop/>).

Formal outputs for this research includes: summary postcards, peer-reviewed research reports, a summary booklet, and a special issue of the Journal of Integrated Care (featuring the three papers by practitioners involved in the PROP project). Outputs differ between practitioners, reflecting the different capacities (particularly time) within the cohort. Each of the five project reports was reviewed by both the project team and a mentor on the project who gave constructive criticism in order to improve the rigour of the research. Additionally, the three research papers which make-up the bulk of the special issue were formally peer-reviewed.

In addition to an increase in skills and confidence, practitioners also gained new insights into their own practice through the reflective process that accompanied their research activities. One practitioner noted the ‘re-boot’ effect that research has had on her practice: “*A change is as good as a rest’ — it’s reminded me to not just work on a production line but to speak about and up to try and work to my own standards/values and ethics as opposed to the demands of the machine*”. These gains are reflected in another practitioner’s observations about her own development: “*personally I have found participating in this a confidence boost on a personal and professional level ... I have a keen interest in research and would be interested in doing more in the future*”.

We were aware that practitioners face particular organisational barriers to accessing, let alone understanding and using, research evidence. Practitioners rarely have permissions to access research materials, time to engage in conducting research, and they have limited capacity to share their knowledge or support its use in other services or organisations (Nutley, Walter and Davies, 2007). In addition, the significance of environmental context for knowledge mobilisation is well documented in the literature, with common barriers including dedicated time, buy-in from organisational leadership and access to support (Nutley, 2003; Buckley, 2009; Ritter, 2009; Gambrill, 2006). We certainly experienced these issues on the PROP project with some practitioners experiencing strong champions within their organisation and management, while others struggled to secure buy-in from their organisation. For example, one practitioner noted some of the personal gains she received, whilst also querying the role of her organisation in taking the work forward:

I’ve become more motivated. I’ve engaged (with) the academic process and using my skills and experience in a different way. My practice ...is more informed and I value the importance of being aware of how I engage Slightly more apathetic about [my organisation] and apparent lack of investment (rhetoric) from where I’m sitting.

When asked what helped or hindered the research process, one practitioner commented: “*Lack of support from my management. Lack of time to carry out project*” (practitioner-researcher). The group also encountered a range of challenges and risks to doing and sharing their research: “*upsetting individuals / organisations – making them defensive and MORE resistant to change*”

(*impact questionnaire*). This risk was echoed by another practitioner who suggested that: “*people who invested in the project might not like the findings - it takes my focus away from practice and my caseload*” (*practitioner-researcher*).

All of the practitioners involved in PROP found it challenging to create protected time for research and all nine worked in their own time to complete their projects. This challenge occurred even though each of the partner organisations had offered guaranteed time for practitioners to undertake their research. The gap between the offer of protected time and practitioners’ ability to take that time is striking. Only two of the nine practitioners were able to reduce their caseload to accommodate the project. Given the demands of practice, three of the PROP practitioners were not able to complete their final reports. After the research was complete, all of the PROP practitioners expressed feeling a need to get back to their real jobs in service delivery.

The challenges that practitioners faced during the research phase of the project increased during their efforts to mobilise their newly acquired knowledge and evidence for the benefit of practice. We supported practitioners to develop knowledge mobilisation plans, including a stakeholder map of evidence champions and knowledge brokers in their organisation and we facilitated a workshop on ‘creating change through research’ which used contribution analysis as a framework to support evidence into action. However, we also note that our project design placed a greater emphasis on research production over mobilisation. Practitioners discussed their plans for knowledge mobilisation on the blog (<http://blogs.iriss.org.uk/prop/2013/05/22/presentations-from-the-may-ke-event/>) and in their research reports (<http://blogs.iriss.org.uk/prop/2013/09/12/practitioner-research-reports-available-for-download/>). However, when the research work was completed, practitioners’ held the view that they were expected (and wanted) to get back to their regular practice. Few were able to take on specific mobilisation work as part of their role. This highlights the limits of improving individual capacity without a broader organisational commitment or environmental context which values and supports KM.

In terms of organisational research capacity, three of the participating organisations, Alzheimer Scotland, Midlothian Council, and VOCAL were supported to create ethical approval procedures in their organisation as part of the PROP project. Four of the nine practitioners on PROP were able to receive approval for their research through these newly designed systems (the remaining five received ethical approval through existing processes within their organisation or the University). This capacity development is an important longer-term resource for the production of research, but does not necessarily support the mobilisation of evidence into practice.

At the end of the project, only two of the six partner organisations involved in PROP reported gaining new knowledge to support service re-design. Likewise, only two participating organisations reported an increase in reflective practice at a strategic level.

Discussion

The key knowledge mobilisation mechanism employed through PROP and in practitioner research more broadly is the practitioner researcher themselves. The exercise involves attempting to position people in the worlds of research and practice at the same time. This approach to KM is less about translating knowledge from one context to another, and much more about creating and mobilising knowledge. In PROP, practitioners and managers became ‘boundary-spanners’ occupying a hybrid-space between research and practice during the life of the project.

