Making social work research count:

Researchers’ perceptions of using research in practice

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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Date: ...............................................................
Acknowledgements

Thirty years ago my older brother, who was ten years old at the time, was trying to get a report on birds written that he'd had three months to write. It was due the next day. We were out at our family cabin in Bolinas, and he was at the kitchen table close to tears, surrounded by binder paper and pencils and unopened books on birds, immobilised by the hugeness of the task ahead. Then my father sat down beside him, put his arm around my brother's shoulder, and said, “Bird by bird, buddy. Just take it bird by bird” (Lamott, 1995 p. 19).

Seven years ago, while completing my undergraduate degree, I attended my first research methods class taught by Professor Mel Gray. On that day she told us the story quoted above, which reminded me of the many times my own father had sat with me at the kitchen table and helped me to navigate the challenges of education and life in general. For me, this moment marked the beginning of my expedition into the extraordinary world of research, which influenced my perception of the world in remarkable ways.

I would like to express my deep gratitude to my doctoral supervisors, Professor Mel Gray and Doctor Elaine Sharland, for their unfailing belief in my ability, their enduring encouragement and thoughtful guidance, which gave me the confidence to commence my doctoral journey and the capacity to develop the skills and competence to complete it. The exhilaration of working with two such extraordinary mentors has shaped me personally and professionally.

To my extended family, friends, and colleagues, I thank you for your encouragement, love and understanding.

To my loving, generous, patient, and supportive husband – thank you for walking through life with me. Your creativity, insightfulness and honesty enrich me every day. I love you.

To my parents, Paul and Veronika Heinsch. You have given me everything. This is for you.
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Abstract

The purpose of this investigation was to explore the experiences and motivations of researchers in social work, in engaging with social work practitioners for the purpose of facilitating the use of research knowledge. It sought to examine how researchers conceived, explained and experienced the research utilisation process and the factors that may impact on this process, with the central aim of identifying how interaction can best lead to research use in social work. A mixed methodology grounded in Bhaskar’s critical realist paradigm was employed. This approach included both a fixed and flexible design, whereby quantitative data was gathered to determine regularities and patterns, and qualitative data to ascertain participants’ meanings, intentions, motivations, and reasons. Data was initially collected from 60 participants who were Australian researchers publishing in social work journals. A follow up semi-structured interview was conducted with 26 of the survey’s participants. A comprehensive review of the literature revealed that the knowledge utilisation field is complex and lacks conceptual depth and clarity. Consequently, the literature reflected a tendency toward superficial understandings of research use and the processes by which it might be achieved. This study offered a rich description of research knowledge utilisation in social work. Participants experienced research use as a socially engaged and relational process, rather than a unilinear event whereby research knowledge moves neatly from the context of production to that of application. The nature of the communication and the characteristics of the relationships between researchers and practitioners affected research use in practice. The power of interaction, as an influential factor in research use lies in the particular way in which it is combined with the characteristics of the individual, the organisation and the research content.

Keywords: Research use, interaction, social work, critical realism, knowledge utilisation
CHAPTER 1

Introduction

We have more information now than we can use, and less knowledge and understanding than we need. Indeed, we seem to collect information because we have the ability to do so, but we are so busy collecting it that we haven't devised a means of using it. The true measure of any society is not what it knows but what it does with what it knows (Warren Bennis, n.d., unpaginated).

Now, more than ever before, we are living at a time when a vast amount of knowledge is immediately available to us, at the click of a mouse. Amid these diverse forms of knowledge, scientific research has been endowed with particular value and importance as a key component of competitive advantage for organisations. Contemporary organisations operate in world markets, in which they can no longer sustain competitiveness from traditional assets, such as raw materials, land, cheap labour, and machinery, but rely on science and technology for economic profit. As a result, pressure on universities to produce research products and demonstrate research productivity and performance is increasing. Research—and its impact—has become a primary avenue through which universities establish their usefulness, and are seen to contribute to their communities and to wider society. The central role which knowledge—and research-based knowledge in particular—now plays in contemporary Western societies, has led to a stronger emphasis on the links between science and society, with society becoming a far more active partner in the creation of knowledge (Estabrooks et al., 2008). The assumption is that stronger links between science and society, via interaction between researchers and practitioners, will lead to the production of relevant research that is more likely to be used and will therefore make a genuine contribution to society. Nevertheless, this goal of research use has remained difficult to achieve, and research
often fails to inform decision making in practice. In order for research to make a more meaningful contribution to society, it is important to test the assumption that linkage and interaction between science and society—or between researchers and users—facilitates research use.

**Background and Rationale**

This research emerged from a study which commenced in 2009, and explored knowledge production in social work and human services in Australia, in which I was engaged as a research assistant. That preliminary study examined the contemporary research landscape and the consequent production of knowledge within human services and social work in Australia. It explored whether social work constituted a gold standard example of mode 2 knowledge production as outlined by Gibbons et al. (1994). Their so-called “new theory of knowledge production” hypothesises that collaborative research increases the likelihood that the findings of research will be translated into practice. Methods of analysis in the initial study included a review of the literature on knowledge and its production in tandem with a targeted review of knowledge production in social work. It also incorporated a content analysis of the Australian Research Council (ARC) ranked journal articles, for the discipline of social work during 1999–2007. The journals were analysed against key factors relating to the nature of mode 2 knowledge production drawn from the knowledge production literature. The study showed that collaboration in and of itself does not lead to the uptake of research or the implementation of research findings. Equally important is the translation of knowledge—as research findings—into a form that can be used. Further, effective

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1 In places where appropriate this thesis is written in first person to make my presence, stance and decision-making processes explicit and transparent.

2 The ARC is a statutory agency under the Industry, Innovation, Climate Change, Science, Research and Tertiary Education portfolio within the Australian Government. Its mission is to deliver policy and programs that advance Australian research and innovation globally and benefit the community. In seeking to achieve this mission, the ARC provides advice to the Government on research matters and administers Excellence in Research for Australia (ERA), in which research quality within Australia’s higher education institutions is assessed against international benchmarks.
utilisation requires organisational change to create an environment receptive to new knowledge and the practices it entails. In summary, despite advances in the theory of knowledge production, at a very practical level, partnerships and collaborations between researchers and agency partners do not necessarily result in knowledge translation without an interceding process of take-up and end-user engagement. This is a time-consuming process in which researchers do not ordinarily engage and it requires in-depth study as a separate process from knowledge production (Gray, Schubert, & Heinsch, 2012). The findings of the preliminary study highlighted the need to look beyond journal publications—which exposed that the relationship between interaction and research use was complex—to an empirical exploration of the processes that explain this complexity.

While working as a research assistant on this study, I was struck by the amount and diversity of research and information available in the field of knowledge utilisation, and the relative lack of social work input in this area. I began to wonder about the contribution that a field as broad and wide-ranging as knowledge utilisation could make to furthering understandings about research use in social work. In particular, the finding of the broader study that collaboration alone does not lead to the uptake of research or the implementation of research findings intrigued me, as it seemed to suggest that the relationship between interaction and research use might be more complex and indirect than interaction theories of research use tended to suggest. Upon examining the literature on research use and interaction, I quickly realised this was an, as yet, under researched area that lacked conceptual depth. As such, a more in-depth exploration of the processes by which interaction could best lead to research use in social work was needed.

Given the focus of the broader study on research outputs, the focus on researchers was maintained in the present study in the interests of developing the
understandings already gained. A decision was made to focus solely on researchers’ experiences of interaction with practitioners, and research use by practitioners, to create some boundaries for the research design and to enhance the depth of data collected given my limited resources. I believed that researchers, as the primary producers of research-based knowledge, would contribute a unique perspective on the research utilisation process and the factors that may impact on this. My prior reading of the knowledge production literature led me to believe that the process by which research is created and comes to be used is highly complex and that exploring one side of the story would yield rich data. I felt this data alone would present a challenge to analyse and draw meaning from without adding perspectives from practice contexts, which would likely bring into play a range of additional factors and workplace issues. Instead, I hoped to make practitioner’s experiences of interaction with researchers, and research knowledge use, the topic of future study.

**Aims of the Study**

The main aim of the study was to explore the research utilisation process in social work from the perspective of those primarily involved in producing it. Further, I hoped to gain an understanding of the role of interaction in this process, and ultimately, to identify how interaction might best lead to research use in social work. To this end, I aimed to:

1. Better understand the process of research utilisation in social work, from the perspective of researchers.

2. Identify whether researchers perceive an existing relationship between interaction and research use by practitioners, and if so, to determine what kinds of interactions researchers identify as best leading to research use by practitioners.
3. Contribute to the refinement of theoretical and methodological frameworks for research use in social work.

**Research Questions**

In light of the background, rationale, and study aims, four research questions were posed:

1. How do researchers in social work perceive the use of their research by practitioners?
2. What key factors do researchers report as facilitating and impacting on research use in social work practice?
3. How do researchers understand the nature of the relationship between interaction and research use?
4. What forms of interaction with practitioners do researchers identify as best leading to research use in social work?

**Theoretical Perspective and Methodology**

I chose to employ a mixed methodology grounded in Bhaskar’s critical realist paradigm because I believed it was most likely to explain the answers to my research questions. Critical realism has been found to fit well with a mixed methodology, whereby quantitative data was gathered to determine regularities and patterns, and qualitative data to ascertain participants’ meanings, intentions, motivations and reasons (Houston, 2010; Mingers, 2000, 2006; Olsen, 2009). The broader study within which my research is situated found that the kind of engagement between researchers and agency partners leading to research use is a time-consuming process, in which researchers did not ordinarily engage (Gray, Schubert, & Heinsch, 2012). Thus, using quantitative techniques, I first needed to identify a sample of researchers who did engage with practitioners in this way in order to then explore more deeply, with the aid of qualitative...
techniques, the nature of their interactions with practitioners and how these related to the research utilisation process.

An important characteristic of critical realism is that it maintains a strong emphasis on ontology and supports the idea that there is a reality independent of our thoughts and impressions. It suggests that the events we observe are determined by the combined activity of hidden causal mechanisms, located beyond the reach of our experience, in the domain of the actual and the real (Bhaskar, 2008). This means that our experiences can never be universal truths but can only ever capture part of the world as it really is. Our impressions therefore provide us with clues as to what the real events and actual causes underlying them might be (Barrett, 2010). Critical realism focuses on gaining a deeper understanding of social situations by going beyond the observable and investigating the mechanisms behind events. This was considered useful for reaching deeper levels of explanation and understanding of the research utilisation process.

Critical realism enabled me to use a mixed methodology to examine the relationship between research use and interaction as part of the broader social context in which they operate. Critical realists highlight the importance of identifying and examining causal mechanisms within open systems, in which many mechanisms operate simultaneously and interfere with the working of one another in a complex, heterogeneous system. This approach provided an opportunity for a deeper exploration of the processes underlying research utilisation, which might not necessarily operate in a straightforward manner.

A mixed methodology requires both a fixed and flexible research component. Quantitative research requires and promotes a fixed design, which specifies in advance the variables to be included in the study and the exact procedures to be followed (Robson, 2002). Qualitative research requires and promotes a flexible research design with responsive methods of data collection from relatively unstructured data-gathering
instruments (Patton, 2002). First, a survey was conducted with 144 participants who were identified via a database of key Australian social work researchers and publications, generated as part of the broader ARC-funded study on knowledge production (see p. 105-107 for a description of how this database was created). The main aim of the survey was to establish the existence of a relationship between my chosen variables—research use and researcher-practitioner interaction. Of the 60 respondents who completed the survey, 26 participated in a semi-structured telephone interview. The main aim of the interviews was to explore the specific qualities and nature of the relationship between research use and interaction, and its underlying causes. The use of telephone interviews enabled inclusion of participants located across the whole of Australia.

In keeping with a mixed methodology, a range of data analysis techniques was applied in a process of triangulation. In critical realism, triangulation provides a “family of answers” (Pawson & Tilley, 1997, p. 152), which are “necessary to reveal different features of the same layered reality” (Downard & Mearman, 2007, p. 92). The survey’s data were analysed using univariate and multivariate approaches, to establish descriptive profiles of research interaction and use, and explore the relationship between them. The interview data were analysed via a thematic analysis carried out within a critical realist framing, which strategically aimed to “unpick or unravel the surface of ‘reality’” in discursive presentations of research use to go beyond the semantic content of the data to start “to identify or examine the underlying ideas, assumptions, and conceptualisations—and ideologies … theorised as shaping or informing the semantic content of the data” (Braun & Clarke, 2006, p. 84).

**Distinctiveness of the Study**

This study contributes to the fields of social work and knowledge utilisation. It is the first Australian study to explore in depth what influences and explains the relationship
between interaction and research use in social work. Others have examined research use and interaction in relation to disciplines, such as economics, information science, sociology, management, and geography (Estabrooks et al., 2008), and a rare few international studies have explored interaction and research use in social work (see Allen-Meares et al., 2005; Landry et al., 2001). However, these factors have not been studied within the Australian social work context, despite renewed interest in the contribution of higher education research to the public good through community engagement and partnership development (Gray & Crofts, 2004). This study offers a rich description of the nature of interactions leading to research use. While other studies mention the importance of personal factors as the crucial variable influencing research use (Bowen & Martens, 2005), this factor has not been explored or described in the knowledge utilisation literature. Consequently, this study offers a unique perspective on how interaction can best lead to research use in an Australian social work context.

This study makes a distinctive contribution towards improving the methodological issues and inconsistencies identified in the knowledge utilisation literature by: (i) exploring the meanings and processes underlying key concepts and terms in the knowledge utilisation literature in an effort to improve definitional and conceptual clarity; (ii) identifying and amalgamating key theories and models of knowledge utilisation into a comprehensive theoretical framework; (iii) using an existing and validated scale to examine the extent of research use in a new context, in order to contribute to the development of standardised measures of research use; (iv) acknowledging potentially influential assumptions about research use and exploring the social structures that underlie these; and (v) conducting an in-depth and contextually situated examination of variables that facilitate and influence research use to move away from superficial listings of variables. Thus, this study deepens and clarifies
contemporary understandings of research use and the processes by which it might be achieved.

This research provides a foundation for a longer-term research agenda focused on research use in social work. It provides data which advance and clarify current definitions and understandings of research use. It also paves the way for more in depth study of research use in social work. For example, such studies could examine the effectiveness of specific projects designed to foster research use through interaction, such as the ARC Linkage Grants, or to test the validity of other instruments or measurements of research use in social work. In particular, however, this study provided the impetus to explore practitioners’ experiences and perceptions of interaction with researchers and of research use. I anticipated this would form the initial follow-on area of research.

**Limitations of the Study**

Maximum care was taken to minimise the limitations of the study through the research design. However, a number of limitations are acknowledged and noted. In order to gather rich data within the time and resource available, I decided to remain focused on the experience of researchers; so practitioners were not surveyed or interviewed for this study and thus one side of the story is missing. The small sample size also inhibits generalisations from the data. A further limitation was the use of a self-report measure of research use, which may have resulted in inaccurate responses, since respondents in self-report studies have been found to overestimate their use of research (Dobbins et al., 2007). Finally, although it is one of the few validated measures of research use, the Knott and Wildavsky (1980) scale used in this study has been critiqued for its linear assumptions about research use. This linear, narrow conceptualisation of research use was inherent in the survey’s questions. It stood in contrast to the meanings which researchers who collaborated with practitioners attributed to the research-to-action
process, and this might have influenced their responses to the survey. This limitation, to some extent, was minimised by the mixed-method approach taken in this study, combining the survey and semi-structured interview methods.

**Definition of Terms**

**Knowledge**

The Oxford Dictionary definition of knowledge is the sum of individual understanding, discovery, and learning from experience. According to Leung (2007), knowledge comprises four levels: data, information, knowledge, and wisdom. The Concise Oxford English Dictionary also divides knowledge into four categories: Know-what, know-why, know-how, and know-who (Huang, Wei, & Chang, 2007; Lundvall, 2003). Many writers on knowledge utilisation draw a distinction between formal, substantive, and informal, uncodified knowledge. In their terms, codifiable knowledge can be written down and transferred easily to others, while tacit knowledge is slow to acquire and difficult to transfer. Generally, however, in the knowledge utilisation literature, knowledge refers to knowledge produced through research, i.e., substantiated and tested knowledge via empirical means. This form of knowledge is advanced by evidence-based practice which has been resisted by social workers as too limiting. Social workers value practice-based, experiential knowledge and highlight the importance of reflexivity and reflection (Greckhamer et al., 2008). Hence, in social work, knowledge is often defined in terms of experience, reflection, context, and interpretation with the main source of knowledge being tacit or explicit depending upon its location. While recognising the multitude of meanings associated with the term knowledge and the many forms of knowledge that inform decision making in practice, this study focuses solely on the use of research-based knowledge in practice.
Knowledge Utilisation

Knowledge utilisation is a complex and poorly defined term that is frequently conflated with a range of words used to describe all or part of the research-to-action process, including transfer, evidence-based practice, translation, diffusion, transmission, absorption, implementation, exchange, sharing, flow, and dissemination. Some authors have conceptualised knowledge utilisation as a broad, overarching domain (Estabrooks et al., 2008). Simultaneously, it has been described as a sub-domain among others, such as technology transfer and innovation diffusion, within the field of knowledge production (Backer, 1991; Estabrooks et al., 2008). According to Backer (1991), since the various sub-domains overlap, an “umbrella definition of the field is necessarily imprecise” (p. 226). For some, knowledge utilisation is a discrete event, which takes place at a particular point in time (Pregernig, 2006), while for others, it encompasses multiple stages. For example, Landry et al. (2001) suggested a six-stage cumulative model of knowledge utilisation. Yet other authors viewed knowledge utilisation as part of a larger process (Graham et al., 2006) involving, for example, “knowledge generation, exchange, and utilisation” (Beal, Havelock, and Rogers, cited in Estabrooks et al., 2008, p. 2). For the purpose of this research, the term knowledge utilisation is used as an overarching term to describe the broad area into which this study falls. The terms research use and research utilisation are used interchangeably and refer to a complex process by which research-based knowledge comes to be applied in practice.

Structure of the Thesis

This chapter has provided the context of the study, including the background, rationale, aims, research questions, limitations, significance of the study, definition of terms, and an overview of the thesis. Next, a literature review is presented in two chapters: The first chapter reviews literature about knowledge utilisation more broadly and the second
reviews literature pertinent to social work and the interaction model of research use. Thereafter, the research methodology is outlined, followed by a description of the findings from the survey and from the semi-structured interviews. These findings are discussed in light of the research literature and an Integrated Model of Research Use informed by the research findings proposed. In the final chapter, conclusions, recommendations for further research, and the lessons for social work practice are presented.
CHAPTER 2

Literature Review: Knowledge Utilisation

This literature review examined recent developments in the knowledge utilisation field. To this end, after outlining the methodology for the literature review, contemporary work on knowledge utilisation is discussed within several broad categories:

- definitions and terminology;
- knowledge utilisation in context;
- origins and development of the knowledge utilisation field;
- evidence-based practice and knowledge utilisation;
- measuring knowledge utilisation; and
- theories and models of knowledge utilisation.

Methodology

Information on knowledge utilisation was initially obtained by searching the journal and bibliographic reference databases held by the University of Newcastle in Australia. The following were searched: EBSCO MegaFile Premier, Informit Social Sciences, Proquest, Scopus Health Sciences and Social Sciences, Web of Science, Wiley InterScience, the Library of Congress, the National Library of Australia, Austrom, Expanded Academic Index and JSTOR, and Social Work Abstracts. A further search was conducted using Google and Google Scholar. Keywords entered were knowledge utilisation and its synonyms and relatives knowledge transfer, translation, utilisation, use, exchange, sharing, flow, evidence-based practice, dissemination, innovation, and absorption were searched alone and in combination with social work, human services, social science, social services, and research. Some references were obtained from the literature review of the broader research project within which this study is situated. A
final search involved the identification of additional material from the reference lists of articles previously located. To obtain the most up-to-date information the literature included in the review was limited to articles published after 2000, although some seminal works published outside this time period were included (see Backer, 1991; Granovetter, 1973; Huberman, 1987; Knott & Wildavsky, 1980; Machlup 1980; Weiss, 1979). Due to the large amount of information identified by the literature searches, the review was divided into two separate chapters: The first chapter explores knowledge utilisation more broadly, and the second chapter focuses specifically on social work and the interaction model of research use. Given the breadth of the literature on knowledge utilisation, a decision was made not to include literature on service user engagement in the manuscript as this area, while relevant, arguably moves beyond the scope of this study.

**Definitions and Terminology**

Past reviews of the knowledge utilisation field have highlighted the difficulty of consolidating the extensive literature in this area (Backer, 1991; Nutley, Walter, & Davies, 2003). In 1991, Backer identified approximately 10,000 citations on knowledge utilisation, concluding “the field is hardly immune from its own problems of information overload!” (p. 232). There is a remarkable amount of multidisciplinarity in the knowledge utilisation field, ranging from studies in agricultural innovation to sociology and information science (Estabrooks et al., 2008). The diversity and abundance of literature in this area, in part, has contributed to its conceptual disarray (Watkins, 1994/95; Weiss, 1979) identified almost a decade ago, which continues to account for the conceptual confusion and variation in research outcomes in the field today (Estabrooks et al., 2006). The terms ‘knowledge’ and ‘utilisation’ are, in themselves, highly complex and can encompass multiple meanings.
Knowledge

Philosophers have been discussing knowledge and its operation in social systems for centuries, and there have been many attempts at developing conceptual and organisational frameworks for delineating forms of knowledge. This is a complex activity given that the very idea of knowledge is ambiguous, multifaceted, and potentially infinite (Hedlund, 1994). The breadth of this term can be seen in Machlup’s (1980) assertion that “we may designate as ‘knowledge’ anything that is known by somebody and as ‘production of knowledge’ any activity by which someone learns of something he or she has not known before, even if others have” (p. 7). Most perspectives on knowledge originate from outside the knowledge utilisation literature, and draw from the philosophy of science, starting with the classical Aristotelian typology of:

1. Episteme (scientific facts or know-what);
2. Techne (know-how); and
3. Phronesis (practical wisdom, implicit knowing or know-that).