PROP clearly developed the capacity of the individual practitioners to engage with and undertake research. But, we suggest that we were less successful in supporting capacity within practitioners and their organisation to mobilise knowledge. Importantly, all of the practitioners on PROP described the value of the process and their own personal transformation. But, the barriers the practitioners faced were ones of time and organisational systems. Given the timeline of the project and the way the resources were allocated (in favour of research over KM), PROP achieved more success in developing individual capacity to do research over their ability to navigate a KM process.

Practitioner research programmes tend to start from the idea that the purpose of the collaboration, and the activity to be undertaken, is research. By positioning “research” as the vehicle for inquiry, those involved in these collaborations are positioned unequally, since only one group within the collaborators is bringing research expertise. Therefore, it is unsurprising that: *“The practitioner may tend to view the academic as an expert – immersed in the theoretical literature and bringing a toolkit of rigorous methodologies – who will solve an organisation’s problem”* (Roper, 2002: 339).

Additionally, since it is the practitioner who is ‘doing’ the research, there is a general assumption that the practitioners are doing the majority of the learning, with the academics or researchers positioned in a supportive, nurturing and facilitation role. In PROP, this can clearly be seen in our overt characterisation of practitioner and mentor roles (researchers based in practice or academic settings whose role was to support the practitioner). Therefore, there is perhaps a tendency for practitioner research programmes to focus on being a (very good) mechanism for knowledge transfer, transferring research knowledge from the researcher down to the practitioner, but this potentially misses some of the knowledge exchange benefits which may come from a more mutual exchange of equals.

In reflecting on this issue, we realise that we started with the idea that the lack of research use was the ‘problem’ and that resolving this issue would contribute to improving support for older people. With hindsight, our proposed approach situated research as the prime, if not sole focus, of knowledge exchange activity. We have come to realise that whilst achieving significant research capacity changes on the individual and some moderate change on organisational level, our framing of the issue in this way limited the possibilities for mobilising knowledge. We therefore identified that we needed a more holistic model of knowledge mobilisation to account for the complexity of what happens, or doesn’t happen, during mobilisation activities. The final sections of this paper set out what we consider to be a holistic model of knowledge mobilisation. It builds on the existing literature within KM as well as our findings from the PROP project.

A holistic knowledge mobilisation model

We propose a model of knowledge mobilisation in health and social care. Our model consists of five components: **Actors, Environment, Knowledge content and type; Mechanisms for mobilising knowledge; Principles and values.** As practitioners of KM, we know that the mechanisms of KM are rooted in a particular place and time – that the individuals, groups or organisations involved bring their own history, capacity and interests. We know that the form of knowledge being mobilised matters and that the choice of mobilisation strategy should fit with these attributes. But, we don’t yet have a model which captures the relationships between the elements of KM. As a result, we continue to tell ‘part’ of the story rather than examining the interactions across the whole. Our experience of KM – as practitioners of mobilisation in a variety of contexts and researchers tasked with examining its role and impact –

suggests that a more nuanced framework is needed to (a) capture robust evidence on the process and impact of KM and (b) ensure that the planning of KM takes appropriate account of its complexity.

We suggest that the relationships within and between these different elements are critical to the impact of KM activities. The knowledge mobilisation model we have created draws on a wide range of literature, models and thinking about different aspects of KM, which we reference below. It focuses on trying to identify and integrate multiple components to aid understanding about the whole picture. Our thinking has been informed by those who have attempted to look at the whole picture or the relationships around knowledge mobilisation, what some call the “collaborative entanglement” of KM (Bennet & Bennet, 2007, p. 48). We have been particularly inspired by Bozeman’s ‘five dimensions of the technology transfer environment’. Although Bozeman focused on knowledge transfer, it was an attempt to describe the whole, and took account of the actor, their environment, the KM mechanism and the form of knowledge being mobilised (Bozeman, 2000, p. 637). Bozeman’s model usefully articulates a holistic way of thinking about knowledge transfer, though there are limits for its application to health and social care (Kitagawa & Lightowler, 2013, p. 3). Below we discuss our evolution of this thinking, giving detail about each of the proposed elements and a summary of literature which supports their inclusion in this model of KM.

1. Actors

This refers to those actors (e.g. people, organisations, partnerships) involved in KM, their characteristics and their capacity – including knowledge and skills – for knowledge mobilisation. We use the term actor to mean both an individual and at times a group or an organisation if they share characteristics or capacity. Much of the KM literature identifies characteristics and capacity as a key feature of KM. Actors are often defined in terms of their skills. For example, networking skills (Friend 1974, Hosking and Morley 1991) are thought to be key qualities as these individuals are often tasked with bringing disparate groups together to work towards a shared purpose. Likewise, entrepreneurial skills are also thought to be key resources for boundary-spanners (Williams 2002, Leadbeater and Goss 1998). Alongside skills, actors are also described in terms of their ability to influence (e.g. Flodgren et al 2011, McCormack et al 2013).

In addition to the focus on capacity, the literature also suggests the relationships and the dynamic between actors matter in knowledge mobilisation (Walter et al., 2003); (Phipps, Jensen, & Myers, 2012). High quality interaction between those with different forms of knowledge are commonly identified as favourable conditions for KM, KT or research utilisation (for instance, (Walter et al., 2003). This linkage and exchange between people is a key component of more dynamic non-linear knowledge exchange frameworks (Ward, House, & Hamer, 2009). However, actors in the KM process tend to be defined in two ways: agents of the transfer/brokerage and recipients. We suggest that these roles are too narrow and one-sided. The PROP project shows that we are all capable of being both a producer and recipient of knowledge, often at the same point in time. We suggest, therefore, that the capacity of actors to mobilise knowledge is more apt and helps to move beyond the binary of knowledge producers or users.

2. Environment

In our model the environment is the social, economic and cultural context in which teams, organisations, communities and structures exist and mobilise knowledge. We find it helpful to separate the wider environmental conditions from the capacity of actors in our model. In this we take inspiration from the work of Walter et al (2004) who developed a typology to

explain different kinds of research-use in social care. Importantly, this model focuses on the systems and processes that surround research-use. For example the ‘embedded research model’, in which knowledge from research is embedded into systems and processes, and the ‘organisational excellence model’, in which the focus is on research-minded organisational cultures and connections between research institutions and (in this case) social care organisations (Walter et al., 2004).

The barriers and enablers to successful KM in different environments are also a recent feature of the literature. For example, Cooke (2005) discusses the need for financial resources in the environment which support research and KM and ensure that individuals have dedicated time to undertake this work. Other authors, such as Long, Cunningham and Braithwaite (2013) talk about the qualitative features of an environment such as ‘trust’. McWilliam and colleagues (2009) talk about the need for equality and a ‘level playing field’ so that KM can occur. This acknowledges that people operate in wider cultures, systems and processes, and that capacity can be developed at this level as well as through developing individuals. Findings from the PROP project show that building individual capacity is not enough to encourage successful KM, account needs to be taken of the barriers and enablers within the environment as well.

3. Knowledge content and type

In our view, the **type of knowledge** can include an idea, way of thinking as well as research evidence, practice wisdom, and the experiences of people. For instance, Heron’s (1996) work on extended epistemology highlighted that you can know by direct experience (experiential); by experiencing meaning and significance expressed by others through dance, drama, writings and so on (presentational); through ideas and theories (propositional); and from knowing how to do something as a skill (practical). Heron’s typology is one of many. Another example is Nonaka’s (1994) exploration of tacit and explicit knowledge, a conceptualisation which suggests knowledge is on the one hand active, contextual and personal (implicit) and on the other fixed and codified (explicit).

This discussion of tacit and explicit knowledge reveals the importance of relationships to knowledge production. Relationships facilitate the production of knowledge because they provide an interface between the personal and the social. For example, the interaction between an individual’s knowledge and the social relations which surrounds them is thought to produce organisational knowledge (Nonaka 1994, Brown and Duguid 1998). Lam (2000) explores the individual and collective forms of knowledge and expands Nonaka’s approach by providing a framework which shows the relationship between knowledge at the cognitive, organisational and societal level. Four knowledge types: embrained, embodied, encoded and embedded are examined at each level, showing the different macro, meso and micro conditions for knowledge production and use. Building on this work, Freeman and Sturdy (2015) focus on the nature of knowledge and its likeness to solid, liquid and gaseous elements, suggesting that it has three types: embodied, inscribed and enacted, each of which can be transformed one into another.

Rarely are these typologies or perspectives on knowledge type included in an exploration of KM. We suggest that our framework offers KM practitioners the necessary prompt to explore the nature of the knowledge that is being mobilised so that this rich theoretical tradition can be drawn into the everyday practice of KM. The PROP project showed us the significance of practitioner-based knowledge and its hybridity between research evidence and practice wisdom.

Likewise, the actual **content of the knowledge** can play a significant role in mobilisation process. For instance, knowledge which is challenging to an organisational culture may have a different mobilisation journey to knowledge which supports existing thinking. For example,

Scott-Samuel and Smith (2016) describe the prevalence of ‘downstream approaches’ (e.g. behavioural interventions) in public health policy and delivery, despite the evidence which suggests that ‘upstream’ approaches are the most likely to be effective. Here instrumental knowledge may be mobilised differently from more conceptual knowledge – which can take time to permeate structures like funding bodies, government policy departments and even the peer-reviewed evidence base (Weiss 1979). An analysis of the content of knowledge in relationship to the other elements of this model can significantly refine the KM processes. We suggest that more thorough analysis of this particular feature could have strengthened our approach to the PROP project.