Rooney and McKenna (2005) observed “these ancient ways of thinking about … applying knowledge … have an intellectual breadth and scope of social vision” (p. 309) and have a lot to offer the contemporary discourse on knowledge utilisation. More recent discourses from the fields of sociology and philosophy also offer useful insights for the conceptualisation of knowledge in the knowledge utilisation field. For example, Arendt (1994) distinguished between knowledge and understanding, proposing:

Understanding, as distinct from having correct information and scientific knowledge, is a complicated process which never produces unequivocal results. It is an unending activity by which, in constant change and variation, we come to terms with and reconcile ourselves to reality, that is, try to be at home in the world (pp. 307–308).
While Arendt and many other philosophers’ perspectives on knowledge and its use may be helpful for developing definitions and understandings of knowledge utilisation, they are not used much in the knowledge utilisation literature. This may be indicative of a broader tension between science and philosophy, which is based on incongruence between “science’s propensity for prediction and control and the openness of philosophical discourse to the ‘subjective and contextual aspects of knowledge’” (Nairn, 2012, p. 6).

In the knowledge utilisation literature, knowledge is generally viewed more narrowly as constituting scientific and technological knowledge, or research (United Nations Educational, Scientific and Cultural Organisation (UNESCO), 2005). Thus the terms ‘knowledge’ and ‘evidence’ are often conflated (Newton, 2009). The basic assumption underlying conceptualisations of knowledge in the knowledge utilisation field is that people should use knowledge (i.e., research) and that knowledge (i.e., research) should be useful (Buchman, 1985). Buchman noted that, in the knowledge utilisation literature, knowledge is metaphorically structured as a “tool” denoting an instrumental purpose judged in terms of its utility: “utility is a measure of the good; in some ways of thinking, the measure of the good” (p. 156). The Oxford Dictionary defines utility as “the state of being useful, profitable, or beneficial”. From this perspective, knowledge that is useful is assumed to be intrinsically good. But, in reality, “research can be poor quality, costly, mistaken in its conclusions or the implications drawn from the data, and used instrumentally to justify a predetermined course of action” (Gough, 2004, cited in Holzer et al., 2007, p. 5). This poor research may find its way into policy and practice through symbolic, conceptual or instrumental utilisation (Weiss, 1979). In symbolic use, research findings are employed “for legitimating and sustaining predetermined positions” (Amara, Ouimet, & Landry, 2004, p. 77). In conceptual use, research is moved into the realm of practice, often through indirect
means (Weiss, 1979) that change our thinking or opinions about certain situations, but not necessarily our actions (Profetto-McGrath, Hesketh, Lang, and Estabrooks, 2003). Weiss (1979) noted it is difficult to control the kinds of research messages taken up in practice:

Many of the social science understandings that gain currency are partial, oversimplified, inadequate, or wrong. There are no procedures for screening out the shoddy and obsolete. Sometimes unexpected or sensational research results, however incomplete or inadequately supported by data, take the limelight. As an environmental researcher has noted, “Bad science, being more news-worthy, will tend to be publicized and seized on by some to support their convictions”. The indirect diffusion process is vulnerable to oversimplification and distortion, and it may come to resemble ‘endarkenment’ as much as enlightenment (p. 430).

Similarly, instrumental use does not protect against the uptake of poor quality research. Where research is applied instrumentally without a critical perspective, its application may become passive (Asselin, 2001), thereby increasing the likelihood that poor quality research will be applied. Paradoxically, meta-analyses and systematic reviews, which are known for their rigor, may engender a particular vulnerability to this form of uncritical research use. These reviews aim to provide an accurate and reliable summary of the best available evidence on a particular topic. They are very important for furthering understandings about a particular issue or area, particularly in light of the increasing amount of research available, and the time and resource constraints of the practitioners and clinicians who use this information. However, the systematic reviews and meta-analyses do not correct publication bias, whereby studies that reported dramatic effects are more likely to be identified, summarised, and subsequently included in meta-analysis than studies that reported smaller effect sizes (Garg et al., 2008). Cooper, Charlton and DeNeve (1997) demonstrated that a large proportion of
studies that have negative or non-significant findings do not get published. A further issue is that manuscripts labeled as a ‘systematic review’ or ‘meta-analysis’ are not always conducted or reported with due rigor (Garg et al., 2008). The discourse of reliability and truth associated with systematic reviews and meta analyses may result in a false sense of precision about the truth, which can lead practitioners to apply poor quality research uncritically. Thus, by viewing knowledge as a tool, knowledge users may overestimate the certainty of knowledge and underestimate their own valid practical concerns (Buchman, 1985). For this reason, Webb (2002) argues that practitioners should exercise caution about the uncritical acceptance of evidence-based practice, as this limits reflective practice.

Other common metaphors for knowledge in the knowledge utilisation field are: (i) knowledge as a resource, which tends toward a dehumanised, mechanistic view that implies gathering, storing, and distributing knowledge has nothing to do with people; (ii) knowledge as an asset, implying its links to economics and accounting; and (iii) knowledge as objective ‘stuff’ that can be stored, retrieved, and transferred from one human being to another without distortion or interpretation (Andriessen, 2008). Andriessen (2008) noted the dominance of these metaphors in Western literature in contrast to knowledge as love, feelings, and thoughts in Eastern discourse, which emphasise relationships of trust and passion for one’s work. He conducted an exercise in which workshop participants discussed a knowledge-related problem in their organisation using a particular knowledge metaphor. He noted a relationship between the metaphor used and the way in which problems were perceived, solutions proposed, and interests served. For example, managers showed a preference for knowledge as stuff while knowledge workers emphasised the importance of working conditions that supported their love of knowledge. Andriessen (2008) concluded that knowledge was a loaded rather than a neutral concept.
The notion that knowledge and the processes involved in its production and use are not neutral, has been the focus of several theoretical and philosophical arguments. For example, feminists like Gilmore (1995) argued that the production of knowledge is a political process controlled by those in society with the greatest power. Critical theorists such as Habermas and Foucault argued that knowledge sets artificial parameters around what might be included as legitimate. Knowledge that sustains the status quo tends to be more easily legitimised than that which runs against dominant trends or mainstream thinking. Hence Ife (2007) believed that social work knowledge needed to be defined in “a way that deconstructs the privilege built into both the discourse of professionalism and the discourse of the west” (p. 23) inherent in textbooks, journals and research reports. Davies and Nutley (2008) adopted a similar stance:

Knowledge (and therefore knowledge production) includes research-based knowledge but also encompasses other ways of knowing (experiential and tacit, as well as local situational awareness). While we think that stakeholders should pay particular attention to research findings, we do not want to characterise findings as the only source of legitimate knowledge. Instead, we strive to see research findings in the context of other more situated and experiential ways of knowing (p. 2).

Taking a critical realist perspective, Nairn (2012) argued that “knowledge is inevitably a part of the social context of its own production” (p. 8) and science, which likes to present itself as neutral, is simply one of many ways of examining the world and “part of a political discourse” (p. 14). Critical theorists draw attention to the importance of examining and acknowledging the motivations, interests, and discourses that underlie knowledge, its production and use.
Knowledge Utilisation

The term knowledge utilisation has been poorly defined and comprises many different meanings. In their work to create a search filter for knowledge utilisation, McKibbon and colleagues identified more than 90 terms for research use (McKibbon, unpublished, 2009, in Straus, Tetroe & Graham, 2009). The present review identified a variety of terms used to describe all or part of the research-to-action process, including transfer, evidence-based practice, translation, diffusion, transmission, utilisation, absorption, implementation, exchange, sharing, flow, mobilisation, management and dissemination. According to Estabrooks et al. (2008), these terms signify different disciplines and research domains. Although they all address the research-to-action process in some way, they can have very different meanings and the terms used often infer different meanings, paradigms, and assumptions about knowledge use. For example, researchers and users in Bowen and Martens’ (2005) study differentiated between knowledge transfer—“which can be a one-way process”—and knowledge exchange—“the process by which researchers and decision makers share expertise and knowledge for a specific purpose” (p. 207). Different terms are used across different disciplines to refer to the same phenomenon. For example, knowledge management tends to be used in business, while knowledge translation is used in health (Cooper & Levin, 2010). Terms can also vary between countries. A recent term emerging amongst Canadian scholars is knowledge mobilisation, which describes activities that “strengthen connections between research, policy and practice across sectors, disciplines and countries” (Cooper & Levin, 2010).

Gredig and Sommerfeld (2008) saw knowledge transfer as encompassing a linear notion of the research-to-action process which overlooked “the complexity of available knowledge and the complexity of the problem-solving strategies required today” (p. 297). However, even where terminology offered expanded views of evidence
and the complex processes of knowledge exchange, such as knowledge translation, Reimer-Kirkham et al. (2009) observed a continual pull toward epistemologies and methods reminiscent of the positivist paradigm, with its instrumental view of knowledge and assumptions of objectivity and political neutrality. Thus, the use of a particular term did not automatically infer the application of a complementary paradigm, as positivist assumptions were found to underlie terms that appeared to acknowledge the complex nature of knowledge, and vice versa.

Some have viewed research use as so intimately connected to, and intertwined with, the process of knowledge production, that the two were difficult to separate. The advent of mode 2 knowledge production theory, with its emphasis on knowledge production in the context of application, influenced the development of new perspectives on knowledge utilisation. For example, Gredig and Sommerfeld (2008) described a process of hybridisation, which “takes place in the context of action” (p. 295). In this process, different forms of knowledge combined to produce a third sphere of knowledge and an endless cycle of knowledge production and utilisation ensued as the process of using research led to the creation of new knowledge, and so on. Likewise Martinez-Brawley (1995) noted that in the process of using and interpreting research, new knowledge was formed which would again be evaluated and disseminated. Hence, Trevithick (2008) believed it was difficult to separate knowledge use from knowledge creation. She drew on Eraut’s (1994) idea that the “interpretive use of an idea in a new context is in itself a minor act of knowledge creation” (Trevithick, 2008, p. 1230). This might partially explain why research findings were often not used in the way intended by their producers (Gillingham & Humphreys, 2010). As Payne (2001) noted, when research is transferred, “it is almost always interpreted in a way which is appropriate to its use in the new framework [and] … becomes inaccurate, compared with the intentions of its original framework” (p. 142). Similarly, Davies, Nutley, and Walter (2005)
observed when practitioners were required to implement evidence, the research was absorbed into, and emulsified with, other knowledge sources, such as practice wisdom, experience, and lay knowledge. Davies et al. (2005) therefore viewed research use as “a transformation process that happens alongside any translation and transfer” rather than a simple “transfer of pre-packaged research findings to passive and accepting user audiences” (p. 2).

Also, there was an ethical dimension to knowledge utilisation, as some scholars linked it to the public good. For Backer (1991), knowledge utilisation included “research, scholarly and programmatic intervention activities aimed at increasing the use of knowledge to solve human problems” (p. 225). Similarly, for Estabrooks et al. (2008), knowledge utilisation was about “solving social problems” (p. 2). Linking knowledge utilisation to human well-being arguably raises issues about the political and economic context within which it is situated (see Knowledge Utilisation in Context).

The issues discussed here highlight the difficulties involved in finding a definition of knowledge utilisation which fully encompasses the breadth and complexity of this process, while at the same time maintaining clarity and consistency. Although a universally applicable definition of knowledge utilisation might not be possible, a clear description of the meaning of knowledge utilisation as it is used by particular authors is needed, to minimise potential misunderstandings and enable comparisons across studies.

**Knowledge Utilisation in Context**

Although knowledge utilisation and knowledge production are often presented as separate fields, domains, or activities, the context in which knowledge is produced is an important factor in examining research use. The research environment in Australia, as elsewhere, is characterised by a trend toward increased surveillance of research productivity through quality assessment and performance evaluation. The bulk of
research is generated by researchers and academics based in universities. In fact, the higher education sector accounts for over two-thirds of Australian publications (L. Butler, 2003). As a result of globalisation and the associated discourse of the knowledge economy, universities have come to be valued first and foremost for their commercial potential and this is linked directly to their research performance (Brint, 2001). It is an environment of intense competition for research funding and one in which there is increasing pressure towards higher research productivity, while student to academic ratios continue to rise. The pressure to produce more and more information and research has led governments to invest billions of tax dollars each year in knowledge production. However, little is spent on, or known about, how best to ensure that the lessons learned from science inform and improve the quality of services (Kerner, 2006). Thus, in the contemporary knowledge production environment, research does not necessarily contribute to enhanced understanding, improved practices or the public good, but is often driven by economic agendas. This environment serves as the backdrop to research activities in Australia and internationally.

**Globalisation and the Knowledge Economy**

Several reasons for the increasing weight placed on research over other forms of knowledge have been proposed. One is the impact of globalisation, which privileges the unregulated interplay of markets, especially financial markets (Scott, 2009). This ideology promotes the production of research and skills formation as the primary purpose of the modern university to the exclusion of other social, intellectual, and cultural agendas. Closely associated to this ideology is the discourse of the knowledge economy, which regards universities as key agents for securing competitive advantage, and research performance is generally viewed as a key component of such advantage, along with increasing student numbers and collaborating in major international research projects (Scott, 2009).
The term knowledge economy dates back to the work of Bell (1973), who was frequently acknowledged as the first to recognise the connection between knowledge and economies (Harloe & Perry, 2004). More recently, Castells (1996) identified the rise of what he called informational capitalism, also referred to as knowledge capitalism (Burton-Jones, 1999), academic capitalism (Barnett, 2000), high-tech or digital capitalism (Schmiede, 2006), the new economy and network society (Zappala, Green, & Parker, 2000). These concepts have been used to describe “parallel developments in the fields of economy, technology, society, and politics” (Schmiede, 2006, p. 334). In essence, the idea of a knowledge economy implies there is a market for certain forms of knowledge, especially that which can be turned into a profit and enable organisations to gain a “competitive advantage” (Brennan & McGowan, 2006, p. 145). As world markets become more open and liberalised, companies can no longer sustain competitiveness from traditional assets, such as raw materials, land, cheap labour, and machinery (Zappala, 2000). Competitiveness now rests on more intangible assets, capabilities, and competencies which enable companies to control knowledge (Thurow, 1999) so as to enhance its commercial potential. Universities, with their research production activities, are at the forefront of the knowledge business, with profit incentives overriding social, intellectual, and cultural agendas (Brint, 2001; Scott, 2009). The transformation of universities into knowledge businesses has had varying consequences and produced clear tensions between stated aspirations—mission statements—and the way they conduct their business (Gumport, 2002). In order for economic profits to accrue from knowledge, it must be transformed into a commodity that can be produced, managed, marketed, packaged, bought, and sold:

Since knowledge is not inherently scarce (in orthodox economic terms, it is a non-rival good), it only gains a commodity form insofar as it is made artificially scarce and access thereto is made to depend on payment (in the form of royalties, license fees, etc.). Thus
a profound social reorganization is required to transform knowledge into something that can be sold (Jessop, 2002, p. 4).

Once knowledge is viewed as a marketable commodity, and made scarce in order to increase its economic value, it may become an instrument of social exclusion rather than the public good. As Zappala (2000) noted, the new knowledge economy only creates good jobs for those with the necessary skills and education to participate in it and, with its eye to profit, is only indirectly concerned with the improvement of social welfare and human well-being:

Research in preventative medicine, for example, may produce no direct or large commercial benefits, yet it can result in a healthier population and thus a more productive workforce and a reduction in both private and public expenditure on health (Bishop, 2006, p. 4).

The narrow lens of economic reasoning, which reduces “all values into economic costs and benefits” (Barry, 2002, p. 143), is particularly unsuited to the holistic integrated approach “needed to deal with most social … problems” (p. 143). The discourse of the knowledge economy “rarely moves beyond commercialisation” and is often “limited by [the] shallow technocratic, functionalist, [and] utilitarian values” (Rooney & McKenna, 2005, p. 307) of “neoclassical economics within a neo-liberal framework”, which privileges economic gain and ignores “fundamental features of human existence such as family, emotion, sentiment and love” (Rooney & McKenna, 2005, p. 311). Rooney and McKenna believe “industry and policy level discourse about and for a knowledge-based economy must not lose sight of the imperatives of the social, ethical and cultural underpinnings of knowledge work” (p. 319). Hence the humanities, with their ability to connect values, knowledge and ethics in “bringing ‘into view’ the most complex areas of intellectual life” (p. 316), have an important role in extending
discourse in the knowledge economy and thereby create “effective knowledge policy and knowledge societies” (p. 316).

The knowledge economy places a high value on knowledge use for profit thus supporting knowledge utilisation has become a priority for governments (Bishop, 2006). As a commodity, knowledge utilisation becomes a marketing process and some authors have proposed relationship marketing as a way to enhance knowledge dissemination and utilisation processes (Rowley, 2004). This hinders the potential for knowledge utilisation to contribute to the development of genuine knowledge societies, in which cognitive and critical thinking skills are used “to distinguish between ‘useful’ and ‘useless’ information” (UNESCO, 2005, p. 19). Rather than promoting quality information, useful knowledge becomes that which can immediately be converted into profit. The prioritisation of economic profit over social justice and human well-being in the knowledge economy means social welfare and the public good will always be a secondary concern. While the above discussion paints a rather bleak picture of knowledge and the role of knowledge utilisation in contemporary society, it provides an important, realistic, starting point from which to move toward pursuing more idealistic goals.

The Australian Context

Highly influential in Australia is the Australian Research Council (ARC), a significant provider of federal research funding, which sets government research priorities. In 2009, the ARC developed the Excellence in Research for Australia (ERA) initiative to assess research quality within Australia’s higher education institutions. Scott (2009) suggested the development of these kinds of assessment indicators is an outcome of new public management, which values corporate and commercial notions of leadership and tighter controls based on a performative and evaluative culture. At any rate, ERA and its predecessors in the United Kingdom are influencing the way in which researchers
respond to the performance evaluation and quality assessment demands of the research context. ERA initially replaced the earlier Research Quality Framework (RQF), which was closely modelled on the Research Assessment Exercise in the United Kingdom (UK-RAE), now succeeded by the Research Excellence Framework (REF). New Zealand has a similar assessment process, called the New Zealand Performance Based Review Fund (PBRF). These exercises have been highly controversial and initially garnered considerable criticism. For example, it was suggested the UK-RAE, introduced in 1986, undermined university autonomy, downgraded teaching, undervalued clinical academics and programs, and led to academic “games playing” (Shewan & Coates, 2006, p. 463). However, the UK-RAE and its successor, the REF, at least rejected the metrics approach to measuring quality of research outputs by publication outlet or citation indices from the outset in most social sciences including social work, opting to assess research quality through a process of expert peer review, instead (Higher Education Funding Council for England, 2009). Australia’s ERA has now followed suit, in response to substantial criticisms incurred during its early implementation. For instance, concerns were raised by academics that the journal rankings would be used to inform university hiring and promotion decisions, and determine areas for expansion or closure (Bloch, 2010). In general, ERA was accepted more readily in the applied and natural sciences than in the social sciences and humanities (Scott, 2009), where the strong focus on citation rates to measure research quality was perceived as a disadvantage. A report by the Australian Council for the Humanities, Arts and Social Sciences (2005) stated “standard bibliometric practices do not capture the variety of research outputs (for instance books, documentaries, policy reports) in the humanities and social sciences” (p. 28). Consequently, instead of sharing their ideas with communities of interest, humanities and social science scholars were producing the kind
of knowledge they thought highly-rated journals wanted (Redden, 2008), or risk missing out on funding.

Based on evaluation and feedback of ERA in 2010, a number of changes to the initiative were announced for the second, 2012, round. These focused mainly on empowering ARC evaluation committee members to use their expert judgement to take account of the quality of journals in the context of each discipline. In this way, ERA could cater better for research produced in the creative arts and humanities. The journal rankings of A*, A, B, and C were also removed. While this may ensure more flexibility in assessments of journal quality, it may lead to further controversy as researchers dispute decisions made by evaluation committee members. An additional criticism of the 2012 draft guidelines for ERA was that they did not refer to measuring the relevance or impact of academic research on society, including professions (Guthrie, 2011). Guthrie (2011) argued “we need collaboration between policy, practice and academia, with defined roles and responsibilities agreed … [so] all parties are on the same page and the end result is clear” (p. 1).

However, as already noted, research impact is not necessarily a sign of quality. As the UK Social Care Institute for Excellence (SCIE) stated, research “may be badly collected or recorded, make unjustified claims or ignore evidence from other sources” (Pawson et al., 2005, p. 1). On the other hand, SCIE proposed a framework for analysing the quality of knowledge in social care in which it presents utility and accessibility of knowledge as two among six key criteria for assessing the quality of social care knowledge. This suggests that, while the relevance or utility of research should not be the only criteria used for judging its quality, these factors should form an important part of decision-making relating to research quality. Thus, despite the improvements to ERA brought about by feedback and evaluation, controversy
surrounding this initiative is likely to remain. It is within this broader context that research is undertaken within Australia.

**Origins and Development of the Knowledge Utilisation Field**

While the origins of the study of knowledge utilisation have been traced back to the ancient Greeks, most scholars view it as stemming from Gabriel Tarde’s innovation diffusion studies more than a century ago (Estabrooks et al., 2008). In a comprehensive co-citation analysis of 5,278 knowledge utilisation articles published between 1945 and 2004, Estabrooks et al. (2008) found the broad knowledge utilisation field began in rural sociology, with studies of diffusion of agricultural innovation, in particular with Ryan and Gross’ hybrid corn study of 1943. Since then, there has been considerable advancement in the field and a range of distinct domains of specialised activity has emerged (Dobbins, Rosenbaum, Plews, Law, & Fysh, 2007; Estabrooks et al., 2008). Until the mid-1980s, the main domains were technology transfer, innovation diffusion, and knowledge utilisation in a wide variety of disciplines, including economics, information science, sociology, management, and geography, which featured mainly in social science journals (Estabrooks et al., 2008). By 1979, the field of knowledge utilisation had become unified enough to justify the development of a specialist journal *Knowledge: Creation, Diffusion, Utilisation*, which later became *Science Communication*. From the mid-1980s, a new domain – evidence-based medicine (EBM) – appeared and began to grow rapidly (Estabrooks et al., 2008). Simultaneously, the *Journal of the American Medical Association* emerged as a core journal. Between 1995 and 2004, the most prolific journals were health journals (Estabrooks et al., 2008). Currently, the most prolific journal in the field is *Evidence & Policy: Journal of Research, Debate and Practice*. The dominance of these journals reflected the growing influence of evidence-based medicine in the knowledge utilisation field.
The emergence of EBM—and its permutations including evidence-based policy, evidence-based practice, evidence-based guidelines, and evidence-informed, evidence-aware, and evidence-influenced policy and practice to name but a few—fitted well with new public management embraced by neoliberal governments with their focus on accountability, efficiency, and cost effectiveness (Estabrooks et al., 2008) or “the three e’s”—economy, efficiency, and effectiveness—to which Trinder and Reynolds (2000) referred. EBM was made possible by, and drew effectively from, the sub-domains of knowledge utilisation, technology transfer, and innovation diffusion (Estabrooks et al., 2008), though it added its own unique emphasis on knowledge hierarchies and active dissemination “in which spread occurs purposefully through centralised and formal efforts” (Yuan, Nembhard, Stern, Brush, Krumholz, & Bradley, 2010, p. 2).

EBM, in turn, spawned evidence-based practice in other disciplines and professions, like social work, where its highly prescriptive orientation represented “a new epistemic culture of knowledge production” (Gray et al., 2009, p. 17), one standing in stark contrast to the “postmodern ‘anything goes’ narrative and the ‘anti-science’ onslaught of critical theory” (Gray et al., 2009, p. xv). In evidence-based practice, research is traditionally ranked according to hierarchies of evidence with the core focus being intervention effectiveness. Consequently, systematic reviews at the top of the hierarchy, followed next by randomised controlled trials (RCTs), are viewed as providing the highest levels or gold standard of evidence (Evans, 2003; Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996), while qualitative participatory action research resides at the bottom (Glasby & Beresford, 2006). In a strict application of this evidence hierarchy, studies with “greater potential internal validity” (Thyer & Myers, 2010, p. 12)—systematic reviews and RCTs—are considered to be “higher forms of evidence [and] are accorded greater weight” (Thyer & Myers, 2010, p. 12). However, as Webb (2002) noted, differences within the evidence-based movement about what counts
as evidence are beginning to emerge. For example, Trinder and Reynolds (2000) usefully distinguished between the experimental and pragmatic approaches to evidence-based practice in social work. Proponents of the pragmatic approach argue that the strict adoption of RCTs as the gold standard for EBP is inappropriate to the kinds of social and emotional problems faced by social work (Webb, 2002; 2001).

Although highly contested and the subject of ongoing debate, EBM and its offspring, including evidence-based practice, has become the dominant domain within the knowledge utilisation field (Estabrooks et al., 2008), influencing a range of disciplines, including education, medicine, public management, criminology, developmental studies, and social work (Gray et al., 2009).

Evidence-based Practice and Knowledge Utilisation

A review of the literature showed evidence-based practice and knowledge utilisation were often viewed as synonymous. This may be because both are essentially concerned with translating research into policy and practice. Evidence-based practice’s central focus on research methodology closely resembles the engineering model of knowledge utilisation (also called the science-push, technology-pull, or demand-pull models), which views the methodological quality of research as pivotal to utilisation and emphasises the objective value of scientific research (Gano, Crowley, & Guston, 2006). This significant, if not exclusive, focus on methodological rigour and accuracy has been referred to as “inner-science” (Shaw & Norton, 2008, p. 961), which can be differently appraised in terms of varying paradigms. It is distinct from “outer-science” (p. 961), which focuses on research utility and its value to the communities it is intended to serve—the perceived public good. In recent years, knowledge utilisation has moved away from engineering or inner science to the interaction model, following limited evidence of uptake arising from the methodological characteristics of research (Oh, 1997). Rather, knowledge utilisation is increasingly seen to depend on the relationships
and interaction between researchers and users, and this collaborative research is assumed more likely to lead to the production of relevant, useable knowledge. Ergo, co-produced knowledge is believed to result in a greater likelihood of use or application. Still in evidence-based practice outer science tends to be overshadowed by inner science and problems arise in how research is translated to practice.

But not all proponents of evidence-based practice endorse strict adherence to the evidence hierarchy and even its strongest advocates in social work acknowledge reliance on the best available evidence (Thyer & Myers, 2010). Others are concerned with outer as well as inner science and, at least to some degree, rate utility and relevance to context, as highly as methodological rigour. Pawson’s (2006) objections to systematic reviews are based on their tendency to decontextualise and dismiss poor quality research which might still contain elements of good evidence.

Evans (2003) questioned the predominant focus of evidence hierarchies on effectiveness, arguing “it is also important to know whether the intervention is appropriate for its recipient … the impact it would have on an organisation or provider, and the resources required to ensure its successful implementation” (p. 79). Similar to issues with knowledge utilisation, these comments reflect a concern with the utility and relevance of research for practice. Meanwhile, Thyer and Myers (2010) argued that, while one element of research quality is its relevance for practice, the issue of its applicability is a separate matter. Relevant research might be produced that is not applied to practice. This is where the difference between evidence-based practice and knowledge utilisation becomes apparent. Evidence-based practice, as espoused by Thyer and his colleagues, is primarily concerned with drawing on the best available evidence, judged according to methodological rigour (using particular paradigm specific notions of what counts as rigour) to ensure that interventions are based on sound research of proven effectiveness. Knowledge utilisation, on the other hand, is more
concerned with facilitating research use per se, rather than with the quality of the research to be applied.

Evidence-based practice and knowledge utilisation thus share a fundamental concern with research-informed practice but differ on their concern with the application of research. Knowledge utilisation focuses more heavily on applicability, while evidence-based practice emphasises the methodology and rigour of research to be applied. Comparison between these sub-domains is made more complicated when individual scholars place different emphases on the relative importance of various features, such as epistemology, rigour, relevance, and applicability.

Figure 1: Knowledge utilisation and evidence-based practice continuum

In Figure 1, rigour, relevance, and applicability are placed on a continuum, with evidence-based practice situated on one end and knowledge utilisation on the other. Individual proponents of each sub-domain (represented by the ‘Ps’) can be situated on this continuum depending on the importance placed on these qualities. The extent to which the perspectives of scholars in each sub-domain overlap determines the degree to which knowledge utilisation and evidence-based practice can be seen to correspond at any given time. Thus, if one were to compare the perspectives of P3 and P6, one might conclude evidence-based practice and knowledge utilisation were similar. On the other hand, if one were to compare P1 and P6 one might think they were vastly different.

In recent years, knowledge utilisation has begun to focus increasingly on the socio-organisational determinants of research use that stress “the importance of
communication between and among groups” (Gano et al., 2006, p. 39). It has shifted its focus “from researcher-as-disseminator to practitioner-as-learner” (Nutley et al., 2003, p. 133) with terms such as exchange, sharing, and translation reflecting recognition of the reciprocity between researchers and users for effective knowledge use (Armstrong, Waters, Roberts, Oliver, & Popay, 2006).

Implementation has also become an important issue in evidence-based practice but since it assumes a linear movement of research to practice, where researchers send evidence to practitioners, problems of research transfer confronted evidence-based practice advocates. Evidence-based practice relies on practitioners possessing the necessary skills to critically appraise and apply research evidence, albeit within the integrative process of factoring in client preferences and values, clinical expertise, professional ethics, and situational circumstances (Thyer & Myers, 2010). Johansson (2010) describes how this creates an unequal relationship between those who produce and send evidence and those who receive and implement it:

Evidence-based practices and programs are often based on intervention research, developed in clinical environments, and evaluated in the scientific community. These practices and programs are then standardised and sometimes certified by public authorities. Finally, the practices and programs reach agencies and organisations where staff [members] belonging to different professions are supposed to adhere to the practices and programs and change their behaviour in order to improve their services to patients and clients. The source is thus researchers and other knowledge producers and the final destination is human services staff. The receivers are supposed to comply with the guidelines and should not add or deduct anything to or from these. The relationship is thus not equal; the sender is superior to the receiver (p. 120).

Although many evidence-based practice supporters present it as a ‘bottom-up’ process that enhances service-users’ ability to make informed choices, Johansson (2010)
shows how evidence-based practice can become an authoritative medium in which empirical findings are supplied to practitioners and service users in a ‘top down’ way and where it is assumed that practitioners have the resources, knowledge, and will to cooperate and comply with the evidence-based practice process. Empirically supported interventions (ESIs) are an example of this type of application of evidence in practice (Gray et al., 2009). ESIs have been defined as the selection and implementation of scientifically validated therapeutic interventions (McBeath, Briggs, & Aisenberg, 2010). Over the past decade, ESI approaches have risen in popularity in the human services field under the expectation that service delivery through such interventions would lead to improved cost-effectiveness and system performance (Gambrill, 2006). In fact, McBeath et al. (2010) voiced concerns that, while other evidence-based models (Gambrill, 2005; Gibbs, 2003; Thyer & Myers, 2010) have been proposed, in the future they might be crowded out by the ESI approach. In such a scenario, practitioners might be required to select and implement programs that meet the strict criteria of ESIs.

Thus, although evidence-based practice has begun to focus concertedly on implementation, it is moving in a slightly different direction to knowledge utilisation, which advocates collaboration and exchange between knowledge producers and users, while evidence-based practice continues to maintain a greater separation between knowledge producers and receivers, opting instead for larger-scale, macro level implementation via social policy.

**Theories and Models of Knowledge Utilisation**

A range of theories and models has been developed to explain the process of research use. A review of the knowledge transfer literature identified 28 models which explained all or part of the knowledge transfer process (Ward, House, & Hamer, 2009). A review of the literature completed as part the broader study on knowledge production, within which this study is located, revealed 53 different models of knowledge production and
translation (Gray & Schubert, 2012; Gray, Schubert, & Heinsch, 2012). However, despite concerted efforts by researchers to build conceptual models of utilisation, no overarching theory has yet been developed (Belkhodja et al., 2007; Estabrooks, et al., 2006). Estabrooks et al. (2008) found certain theories have represented dominant paradigms in the field at certain times. For example, between 1945 and the mid-1980s, Everett Rogers’ general diffusion model was the dominant model, while from the mid-1980s to date, evidence-based medicine emerged as the central perspective in the health field. Nonetheless, there continues to be a lack of theory development about the knowledge utilisation process, suggesting “models may be too grand a term for much of what has been written in this area” (Nutley et al., 2003, p. 132). Estabrooks and Wallin (2004) found many studies of utilisation in the health field did not explicitly apply a theoretical framework. This atheoreticism has led to a technical rather than a critically reflective or creative approach to dealing with complex problems.

Attempts to solve the utilisation problem through technical means have resulted in the identification of an extensive array of variables for effective knowledge utilisation (Chagnon et al., 2010). Rather than formal heuristic devices, these variables have more of a list (Landry, Lamari, & Amara, 2003) or ‘cookbook-like’ content and form (Jacobson, 2007, p. 119). Landry et al. (2003) attempted to make sense of the abundance of factors affecting use by grouping them into two overarching explanatory frameworks: The engineering and socio-organisational models. The engineering model depicts research as moving into practice by virtue of its technical qualities (Gano et al., 2006). It sees the progress of knowledge from production to application as a linear process referred to as a science-push or technology-push solution (Landry et al., 2003). In this way, it is more akin to the assumptions of evidence-based practice. The socio-organisational model depicts the “social aspects of knowledge transactions” (Gano et al., 2006, p. 42), such as linkages and interactions between researchers and users, as the
most important factors influencing knowledge utilisation. This model can be subdivided further into three categories: interactional, two communities, and organisational learning.

Rogers (2003) suggested another framework for examining the multiple factors determining utilisation. He summarised variables into four overarching categories: “(1) characteristics of the individual (i.e., the practitioner), (2) characteristics of the organisation, (3) characteristics of the innovation itself (i.e., the research), and (4) the nature of the communication (i.e., how the research is communicated)” (p. 298).

Table 1 shows a comprehensive list of facilitators and barriers to research use identified in the literature review, based on Rogers’ categories. A fourth category—contextual factors—was added to account for the impact of broader societal factors on knowledge use, such as economic theory, political ideology, public preferences, and political expediency (Holzer et al., 2007). Holzner et al. (2007) argued “the influence of the broader social, institutional and political contexts” (p. 2) is often understated in the knowledge utilisation literature. Similarly, Brown (2012) suggested that knowledge utilisation models often fail to address the complexities affecting knowledge utilisation efforts. Holzer and colleagues therefore developed the ‘Cultures in Context Model’ to recognise and include broader contextual factors. Holzer et al.’s (2007) model is based on an ecological framework, which asserts that “person and environment are engaged in constant exchanges in which each is reciprocally shaping and influencing the other” (p. 58). This theory represents a useful lens through which to view knowledge utilisation, as it emphasises the potential of a whole range of broader environmental factors to influence knowledge utilisation. Given the lack of a commonly accepted, overarching model of knowledge utilisation, a synthesis of the central models and theories identified by the literature review was conducted, including an examination of common factors which might be integrated and compatible, and those which might not.
<table>
<thead>
<tr>
<th>Factor</th>
<th>Barrier</th>
<th>Facilitator</th>
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<tbody>
<tr>
<td>Organisational</td>
<td>Time</td>
<td>Providing scheduled time for reading and discussing research with colleagues (Humphries et al., 2000; Morago, 2010)</td>
</tr>
<tr>
<td></td>
<td>Insufficient time on the job to implement new ideas and read new research (Kajermo et al., 2010)</td>
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</tr>
<tr>
<td></td>
<td>High work load reduces the time to read and discuss research (Holzer et al., 2007)</td>
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<tr>
<td></td>
<td>Lack of autonomy and authority to implement research results (Kajermo et al., 2010)</td>
<td>More senior positions provide autonomy, influence, and the capacity to make changes to practice (Holzer et al., 2007)</td>
</tr>
<tr>
<td>Support</td>
<td>Lack of support by management for implementing research (McCleary &amp; Brown, 2003)</td>
<td>Research is formally recognised as a priority area within an organisation (Holzer et al., 2007)</td>
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<td></td>
<td></td>
<td>Willingness to change practices and address resource and operational barriers directly (McFarlane et al., 2001)</td>
</tr>
<tr>
<td>Training</td>
<td>Lack of information and training (Morago, 2010)</td>
<td>In-service training on research methods and skills, locating appropriate literature, and how to promote evidence-based practice and use research in practice (Humphries et al., 2000)</td>
</tr>
<tr>
<td>Incentives and Rewards</td>
<td>Academic reward and incentive system continues to support traditional dissemination activities via academic publications and there is a lack of administrative support and other resources for knowledge transfer activities and collaboration (Estabrooks et al., 2008; Jacobson et al., 2004)</td>
<td>Access to libraries or databases (Barratt, 2003; Plath, 2006), departmental libraries, and research departments are important factors aiding research use (Holzer et al., 2007)</td>
</tr>
<tr>
<td>Access</td>
<td>Lack of access to research (Dobbins et al., 2007; Plath, 2006)</td>
<td>Access to libraries or databases (Barratt, 2003; Plath, 2006), departmental libraries, and research departments are important factors aiding research use (Holzer et al., 2007)</td>
</tr>
<tr>
<td>Resources and Funding</td>
<td>Lack of resources to implement research (Drummond et al., 1997)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inability to afford journal subscriptions or to obtain funds and/or time release to attend conferences, workshops, and training sessions (Holzer et al., 2007)</td>
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<tr>
<td>Leadership</td>
<td>Armstrong et al. (2007) described a model of knowledge translation that “operationalised through a ‘knowledge broker’” (p. 258), that is, a person who supports the implementation of evidence into policy and practice. Leadership in the form of a designated manager or champion (Levin, Cooper, Arjomand &amp; Thompson, 2011; Morago, 2010; Phipps &amp; Shapson, 2009).</td>
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<tr>
<td>Culture</td>
<td>The main barriers to knowledge use in the public sector are not at the level of individual resistance but lie in an institutionalised culture that does not foster learning (Louis, 1996). Research is likely to be stronger where it is supported by a culture that values and encourages research (Levin et al., 2011).</td>
<td></td>
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<tr>
<td>Research</td>
<td>The main barriers to knowledge use in the public sector are not at the level of individual resistance but lie in an institutionalised culture that does not foster learning (Louis, 1996). Research is likely to be stronger where it is supported by a culture that values and encourages research (Levin et al., 2011).</td>
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</tr>
<tr>
<td>Volume</td>
<td>High volume of information (Holzer et al., 2007)</td>
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<tr>
<td>Relevance</td>
<td>Length of time between when research is conducted and reported (Bulmer, in Sin, 2008) Lack of generalisability of research to practice context (Carrion et al., 2004 cited in Osterling &amp; Austin, 2008) Implications of research for practice are not made clear (Dal Santo et al., 2002; McCleary &amp; Brown, 2003) Conducting research that incorporates the realities of the local practice settings (Kajermo et al., 1998) Making useable recommendations for policy and practice (Dobbins et al., 2004; Cooper, Arjomand &amp; Thompson, 2011) Conducting research on practice-relevant issues as professionals “choose the sources of information that are most applicable to the problem” (Hemsley-Brown &amp; Sharp, 2003).</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Research that is too theoretical has been reported to inhibit use (Holzer et al., 2007) Proponents of the engineering model predict quantitative and theoretical research is more likely to be used (Landry et al., 2003) Use of systematic reviews has been found to be high since they negated the need for advanced critical appraisal skills by users (Dobbins et al., 2001).</td>
<td></td>
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<tr>
<td>Source</td>
<td>The publication of research findings in traditional research journals, which practitioners typically did not view as useful sources of knowledge (Holzer et al., 2007) Competing sources of information and influence have been identified as a barrier to using research (Holzer et al., 2007)</td>
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<tr>
<td>Timeliness</td>
<td>Lack of timeliness of research outputs (Bulmer, in Sin, 2008)</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>Poor quality of research (Innvaer Vist, Trommald, &amp; Oxman, 2002; Plath, 2006)</td>
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</tr>
<tr>
<td>Communication Power</td>
<td>Rigorous methodological design (Dobbins et al., 2007)</td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>Power dynamics between researchers and practitioners (Petticrew, Whitehead, &amp; Macintyre, 2004)</td>
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</tr>
<tr>
<td>Technology</td>
<td>Absence of personal contact between researchers and policy-makers and practitioners</td>
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<tr>
<td>Individual</td>
<td>Currently, a recurring theme in the literature is the importance of encouraging the development of partnerships and linkages between researchers and users as a means of promoting research use (Chagnon et al., 2010; Huberman, 1990; Nutley et al., 2003).</td>
<td></td>
</tr>
<tr>
<td>Isolation</td>
<td>Lacking computer skills (Savory, 2009) or access to the Internet and email facilities (Holzer et al., 2007) Technology challenges provide barriers to transmission and communication across global boundaries (Allen-Mears et al., 2005)</td>
<td></td>
</tr>
<tr>
<td>Expertise</td>
<td>Isolation from knowledgeable colleagues with whom to discuss research (Kajermo et al., 1998)</td>
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</tr>
<tr>
<td></td>
<td>Background in research (Kajermo et al., 1998; Estabrooks et al., 2003) Rigorously conducted systematic reviews can overcome these challenges by providing decision makers with a synthesis of all of the best available research evidence</td>
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</table>
(Dobbins et al., 2004)
Higher education level (Michel & Sneed, 1995) and other socioeconomic factors (Estabrooks et al., 2003)
Number of in-service trainings attended (Estabrooks, 1999)
More teaching of evidence-based practice at university (Morago, 2010)

<table>
<thead>
<tr>
<th>Awareness</th>
<th>Not being aware of research (Carroll et al., 1997)</th>
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<tr>
<td>Attitude / disposition</td>
<td>Previous unsatisfactory research experiences (e.g., while studying) (Holzer et al., 2007)</td>
</tr>
<tr>
<td>Language</td>
<td>Not speaking English as a first language (Powell, 2006)</td>
</tr>
<tr>
<td>Contextual</td>
<td>Political ideology</td>
</tr>
<tr>
<td>Professional standards</td>
<td>In Australia and the UK professional practice standards for both social work and education do not mention the need to use research to inform decision making, reflecting a broader lack of expectation of professionals to use research</td>
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</table>
Table 2 shows that the theories and models of knowledge utilisation were organised into two overarching categories: (i) Linear and (ii) interaction. The term ‘interaction model’ in this study was used as an overarching category incorporating a range of related conceptualisations. The models and theories in each column were shaded according to their level of complexity; those at the top of the left hand column remained unshaded because they infer a clear separation between research and practice and depict practitioners as passive recipients of research, while those at the bottom of the right hand column were darkly shaded because they characterise research utilisation as resulting from intense interconnections between research and a range of social systems. Thus, there are a large number of models and theories for knowledge utilisation, with varying levels of complexity and interconnection between research and practice. However, many of these models remain untested and their applicability and relevance is therefore largely unknown (Ward et al., 2009), hence the urgent need to establish the effectiveness of knowledge utilisation models in a range of contexts (Armstrong et al., 2006). While the focus of the present study was on exploring the applicability of the interaction model of research use in social work, the results of the study were also compared to the key models and theories described above to determine their potential effectiveness for enhancing research use in social work.