4. Mechanisms for mobilising knowledge

This element of the model refers to the activities undertaken to share knowledge and enable it to be used. This includes dissemination, linkage, exchange, translation, co-production and collaboration, commercialisation (turning knowledge into products), knowledge brokerage, capacity building and of course practitioner research. At its simplest, this can include conversation or writing an article. In analysing their survey of KM organisations Davies et al. helpfully identify six categories of KM activity: push activities (creating and disseminating products/resources); pull activities (creating knowledge demand or building knowledge capacity); linkage and exchange (more interactive approaches); other activities involving practitioners or policy makers; activities involving service users or members of the public; advocating and advancing knowledge mobilisation (2015, p. 97). Similarly, Ward et al. identify three key roles being performed by those involved in brokering knowledge: information management (helping people find, package and disseminate information), linkage and exchange, and capacity building (helping people develop their capacity to exchange and mobilise knowledge in the future) (Ward et al., 2009).

Nutley et al identified a range of strategies to increase research impact: dissemination, educational interventions, social influence interventions, reinforcement strategies (feedback on behaviour to encourage change), incentives (reward/encouragement for research impact or best practice), collaborations between researchers and users and facilitation (Nutley, 2003). However, a consistent finding from the literature is that ‘multifaceted and organisationally focused approaches – those which deploy two or more specific interventions (such as education and reinforcement) – are more effective than single interventions alone’ (Nutley, 2003, p. 9). For any of these strategies to work, though, issues such as enthusiasm, credibility and leadership are key. Thus, effective mechanisms for mobilising knowledge in and of themselves are thought to be necessary but not, in and of themselves, sufficient (Nutley, 2003). Whilst we were aware of and attempted to harness the recommendations in this literature throughout the PROP project, we suggest that the mobilisation process is better understood when considered in light of the other elements of this model.

5. Principles and values

We note that a discussion of the values within the KM process is rare in the literature. Values are mentioned within some of the tools that have been developed for KM. For example, Ward and colleagues (2014) include a question about values in their resource on networks and KM. Likewise Ward and colleagues (2010) prompt research producers to think of the user’s values and norms in their examination of knowledge transfer. Too often, though, values seem to appear in frameworks about the ‘context’ of KM.

The values that underpin the production of research – as well as its use – are highly relevant to the activities of KM. For example, Flyvbjerg (2006) suggests that “we must focus on issues of context, values, and power, as advocated by great social scientists from Aristotle and Machiavelli to Max Weber and Pierre Bourdieu” in order to arrive at research “that matters” (p370). Flyvbjerg’s (2006) interest in “specific values and interests in the context of particular power relations” (p370) is core to our approach to KM.

But, the values underpinning the mobilisation itself are rarely explored – this observation has implications for the ethics of the KM process and the transparency of both power and needs within the interactive dynamics which create the conditions for successful KM. A useful exploration of this interaction can be found in Smith’s (2013) theory of institutional, critical/charismatic, and chameleonic ideas (see also Smith 2007 and 2014). In Smith’s analysis, evidence producers and evidence users work may draw on particular political, ideological and/or epistemological values in their work; an interaction which may in turn influence the production of research as well as their willingness to make use of it.

In our experience, the values that underpin the KM process are as important as those that informed the research process. Why knowledge is being created, shared and used/not used, or why others want it to be so, are important aspects influencing KM. For instance, if knowledge mobilisation strategies are driven by a desire to cut costs they may be treated differently by the actors involved than if the underpinning principles are around improving outcomes for individuals.

Taking these elements together, we have found that this, more holistic, KM model has enhanced our understanding of the impact of the PROP project and crucially how the impact could have been strengthened. We would argue that this model has utility as a descriptive tool to explain the range of influences on knowledge mobilisation in any given context and that it can also be used as a more prescriptive checklist to assess whether knowledge mobilisation initiatives have considered the holistic environment in which they operate. The model can therefore also be used as a guide or a checklist when planning and evaluating KM activities.

Conclusions

Despite attention being paid to practitioner research and to knowledge mobilisation separately, the potential contribution that practitioner research can make to mobilising knowledge has been somewhat ignored. Given the boundary spanning nature of practitioner-research and practitioner-researchers, there is a strong argument for paying greater attention to practitioner research to strengthen collaborative engagement between practice and research, and thus to improve both research and practice.

In this research, we sought to bridge the fields of KM and PR. In so doing, we have been able to see the strengths – and some possible weaknesses – in both approaches. For example, our findings suggest beginning with an assumption that a lack of research is the ‘issue to be addressed’ potentially focuses attention on building research skills and knowledge to the detriment of improving practice skills and knowledge. This can result in an imbalance in the exchange of knowledge, prejudicing the research-based knowledge as the superior knowledge being shared through the process. Of course, in reality, when researchers and practitioners come together, there will be mutual learning, but, by starting from the ‘research’ world or lens, opportunities for sharing practice-based knowledge through the initiative are potentially missed. Whilst not underplaying the significant impacts that our practitioner research programme had in terms of building individual and organisational knowledge and capacity, particularly around

research, the evaluation evidence revealed limited success in terms of actual practice change and that practitioner's struggled to support the use of the knowledge they had generated once they got back to their (very busy) day jobs. We are left therefore with the realisation that we could have done more to maximise the full potential of practitioner research as a vehicle for knowledge mobilisation because we did not fully think through everything that needs to be in place to effectively mobilise knowledge.

The holistic model of knowledge mobilisation we propose identified that without the right actors involved (and the right relationships between them); a supportive environmental context; the content and type of knowledge being appropriate/applicable/acceptable; effective mechanisms for mobilising the knowledge; and principles and values which are aligned to the actors, environment and knowledge involved; the extent to which knowledge is mobilised will be reduced. On the contrary then, if we want to adeptly mobilise knowledge then paying attention to the actors, environment, knowledge content and type, the mechanisms and, the principles and values underpinning this work will help to maximise the impact of the knowledge under consideration. We suggest that as well as providing a useful planning framework for KM initiatives, this model also offers a useful evaluation framework to think about how the different elements in the model affected the mobilisation of knowledge in a particular context or scenario.

This model is not in opposition to other models or frameworks, rather, it is an attempt to bring together, and provide a framework for the exciting diversity of existing work in this field. There is a wealth of extremely useful literature about the different elements of knowledge mobilisation but by failing to think through the whole picture we missed something very important in our work, and we imagine that other people might be doing the same. We suggest that the current literature tends to focus primarily on one or some of these elements together – and yet practice of KM encounters all of these elements. We offer this model as a proposition. We are very conscious of offering yet another unevaluated model of knowledge mobilisation to an already clustered landscape, however, we needed to develop this holistic model in order to fully understand where we went wrong, and what we need to think about in the future when involved in seeking to support KM.

Bibliography

- Anderson, G, and Jones, F, 2000, Knowledge Generation in Educational Administration From the Inside Out: The Promise and Perils of Site-Based, Administrator Research, *Educational Administration Quarterly*, 36(3), 428-464
- Arkins, B, 2011, First Steps in Practitioner Research: A Guide to Understanding and Doing Research in Counselling and Health and Social Care, *Journal of Psychiatric and Mental Health Nursing* 18(5), E14-E15
- Beddoe, L, and Harington, P, 2012, One Step in a Thousand-Mile Journey: Can Civic Practice Be Nurtured in Practitioner Research? Reporting on an Innovative Project, *British Journal of Social Work* 42(1), 74-93
- Bennet, D, and Bennet, A, 2007, *Knowledge Mobilization in the Social Sciences and Humanities: Moving from Research to Action*, West Virginia: Mqi Press
- Bielak, A. T, Campbell, A, Pope, S, Schaefer, K, and Shaxson, L, 2008, From Science Communication to Knowledge Brokering: the Shift from 'Science Push' to 'Policy Pull', *Communicating Science in Social Contexts: New Models, New Practices*, 201-226

- Boddy, J, Daly, M, and Munch, S, 2012, The Writing Series Project: A Model for Supporting Social Work Clinicians in Health Settings to Disseminate Practice Knowledge, *Social Work in Health Care* 51(3), 246–270
- Bond, M, and Walton, P, 1998, Knowing mothers: from practitioner research to self-help and organisational change. *Educational Action Research* 6(1), 111–129
- Bornbaum C, Kornas K, Peirson L & Rosella, L. 2015, Exploring the function and effectiveness of knowledge brokers as facilitators of knowledge translation in health-related settings: A systematic review and thematic analysis, *Implementation Science* 10, 162-184
- Bozeman, B, 2000, Technology transfer and public policy: a review of research and theory, *Research Policy* 29, 627-655
- Buchanan, A, 2013, Impact and knowledge mobilisation: what I have learnt as Chair of the Economic and Social Research Council Evaluation Committee, *Contemporary Social Science* 8(3), 176-190
- Carlsson, C, Mezei, J, & Brunelli, M, 2013, Fuzzy Ontology Used for Knowledge Mobilization, *International Journal of Intelligent Systems* 28(1), 52-71
- Casey, A, 2013, Practitioner research: A means of coping with the systemic demands for continual professional development? *European Physical Education Review* 19(1), 76-90
- Cooke, J, 2005, A framework to evaluate research capacity building in health care, *BMC Family Practice* 6, 44-55.
- Cooper, A, 2014, Knowledge mobilisation in education across Canada: a cross-case analysis of 44 research brokering organisations, *Evidence & Policy*, 10(1), 29-59
- Currie, G, and White, L, 2012, Inter-professional barriers and knowledge brokering in an organizational context: the case of healthcare, *Organization Studies* 33,10, 1333-1361
- Davies, H, Powell, A. E, and Nutley, S, 2015, Mobilising knowledge to improve UK health care: learning from other countries and other sectors – a multimethod mapping study, *Health Services and Delivery Research*, 3(27)
- Dobbins, M, Robeson, P, Ciliska, D, Hanna, S, Cameron, R, O'Mara, L, Decorby, K, & Mercer, S, 2009, A description of a knowledge broker role implemented as part of a randomized controlled trial evaluating three knowledge translation strategies, *Implementation Science* 4, 23-31
- Elliott, G, 2011, Creating Spaces for Practitioner Research: Strategic Leadership to Create a Third Space for Practitioner Enquiry in an Authentic Professional Learning Community, *Rethinking Educational Practice through Reflexive Inquiry: Essays in Honour of Susan Groundwater-Smith* 7, 89-104
- Ellwood, P, Thorpe, R, & Coleman, C, 2013, A model for knowledge mobilisation and implications for the education of social researchers, *Contemporary Social Science* 8(3), 191-206
- Fenwick, T, & Farrall, L, 2012, Knowledge mobilisation: The new research imperative, in T. Fenwick & L. Farrall (eds), *Knowledge Mobilization and Educational Research: Politics, languages and responsibilities*, London: Routledge, 1-14
- Ferlie, E, Crilly, T, Jashapara, A, and Peckham, A, 2012, Knowledge mobilisation in healthcare: a critical review of health sector and generic management literature, *Social Science & Medicine* 74(8), 1297-1304
- Flodgren, G, Parmelli, E, Doumit, G, Gattellari, M, O'Brien, M. A, Grimshaw, J and Eccles, M. P, 2011, Local opinion leaders: effects on professional practice and health care outcomes, *Cochrane Database of Systematic Reviews*, 8