**Measuring Knowledge Utilisation**

While previous studies have tended to focus on identifying and measuring instrumental use only, more recent studies begin with the awareness that research can be used in different ways by different actors. Studies which take a broader perspective on research use have tended to find more evidence of utilisation than studies with a narrow focus on transferring a “tangible technological product” (Landry, Amara, & Ouimet, 2007, p. 566).
Table 2: Synthesis of central models and theories of knowledge utilisation

<table>
<thead>
<tr>
<th>Linear</th>
<th>Interaction</th>
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<tr>
<td>Linear models are characterised by the unidirectional, linear movement of research from the context of production to the context of application. Research is either pushed into practice through persuasion or endorsement, or pulled into practice to aid decision making and meet demand.</td>
<td>Interaction models are characterised as dynamic, interactive and ongoing, involving many different actors and activities. Individual components of these models are not linked in a linear fashion, but can occur simultaneously or in different sequences.</td>
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<th>Transfer</th>
<th>Translation</th>
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<tr>
<td>Central to the transfer model is the understanding that science and practice are two separate spheres or systems and that the dividing line between these spheres can be transcended in the form of a transfer, whereby knowledge moves from the context of application to the context of utilisation. Transfer models have a stronger focus on the dissemination and diffusion of information than on its use of that information (Gredig &amp; Sommerfeld, 2008).</td>
<td>Translational models emphasise involvement of multiple constituents—i.e., consumers, researchers, practitioners and policy makers—within the research pipeline as a means of converting basic knowledge into practical applications (Hudgins &amp; Allen-Meares, 2000). The goal of knowledge translation is seen as utilisation, rather than simply the creation and dissemination of evidence (Bowen &amp; Martens, 2005, p. 204 emphasis in original). However, translational models still view research and practice as essentially separate spheres between which a translational ‘bridge’ must be forged (Allen-Meares et al., 2005).</td>
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<tr>
<th>Dissemination and diffusion</th>
<th>Linkage and exchange</th>
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<td>While addressing dissemination and diffusion as social processes, these models generally lack emphasis on the development, quality, uptake or complexities of knowledge utilisation, instead focusing on the endorsement of knowledge products (Graham et al., 2006; Rogers, 1991). Common to most of these models is the assumption that knowledge production and utilisation proceed in stages. The first stage, in which knowledge is created, is the domain of the researcher. In the second stage—dissemination or persuasion—the researcher tries through various means to capture the attention of a seemingly passive decision maker in order to translate the results of research into practice more or less automatically (Reimers &amp; McGinn, 1997, p. 71).</td>
<td>Linkage and exchange models describe the process by which researchers and decision makers interact and share expertise and knowledge for a specific purpose. In this way, mutual learning is achieved through a process of planning, producing, disseminating, and applying existing or new research in decision-making (Bowen &amp; Martens, 2005).</td>
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<th>Engineering</th>
<th>Socio-organisational</th>
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| Holds that utilisation will occur when the imperatives of technical advancement are too great to ignore. There is, in a sense, a knowledge-push behind the spread of a particular idea beyond the confines of its original domain. The engineering perspective views the value of research to its consumers as lodged in its apparent objective and unbiased nature (Gano et al., 2006). | Maintains that what matters most in promoting utilisation is not so much the research behind a particular idea, but the existence of linkages that foster interaction between researchers and users. Interpersonal contacts and ease of communication between individuals from different backgrounds and between organisations and groups with different goals are seen as the primary drivers behind informational exchange (Gano et
Evidence-based practice
Defined as “the conscientious and judicious use of current best evidence in conjunction with clinical expertise and patient values to guide health care decisions” (Titler, 2008, p. 1). While akin to both the engineering and problem solving models, evidence-based practice has a stronger focus on the quality of research evidence with its emphasis on methodological soundness of research and hierarchies of evidence.

Problem-solving
Involves the direct application of the results of a specific research study to a pending decision. Here the decision drives the application of research. In this model there are two ways research enters the policy making process—research that already exists is drawn upon according to need (in which there is an element of chance in moving from problem to decision—or—the research is commissioned to fill a knowledge gap (Weiss, 1979).

Hybridisation
Refers to processes in which professional knowledge is specifically combined with other forms of knowledge and acquired by professionals in a circular process of pattern formation and pattern recognition in action. This pattern formation does not happen in a vacuum, but is a deeply social process (Gredig & Sommerfeld, 2008).
Using the popular Knott and Wildavsky scale (1980), in which utilisation is defined on a continuum ranging from the receipt of knowledge to application, Landry et al. (2001) found research was “more extensively used than commonly assumed” (p. 345). Similarly, studies which have defined utilisation more broadly as including conceptual, symbolic, and instrumental research use have found evidence of all three forms of use (see for example, De Goede, Bon-Martens, Mathijssen, Putters, & Oers, 2012; Ginsburg, Lewis, Zackheim, & Casebeer, 2007; Wallin, Gustavsson, Ehrenberg, & Rudman, 2012). This suggests that the extent of research use may be higher than previously thought. In contrast, studies of evidence-based practice widely agree that “health policies do not reflect research evidence” (Hanney et al., 2003, p. 2). Hanney et al. (2003) believe this is because evidence-based practice has a much more narrow focus on the direct, instrumental use of research. According to Nutley et al. (2003), there are far more grounds for optimism when research utilisation is defined more broadly than the “direct translation of changes into practice” (p. 130).

Although theoretical and empirical contributions to knowledge utilisation are accumulating, the impression persists that there is a dearth of empirical studies examining research use. A recent study examining empirical evidence on the effectiveness of research utilisation strategies found that, of the 106 publications identified, 59 were descriptive, examining policy makers’ perceptions about what strategies might lead to research use, and only five studies tested the efficacy or effectiveness of an intervention designed to increase research use (Moore, Redman, Haines and Todd, 2011). The authors highlighted the urgent need for further research to evaluate the impact of strategies designed to increase the use of research in policy. However, Landry et al. (2001) argued that excellent exemplar empirical studies were more abundant than critics realised, suggesting that these studies were not very visible because they were scattered through the journals of many diverse disciplines. Similarly,
Cooper and Levin (2010) noted that knowledge utilisation was a challenging area to study because much of it occurred across different sectors, disciplines, and counties and efforts often failed to integrate and build on one another’s work. Consequently, “the proverbial wheel is continually reinvented as researchers conduct similar studies … instead of learning from each others’ failures and successes” (Cooper & Levin, 2010, p. 353).

Although studies are beginning to find evidence of research use, their results often differ. In a study of research use by health officials, De Goede et al. (2012) found that conceptual use was more common than instrumental research. Conversely, in a longitudinal study of research use by graduate nurses, Wallin et al. (2012) found that instrumental use of research was most frequently reported, followed closely by conceptual use, and to a considerably lesser extent, political use. Finally, Ginsburg et al.’s (2007) study of research use in health identified higher rates of conceptual and symbolic than instrumental use. This suggests either that: (i) it is not possible to identify common factors facilitating research use, even across similar contexts; or (ii) the different factors used to measure research use in these studies resulted in very different findings. As Moore et al. (2011) suggested, it seems likely that the processes that govern the decisions of practitioners will be different to those that determine policy development, “which include the need to pay attention to community, political, resource and other considerations” (p. 278). This highlights the importance of developing a sophisticated measure of research use, with the ability to capture complexity of the different types of research use.

The lack of definitional and conceptual clarity in the knowledge utilisation literature presents “one of the major obstacles to establishing a sound measure of research use” (Estabrooks & Wallin, 2004, p. 7). Although some measures have been validated and applied several times, the most widely used approach is to design a new
measure with little attention to “standard psychometric methods or to post-use evaluation of the measure’s performance” (Estabrooks & Wallin, 2004, p. 7). For several authors, developing a reliable measure of utilisation would facilitate meaningful comparisons of results (Estabrooks & Wallin, 2004; Hanney et al., 2003). Until then, the ability to determine factors that may affect knowledge utilisation remains questionable (Estabrooks, Wallin, & Milner, 2004).

A number of studies have examined the knowledge utilisation literature to review appropriate methods for the assessment and measurement of utilisation. In 2002, the first systematic review of research utilisation in policy making included 24 studies, where the predominant method used was face-to-face interviews (Innvaer et al., 2002). Estabrooks and Wallin’s (2004) systematic review of knowledge utilisation in nursing found self-report surveys were commonly used, while scholars in non-nursing fields mainly used qualitative approaches. Hanney et al.’s (2003) review of methods of assessing health research utilisation in policy, found in-depth interviews and documentary analysis were the two main methods used. They showed in-depth interviews were widely accepted as the most appropriate way of measuring utilisation “when there is a need to unravel situations with diverse layers and subtle nuances” (p. 21), but questionnaires and surveys could also have a role in obtaining a wider range of responses.

The wide use of self-report surveys by investigators in the knowledge utilisation field (Estabrooks & Wallin, 2004; Estabrooks, Floyd, Scott-Findlay, O’Leary, & Gushta, 2003) is problematic since “self-report measures represent a potentially serious threat to construct validity” (Estabrooks et al., 2003, p. 509) due to a “lack of operational precision” (Bozeman & Corley, 2004, p. 600). Respondents in self-report studies have been found to overestimate their use of research (Dobbins et al., 2007) as a result of social desirability bias (Lavis, Robertson, Woodside, McLeod, & Abelson,
2003). According to Buchman (1985), people whose lives are occupied with the creation of knowledge will feel that knowledge is important; if they live in a culture in which utility seems the end toward which everything gravitates, they will tend to present their knowledge as useful, regardless of its utility.

Drummond, Cooke, and Walley (1997) investigated the problem of inaccurate responses by asking policy makers to select research with which they were familiar and which had influenced them from a list of studies to which the researchers had added two fictitious papers. Almost 20% believed they had seen the fictitious studies and some claimed to have been influenced by them (Drummond et al., 1997).

Some researchers have attempted to minimise this inaccuracy by combining self-report measures with direct observation, assuring respondents of the anonymity and confidentiality of their responses, and asking them to provide details of specific instances when research was used (Dobbins et al., 2007). Another approach used by Molas-Gallart, Tang, and Morrow (2000) was to map the networks of researchers and users via a ‘snowball’ sampling method by asking project investigators to provide names of potential non-academic users of their research, revealing the ‘flow’ of research across academic and non-academic communities. Others have argued, regardless of whether responses were accurate, or due to social desirability bias, they nonetheless highlighted areas most in need of greater research utilisation (Lavis et al., 2003). Thus, even if responses were to reflect a social desirability bias they would indicate, at the very least, respondents’ awareness of what the literature suggested they ought to be doing (Lavis et al., 2003). The tendency of professionals to overestimate research use is also likely to be a problem in cases where researchers are asked to report on the extent to which their own research is applied.

Landry et al. (2001) examined the utilisation of social science research in Canada and found a much higher rate of use than would commonly be assumed.
However, the authors did not consider the possibility of respondents, all of whom were university researchers, overestimating the degree to which their research was used. On the other hand, researchers might simply not know whether or not their research had been used, which might lead them to underestimate the use of their research. Therefore, self-report measures of research use should arguably provide an option for researchers to indicate that they did not know whether their research had been used.

A further issue, highlighted by Molas-Gallart et al.’s (2000) research, is that a very small percentage of research outputs account for most of the impact, while a large proportion of efforts has little or no impact. They pointed towards research conducted as early as the 1960s, which found that, of 70,000 research outputs in the USA, only 70 had significantly influenced practice and policy. They concluded that this called into question the adequacy of using standard sampling techniques to evaluate the outputs and impact of research on practice. For example, “if a few projects are responsible for most of the impact of a research programme, sampling could result in a misleading estimate of its impact, if significant projects are either left out of the sample or included” (Molas-Gallart et al., 2000, p. 172).

According to Estabrooks and Wallin (2004), developing a robust measure of utilisation would enable: (i) comparisons among groups, settings, and/or institutions; (ii) an important outcome measure for intervention studies; and (iii) accurate assessment of the impact of research use on outcomes. One frequently used and cited measure of knowledge utilisation is the Knott and Wildavsky (1980) scale. This comprises a seven-stage cumulative process involving “reception, cognition, reference, effort, adoption, implementation, and impact” (p. 546), with each stage progressively more important than the last. Landry et al. (2001) have repeatedly used a slightly modified version of this scale to measure utilisation to assess research use from the perspective of researchers rather than practitioners.
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<tbody>
<tr>
<td>1</td>
<td><em>Transmission</em>: I transmitted my research results to the practitioners and professionals concerned</td>
<td><em>Reception</em>: I received research pertinent to my work</td>
</tr>
<tr>
<td>2</td>
<td><em>Cognition</em>: My research reports were read and understood by the practitioners and professionals concerned</td>
<td><em>Cognition</em>: I read and understood the research I received</td>
</tr>
<tr>
<td>3</td>
<td><em>Reference</em>: My work has been cited as a reference in the reports, studies, and strategies of action elaborated by practitioners and professionals</td>
<td><em>Reference</em>: I cited research studies as references in my own professional reports or documents</td>
</tr>
<tr>
<td>4</td>
<td><em>Effort</em>: Efforts were made to adopt the results of my research by practitioners and professionals</td>
<td><em>Effort</em>: I made efforts to favour the use of research results</td>
</tr>
<tr>
<td>5</td>
<td><em>Influence</em>: My research results influenced the choice and decision of practitioners and professionals</td>
<td><em>Adoption</em>: The research results I adopted influenced my professional choices and decisions</td>
</tr>
<tr>
<td>6</td>
<td><em>Application</em>: My research findings have given rise to applications and developments by practitioners and professionals</td>
<td><em>Implementation</em>: I implemented the research results I adopted in my practice</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td><em>Impact</em>: The research results I implemented had a desired and tangible impact</td>
</tr>
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</table>

In their modified version, Landry et al. (2001) removed the final stage – impact, instead adding influence stage and amalgamating the stages of adoption and implementation into a single stage called application (as shown in Table 3). Since the three final stages of the original Knott and Wildavsky (1980) scale proved more difficult for researchers to identify, the modified version might be more appropriate for examining the views of this particular study population. Landry et al.’s (2001) modified scale has six stages of research utilisation, which are commonly viewed as cumulative, in the sense that cognition builds on transmission, reference on cognition, effort on reference, and influence on effort. Measuring research use across a spectrum in this way has enabled the identification of higher levels of utilisation than instruments which...
measure use as a single event (Cherney & McGee, 2011). For the purpose of investigating research utilisation, it enabled the identification of social researchers who moved up the scale and the exploration of the factors that may influence this process (Landry et al., 2001). Landry et al. (2001) noted that this scale overcame the shortcomings of other scales “too focused on instrumental use, too focused on particular uses, i.e., evaluation, or too much defined in terms of perceptions” (p. 336). Their revised scale measures instrumental and conceptual use, with instrumental use overlapping with the higher stages of implementation and impact, and conceptual use overlapping with the lower cognition and reference stages of the knowledge utilisation scale (De Goede, Putters, van der Grinten, & van Oers, 2010).

Criticisms of this model include the weighting given to instrumental over conceptual use and its heavy reliance on linear assumptions whereby all stages must occur in sequence with each deemed to be of equal importance (Davies et al., 2005). Hence cumulative impacts derived from the linear movement through the stages and similar effort was required to move across each stage (Davis et al., 2005). Cherney and McGee (2011) noted this was inaccurate since, as indicated in Landry et al.’s (2001) study, movement up the ladder of utilisation was influenced by investment in different activities promoting research use. While studies might point to the non-linear way in which research utilisation occurred, Cherney and McGee (2011) emphasised the analytical benefit in using the scale utilisation since “it enables one to identify those factors that explain why some researchers may succeed in moving through the various stages of knowledge utilisation, that is, what their distinguishable characteristics are” (p. 157). This had theoretical and practical implications for those wishing to understand activities that facilitated or impeded research use (Cherney & McGee, 2011).
Conclusion

This literature review found that the knowledge utilisation field was remarkably broad and multidisciplinary. The literature in this area was particularly difficult to consolidate due to a breadth of discipline-specific terminology, much of which remains undefined. Consequently, there is considerable variation between and among studies in the knowledge utilisation field, since a sound measure of research use is difficult to establish. To date, few studies have found strong evidence for the effectiveness of existing knowledge utilisation models. In fact, although numerous models and theories of knowledge use have been proposed, no overarching theory has yet been developed. The present study will contribute to theory and model development in the knowledge utilisation field by examining how researchers’ conceptualisations of research utilisation fit with existing models and theories of knowledge use. In particular, it will examine the effectiveness of interaction models of research use in the context of social work practice. To this end, the interaction model of research use is explored in more detail in the following chapter.
CHAPTER 3

Literature Review: Social Work and the Interaction Model of Research Use

This chapter examines the current state of research use in social work and how the interaction model of research utilisation might facilitate research use by social work practitioners. Thus, the topics covered are:

- Research utilisation in social work;
  - Barriers to research use by social workers;
  - Projects fostering research use in social work;
- A broader shift towards interaction;
- Interaction models of research use;
  - Effective interaction;
  - Challenges to effective interaction;
  - Responding to challenges;
- Social work and interaction; and
- Practitioner-researcher engagement in social work.

Research Utilisation in Social Work

Knowledge relevant for practice is central to the social work profession. The knowledge a profession uses to do its work are its defining characteristics. The knowledge used to accomplish the work of a profession is also what differentiates it from other professions and legitimises it (Marsh, 2002, p. 101)

There has been ongoing debate in social work as to what constitutes valid knowledge for practice (Gray & Schubert, 2012). A consistent theme is the value of practice-based knowledge, where professional action is guided by a form of knowledge different from the scientific. Discussions of practice wisdom (see, for example, Dybicz, 2004;
O’Sullivan, 2005; Tsang, 2008), tacit knowledge (see, for example, Osmond, 2006; Zeira & Rosen, 2000), and process knowledge (see, for example, Sheppard, 1998; Sheppard, Newstead, Di Caccavo, & Ryan, 2000; Sheppard & Ryan, 2003; White, 1997) are all common within the social work literature. Cha, Kuo, and Marsh (2006) also observed a growing professional interest in the relationship between research and practice. With approaches like evidence-based practice gaining momentum in Australia and internationally, pressure on social workers to use research evidence to inform their decision making is increasing, as government agencies and funding bodies demand more accountability, efficiency, and effectiveness in the provision of social services (Pope et al., 2011).

In some practice areas, social workers are more likely to be exposed to discourses on research and its use. For example, social workers in health are more exposed to evidence-based practice discourses due to their proximity to the medical professions, which currently produce the majority of research on this topic (Chagnon et al., 2010; Comino & Kemp, 2008). Emphasis on the need for research to support practice has also increased enormously in the field of mental health following recognition that practice decisions and treatments in mental health were often not based on sound research evidence (Bellamy, Bledsoe, & Traube, 2006; Proctor et al., 2009). Other fields of social work in which evidence-based practice has been adopted most enthusiastically include corrections, juvenile justice and child protection, where it has been promoted as the best response to manage risks to the populations in question and to the general community (McDonald, 2003). According to McDonald (2003), contemporary engagement with scientific research represents, in part, an enactment of beliefs about what the social work profession should do and be. For example, a publication by the Centre for Evidence-Based Social Care in the UK stated that “it is important that professionally qualified social workers base their practice on the best
Evidence of what works” and that social workers’ claim to authority resides in their claim to “expert knowledge” (Newman, 2002, p. 3).

Despite the recent movement towards greater research use in many areas of social work practice, driven in part by the evidence-based practice agenda, criticisms persist regarding the lack of research use in practice. While evidence describing effective interventions exists, there continues to be a lack of attention to knowledge utilisation processes or the ways in which research is translated to practice (Bellamy et al., 2006; Landry et al., 2001). Consequently, there is little clarity on how to achieve utilisation other than repeated statements about social work practitioners rarely basing their decisions on sound research (Osterling & Austin, 2008) or contributing to discourses surrounding knowledge creation and use (Trevithick, 2008).

Berman’s (1995) review of literature on knowledge transfer in social work found social workers underutilised research and theory, and did not do much of their own research in practice. In fact, the social work profession has been the slowest to generate and take up knowledge into evidence-based practice (Gray et al., 2009). A UK survey of 595 social care workers found that, although respondents showed an interest in acquiring knowledge and skills for evidence-based practice, their interest waned as topics became less focused on practical skills and more concerned with research methodology (Booth, Booth, & Falzon, 2003). Similarly, a survey of 407 readers of the US NASW journal Social Work, of whom 77% were practitioners, found respondents valued practically-focused knowledge over formal theoretical knowledge, although younger practitioners were more likely to express enthusiasm about the use of formal knowledge than older practitioners (Cha et al., 2006). Marsh (2002) noted that the debate on knowledge utilisation in the social work literature suggests that social work academics and researchers are surprised and discouraged that their preferred mode of knowledge dissemination via publication does not emerge as the preferred mode of
practitioners. She listed practitioners’ most trusted and valued sources of knowledge—in decreasing order of usefulness—as consultations with colleagues and supervisors, workshops on practice issues, theoretical books and papers, and empirical books and articles. These findings suggest a large proportion of social workers are not interested in research-based knowledge unless it is practically focused. However, the finding that younger practitioners valued formal knowledge more highly than older practitioners (Marsh, 2002) suggests the tide may be turning. For I. Butler (2003), a lack of research utilisation does not equate to a lack of interest in research. He claimed “it is difficult to remember a time when interest in social work research was so widespread, so urgent and so apparently full of possibilities” (p. 19). Given this apparent interest in research by social workers, why does research use remain so low?

**Barriers to Research Use in Social Work**

Many factors have been highlighted as barriers to research use in social work practice. Many of these overlap with the barriers described in Table 1 (pp. 39-42). For example, Morago (2010) identified lack of time, resources, information, and training as the main barriers to the effective implementation of research in the social services. In discussing the professional, organisational, and political contexts of social work practice, Plath (2006) highlighted three challenges to research use by social workers: (i) the limited amount of high-quality social work research to be drawn on; (ii) making research findings accessible for practitioners; and (iii) getting social workers to actually use findings. Of particular interest is that the Australian Association of Social Workers’ Code of Ethics (2010) makes no reference to the use of research by practitioners, reflecting a lack of expectation of social workers to use research to inform their practice.
Several authors have highlighted a lack of high-quality research in social work. A content analysis of *Australian Social Work* found most studies were relatively unsophisticated, with articles lacking detailed descriptions of the research approach, design, and methods of analysis (Ryan & Sheehan, 2009). Concerns have also been raised with the overall quality of mixed-method studies, which “too often displayed minimal levels of competence … in both approaches, as evidenced by the use of basic descriptive statistics only and often poorly described qualitative data analytic methods” (Ryan & Sheehan, 2009, p. 538). While social work usually claims to be better at qualitative research than quantitative, Rubin (2000) highlighted the low standard and lack of rigour in many qualitative social work studies, speculating as to whether authors thought “calling their studies qualitative justifie[d] an anything goes mentality” (p. 175). Thus social workers might not be producing enough high-quality knowledge to inform their practice decisions. Plath (2006) suggested, given the diverse contexts, interventions, and client groups in social work, providing conclusive and widely applicable high-quality research is very difficult. On the other hand, Padgett (2009) suggested confusion and disagreements about epistemology, in part, have contributed “to the lack of consensus regarding what is ‘good’ versus what is ‘bad’ qualitative research” (p. 101). Thus the epistemological position of those who have critiqued the quality of social work research should be considered, as authors writing from an inner-science perspective may prioritise methodological rigour over other factors, such as relevance or utility, when assessing the quality of qualitative research. Lewis (2003) also noted that in an effort to achieve scientific rigour, social science research has become increasingly narrow, addressing more and more tightly defined questions, cut off from their context—in a nutshell, it has sold wisdom short. Secondly, it nevertheless fails to achieve the scientific rigour expected of the natural sciences and hence lacks the confidence to prescribe. At best, it helps policy makers to ask the right questions.
A related point made by Stevens, Liabo, Witherspoon, and Roberts (2009) was that social scientists tended to conduct a high volume of qualitative work which did not help practitioners to “map the clustering of risk and protective factors” (p. 289) related to an intervention. Thus, this research could not determine exactly what practitioners should do in a particular case. The most it could do was to “identify possible interventions, or choices, or things that might be worth trying, or things that are unlikely to work, or the context in which any choices must be made” (Stevens et al., 2009, p. 287).