- Flyvbjerg, B, 2006, Making Organization Research Matter: Power, Values, and Phronesis, in S. R. Clegg, C. Hardy, T. B. Lawrence, and W. R. Nord, (eds) *The Sage Handbook of Organization Studies*, 2nd edition, Thousand Oaks, CA: Sage, 370-387
- Friend, J, Power, J, Yewlett, C, 1974, *Public Planning: The Inter-Corporate Dimension*, Tavistock: London
- Freeman, R, Sturdy, S, 2015, Introduction: knowledge in policy: embodied, inscribed, enacted, in R. Freeman and S. Sturdy (eds) *Knowledge in Policy: Embodied, Inscribed, Enacted*. Bristol: Policy Press, 1-20
- Frost, H, Geddes, R, Haw, S, Jackson, C. A, Jepson, R, Mooney, J. D, and Frank, J, 2012, Experiences of knowledge brokering for evidence-informed public health policy and practice: three years of the Scottish Collaboration for Public Health Research and Policy, *Evidence & Policy* 8(3), 347-359
- Gabbay, J, & le May, A, Evidence-based guidelines or collectively constructed 'mindlines'? Ethnographic study of knowledge management in primary care, *BMJ*, 329, 1013-1018
- Gallagher, M, Smith, M, Wosu, H, Stewart, J, Hunter, S, Cree, V. E, and Wilkinson, H, 2011, Engaging with families in child protection: lessons from practitioner research in Scotland, *Child Welfare* 90(4), 117-134
- Gambrill, E, 2006, Evidence based Practice and Policy: Choices Ahead' *Research on Social Work Practice* 16, 338-357
- Ghaye, T, 2000, In to the reflective mode: Briding the stagnant moat, *Reflective Practice*, 1(1), 5-9
- Graham, I. D, Logan, J, Harrison, M. B, Straus, S. E, Tetroe, J, Caswell, W, and Robinson, N, 2006, Lost in knowledge translation: Time for a map? *Journal of Continuing Education in the Health Professions*, 26(1), 13-24
- Greenhalgh, T, and Wieringa, S, 2011, Is it time to drop the 'knowledge translation' metaphor? A critical literature review. *Journal of the Royal Society of Medicine* 104(12), 501-509
- Hargadon, A. B, 2002, Brokering knowledge: Linking learning and innovation, *Research in Organizational Behavior*, 24, 41-85
- Harvey, D, Plummer, D, Pighills, A, and Pain, T, 2013, Practitioner Research Capacity: A Survey of Social Workers in Northern Queensland, *Australian Social Work*, 66(4), 540-554
- Heron, J, 1996, *Co-operative Inquiry: Research into the Human Condition*, London: Sage.
- Hosking, D.M, and Morley L.E, 1991, *A Social Psychology of Organising*, London: Harvester Wheatsheaf
- Kislov, R, Hodgson, D, and Boaden, R, 2016, Professionals as knowledge brokers: The limits of authority in healthcare collaboration, *Public Administration* 94 (2), 472-89
- Kislov, R, Waterman, H, Harvey, G, and Boaden, R, 2014, Rethinking capacity building for knowledge mobilisation: developing multilevel capabilities in healthcare organisations, *Implementation Science* 9, 166-188
- Kitagawa, F, and Lightowler, C, 2013, Knowledge exchange: A comparison of policies, strategies, and funding incentives in English and Scottish higher education, *Research Evaluation*, 22(1), 1-14
- Knight, C, and Lightowler, C, 2010, Reflections of 'knowledge exchange professionals' in the social sciences: emerging opportunities and challenges for university-based knowledge brokers, *Evidence & Policy*, 6(4), 543-556
- Lam, A, 2000, Tacit knowledge, organizational learning and societal institutions: an