The lack of consensus among the academic community about what constitutes high quality research in social work points toward another barrier to research use in practice, namely, a lack of practitioner confidence in assessing the quality of available research. The current information age, in which knowledge is viewed in economic terms (see discussion on Globalisation and the Knowledge Economy), has seen a rapid increase in the amount of information produced to meet the needs of a knowledge society. The result is a barrage of new research which practitioners do not have the time or skills to sift through, let alone assess it for content and quality (Gough, Lajoie, Shlonsky, & Trocme, 2009). In fact, in highlighting the problem of information overload that has resulted from the move to a knowledge-based economy, O’Sullivan (2002) noted the importance of information literacy as a new economy skill set to help workers deal effectively with information in their day-to-day work. She referred to a study examining the information-seeking habits of corporate workers in the USA. The 6,000 participants interviewed in this study reported spending an average of eight hours per week obtaining, reviewing and analysing external information, with 10% spending more than 20 hours per week on these activities (White Paper for Moreover Technologies, 2001). O’Sullivan (2002) concluded knowledge workers experienced difficulty finding what they needed quickly and efficiently, and were struggling with
issues of quality and credibility with the information they did find. Seen in this light, research findings suggesting that many social care practitioners were poorly equipped to access and critically assess research quality are not surprising (Booth, 2003; Pope et al., 2011). These issues are likely to discourage them from attempting to locate and use research findings to inform their practice.

Despite the abundance of online information currently available, Trevithick (2008) and Plath (2006) expressed concern over the lack of accessible, academically-produced knowledge for practitioners, students, service users, and carers. In a study of 200 social workers in the USA, Pope et al. (2011) found that, while a high percentage of respondents know about social work databases, a smaller percentage actually reported using online resources in their practice. They suggested that unavailability of Internet access at workplaces might explain why fewer respondents reported they access relevant research online. Another reason might be that traditionally the social work profession has been tied to face-to-face interaction, which meant practitioners might not have had sufficient opportunities to develop their skills in using computers and technology. Choi et al. (2002) found that social workers were anxious about using computers due to a lack of education and exposure. A further issue highlighted by Plath (2006) was that, although there were Internet databases and search tools available to make relevant research findings available to practitioners, the quality of these databases had been found to be poor (Newman, 2002). Thus, despite the increased availability of a broad range of research and information through the emergence of the Internet, locating relevant research requires specific knowledge and skills in using computers, databases, and Internet search engines. Therefore, a lack of confidence in using technology might make it difficult for social workers to locate relevant research in the time available to them. Thus, they might be more likely to turn to trusted and immediate sources, like
colleagues and supervisors, for help and advice relating to their practice (Gray & Schubert, 2012; Stone, 2002).

A related explanation for social workers’ lack of research use might be a tendency to associate traditional academic research with a scientific or positivist paradigm and the perception that evidence-based practice promoted this (Gray et al., 2009; Plath, 2006). Again, this is not surprising given the disagreements between and among the proponents of varying paradigms—such as positivists and interpretivists—leaving it very unclear (for academics let alone for practitioners) as to what counts as good research. Viewed in this way, research might be seen to stand in tension with the “reflective, interpretive and humanist responses to the personal and social conditions encountered in practice” (Plath, 2006, p. 57). In modern society, the ethos of productivity, performance, and rational problem solving has led to a valuing of only those forms of knowledge “seen to be ‘performing’, contributing to economic productivity, or enabling a project of human mastery of reality” (Yeatman, 2008, p. 1). While this is not necessarily to be conflated with positivist approaches, which in the main privilege quality over utility, positivism does try to establish cause and effect for some productive or instrumental purpose. For I. Butler (2003), this utilitarian focus on “providing ‘real’ solutions to ‘real’ problems and become more ‘scientific’” (p. 21) does not allow social work to live up to its emancipatory, transformative, and radical ideals. Thus, knowledge which does not contribute directly to the maximisation of output in relation to input, or critical knowledge which challenges the status quo, is considered less valuable. For Ife (2008), a sterile, academic or utilitarian research approach to moral issues and human experience is inconsistent with social work’s rights-based focus. He argued social work is not merely motivated by careful analysis or research outcomes, but also by a passion for justice and outrage against oppression. Hence social workers must include this passion in all aspects of their work, including research. Thus
Ife (2008) proposed social workers might reject traditional scientific knowledge because it does not fit with the ideals of the profession. In fact, positivism seeks to rule out ideals and values in favour of discovery of objective truths, laws and rules. In a similar vein, Cnaan and Dichter (2008) discussed how the quest for the status of a profession forced the emphasis on empirical research in social work. The notion of a forced emphasis on research implies an inherent resistance by social work to what Cnaan and Dichter (2008) referred to as the “scientification” (p. 283) of social work. Although they proposed “a more modest version of evidence-based practice” (p. 284), the sensation of being forced may result in a more general rejection of science by practitioners.

Projects Fostering Research Use in Social Work

Several innovative projects have attempted to enhance research accessibility and use in Australia and internationally. In Canada, a group of staff, faculty, and students at the University of Toronto started a monthly discussion group called ‘Journal Watch’ (Gough et al., 2009). The group appraises new research on child welfare and produces summaries of the most pertinent studies, which are then shared with the broader community of child welfare practitioners and researchers throughout Canada using an electronic newsletter (Gough et al., 2009). A similar activity is occurring in Australia, where the NSW Department of Community Services electronically disseminates summaries of recent research under the title ‘DoCS Research to Practice Update’ (Gough et al., 2009). A range of organisations and public funding bodies are involved in reviewing and disseminating research findings. These are the Social Care Institute for Excellence (SCIE), which is concerned with knowledge translation into accessible virtual learning tools, and the Cochrane and Campbell Collaborations, which arguably has not specialised in producing accessible materials for practitioners. Two further examples from the UK are the Research in Practice and Making Research Count initiatives, which focus on improving practitioner access to a range of publications,
products and resources to aid evidence-informed practice. In addition, search tools and Internet databases make research findings accessible to social workers (Newman, 2002; Plath, 2006). Thus some organisations have taken on the considerable task of identifying and reviewing research findings to ensure practitioners have access to the necessary resources to provide high-quality services.

Despite these efforts, findings suggest social workers continue to underutilise research even when they have ready access to it (Gira, Kessler, & Poertner, 2004). Gira et al. (2004) noted the profession had not yet identified effective ways of helping practitioners find and use research evidence in their practice. They suggested a different approach might be needed for increasing research use in social work. Based on a meta-analysis of strategies influencing practitioners to use research, they stated “there are no ‘magic bullets’ that are effective across all practice issues” (p. 76), adding that “multiple strategies are more likely to provide workers with what they need” (p. 78). For example, research by Freemantle et al. (2000) found “printed educational materials are more effective when paired with local opinion leaders or audit and feedback” (p. 76). Gira et al. (2004) concluded more research was required to identify the optimal components of a successful strategy for research use. The present study contributes new insight and understanding about the specific factors that may lead to effective research use from the perspective of Australian researchers.

A Broader Shift Toward Interaction

A recurring theme in the literature is the importance of partnerships and linkages between researchers and users (Chagnon et al., 2010; Huberman, 1990; Nutley et al., 2003). The main focus of these partnerships is on the coproduction of knowledge for the purpose of generating relevant and useable knowledge to solve complex, real-world problems. The assumption is that knowledge produced cooperatively or collaboratively is more likely to be used. A multitude of terms has been used to describe interactions
between researchers and user, such as linkage mechanisms (Belkhodja et al., 2007), productive interactions interfaces between producers and users, (Hanney et al., 2003), interaction models (Landry et al., 2001), collaboration (Allen-Meares et al., 2005), sustained interactivity (Huberman, 1987), networks (Bowen & Martens, 2005), two-way personal communication (Innvaer et al., 2002), sustained dialogue and joint interpretation (Elliott & Popay, 2000), and relational capital (Chagnon et al., 2010).

Governments are increasingly focusing on fostering engagement between universities and industry (Bishop, 2006). As noted earlier, this is often expressed in the language of the knowledge economy, with political leaders asserting their intention to develop “effective mechanisms for the demand and supply sides to meet” (p. 5). In Australia, the Government provided approximately $46 million in funding between 2005 and 2009 to promote collaborative activities between business, tertiary institutions, and the community (Bishop, 2006). Between 2005 and 2006, the Australian Research Council also allocated more than $260 million for Linkage Projects, which involve researcher-user partnerships (Bishop, 2006). More recently, the Australian government announced a new $249 million package designed to bring researchers and industry representatives together to increase the competitiveness of Australian industries and design “solutions to some of our most pressing industrial problems” (Carr, 2011, p.1). Further, the White Paper on Higher Education in Australia (Department of Education, Training and Youth Affairs, 1999) stressed the importance of collaborative links between researchers and industry, announcing measures to improve the links between universities and the users of research. The Collaborative Research Partnership program, whereby established research universities are encouraged to partner with the bottom eight non-research intensive universities is an example of the Australian government’s attempt to use collaboration to build research capacity in the centre of knowledge production. Another is the Department of Innovation, Industry, Science and
Research’s Cooperative Research Centres (CRC) policy framework. CRCs attempt to bring diverse sectors together in joint end-user-driven research programs. A similar program in the UK is the Government’s Technology Strategy Board: Knowledge Transfer Partnerships scheme which, despite the terminology, is increasingly about coproduction, as well as transfer, of knowledge between research facilities and industry but also between public and voluntary sector partners. The common aim among these institutional arrangements is to connect and integrate academic research with industry.

Despite the strong emphasis on partnerships between researchers and users for the purpose of creating practice-relevant knowledge for practice, Nutley et al. (2003) expressed concern that recommendations for collaborative approaches were more often based on conceptual understandings of the research utilisation problem than on strong evidence of research effectiveness such that “in this case the solution somewhat precedes the analysis” (p. 140). Nonetheless, Chagnon et al. (2010) identified collaboration between researchers and users as the most important predictive factor of knowledge utilisation and suggested this variable might bolster other determining factors, such as the perceived usefulness of knowledge. Other studies have produced different results, depending on the user’s decision-making level (Dobbins et al., 2007) and discipline (Landry et al., 2001).

Using a staged model of research use, Landry et al. (2001) observed linkages between researchers and users significantly and positively related to knowledge use in anthropology, political science, and social work, but not in sociology and economics. In fact, linkage between researchers and users was the only variable significantly influencing knowledge use by social workers. In a similar study focusing on engineering and natural science disciplines, Landry et al. (2007) found linkages between

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research producers and users were used to explain knowledge utilisation across all six subfields examined.

Using the same measure of research use, a recent Australian study of sociologists and criminologists found that the variables distinguishing respondents who reported high levels of utilisation, were investments in linkage and exchange (Cherney & McGee, 2011). These findings suggest collaboration is an important factor predicting use, but the effectiveness of interactive approaches may vary depending on the research field. As noted earlier, evidence of the effectiveness of interaction may also vary depending on the model applied in measuring use, with staged models more likely to find evidence of use than models measuring use as a single event.

**Interaction Models of Research Use**

Landry et al. (2001) used the term interaction models as an overarching category under which to cluster a range of related conceptualisations. The central focus of interaction models is on the various disorderly interactions between researchers and users at different stages of knowledge production, dissemination, and utilisation (Belkhodja et al., 2007), rather than on a linear movement of research from the context of production to the field of application (Hanney et al., 2003). Interaction models developed in response to criticisms of previous science-push and demand-pull models which: (i) do not involve users in the production of research results; (ii) do not assume responsibility for the transfer of research; or (iii) are focused on instrumental use of research findings (Belkhodja et al., 2007). According to Landry et al. (2001), interaction models incorporate all of the explanatory factors identified in prior models: “types of research and scientific disciplines, needs and organisational interests of users [and] dissemination … mechanisms” (p. 335; See Theories and Models of Knowledge Utilisation). The crucial new variable contributed by interaction models is linkage. According to interaction models, the more resources invested in linkages between researchers and
users the higher the use of research. The present study seeks to test this assumption by identifying researchers with high collaboration scores to examine whether these researchers also report high levels of utilisation of their research by practitioners.

In focusing on linkages between researchers and users, interaction models draw a stronger connection between the processes of knowledge production and utilisation. This is based on the belief that interaction between researchers and users during the research production phase makes the resulting knowledge more relevant and useable (see Interaction facilitator in Table 1, pp. 39-42). A diverse range of models in which knowledge production and utilisation processes are more closely connected have been proposed. The broader study on the knowledge economy of human service research in Australia (Gray, Schubert & Heinsch, 2012), within which the present study is embedded, identified 53 models in 238 journal publications alone. Among the most popular conceptualisations were the triple helix and mode 2 models. The triple helix model views knowledge production as an industrial-style process, whereby universities, government, and industry work together in a three-way process to create research for strengthening industry (Etzkowitz, 2008). Mode 2 provides a more open account of knowledge production in which the aim is to create relevant and socially useable knowledge unbounded by disciplinary barriers (Aram, 2004; Cody, 2001). These conceptualisations share a perception of research as “no longer a closed system determined and dominated by traditional scientific and scholarly communities predominantly located within universities” (Scott, 2009, p. xvi). However, the broader study (Gray, Schubert & Heinsch, 2012) found the triple helix approach was located exclusively in literature from the fields of management and economics, higher education and research policy, and science and technology, whereas literature on mode 2 also came, to a limited extent, from the fields of social and information science, philosophy, healthcare and healthcare policy, and sociology. Thus while the two models share an
emphasis on researcher-user interaction for the purpose of knowledge coproduction, the triple helix is more specific in defining the constituents that make up the three helixes, with a stronger focus on the development of research for industry than mode 2.

**Effective Interaction**

The manner in which interaction occurs both during, and separately from, the knowledge production process can influence the degree of research utilisation. Osterling and Austin (2008) summarised four central elements of effective collaboration between researchers and practitioners for the purpose of promoting the dissemination and utilisation of research findings: “(1) incentive to collaborate, (2) shared values, trust, open communication, and respect, (3) ability to collaborate, and (4) capacity to build and sustain collaboration” (p. 314). Huberman (1990) identified five types of interactions during the life of a research project related to utilisation: (i) hello-goodbye—no links before, none after, (ii) two planets—weak links which remain weak, (iii) standoff—moderate links remaining stable, (iv) mutual engagement—weak links which strengthen, and (v) synergy—moderate links which strengthen. He found mutual engagement and synergy were most effective in facilitating knowledge utilisation by practitioners. The two key elements facilitating knowledge use in Huberman’s (1990) study were frequent informal contacts, the provision of regular comprehensible reports, and ongoing discussions based on these reports at regular meetings throughout the project. Participants in Bowen and Martens’ (2005) study placed greater emphasis on personal factors in the knowledge creation process for facilitating knowledge utilisation, such as enjoyable, informal rather than formal, structured interaction. Unfortunately, authors seldom provided a clear explanation of the activities involved in formal and informal linkages though Belkhodja et al. (2007) explained informal contact included “informal personal contacts, participation in committees, and the conveying of research reports to organisations” (p. 381). They found formal linkage had a greater effect on
utilisation than informal links, with a 10% increase in formal linkage leading to a 2.39% increase in research use, while a 10% increase in informal linkage resulted in a 0.88% increase in use. However, arguably, the practical significance of these results is questionable in cost-benefit terms if a 10% investment leads only to a 0.88% increase in utilisation.

Some studies found interaction between researchers and users only influenced the early stages of utilisation. Kothari et al. (2005) investigated research uptake by Canadian public health units and found that, although interaction during research development led to better understanding of research by users and influenced their intent to use research findings, there was no increase in applied use. Similarly, Landry et al. (1999) examined factors enabling researchers to improve the progression of knowledge utilisation from transmission to application. While linkage factors that were separate from the knowledge production process correctly predicted a climb from transmission to cognition in this study, they did not explain the movement to higher stages of utilisation, such as reference, effort, influence, and application. This suggests interaction between researchers and users both during, and separate from, the knowledge creation process increases the likelihood of knowledge being received and understood, but fails to influence the application of research and compensatory changes to industry practices.

A rather different argument is that trust developed through intense interaction between researchers and users enhances knowledge use (Bowen & Martens, 2005; Bowen & Zwi, 2005; Dobbins et al., 2007; Hanney et al., 2003; Levin & Cross, 2004; Huberman, 1990). Some authors suggested strong links were positively associated with utilisation (see, for example, Landry et al., 1999, 2001, 2007; Osterling & Austin, 2008; Vingilis et al., 2003). Presumably strong ties are more likely to expend effort to ensure that a knowledge seeker sufficiently understands and can put newly acquired knowledge into use (Krackhardt, 1992, cited in Levin & Cross, 2004). This perspective is shared by
the interaction model of utilisation, which predicts that the stronger and more prolonged the contact between researchers and users, the more likely it is research findings will be taken up (Landry et al., 2001). Levin and Cross (2004) believed strong relationships were helpful because they tended to be trusting, and trusting a knowledge source would make it more likely the receiver would learn from the interaction. While the influence of trust on knowledge use is important, use based solely on trust might lead to the uncritical acceptance of knowledge, and investing professional resources and effort in a new approach to practice cannot be justified appropriately on the basis of trust alone.

According to Granovetter’s (1973) theory, weak ties—characterised by distant and infrequent interaction—were more likely to provide access to new information than strong ties, which tended to be closely connected to the knowledge seeker and, therefore, to deal in more familiar knowledge. This theory focuses more on the receipt of new knowledge than on its use and proposes that the stronger the ties, the less likely it is that novel information will be transferred between researchers and users (Levin & Cross, 2004). Levin and Cross (2004) found weak ties influenced the receipt of useful knowledge more than stronger ones in keeping with Granovetter’s (1973) theory. Moreover, although an initial effort might be required to build ties between researchers and users, once established, fewer costs were required to maintain weak ties.

Rather than the strength or weakness of ties, Bowen and Martens (2005) emphasised the importance of the quality of an interaction, arguing this personal factor, involving “attention to political and value issues” (p. 209), might be the crucial variable influencing knowledge use. This form of interaction might result in the production of knowledge in a way that takes the user’s context into account. Thus rather than simply using knowledge because one trusts the person who provided or produced it, the interaction would influence and shape the knowledge produced, and the way in which it was communicated to the user. This perspective is reflected in Giddens’ (1987)
dialogical model of knowledge co-construction (cited in Elliott & Popay, 2000) wherein knowledge is jointly constructed through dialogue between researchers and users. This does not necessarily mean the knowledge produced will reinforce the user’s perspective. On the contrary, a quality interaction may encourage users to value the different perspective researchers can contribute to practice situations. For example, participants in Elliott and Popay’s (2000) study valued researchers as “knowledgeable outsiders” (p. 466), who could provide a critical perspective on practice. In their study, independence was perceived as an important feature of the researcher-user relationship as it enabled researchers to maintain a critical perspective rather than merely legitimate practitioners’ views. Weiss and Bucuvalas’ (1980) study also found that research provoked decision makers to rethink taken-for-granted assumptions. Thus the role of researchers “is not just to be ‘useful’ but also to have faith in the value of [their] work and to be clear that [they] are making a contribution when [they] challenge norms and practices” (Gill, 2006, p. 15).

The sheer number of possible relationships and forms of interaction illustrates the complexity of this area. Through participation in networks, meetings, conferences, workshops, blogs, publications, radio and podcasts, as well as more informal behind-the-scenes engagements with stakeholders and personal networks, an individual becomes embedded in a “thick web of relationships” (Stone, 2009, p. 313). The introduction of interaction variables into the analysis of knowledge utilisation thus adds a level of complexity that has not yet been examined empirically (Inkpen & Tsang, 2005).

Challenges to Effective Interaction

While interactions between researchers and practitioners may enhance research use by practitioners, the literature highlighted many challenges to effective collaboration. The ‘two communities’ theory of knowledge utilisation proposes that collaboration between
researchers and practitioners may be hindered by the gap between their two communities or cultures (see Table 2, pp. 44-45). This theory sees research producers and users as living in distinct worlds, characterised by different languages, values, and interests (Jacobson, 2007). Consequently, knowledge-sharing between these groups can become problematic as they unintentionally work at cross purposes and harbour a strong distrust of one another (Bowen & Martens, 2005; Hanney et al., 2003). For instance, decision makers in Bowen and Martens’ (2005) study expressed a “lack of confidence in researchers and the potential benefit of research”, while researchers underestimated the “knowledge, capacity and unique insights” of decision makers (p. 205).

A common theme in the literature was the unrealistic expectations researchers and decision makers have of one another (Lewis, 2003). This pertained, in particular, to research in the social sciences. Lewis (2003) believed decision makers “largely do not understand the social sciences and impose upon them their own ill-informed notions [of valid research]” (p. 12). For instance, an Australian study investigating the experience of social scientists within natural resource management agencies found the agencies rejected social science methods, data, epistemology, and terminology, and failed to recognise the social sciences as an intellectual discipline, arguing it was not scientific or politically saleable but simply common sense (Roughley & Salt 2005). As noted earlier, this might be a result of knowledge hierarchies and the paradigms underpinning different understandings of quality (see Barriers to Research Use in Social Work). According to Martin (2001), “it is difficult to envisage how the vague abstractions and epistemological and ontological relativisms of much human geography research ... can form the basis of critical public policy analysis” (p. 196). According to Roughley and Salt (2005), at the heart of decision makers’ rejection of social science research lies the issue that, instead of producing neat models in line with decisions already made, social scientists challenge and critique the very assumptions on which these decisions are
based (Roughley & Salt, 2005). While for Gill (2006) the value and contribution of social science research lies precisely in this critical stance, users may have a very different conception about what constitutes a valuable contribution.

Elliott and Popay (2000) noted, in practice, dialogue between researchers and users can be “confrontational or fraught” (p. 467) and long-term collaborative relationships between the two groups are difficult to sustain. Similarly, Ife (2007) argued genuine dialogue is very hard to achieve:

It is counter to the way we have been socialised. It requires getting away from the characteristic Western approach of debate, where it is one side against the other, and where the aim is to win. Instead, the aim is to learn, and to move forward together in an equal partnership (p. 22)

For Freire (1996, cited in Morley & Ife, 2002), dialogue is perhaps the hardest part of communication and involves moving “beyond the superficial exchange of information” to “a connection through the act of listening and reciprocating” (p. 74).

The broader social context in which research is produced presents a further challenge for effective interaction between researchers and practitioners. Generally, the context in which most researchers operate does not support the collaborative research activities between researchers and users espoused by knowledge utilisation scholars (Bowen & Martens, 2005). On the one hand, universities have become “transgressive institution[s] characterised by fuzzy categories …and … permeable frontiers to the ‘external world’” (Scott, 2009, p. xvii). While this should be conducive to collaborative research, at the same time, national policies are driving universities to establish even fiercer institutional priorities, accepting more rigid rankings, and more pernicious hierarchies (Scott, 2009). This contradictory phenomenon makes it very difficult for academics to engage in collaborative activities. As Jacobson, Butterill, and Goering (2004) noted:
the activities that make up much of the work of knowledge transfer—outreach, building partnerships with non-academic organisations, and plain language communication—are not widely accepted as legitimate forms of scholarship … [and] researchers who devote time and energy to these activities risk having them discounted when they are judged for promotion and tenure (p. 248).

It is worth noting, in the UK REF, for the first time, significant weight in assessing research quality is being given to impact, which expressly refers not to its intellectual impact on the scholarly community, but to its social, economic, and cultural impact. This impact is measured using case studies submitted by university departments describing the impact of academic research over 17 years, which are reviewed by academics and industry scientists on subject-specific panels and awarded rankings ranging from 4* (the best) to unclassified (Gilbert, 2010). Impact measures considered include “the establishment of spin-off companies, clinical trials or the development of drugs, impact on policy relating to the environment, or the development of industry-specific products and services such as computer software or technology” (Gilbert, 2010, p. 1). This impact assessment contributes to 25% of the REF (Gilbert, 2010). Also many key research funders in the UK, such as research councils and government, now require that applicants and funded researchers identify and fulfil pathways to impact and impact strategies requirements. However, there is not necessarily a direct connection between impact and collaboration or interactive partnerships, and certainly not necessarily an emphasis on coproduction of research or collaborative enquiry.

Increasing time and resource demands on community partners also make it difficult for them to engage in collaborative activities with researchers (Bowen & Martens, 2005). This issue is often omitted from the literature, which tends to focus more on research budgets to support collaborative activities (Bowen & Martens, 2005). Thus, the context in which research is created and used does not appear to be conducive
to supporting the kind of interactive partnerships between researchers and users which
the contemporary knowledge utilisation literature advocates in general and the
interaction model suggests in particular. Despite the large number of proposed
approaches and activities in the knowledge utilisation literature, this may partly explain
the reportedly poor uptake of research in policy and practice (Chagnon, 2010; Graham
et al., 2006; Hemsley-Brown & Sharp, 2003; Lewig, Arney, & Scott, 2006).

Responding to the Challenges

In response to the challenges discussed above, Beesley (2003) suggested the institution
of science and the science policies underpinning it must become more flexible and
create reward systems for those who choose to engage in collaborative scientific
enquiry. Scott (2009) observed the changes taking place within the research
environment are leading to a “profound transformation of professional identities” (p.
xv) in which senior academics and professors are becoming research leaders or
entrepreneurs (or both), and junior researchers are pursuing practice-based roles in
which they “think and act as ‘researchers’” (p. xvi) rather than following traditional
academic careers. In turn, practice-based organisations are under increasing pressure to
develop research capacity in order to survive and succeed. Thus, while the research
context does not support collaboration between researchers and practitioners, in time,
the changes to professional identities arising from this context may negate the need for
explicit support of collaborative activities as researchers begin to recognise the value of
these connections for their own careers and embark onto more “novel and fluid
configurations of academic work” (Scott, 2009, p. xvii).

Some authors have suggested an intermediary—a research broker or policy
entrepreneur with a flair for interpreting and communicating the technical or theoretical
work—is needed to facilitate the connection between research and practice (Armstrong
et al., 2007; Phipps & Shapson, 2009; Stone, 2009). Knowledge brokers have been
defined as external experts in the management of change, who work with teams to help them introduce new research-based practices (Kitson et al., 1998). Key among their skills is the ability to bring people together and foster collaboration by helping groups communicate and understand each other’s needs and abilities (Phipps & Shapson, 2009). However, knowledge brokering can also be undertaken by organisations such as think tanks. Ball and Exley (2010) noted that knowledge brokering involves nodes—i.e., groups such as think tanks—connected to one another through a relatively small number of individuals described as interlockers. Competing priorities and values, and a lack of organisational support, have been found to make it difficult for researchers and practitioners to engage effectively in activities that promote the use of research (Maxwell, 2005; Stone, 2009). Kitson et al. (1998) suggested these issues may be overcome by appropriate facilitation. In a study where strong evidence was presented to staff, coupled with appropriate facilitation, negative aspects of the context began to be modified to ensure that the new practices were implemented. It took about 12 months however, to ensure that infrastructural and staff developmental issues were dealt with. The authors (Kitson et al., 1998) concluded facilitation might be one of the key variables facilitating research use in practice. This is certainly true of the knowledge mobilisation experience of York University, Canada, where knowledge brokers played a key role in identifying and supporting connections between researchers and research users (Phipps & Shapson, 2009). The authors noted that it takes time to break down community-university barriers and develop trust. They described the knowledge mobilisation strategies of knowledge brokers as involving a complex mix of producer push factors (e.g., clear language summaries of practice relevant research made available through web posting), user pull factors (e.g., translation of knowledge need into a question and subsequent ‘match-making’ between individual researchers and research users), knowledge exchange (e.g., via research forums and monthly topical
meetings) and co-production (e.g., database of research expertise enables identification of possible research-based partners, incentive grants & release time from teaching). Knowledge brokers at this university reported a 71% success rate in making a match between researchers and users, with a further 19% pending matchmaking (Phipps & Shapson, 2009). Given the complex activities involved in developing institutional capacity to support knowledge mobilisation highlighted in this example, it is unlikely that this goal can be achieved by individual researchers without the help of an intermediary.

Although on the surface knowledge brokers may represent an ideal resource for overcoming the challenges associated with moving research into practice, a number of authors have emphasised the need to exercise caution in relation to intermediaries. For example, while think tanks have been emphasised as having “significant autonomy from government interests” (Haas, 2007, p. 68), many researchers note that some think tanks are far from autonomous (Abelson, 2002; Stone, 2000). McNutt and Marchildon (2009) have usefully distinguished between advocacy based think tanks with vested interests and independent research based think tanks. This suggests that the extent of independence varies and must be assessed by practitioners or policy makers seeking evidence from knowledge brokers. A second point is that knowledge brokers do not always have a research background but, despite their lack of research experience (Rich, 2004) may present themselves as researchers (Haas, 2007) without subjecting their findings to peer review. This brings into question the efficacy of the research mediation role.

Several metaphors have been used to illustrate ways of bringing research and practice closer together, the most well-known of which is undoubtedly the bridging the gap between research and practice metaphor. Cundill et al.’s (2005) boat metaphor captured the complexity of the research utilisation process as “navigating between
unknown shores” (p. 1). This might be a more appropriate metaphor than a bridge with fixed starting and end points (Cundill et al., 2005). However, Stone (2009) argued neither was appropriate since they both symbolised a policy-research divide. Politically, this divide might suit those whose business was capacity building, networking and communicating with end-users, that is, building bridges or navigating between shores (Stone, 2009). For example, the instrumentality and linearity of the bridge metaphor aptly described the work of think tanks engaged in reshaping knowledge for practice (Stone, 2009). According to Stone (2009), the bridge and boat metaphors were appealing because they simplified the knowledge-to-action process but, in doing so, failed to capture the mutually constitutive and deeply intertwined nature of this process.

**Interaction and Research Use in Social Work**

As already noted, a major theme in the knowledge utilisation literature is the potential for relational factors, such as interaction and communication, to enhance knowledge use. Could this offer a possibility for enhancing research use in social work? The Australian Association of Social Workers’ Code of Ethics (2010) affirms social work’s commitment to “collaboration [as] the cornerstone of effective practice” (p. 9). Trevithick (2008), too, held that, in their use of knowledge, practitioners tend to favour “accessible and immediate knowledge sources and more personal and interactive points of contact” (p. 1229). Relational sources of knowledge, like workshops on practice issues and consultations with supervisors and colleagues, are highly valued, whereas textual resources, while not considered irrelevant, are less preferred (Marsh, 2002). Cha et al. (2006) also found practitioners preferred face-to-face exchanges. Chagnon et al.’s (2010) Canadian study of child protection organisations found interaction between researchers and practitioners was strongly associated with knowledge utilisation. Similarly, Haug (1997) found that practitioners frequently rely on indirect sources of information about research findings, such as discussions with colleagues. These
findings support the socio-organisational model, which depicts knowledge use as a social process, suggesting interactive approaches may be appropriate and effective in enhancing knowledge use in social work.

Despite practitioner preferences for interactive modes of knowledge utilisation, interaction between researchers and users is not well supported in the human services or social care environment. In turn, social work researchers face particular challenges to engaging with practitioners given their “struggles to raise the intellectual level of the discipline, to specify its domain of knowledge, and to refine [its] distinct approach to practice, while also grappling with workforce-related [pressures]” (Cody, 2001, p. 274). At first glance, it appears social work—and the human services—could benefit from interactive approaches to knowledge generation. However, social work researchers are fighting a simultaneous battle for recognition in a context which continues to value traditional scholarly output over participatory, practice-based knowledge.

Given this context, what is the extent of interaction between researchers and practitioners in social work? Klein (1996) argued, despite a surface organisational structure oriented to mode 1 knowledge production, mode 2 activities—involving dynamic, informal networks and interaction formed beneath and across discipline-based surface structures within mode 1 organisations—existed within what she called ‘shadow’ structures. She described mode 2 shadow structures as complex systems or networks not always visible but discernible on examining the informal activities of, and connections between, researchers. Therefore, it is possible that researchers are engaging in undetected interactive activities in these shadowlands. If so, what kinds of activities might they be engaging in? Further, might there be a relationship between these activities and research use?
Practitioner-Researcher Engagement in Social Work

Although the knowledge utilisation literature emphasises the value of interaction between researchers and practitioners, there are not many accounts of this kind of engagement. Interestingly, articles describing efforts at interaction between researchers and practitioners mainly derived from social work or social care. For example, in Switzerland, Gredig (2011) described a collaborative project conducted by the University of Applied Sciences at the University of Northwestern Switzerland together with the Swiss AIDS Federation. This project tested a model of cooperative knowledge production in which different forms of researcher and user knowledge combine to form a third sphere of hybridised knowledge. Though initial evaluations demonstrated the project’s feasibility, the time commitment required was “a little too high” (p. 66) and involvement of a staff representative in the program design might have improved user acceptance. Gredig (2011) noted that further development of the cooperative approach was needed as “currently [it] still resembles a concept” (p. 67). His account highlights the complex nature of cooperative knowledge production and utilisation, which still requires “implementation and evaluation, and ongoing reflection and development” (p. 68).

Allen-Meares et al. (2005) offered an account of 10 collaborative projects conducted by the University of Michigan, School of Social Work together with the Global Program on Youth. These projects drew on translational, participatory and IT-supported collaborative research approaches, which enhanced access to colleagues without the constraints of “temporal or geographical barriers” (Allen-Meares et al., 2005, p. 31). These forms of collaboration connected people in new ways, enabling them to share information and conduct research on a scale “that was impossible before recent technological advances” (Allen-Meares et al., 2005, p. 31). In fact, the collaborative model would not have worked without the aid of technology, “such as
email, online community websites, transcription software, and database software, for communicating in real time as well as collecting, analysing, and disseminating data” (Allen-Meares et al., 2005, p. 35). The collaborative model involved: (i) a commitment from researchers to overcome the stigma of the ‘big, bad university’ brought about through a legacy of poor collaboration with the community; (ii) assessment of the feasibility of collaboration at the initial stage; (iii) supporting participants to ensure their successful and continued participation in the collaboration; and (iv) including all members in defining the nature and goals of the project. Allen-Meares et al. (2005) acknowledged that “establishing and maintaining a collaboration that can unify participants on the basis of their common interests while addressing each participant’s unique concerns … is a monumental task” (p. 34). However, they noted that project participants recognised and were motivated by the benefits of working in a team with diverse knowledge and capabilities to bring about far-reaching benefits. The enormous potential for information technologies to facilitate effective collaboration between researchers and practitioners made for sound collaborative processes.

In the UK, Stevens et al. (2005) described a Research Information Service “set up to support social care practitioners in using research findings in their service-planning” (p. 67) in association with the Making Research Count initiative mentioned above. The service was not Internet based, to enable access for practitioners without computers. Practitioners formulated their own questions and submitted them by filling in a form with the assistance of an implementation officer either in person or on the phone. The implementation officer then worked with them to demonstrate how research might prove useful to them (Stevens et al., 2005). Initial practitioner feedback indicated that contact with the implementation officer enabled them to recognise the benefits of the research to their practice activities. According to Stevens et al. (2005), the service could be enhanced through detailed discussion between the implementation officer and
practitioners to clarify the practitioner’s expectations before literature searches were conducted. Another suggestion for improvement was the provision of information to practitioners “at a time when the relevant decisions are being taken and when they have the time to give the research findings some attention” (p. 72). However, despite increasing access to research, practitioners who received the information when their program or intervention was already running tended not to use the research findings provided (Stevens et al., 2005).

**Conclusion**

Research utilisation has been identified as a critical issue for social work, which must be better understood if research is to be used and resultant improvements to practice are to be realised (Proctor & Rosen, 2008). The three projects described above highlight the potential capacity of social workers to develop innovative projects linking researchers and practitioners in the production and utilisation of relevant and useful knowledge for practice. Despite posing some challenges, effective interactions between researchers and users are arguably worth the effort for both parties. Trevithick (2003) emphasised the important contribution of practitioners in sharing their frontline knowledge “to bear witness and report on ‘social ills’ as they impact on the lives of service users” (p. 163). Huberman (1990), too, found researchers appreciated the input and alternative interpretations offered by practitioners. He showed that interaction throughout the life of a research project resulted in utilisation of the major findings and engagement between researchers and users continuing beyond the initial study. Despite a lack of attention to knowledge utilisation processes in social work, those who do engage with this process have made valuable contributions to the advancement of interactive, collaborative, and cooperative models of utilisation. Although the present study does not anticipate that interaction between researchers and practitioners is common in social work, the foregoing examples suggest some unique and thoughtful projects are being conducted
which might have a positive impact on the uptake of research by practitioners. The further promotion of research use should involve helping researchers and decision makers identify strategic opportunities for decision-maker involvement in the research process (Ross et al., 2003). Consideration should also be given to evaluating the impact of interactions between researchers and decision makers outside of the research process on research use (Ross et al., 2003). The present study aimed to identify pockets of engagement and interaction among social work researchers and practitioners in Australia in order to extend international understanding of the potential of interaction, both during and outside the research process, to increase the use of research by social workers.
CHAPTER 4

Research Methodology

This chapter describes the methodology used in the study. To make my presence felt and my stance in the decision-making processes transparent, I write in the first person. Transparency is particularly important to the methodological frame for my research—the critical realist standpoint. Critical realism holds that human subjects, including the researcher, can never gain a complete and accurate picture of the world and, therefore, need to remain aware that any claims made are “transitive” and open to verification or refutation (Bhaskar, 2008; Houston, 2001, p. 855). Therefore researchers should make every effort to identify, anticipate, bring into the open, and counter potential bias (Robson, 2002). By writing in the first person, I aim to make it clear that my statements and decisions regarding the methodology are my own and I am not presenting the findings as irrefutable facts but rather as a snapshot of a particular situation at a particular time, open to further examination.

Purpose of the Research

As identified in the literature review, evidence on how to achieve research utilisation is still limited, and most debate on this subject remains abstract (Armstrong et al., 2006). This may, in part, result from significant methodological issues and inconsistencies, including: (i) a lack of definitional or conceptual clarity; (ii) the absence of an explicit theoretical framework, standardised measures of research utilisation, or repeat measurement and frequent use of any particular instrument; (iii) unacknowledged yet potentially influential assumptions; and (iv) basic lists of knowledge utilisation variables. These issues call into question studies that claim to demonstrate the causes or
effects of research utilisation (Estabrooks et al., 2004), which have led to a superficial, surface understanding of research use and the processes by which it might be achieved.

Recently, knowledge utilisation theory has begun to emphasise the importance of linkages and connections between researchers and practitioners both during, and separate from, the knowledge production process in influencing research use. At the same time, the emerging terms such as research translation and reciprocal exchange, reflect recognition of the importance of relationships between researchers and practitioners, and a subsequent appreciation of the complexity of the knowledge-to-action process (Strauss, Tetroe, & Graham, 2009). While some studies report that interaction between researchers and practitioners is an important predictor of research use (Chagnon et al., 2010, Cherney & McGee, 2011, Landry et al., 2001), there is an absence of strong evidence to support this theory and little is known about the kinds of interactions most likely to lead to research use. More research is needed to explore the connection between social engagement and interactive processes between researchers and practitioners, and research use by practitioners.

Though the literature on knowledge utilisation is extensive, it originates mainly from disciplines other than social work. Social work’s contribution to discourses on research use generally simply reiterates that social workers should use research to inform their practice, and argues for the importance of diverse forms of knowledge for practice (Ifè, 2007). As shown in the Literature Review on Social Work and the Interaction Model of Research Use, although there is growing interest in research use by social workers, there is, as yet, little understanding of how this might be achieved, and research use in social work remains relatively low. The growing emphasis of knowledge utilisation theory on interaction between researchers and practitioners holds promise for social work in that findings from some studies show social workers’ preference for information gained through personal interaction (Booth et al., 2003; Cha et al., 2006;
Kjorstad, 2008; Marsh, 2002; Trevithick, 2008). This does not seem surprising given the socially-oriented nature of social work. From this, it might be deduced that social workers would more likely use information acquired through personal interaction with researchers, either in the course of a collaborative research project or through some other relational means. However, more research is needed to confirm this hypothesis, since the literature about the social base of knowledge in social work has not explored collaborative endeavours or interactions between researchers and practitioners.

The purpose of this research, then, was first, to address some of the inconsistencies identified in the literature review; secondly, to provide deeper levels of explanation and understanding of the research utilisation process; and, thirdly, to explore whether a relationship between interaction and research use exists and, if so, how interaction might best lead to research use in social work. This research explored these issues from the perspectives of researchers only Bhaskar’s critical realist philosophy, which offered a useful framework for achieving these objectives, since it focuses on gaining a deep understanding of social situations, going beyond the observable, and investigating the mechanisms behind events (see Critical Realist Framework).

This study examined research utilisation from the perspective of researchers who had published in social work journals in Australia during a particular period. Practitioners were included if they had published in the journals under study. The reasons for this decision, and the limitations it may have posed, are discussed later in this chapter. Since the main subject matter of social work research is social work practice (Soydan, 2010), I anticipated that social work researchers might demonstrate a unique, albeit one-sided, perspective on research use. The main aim of the study was to explore the research utilisation process in social work from the perspective of those primarily involved in producing it. Further, I hoped to gain an understanding of the role
of interaction in this process, and ultimately, to identify how interaction might best lead 
to research use in social work, from the perception of researchers. To this end, I posed 
four research questions:

1. How do researchers in social work perceive the use of their research by 
   practitioners?
2. What key factors do researchers report as facilitating and impacting on 
   research use in social work practice?
3. How do researchers understand the nature of the relationship between 
   interaction and research use?
4. What forms of interaction with practitioners do researchers identify as best 
   leading to research use in social work?

As such, the study aimed to:

1. Better understand the process of research utilisation in social work, from the 
   perspective of researchers.
2. Identify whether researchers perceive an existing relationship between 
   interaction and research use by practitioners, and if so, to determine what 
   kinds of interactions researchers identify as best leading to research use by 
   practitioners.
3. Contribute to the refinement of theoretical and methodological frameworks 
   for research use in social work.

**Critical Realist Framework**

Bhaskar’s (2008) *critical realist* philosophy, which has had a major impact on the social 
sciences, and has been applied to social work primarily through Houston (2001), 
seemed to offer a framework particularly well suited to my chosen methodology. In this 
section, I first provide a background to critical realist philosophy, including its 
implications and specific relevance for social work and for my research enquiry.
Thereafter, I discuss how critical realism influenced my framing of the methodology and the specific methods I used to conduct my study.

An important characteristic of critical realism is that it maintains a strong emphasis on ontology. In this way, it is no different to realism more generally, which holds that “perception gives us access to things and experimental activity access to structures that exist independently of us” (Bhaskar, 2008, p. 9). Thus Bhaskarian critical realism supports the idea that there is a reality independent of our thoughts and impressions. Bhaskar (2008) distinguished between three levels of reality: (i) the empirical domain of experienced events; (ii) the actual domain of events occurring whether or not we experience them; and (iii) the underlying real domain of structures generating those events. In his seminal work *A Realist Theory of Science?* (2008), Bhaskar called it ‘transcendental realism’, given its central tenet that “an entity can (which does not mean it does) exist independently of our knowledge of it” (Fleetwood, 2005, p. 198). Fleetwood (2005) provided an example of this, noting that “class structures, patriarchal structures and tacit rules of the workplace do not require the activity of identification (i.e. observing, knowing and constructing) in order to be reproduced and transformed” (p. 20).

While Bhaskar (2008) believed that structures in nature exist independently of the actual events they cause, he makes an important distinction when it comes to social structures, namely, that unlike natural structures, they “cannot exist independently of their effects” (p. 246). Bhaskar differentiated between open systems and closed systems. Closed systems can be characterised as situations in which a certain mechanism operates in an undisturbed way and produces empirically observable regularities. These kinds of conditions tend to occur almost exclusively inside laboratories in which scientists test variables in a tightly controlled, stable environment, where influences are constant. Conversely, open systems are conditions which tend to occur outside
laboratories, where many mechanisms operate simultaneously and interfere with the working of each other in a complex, heterogeneous system. In this way, the notion of open systems fits with ecological or systems perspectives, which assume a dynamic relationship between people and the social, political and ecological systems that surround them (see Table 2, pp. 44-45). Bhaskar argued that, in open systems, laws could only be universal if generative and structures were interpreted independently of any particular sequence or pattern of events. Since social structures cannot be separated from the events they cause, they “can only be justified by their capacity to render intelligible a certain domain or phenomenon” (p. 246). Thus an analysis of social structures must be grounded in concrete events and cannot result in a universal law. Since this is a study of social rather than natural structures, any models that are generated by it must be viewed as specific to the particular locality which informed them (Bhaskar, 2008, p. 246).