- integrated framework, *Organization Studies*, 21(3), 487-513
- Lavis, J, Ross, S, Hurley, J, Hohenadel, J, Stoddart, G, Woodward, A, & Abeson, J, 2002, Examining the Role of Health Services Research in Public Policy Making, *Milbank Quarterly*, 80, 125-154
- Leadbeater, C, and Goss, S, 1998, *Civic Entrepreneurship*. London: Demos.
- Lomas, J, 2007, The in-between world of knowledge brokering, *British Medical Journal*, 334(7585), 129-132
- Long, J. C, Cunningham, F. C, and Braithwaite, J, 2013, Bridges, brokers and boundary spanners in collaborative networks: a systematic review, *BMC Health Services Research* 13, 158-172
- Lunt, N, and Fouche, C, 2009, Action Research for Developing Social Workers' Research Capacity. *Educational Action Research*, 17(2), 225–237.
- Mayne, J, 2001, Addressing Attribution through Contribution Analysis: Using Performance Measures Sensibly, *Canadian Journal of Program Evaluation*, 18(1), 1-24
- Mayne, J, 2012, Contribution Analysis: Coming of Age. *Evaluation*, 18(3) 270-280
- McCormack, B, Rycroft-Malone, J, DeCorby, K, Hutchinson, A. M, Bucknall, T, Kent, B, Schultz, A, Snelgrove-Clarke, E, Stetler, C, Titler, M, Wallin, L. and Wilson, V, 2013, A realist review of interventions and strategies to promote evidence-informed healthcare: a focus on change agency, *Implementation Science*, 8(1), 1-12
- McCrystal, P, 2000, Developing the social work researcher through a practitioner research training programme, *Social Work Education* 19(4), 359-373
- McWilliam, C. L, Kothari, A, Ward-Griffin, C, Forbes, D, Leipert, B, & South West Community Care Access Centre Home Care, C, 2009, Evolving the theory and praxis of knowledge translation through social interaction: a social phenomenological study, *Implementation Science* 4, 26-40
- Meyer, M, 2010, The Rise of the Knowledge Broker, *Science Communication*, 32(1), 118-127
- Mitchell, F, Lunt, N, and Shaw, I, 2009, *Practitioner research in social services: A literature review*,
http://lx.iriss.org.uk/sites/default/files/resources/practitioner_research_literature_review_report.pdf
- Mitchell, F, Lunt, N, and Shaw, I, 2010, Practitioner research in social work: a knowledge review, *Evidence & Policy*, 6(1), 7-31
- Moss, G, 2013, Research, policy and knowledge flows in education: what counts in knowledge mobilisation? *Contemporary Social Science*, 8(3), 237-248
- Morton, S. (2012). *Exploring and Assessing Research Impact*, PhD in Social Policy, Edinburgh: University of Edinburgh
- Nonaka, I, 1994, A Dynamic Theory of Organizational Knowledge Creation, *Organization Science* 5(1), 14-37
- Nutley, S, 2003, *Increasing research impact: early reflections from the ESRC evidence network*,
<https://www.kcl.ac.uk/sspp/departments/politiceconomy/research/cep/pubs/papers/assets/wp16.pdf>
- Nutley, S, Walter, I, and Davies, H, 2007, *Using Evidence: How research can improve public services*, Bristol: The Policy Press
- Orr, K, and Bennett, M, 2012, Public Administration Scholarship and the Politics of Coproducing Academic-Practitioner Research, *Public Administration Review*, 72(4)