As Maentysaari (2005) noted, the position that there is an intangible reality, independent of our perceptions, is difficult for social scientists to accept. He suggested this position implies either “that the part of the world that is dependent on our thoughts and impressions is not part of reality” or “that only part of reality is dependent on our impressions, whereas there is another part that is independent of them” (p. 91). However, for Bhaskar, the notion of a reality independent of our thoughts and impressions meant that our experiences can only ever capture part of the world as it really is. Thus our impressions provide us with clues as to what the real events and actual causes underlying them might be (Barrett, 2010). This highlights the potential for events to be misidentified through faulty individual perception or recall. Bhaskar (2008) provided an example of the way in which the same event can be interpreted in diverse ways, noting that “for Kepler to see the rim of the earth drop away, while Tycho Brahe watches the sun rise, we must suppose that there is something that they both see (in
different ways)” (p. 31). For this reason, Bhaskar emphasised that all causal mechanisms identified must be viewed as tendencies only and that “the scientist can never dogmatically eliminate one of these alternatives in advance” (p. 180).

A central notion of critical realism is that natural and social reality should be understood as an open stratified system of objects with causal powers (Morton, 2006). Rather than constructing an artificial space in which only a select number of variables are examined, Bhaskar suggested events and their causal mechanisms should be examined in the context of the complex environments in which they occur, thereby taking into account all possible influences on the event. Theory is then used to explain each causal mechanism to identify which one actually led to the event in question, and how two or more mechanisms might have combined to produce effects. What follows is the emergence of a picture of the “balance of forces” in which an event occurred (Bhaskar, 2008, p. 123). It is this decentralised focus, where “the reality of mechanisms postulated [is] subjected to empirical scrutiny” (p. 14), which is unique to Bhaskar’s (2008) notion of critical realism. In contrast, he described how “most science proceeds by way of a two-tiered method designed to identify invariances in nature, normally under conditions which are experimentally produced and controlled” (p. 168).

Critical realists highlight the importance of theory for identifying and explaining the causal mechanisms contained within open systems. By using theories to illuminate the unobservable (Maentysaari, 2005), critical realism provides an opportunity for a deeper exploration of the processes and causes underlying research utilisation, which may not be open to direct observation. In this way, critical realism might provide a much-needed antidote to methodological shortcomings in the knowledge utilisation field, as identified in the literature review. For example, research on knowledge utilisation has been criticised for being too instrumentally focused and a-theoretical. This atheoreticism has led to the identification of extensive listing of variables rather
than the development of formal heuristic devices. By moving beyond the basic identification of variables to the examination and explanation of the underlying causes of events via theory, the development of models and heuristic devices “based on the generation of facts empirically relevant to the theory” (Bhaskar, 2008, p. 156) becomes possible.

Although Bhaskar’s critical realist philosophy is becoming an increasingly influential approach (Cruickshank, 2010), several of his propositions have been subjected to critique (Cruickshank, 2004, 2010; Hammersley, 2009; Jefferies, 2011). In particular, there has been compelling criticism of Bhaskar’s fact-to-values argument (Cruickshank, 2010; Hammersley, 2009). Bhaskar contended that, by uncovering facts about false beliefs, which many people hold and which serve to legitimate particular social institutions, researchers necessarily criticise the institutions that perpetuate and rely on these false beliefs. For example, a critical realist approach to research utilisation might involve illuminating the disjuncture between the belief that practitioners do not use research because they are “bad workers” (Oliver, 2012, p. 376) and recognition of the wider organisational and structural contexts that hinder knowledge utilisation, such as inadequate support, time pressures, and demand overload. Critical realism “will then go further to explore the value of the ‘individual pathology’ narrative to institutions that may lack the will and money to address the real causes” (Oliver, 2012, p. 376). By showing how a false belief functions ideologically, social scientists criticise those who hold it and the institutions that generate it (Collier, 1994).

Both Hammersley (2009) and Cruickshank (2010) argued that Bhaskar’s argument is unconvincing. Hammersley (2009) noted that a value-based stance, of necessity, depends on researchers revealing not only what the facts are and why they came about—i.e., their causes—but also how things ought to be—a normative outcome. He rejected the notion that ‘ought’ can logically be derived from ‘is’, noting that “while
social scientists, like others, can engage in value argument to which both factual evidence and value principles will be relevant, they must not suggest or imply that any value conclusions they reach can be validated through their work” (p. 8). Hammersley (2002) contended this orientation “fails to recognise the proper limits that operate on the authority of science in the practical realm” (p. 48). Cruickshank (2010) made a slightly different argument, stating that “if we accepted Bhaskar’s fact-to-value argument, then for reasons of cognitive economy we would have to be an ethical ‘blanksheet’, since our values would be gained solely through explanatory critiques” (p. 172). Alternatively, Cruickshank (2010) proposed a “value-to-value argument, whereby value judgements stem from prior rationally held value commitments and not a fact-to-value or value-to-fact argument” (p. 169). Thus, researchers’ critical approach can be “rooted in rationally held values rather than putatively logical derivations or ‘valuey’ facts” (Cruickshank, 2010, p. 173).

Cruickshank’s (2010) value-to-value argument fits well when applying critical realism to social work. The social work profession has traditionally held a strong value base. In fact, Reamer (2006) argued that “social work is among the most value based of all professions” (p. 3). Social justice and care for those who are marginalised and disadvantaged by unfair processes are priority concerns for social workers (Houston, 2010). The definition of social work by the International Federation of Social Workers’ (IFSW, 2012) opens with the statement that “the social work profession promotes social change … and the empowerment and liberation of people to enhance well-being” (p. 1) and, to do this, “the profession strives to alleviate poverty and to liberate vulnerable and oppressed people” (IFSW, 2012, p. 1). Houston (2010) noted that critical realism’s importance for social work is that it requires us to understand and explain the causal mechanisms giving rise to suffering and oppression. Following Cruickshank’s (2010) argument, if Bhaskar’s fact-to-value argument were accepted, social work would have
to have no prior value commitments. Instead, the profession’s value commitments would stem solely from explanatory critiques, effectively forcing it to accept an account that “could reflect the one set of values intrinsic to the object of study” (Cruickshank, 2010, p. 173). Since social work is a profession with a long-standing critical tradition (Fook, 2002), arguably it already possesses the foundation for applying its pre-existing values through rational reflection on how well or poorly those values are in dealing with given events. Thus, for the purpose of this study, Cruickshank’s (2010) value-to-value argument is applied in place of Bhaskar’s fact-to-value argument.

In this study, ethical issues may be seen to arise when social structures hinder research use by policy makers and practitioners. This ultimately affects their ability to address the needs of service users who, in the case of social work, are frequently experiencing oppression and marginalisation. From this perspective, the importance of critical realism to this study lies in its potential to reveal social structures that hinder research-based knowledge from benefiting those who may need it most. The understandings gained through this approach can inform a critical approach in social work by making it possible for social workers “to have an informed opinion about ethical issues” (Mäntysaari, 2005, p. 92). In this way, cognitive enlightenment becomes the first step towards emancipation (Collier, 1994), which can then be followed by action to create change.

Houston (2001) saw emancipatory potential in Bhaskar’s emphasis on individual agency, asserting that people are not helpless in the face of constraining causal mechanisms, but have the capacity to transform constraining structures. Bhaskar (2008) argued that structural constraints should not merely be overcome but must be changed, and that individuals have the power to generate this change. He distinguished between the transformation of social structures and the alteration, or amelioration, of states of affairs (Bhaskar, 2009). For example, workers who receive a low rate of pay do not
achieve emancipation by ameliorating this state of affairs through a pay rise. Although a pay rise would be freedom-enhancing, Bhaskar believed that unless structural transformation was achieved, the underlying structures constraining their possibilities would endure (Collier, 1994). This study sought to examine researchers’ responses to social structures which hinder the use of their research by practitioners, and where possible, to identify possibilities for transforming these constraining structures.

Mixed Methodology

I chose a mixed methodology, grounded in a critical realist paradigm informed by Bhaskar, because I believed it was most likely to provide answers to my research questions. In keeping with Denzin and Lincoln’s (2008) definition, I use the term paradigm to refer to “the net containing the researcher’s epistemological, ontological, and methodological premises” (p. 31), including beliefs about the nature of knowledge, motivations for conducting the study, methods for collecting data, and criteria for establishing validity (Mackenzie & Knipe, 2006). There has been some debate among critical realists about which methodology offers the best means for acquiring knowledge about the world. According to Sayer (2000), critical realism cannot use quantitative techniques to identify the causal influence of the structures on the social world, since “statistical explanations are not explanations in terms of mechanisms at all, merely quantitative descriptions of formal (not substantial) associations” (p. 22). Maentysaari (2005), on the other hand, argued that quantitative methods should not be abandoned from the methodologies of critical realist social science. Olsen (2009) noted that quantitative methods may be useful to critical realists, but that they are not sufficient for good critical realist research and also require qualitative background research. Houston (2010) believed critical realism requires a mixed methodology, whereby quantitative data are used to determine regularities and patterns, and qualitative data are used to ascertain participants’ meanings, intentions, motivations, and reasons. Mingers (2000,
2006) noted that a mixed methodology, including factor analysis, might provide insights into causal mechanisms and their empirical manifestations. Thus a mixed methodology comprising qualitative and quantitative techniques might enable identification of the different domains of the real, the actual, and the empirical, since each methodology could be used to capture different elements of the object or situation under study.

According to Modell (2009), critical realism has recently been advocated as a way of bridging the polarised positions of positivist paradigms, which emphasise objectivity and the unbiased nature of research, and interpretive paradigms, which argue that researchers are active rather than passive and co-construct knowledge with participants. For example, Oliver (2012) noted that critical realism successfully “marries the positivist’s search for evidence of a reality external to human consciousness with the insistence that all meaning to be made of that reality is socially constructed” (p. 372). This conflation of positivism and interpretivism does not fit with Bhaskar’s account of critical realism. In his seminal work, Bhaskar (2008) presented critical realism as an “alternative to positivism” (p. 8) and criticised positivism for presenting “a model of man in which men (sic) are seen as sensors of given facts and recorders of their constant conjunctions: passive spectators of a given world, rather than active agents in a complex one” (p. 198). For Bhaskar (2008), science is a social activity and the knowledge it produces is a social product. As such, scientists’ interpretations of the world cannot be separated from their social context and must be viewed as transitive—“only a structure in time” (Bhaskar, 2008, p. 189).

By viewing research as a social activity and knowledge as transient, critical realism does not exclude the possibility of applying a quantitative methodology. However, rather than viewing quantitative techniques as synonymous with positivist notions of research as value neutral, for critical realists quantitative research is value-laden (Olsen, 2007, 2009). Taking a critical realist perspective, Olsen (2009) noted that
survey questions are framed in language and therefore invoke values implicitly even if that were not their core intention. Furthermore, a researcher’s decision to test two factors for co-association is arguably value-laden, since it requires acceptance of at least part of a theory a priori before tests can be run, and “to choose a theory is to grant it cognitive value, to affirm (at least) that it is a better theory than some other competitor” (Lacey, 1999, p. 15; Olsen, 2009). Thus, rather than viewing critical realism as accommodating positivist and interpretivist paradigms, it may be better viewed as a paradigm in and of itself that can inform both qualitative and quantitative methodologies.

**Quantitative Methodology**

From a critical realist perspective, a quantitative methodology can be used to transcend individual differences to determine regularities and patterns, which can be linked to social structures and group or organisational features (Houston, 2010; Robson, 2002). Quantitative research is systematic: it requires and promotes a fixed research design, which means it specifies in advance the variables to be included in the study and the exact procedures to be followed (Robson, 2002). Quantitative researchers often use surveys and questionnaires because they lend themselves to ease of quantification (Robson, 2002). This requires a reasonably well-articulated theory of the phenomena under study, including “the mechanisms likely to be in operation, and the specific contexts in which they will, or will not, operate” (Robson, 2002, p. 96).

In this study, I saw quantitative inquiry as best suited to establishing the existence of a relationship between my chosen variables—research use and researcher/practitioner interaction. I sought to identify and describe patterns and regularities of activities relating to research utilisation and interaction among social work researchers and practitioners, which might provide clues or inferences about deep-level structures or causal mechanisms (Houston, 2010; Robson, 2002). In this way, I
aimed to test the theories and models that I had uncovered in the literature review about the way in which these variables operated. However, while quantitative methodologies may be useful for establishing the existence of relationships, they are typically weak in explaining the reasons for them (Robson, 2002).

**Qualitative Methodology**

According to Gummesson (2006), a qualitative methodology allows “researchers to deal with complexity, context and persona and their multitude of factors, relationships and fuzzy phenomena; conventional statistical methods fail in all these aspects” (p. 167). Qualitative research is most useful when little is known about the area under study, the phenomena being studied are complex and context-dependent, and the researcher wishes to gather rich data about the experience and meaning of a particular phenomenon (Bryman, 2008; Morris, 2006; Richards & Morse, 2007; Sarantakos, 2005). It requires and promotes a flexible research design with responsive methods of data collection from relatively unstructured data-gathering instruments (Patton, 2002). This allows for the exploration of phenomena as they become manifest during the data collection process and enables researchers to modify their approach when the emerging data calls their original assumptions into question (Broom & Willis, 2007). Qualitative researchers show a preference for research methods like in-depth and semi-structured interviewing that allow flexibility and responsiveness to a participant’s presentation and circumstances, in the belief they enhance the quality of the data collected (Warren, 2002).

Although the knowledge utilisation literature points to a relationship between research use and interaction, little is known about the nature of this relationship, or about the direction of causality between them. In this study, I saw qualitative inquiry as best suited to exploring the specific qualities and nature of the relationship between research use and interaction. I sought to examine the way in which respondents
experienced these interactions and their motivations and reasons for engaging in them. This detailed level of observation provided a platform for making initial inferences about the underlying mechanisms influencing researchers’ activities (McEvoy & Richards, 2006), taking into consideration that the perceptions of researchers offer only a very limited account of the overall mechanism (see ‘Limitations of the study’ on page 119).

Research Design

In *A Realist Theory of Science* (2008), Bhaskar summarised four stages in uncovering open-systemic events (see Table 4). However, this model is more applicable to a theoretical study which involves making inferences from known structures or events. For example, Witham (2012) used this model for explaining contemporary liberal-democratic state violence. Several authors have proposed models that integrate the essential parts of this earlier critical realist explanatory model into models more conducive to studying the concrete aspects of the social domain (Dannermark, Ekstrom, Jacobsen, & Karlsson, 2002; Houston, 2010; Sayer, 2000). Sayer (2000) wrote extensively, but mainly at a general level, on critical realism as a social theory and research method. Danermark et al. (2002) contributed a more detailed description on realist explanations in the field of social welfare. More recently, Kjørstad (2008) described a critical realist approach to uncovering generative mechanisms underlying collaborative knowledge production in social work. She noted that, in order to gain insight into the mechanisms working below the surface, researchers must first gather raw data on the everyday knowledge, experiences, and perceptions of key actors. Next, to move from the trivial to the abstract and present a framework for generalised reflection on causal mechanisms, theory must be brought in (Kjørstad, 2008). The researcher then moves back and forth between participants’ descriptions and explanations, and their own theoretical understandings and socio-political knowledge to
identify underlying causal factors. Houston (2010) offered a more detailed description of this process, describing a five-stage model of critical realist analysis in social work.

Table 4: Bhaskar (2008) and Houston’s (2010) critical realist frameworks applied to my research process

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<tr>
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<tbody>
<tr>
<td>Stage 1</td>
<td>Causal analysis of the event</td>
<td>Asking a transcendental question – ‘what must be the case in order for events to occur?’</td>
<td>Asking a transcendental question: ‘What has to be in place for research utilisation to occur in social work?’ Exploration of this question via a literature review and diagrammatic representation of possible causal mechanisms including different theoretical perspectives and explanations</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Theoretical redescription of the various kinds of mechanisms at work in the generation of an event</td>
<td>Developing a priori hypotheses</td>
<td>Posing research questions</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Retrodiction via normic statements to possible causes of components</td>
<td>Seeking evidence to confirm or falsify hypotheses</td>
<td>Data collection and analysis</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Elimination of alternative causes – gathering independent evidence for the antecedents until alternative causes have been eliminated</td>
<td>Refining, confirming, falsifying hypotheses, or reworking hypotheses and seeking further evidence</td>
<td>Critical questioning and reflection</td>
</tr>
<tr>
<td>Stage 5</td>
<td></td>
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<td>Discussion and dissemination of key findings and conclusions</td>
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This model was mapped against Bhaskar’s original critical realist model (see Table 4) to highlight the similarities and differences between them and the way in which they were amalgamated to inform my research process in this study. According to Houston (2001), “to outline this process in such a linear way does a disservice to the complexity of the task” (p. 852) in which “multiple causal mechanisms, including the interpretations of each situation made by each individual, constantly interact with,
negate and reinforce each other” (Oliver, 2012, p. 374). Thus, the stages of critical realist research were not viewed as forming part of a concrete hierarchy, but were applied somewhat fluidly.

**Stage 1:** According to Bhaskar (2008), the first stage of critical realist analysis involved conducting a causal analysis of the event under study. He illustrated the pattern of a causal explanation diagrammatically by dividing the event into its component parts (see Figure 2).

*Figure 2: Pattern of explanation in open systems according to Bhaskar (2008)*

In Figure 2, ‘E’ represents the event under study, and C1, C2 and C3 represent the possible mechanisms that could conceivably cause this event. C4 and C5 represent causal mechanisms which impact on ‘E’ more indirectly, by influencing causal mechanisms C1, C2 and/or C3.

For Houston (2010), the process of critical realist analysis in social work began by asking a transcendental question, i.e., ‘what must be the case in order for events to occur as they do?’ (p. 83). Only once this question has been asked do enquirers seek to identify observable patterns or events that provide clues as to what the answer(s) to this question might be (Houston, 2005). Hence, asking a question before describing it and examining possible causes seemed a logical starting point. For this reason, I began my research by asking the following transcendental question: ‘What has to be in place for research utilisation to occur in social work?’ To further describe and examine this
question and identify possible patterns or events that suggested how research use might be achieved, I conducted a literature review (see pp. 14-15 for a description of the literature review methodology). In line with Bhaskar (2008), I then represented the central themes identified in the literature review diagrammatically to illustrate the possible relationships between the component parts of research use.

**Figure 3: Causal analysis of research utilisation in an open system**

As shown in Figure 3, these relationships come to resemble a network of interactions with myriad possible relationships between the causal components identified. My task in this study was to examine the ways in which these components interacted to cause research use. Specifically, the study examined the relationship between interaction (I) and research use (RU) within an open system in which many mechanisms operate simultaneously and interfere with the working of each other in a complex, heterogeneous system. For example, interaction (I) with researchers could enhance practitioner’s motivation (M) to engage with research, thereby leading to an increase in their research use (RU). Alternatively, interaction (I) with practitioners could motivate (M) researchers to ensure that the characteristics of their research (R) make it
more accessible and relevant to practitioners, thereby increasing research use (RU) by practitioners.

**Stage 2:** For Bhaskar, the second stage of critical realist analysis involved a theoretical redescription of the various kinds of mechanisms at work in the generation of an event. This meant using theory to develop a new and more complete description of an event (Livock, 2009). Houston took a slightly different approach, choosing instead to develop *a priori* hypotheses to explain the event. For me, this stage involved the formulation of research questions, based on my prior examination of the knowledge utilisation literature and my exploration of different theoretical perspectives and explanations.

**Stage 3:** Bhaskar described Stage 3 as a process of retrodiction via normic statements to possible causes of components. Retrodiction should not be confused with retroduction. According to Elger (2010) “when the theoretically guided engagement works from outcomes and contexts to develop an account of possible mechanisms, critical realists characterise this as *retroduction*; when it works from posited mechanisms through contexts to explain specific outcomes it is termed *retrodiction*” (pp. 254-255, emphasis in original). In this study, I used both retrodiction and retroduction. For example, a review of the literature was conducted to retrodict possible causal mechanisms based on antecedent social structures. Retrodiction was then employed in Stage 4, to explain the outcomes observed by postulating mechanisms capable of producing them. In order to make retroductive observations, I needed to seek evidence to answer my research questions. In Stage 3, I employed two methods of data collection: (i) a survey of researchers publishing in social work journals; and (ii) semi-structured interviews with a proportion of these researchers.

**Stage 4:** Bhaskar described Stage 4 as a process of “gathering independent evidence for the antecedents until alternative causes have been eliminated” (p. 125).
Similarly, Houston noted that, at this stage, hypotheses should be refined, confirmed or falsified, or reworked before seeking further evidence. For me, Stage 4 involved critical questioning and reflection, which was constant throughout the research process.

**Stage 5:** In Houston’s (2010) adaptation of critical realism to social work, once the constraining structures have been identified, the researcher is morally obligated to develop strategies to challenge them. As noted earlier, in this study, highlighting the structures that hinder the use of research in practice is considered the first step to achieving the emancipatory goal of critical realism. Any further obligation by the researcher to take action is not intrinsic to critical realist philosophy per se, but simply reflects Houston’s (2010) application of it in social work.

**Sampling and Recruitment**

I chose purposive sampling as most appropriate for this research because I needed to recruit a particular group of people, namely, Australian social work researchers, who had published between 1999 and 2007 in journals categorised by the ERA (2010) field of research (FoR) code 1607 for social work. The focus on journals coded in the social work category was considered a means of identifying researchers whose work was likely to be influencing social work practice. The reason for the date range was that the Research Evaluation and Policy Project (REPP) at the Australian National University (ANU), contracted to conduct the initial publication analysis, only had access to Thomson Reuters data files covering the period 1981–2007 (ANU, 2009).