- Phipps, D, and Shapson, S, 2009, Knowledge mobilisation builds local research collaborations for social innovation, *Evidence & Policy* 5(3), 211-227
- Phipps, D. J, Jensen, K. E, and Myers, G, 2012, Applying Social Sciences Research for Public Benefit Using Knowledge Mobilization and Social Media, in A. Lopez-Varela (ed), *Theoretical and Methodological Approaches to Social Sciences and Knowledge Management*, InTech, 179-208
- Pilkington, R, 2014, A guide to practitioner research in education, *Studies in Continuing Education*, 36(2), 233-234
- Roper, L, 2002, Achieving successful academic-practitioner research collaborations, *Development in Practice* 12(3-4), 338-345
- Schlierf, K, and Meyer, M, 2013, Situating knowledge intermediation: Insights from science shops and knowledge brokers, *Science and Public Policy*, 40(4), 430-441
- Schön, D. A, 1999, *The reflective practitioner: How professionals think in action*, Aldershot: Ashgate.
- Shaw, I, & Lunt, N, 2012, Constructing practitioner research. *Social Work Research*, 36(3), 197-208
- Shonkoff, J, 2000, Science, policy and practice: three cultures in search of a shared mission, *Child Development* 71(1), 181-187
- Skattebol, J, and Arthur, L. M, 2014, Collaborative practitioner research: opening a third space for local knowledge production, *Asia Pacific Journal of Education*, 34(3), 351-365
- Smith, M, Gallagher, M, Wosu, H, Stewart, J, Cree, V. E, Hunter, S, and Wilkinson, H, 2012, Engaging with involuntary service users in social work: findings from a knowledge exchange project, *British Journal of Social Work*, 42(8), 1460-1477
- Smith, K, E, 2007, Health inequalities in Scotland and England: the contrasting journeys of ideas from research into policy, *Social Science & Medicine*, 64,(7), 1438-1449
- Smith, K, E, 2013, *Beyond evidence based policy in public health: the interplay of ideas*, London: Palgrave Macmillan.
- Smith, K, E, 2014, The politics of ideas: The complex interplay of health inequalities research and policy, *Science and Public Policy*, 41(5), 561-574.
- Stocks-Rankin, C-R, Lightowler, C, and Wilkinson, H, 2014, Challenging conceptions of integration: sharing the findings from a Practitioner Research Programme on improving the care of older people in Scotland. *Journal of Integrated Care*, 22(3)
- Stocks-Rankin, C-R, Lightowler, C., Wilkinson, H, and Morton, S, 2014, *Assessing the Impacts of New Research Evidence in Health and Social Care in Scotland*, <http://blogs.iriss.org.uk/prop/files/2013/09/PROP-Pathway-to-Impact-2-New-Research-Evidence-September-2013-Updated-January-2014.pdf>
- Stocks-Rankin, C-R, Wilkinson, H, Lightowler, C, and Morton, S, 2014). *Becoming a 'Boundary Spanner' through Practitioner Research*, <http://blogs.iriss.org.uk/prop/files/2013/09/PROP-Pathway-to-Impact-1-Becoming-a-Boundary-Spanner-September-2013-Updated-January-2014.pdf>
- Walter, I, Nutley, S, and Davies, H, 2003, *Developing a Taxonomy of Interventions Used to Increase the Impact of Research*, http://www.ruru.ac.uk/pdf/Taxonomy_development_paper_070103.pdf
- Walter, I, Nutley, S, Percy-Smith, J, McNeish, D, and Frost, S, 2004, *Improving the use of research in social care practice*, <http://www.scie.org.uk/publications/knowledgereviews/kr07.asp>

- Ward, V, House, A, and Hamer, S, 2009, Knowledge brokering: the missing link in the evidence to action chain? *Evidence & Policy* 5(3), 267-279
- Ward, V. L, House, A. O, and Hamer, S, 2009, Knowledge brokering: Exploring the process of transferring knowledge into action, *BMC Health Services Research* 9, 12-18
- Waring, J, Currie, G, Crompton, A, and Bishop, S, 2013, An exploratory study of knowledge brokering in hospital settings: Facilitating knowledge sharing and learning for patient safety? *Social Science & Medicine* 98, 79-86
- Weiss, C, 1979, The Many Meanings of Research Utilization, *Public Administration Review*, 39(5), 426–431
- Weiss, C, 1998, *Evaluation: methods for studying programs and policies*, Upper Saddle River, N.J.: Prentice Hall.
- Williams, P, 2002, The Competent Boundary Spanner, *Public Administration* 80(1), 103-124
- Wimbush, E, Montague, S, Mulherin, T, 2012, Applications of contribution analysis to outcome planning and impact evaluation, *Evaluation*, 18(3), 310-329.
- Wilkinson, H, Gallagher, M, & Smith, M, 2012, A collaborative approach to defining the usefulness of impact: lessons from a knowledge exchange project involving academics and social work practitioners, *Evidence & Policy* 8(3), 311-327.
- Ziam, S, Landry, R, & Amara, N, 2012, How Knowledge Brokers Promote Research Findings: Theory and Evidence From Canadian Health Services, *Proceedings of the 13th European Conference on Knowledge Management*, Vols 1 and 2, 1312-1320

Acknowledgements

The study on which this article is based was funded by the Economic and Social Research Council (ES/J010820/1). We would like to thank Vivien Moffat, Stuart Muirhead, Douglas Robertson, Beth Weaver, and the anonymous reviewers and editors of this journal for their very helpful comments on earlier versions of this article. We are also indebted to all those involved in PROP, particularly all the practitioners involved. The article also draws indirectly on a range of conversations with people involved in different aspects of knowledge mobilisation, too numerous to name.