The sampling frame for my study was a comprehensive database of key Australian social work researchers and publications, generated as part of the broader ARC-funded study on knowledge production described in Chapter 1, within which my research was nested. The decision to remain focused on researchers was made because my study aimed to extend upon the broader study of knowledge production in social work, which found that collaboration in and of itself does not lead to the uptake of
research or the implementation of research findings. By exploring researcher’s actual experiences of interacting with practitioners, and their perceptions and values relating to the use of their research, I aimed to develop a deeper understanding of the way in which interaction can best lead to research use in practice. By focusing on researchers only, I hoped to gather richer data than might otherwise have been possible if practitioners had been studied as well. I decided it was better to illuminate the lived experience of one group well, and hoped I would be able to study practitioners in the future. However, this decision may have imposed limitations discussed later in this chapter (pp. 119-120). In this study, the REPP at the ANU was contracted to conduct a publication analysis of relevant journals from Excellence in Research for Australia (ERA) (Australian Research Council, 2009). REPP was considered the most suitable candidate for this consultancy as it is Australia’s leading centre for the systematic evaluation and mapping of research across all fields of scholarship, with access to advanced data files purchased from Thomson Reuters covering the period 1981–2007 (ANU, 2009). The REPP database captured all publications with an Australian address in the Thomson Reuters Web of Science’s (WoS) three main indices: Science Citation Index (SCI), Social Sciences Citation Index (SSCI), and Arts & Humanities Citation Index (A&HCI). The database also contained the yearly counts of citations for Australian publications. The REPP database, as it stood, contained over 440,000 Australian publications.

The focus of the database was the departmental and the institutional address given for each contributing author to the publication rather than the names of the authors. REPP cleans the addresses in the database to enable analysis to be done at various levels of aggregation. ‘Cleaning’ means ensuring that all variations of the same address are identified and that all publications with variants of that address are allocated one standardised address. The standardised addresses for all Australian universities and other major research institutions are set up in a hierarchical format, from the institution
down through faculties or schools to the department, enabling tabulations at these different levels of aggregation to be produced. Addresses in most other sectors are cleaned only to the institutional level.

As a starting point, REPP was provided with a list of 105 human services journals, which had been included in the 2009 ERA-ranked journal list, and later refined against the 2010 ERA-ranked journal list, based on the FoR code 1607 for social work. Thereafter, the REPP database was checked to see whether it contained the journals on this list. It was necessary to identify the 20-character abbreviation used in the REPP database for the journals in order to extract the publication and author information required. This resulted in a list of journals (n=32), which included all the A* and A-ranked ERA journals from the file (except for Conflict Resolution Quarterly which was not in the Thomson Reuters database), one B journal, and 14 C journals.

Using the human services journal list thus created, REPP extracted all journal publications for the period 1999-2007 from the database (since 2007 was the latest year of data in the REPP database). Of the original 32 journals, only 26 had publications in the relevant period in this database. ANU extracted the required data using Structured Query Language (SQL)—a database computer language designed for managing data in relation data bases—identifying author and position, title, citations, article, and author address details. This analysis identified 238 unique articles and 144 Australian social work researchers. These researchers constituted my sampling frame.

It should be noted that the list of researchers and their publications was initially to be compiled via a web search of university departments and research centres. A preliminary register of research was then to be compiled from publications listed on the site of each researcher. However, an initial investigation revealed that these websites were not a reliable source of up-to-date and comprehensive information on the researchers and their activities. Other challenges to this method of data collection were,
first, that there was no electronic storage system large enough to encompass the considerable amount of information gathered from each website and, secondly, that information needed to be copied manually from the websites, which was very time consuming.

Several possibilities for efficient data collection were investigated prior to contracting ANU. For instance, the possibility of commissioning an IT company to custom-design a website that would enable transfer of information directly from the web was explored. However, issues of cost and plagiarism hindered this endeavour. Using the university Scopus and WoS databases to identify researchers was also considered. However, on further investigation, REPP was found to have access to far more advanced technologies and experience for conducting this kind of analysis.

Data Collection

I invited potential respondents to participate in two research processes: a survey and a semi-structured follow-up interview. I required them to complete the survey to become part of the study and they could choose whether or not to participate in the follow-up interview. All 144 researchers in my sampling frame were emailed a survey, 24 of which were returned as undeliverable. Of the 120 surveys successfully delivered, 65 responses were returned, 5 of which were incomplete. Incomplete survey responses were excluded, resulting in 60 responses and a 50% response rate. Thirty-two (27%) survey respondents agreed to participate in a follow-up interview. Of these, upon being contacted direct, two declined my invitation to an interview and four did not respond. Thus, 26 researchers, constituting 43% of the survey’s sample and 18% of the sampling frame, participated in the interview stage of the study. Due to the relatively small interview participant sample size, the results of these interviews cannot be considered representative of all social work researchers, since those who responded may have had a particular interest in research use or researcher/practitioner interaction.
Survey

Initially, I emailed an information package to potential participants, including an invitation to participate, a statement of information about the study (see Appendix B), and a link to an electronic survey powered by Survey Monkey (see Appendix A). The survey opened on 10 November 2011 and ran until 1 December 2011. I considered this an adequate amount of time since the survey was relatively short and I was concerned participants might not prioritise it if they were given more time. At the end of the second week, I emailed a reminder asking participants to complete the survey if they had not already done so. Most responded within the first week, with contributions slowing down in the second and third weeks. Two participants emailed me after the survey had closed to ask whether they could still complete it, so I re-opened it for a further two days to allow them to respond. Thereafter, no additional responses were received.

Completion of the survey signified the respondents’ consent to participate in this stage of the study (see Ethical Considerations section, p. 116-119, and Appendices for a more detailed discussion of informed consent issues). Those who chose to participate only in the survey remained anonymous to the researcher. Those who indicated their consent to be contacted for a follow-up interview gave their names and contact details, so their survey responses were not anonymous. The survey took approximately 10 minutes to complete. It was divided into three sections which asked participants to: (i) provide demographic information; (ii) indicate the extent to which they had engaged with practitioners (this included all forms of interaction and engagement, both during and apart from the research process); and (iii) indicate the extent to which they believed the research they had produced was used by practitioners. As most items were closed questions, I included an open-ended question at the end to enable participants to expand on their responses.
Research utilisation, the dependent variable in this study, was measured using a modified version of the Knott and Wildavsky (1980) research use (RU) scale, which has been validated several times (see Cherney & McGee, 2011; Landry et al., 2001), and was discussed fully in Chapter 2. I felt it was important to use a validated measure of research use to enable comparisons with other studies and thus contribute to the enhancement of existing research utilisation measures. Each question corresponded to one of the six items in the Knott and Wildavsky (1980) scale adapted by Landry et al. (2001) (see Table 3, p. 51 for the wording of each stage). As indicated previously, the scale was based on six stages, namely, transmission, cognition, reference, effort, influence, and application. For each of these six stages of the research utilisation scale, respondents were asked to estimate what had become of their research using a 5-point Likert scale ranging from 1 (never used), 2 (rarely used), 3 (sometimes used), 4 (usually used), to 5 (always used). To account for the fact that respondents might not have known whether their research had been used, I added an additional item: 0 (I don’t know). Previous research studies (see Cherney & McGee, 2011; Landry, Amara, & Lamari, 2001) have used this scale cumulatively, meaning that each stage was more important than, and built upon, the next. For the sake of comparison, the present study also gave the six stages of the scale a cumulative weighting. However, the process of research utilisation has been argued to be non-linear, indicating that one does not necessarily have to traverse each rung of the research utilisation ladder in sequence to reach the final stage of application (Cherney & McGee, 2011). In fact, the review of interaction models above (see Table 2, pp. 44-45) highlighted that individual components of knowledge utilisation do not need to be linked in a linear fashion, but can occur simultaneously or in different sequences. This was taken into consideration in the analysis and discussion of the survey findings.
Interaction was measured by asking participants to respond to six statements about their engagement with practitioners, using a five-point scale of 1 never, 2 rarely, 3 sometimes, 4 usually, and 5 always interacted with practitioners concerning the research. Questions for this section were intentionally formulated broadly to enable identification of a wide range of different interactions, including non-research-related engagement and collaborative engagement in shared research. For example, rather than asking participants to select from or rank a list of pre-formulated activities, the survey asked them to specify whether they had engaged with practitioners in the course of their work and whether they made efforts to produce research together with practitioners. The former could include interaction as a result of a researcher’s professional role (where researchers were involved in organising student placements or where they were employed in a practice capacity), through informal social engagement (such as going out for coffee, dinner or drinks together), and through formal interaction (such as during a funded linkage project or where practitioners participated in a researcher’s study). The later was slightly more specific, relating solely to researchers’ engagement with practitioners during the research process and could include formal and informal engagement. The aim of the survey was not to identify details of these interactions, but to open up the possibility for researchers to reveal the extent to which they had engaged with practitioners either during, or apart from, the research process.

Semi-structured interviews

Next, I conducted semi-structured telephone interviews with selected participants. Conducting interviews via telephone meant I was able to interview researchers throughout Australia, rather than only those based locally. Rather than being a distant observer, my aim during these interviews was to develop mutual confidence and share a curiosity about possible factors and structures influencing research use and interaction. This is in line with critical realism, which views social scientists as part of the open
social system under study (Bhaskar, 2008), implying a two-way movement, a “fusing of the horizons” (Sayer, 2000, p. 17) of listener and speaker, researcher and researched. I attempted to establish mutual confidence by developing rapport as outlined by DiCicco-Bloom and Crabtree (2006): (i) apprehension, where the goal is to encourage the interviewee to talk by asking a broad and open-ended, nonthreatening question; (ii) exploration, where the interviewee is encouraged to engage in in-depth descriptions and a sense of bonding and sharing is developed (here, I had to find a balance between asking the questions in my semi-structured interview schedule and allowing interviewees to elaborate on questions they found most relevant); and (iii) cooperation, whereby the interviewer may take the opportunity to clarify certain points, and the interviewee may correct the interviewer as both together attempt to make sense of the interviewee’s world. I experienced varying degrees of success in reaching the final cooperation stage of rapport, depending on the environment and frame of mind of each participant at the time of the interview, and the degree to which I was able to connect with them over the telephone.

For each interview, I used a pre-formulated, semi-structured interview schedule with approximately ten questions, which I revised for each participant depending on their responses to the survey (see Appendix C). I asked participants to add any necessary clarifications, additions, and suggestions to their survey responses throughout the discussion. This was important, since the survey was completed six months prior to the interviews (an unintentional time lapse) and several participants had changed employment during this time. I also used the interview to clarify anything that had puzzled or especially interested me about a participant’s response during the preliminary data analysis. The aim of the interviews was to develop a deeper understanding of researchers’ perceptions of the research utilisation process and their motivations and methods for engaging with practitioners. Further, I wanted to determine
whether the interviews confirmed the existence of a relationship between interaction and research use and, if so, whether they would provide insights into how interaction could best lead to research use.

Each interview lasted approximately 30-50 minutes. The audio files were sent to a professional transcription service (see the Ethical Considerations section, p. 116-119 for a full discussion of issues of anonymity) and the interview was transcribed verbatim to preserve meaning. Participants had been informed in advance that their interviews would be transcribed by a professional service, which has a strict confidentiality policy. Upon receipt of the transcripts, I removed all identifiers and emailed the clean transcripts to participants for review and confirmation that all identifying information had been removed. Member checking invites research participants to verify and amend the interpretations and conclusions made from the data by the researcher so as to increase the credibility of research findings (Krefting, 1991; Manning, 1997). Twenty participants returned their transcripts with minor to moderate amendments.

Data Analysis

Survey

The survey’s data were analysed using the quantitative data analysis software packages, Statistical Package for the Social Sciences (SPSS) and Microsoft Excel. First, I recorded the descriptive statistics in my sample by manually summarising the data into tables. Descriptive data for research utilisation and interaction enabled me to gain an understanding of the extent of research use and interaction among the population of social work researchers under study. Next, using SPSS, I conducted a multivariate analysis to ensure the quality and validity of my research questions. The underlying theme of many multivariate analysis techniques is simplification. In other words, it is desired to summarise a large body of data by means of relatively few parameters.
(Stevens, 2002). In this multivariate analysis, principal component analysis was employed to reduce variables into a smaller number of components and to use these components to ascertain whether the survey had measured two distinct constructs—i.e., interaction and research use. This was done via an orthogonal rotation, which determines whether factors are unrelated (Costello & Osborne, 2005). If variables group onto separate components this indicates a reasonable scale has been developed (Stevens, 2002). Finally, I completed a univariate analysis to examine the relationship between individual variables for interaction and research use. This form of analysis was used to ensure that the simplification of data via the multivariate analysis did not obscure the existence of a relationship between individual questions for interaction and research use. For example, taken as a whole, there may be no apparent relationship between research use and interaction. However, individual questions in these components may be strongly related with individual questions in the other component. Thus, the disadvantage of simplifying variables into one ‘usage value’ in a multivariate analysis is that this can dilute the strength of relationships between individual questions. This form of univariate analysis can be used to supplement multivariate analysis by selecting and analysing two single variables for the purpose of determining the empirical relationship between them (Stevens, 2002). In this univariate analysis, a Pearson’s chi-squared test was used to examine whether there was a relationship between individual variables for interaction and for research use. This was done by testing what scientists refer to as the null hypothesis. The null hypothesis is a hypothesis which the researcher tries to disprove, reject or nullify (Stevens, 2002). The null hypothesis is usually stated in conjunction with an alternative hypothesis, which is what the researcher really thinks is the cause of a phenomenon (Stevens, 2002). In this study, the null hypothesis was that participants who reported high rates of interaction or coproduction with practitioners would not report high rates of research use by practitioners. The alternative hypothesis was that
participants who reported high rates of interaction or coproduction with practitioners would report high rates of research use by practitioners.

**Semi-structured interviews**

Qualitative data arising from the semi-structured interviews were analysed using a combination of manual methods and NVivo 10. Using the best features of manual and electronic methods of analysis has been found to yield the best results in qualitative research (Welsh, 2002). Audio files were retained so I could return to the recordings for a nuanced verification or clarification of content or meaning. Initially, I conducted a manual thematic analysis through a brief reading of the 26 transcripts to identify recurrent patterns or themes within the data, given Braun and Clarke’s (2006) observation that “it is ideal to read through the entire data set at least once before you begin your coding, as ideas and identification of possible patterns will be shaped during the read through” (p. 87) and “a theme captures something important about the data in relation to the research question, and represents some definite answer to the question of what constitutes a theme or pattern or what weight a theme needs to indicate. Hence flexibility is needed as “rigid rules really do not work” (p. 82). Part of the flexibility in thematic analysis is that it enables researchers to determine themes (and their prevalence) in a number of ways. It is important that researchers are consistent in how they evaluate themes within any particular analysis (Braun & Clarke, 2006). Thematic analysis may be aligned with a range of ontological and epistemological positions and theoretical frameworks (Borrell, 2008). Braun and Clarke (2006) explained that “thematic analysis can sit between the two poles of essentialism and constructionism, characterised by theories such as critical realism” (p. 81, emphasis in original). This approach focuses on the ways that individuals make meaning of their experience, as well as the ways in which the broader social context impinges on those meanings, while retaining focus on the material and other limits of reality (Braun & Clarke, 2006). Thus
“thematic analysis can be a method that works … to reflect reality and to unpick or unravel the surface of reality” (Braun & Clarke, 2006, p. 81). For this study, a thematic analysis was carried out within such a critical realist framing, strategically focused on unpicking the surface of reality in discursive presentations of research use. This is in line with Braun and Clarke's description of a thematic analysis at the latent level, going beyond the semantic content of the data and starting “to identify or examine the underlying ideas, assumptions, and conceptualisations—and ideologies—that are theorised as shaping or informing the semantic content of the data” (p. 84).

In this study, the significance of a theme was determined not by quantifiable measures but rather by whether it captured something important in relation to the overall research question. Critical realist theory suggests that the events we observe are determined by the combined activity of hidden causal structures, located beyond the reach of our experience, in the domain of the actual and the real (Bhaskar, 2008). This suggests that one comment alone can reveal the presence of hidden causal structures. Thus, the importance of a theme was not necessarily based on the number of times it was mentioned or the length of time spent talking about it. On the other hand, prevalence could indicate hidden causal structures. For this reason, the space allotted to a theme within each data item and the prevalence of a theme across the entire data set were taken into consideration during the thematic analysis as a possible indicator of the strength of a theme.

Next, I compiled a list of themes and tried to collapse them or arrange them under my research questions for coding in NVivo. I then re-read each transcript and coded it according to the preliminary codes I had established in NVivo. I also made annotations about possible connections between themes, additional themes, and potential underlying causal mechanisms. Identifying mechanisms was a difficult task, since they are not observable, and there is currently no broadly accepted approach to
identification of mechanisms (Bygstad & Munkvold, 2011). While there is no established methodology for identifying mechanisms, some key contributions provide the basis for the identification of mechanisms in this study (see Table 4, p. 99). It should be noted that the pragmatic choice to restrict the sample to researchers proved particularly problematic for the identification of mechanisms, since the experiences of researchers reflect only in a very incomplete way the processes of interaction, making it even more difficult to construct the mechanisms. This limitation is discussed further on pages 144-145.

**Triangulation**

As part of the data analysis, the interview findings provided a framework to reflect and expand upon the survey’s results through a process of triangulation. In critical realism, triangulation provides a “family of answers” (Pawson & Tilley, 1997, p. 152), which are “necessary to reveal different features of the same layered reality” (Downard & Mearman, 2007, p. 92). Sobh and Perry (2005) noted sometimes triangulation provides differing perceptions which foster understanding of the complexities of reality. Patton (2002) emphasised the importance of triangulation precisely because mixed-methods studies, such as this, combining quantitative and qualitative methods are highly likely to generate different perspectives given the relative strengths of each approach. Triangulation offers an opportunity to uncover deeper meaning in the data. Thus, from a critical realist perspective, the differing approaches of quantitative and qualitative methodologies play a fundamental role in uncovering underlying causal mechanisms and generating theories to explain them (Houston, 2010; Kjørstad, 2008; McEvoy & Richards, 2006).
Ethical Considerations

I was granted ethics clearance for this research project from the University of Newcastle Human Research Ethics Committee on 11 July 2011 (Approval number H-2011-0235). I was also guided by the *National Statement on Ethical Conduct in Human Research* (National Health and Medical Research Council, Australian Research Council, and Australian Vice-Chancellors’ Committee, 2007) and the *AASW Code of Ethics* (Australian Association of Social Work, 2010). Ethical issues included ensuring voluntary participation, confidentiality and anonymity, and validation and communication of findings. Risk of harm was not considered an ethical issue in this study as participants were all researchers, mostly with a PhD qualification, and were not asked to discuss sensitive topics. For this reason, they were not viewed as vulnerable.

**Voluntary Participation**

I ensured voluntary participation through the distribution of invitations to participate in the research via email, which I considered a relatively nonintrusive or non-coercive method. Potential participants were not offered payment for participation. Participants were self-selecting, since they needed to complete the survey to become part of the study. I ensured voluntary participation throughout the research process by providing verbal and written statements (supplied in initial information packages and reiterated during interviews and in letters accompanying transcripts). Participants who decided to respond to the survey were informed that, due to the anonymous nature of the survey, they would not be able to withdraw their response once it had been submitted. Those who decided to take part in a research interview were informed that they could withdraw at any time, and that their participation in any aspect of the research was entirely voluntary.
Confidentiality and Anonymity

I addressed issues of confidentiality and anonymity through the careful handling of participant files comprising consent forms and transcripts. The recorded interviews were sent to a professional transcription service that employs specific measures to protect client privacy and confidentiality in compliance with the National Privacy Principles contained in the Privacy Act 1988, as well as the Guidelines on Privacy in the Private Health Sector issued by the Federal Privacy Commissioner under the National Health Act 1953 (www.privacy.gov.au). Employees of and subcontractors to this service sign confidentiality agreements before the commencement of work in compliance with the National Privacy Principles contained in the Privacy Act 1988. While this ensured the confidentiality of participants, it did not ensure their anonymity since identifying information formed part of the interview recordings. For this reason, anonymity was not possible during transcription and participants were informed of this verbally prior to the interview and in written statements included in the survey and information packages.

Prior to emailing the transcripts to participants, I highlighted the identifiers that would be removed from the documents and encouraged participants to highlight any further information that might identify them. I then removed these identifiers from the transcripts and replaced names with pseudonyms. I kept a master list of participant codes and pseudonyms separately from the data and consent forms. During the active phase of the research, I held consent forms and hard copies of data on the premises of the University of Newcastle, secured in a locked filing cabinet in my office. I also secured the master list of participant codes in my office, but in a separate locked filing cabinet. Only the project supervisors and I had access to these records. I identified electronic files by the participant’s code number and stored password-protected data on a secure network. On completion of the research, I transferred these forms and data to the administrative office of the School of Humanities and Social Science, where they
will remain secured for five years beyond final publication of this research. Thereafter, I will delete all electronic records, hard copies of data, and shred consent forms using the University’s secure documents removal service.

**Validation and Communication of Findings**

I emailed each participant a copy of the verbatim transcript of their interview, which they could return with comments and amendments. Participants specified the email address to which they would like the transcripts to be sent. One participant requested a hard copy of the transcript, which I mailed to her with a reply-paid envelope. I also emailed a summary of the final results to participants prior to submitting my thesis or publishing the results of my research to guarantee its credibility.

**Potential Benefits of the Study to Participants and Others**

The study provided an opportunity for participants to reflect on their reasons and motivations for conducting research, and for engaging with practitioners. Leshem and Trafford (2006) suggested that, by telling their story, people can improve their capacity to learn from experience. Some participants said they had enjoyed the opportunity to talk with someone about what they do and why. One participant thanked me for the opportunity to participate in my study via email: “I found it really interesting and helpful to reflect on my current work here—maybe I like my job after all!” Another participant noted “it’s quite interesting to talk about what you do every day. You don’t get a chance to do it very often”. Thus the opportunity to reflect on their work may have benefited participants by providing fresh insights and new learning.

Participants were provided with a summary report of the research results, which may have been of benefit to them (Fernandez, Skedgel, & Weijer, 2004). Dissemination of results places the tangible benefits of the research in the public domain (Fernandez, Kodish, & Weijer, 2003). Benefits might, though do not necessarily follow. Several
participants expressed an interest in the results of this study, and elaborated on the importance of feedback to research participants. For some participants, seeing their own thoughts and experiences reflected in the comments of others provided helpful encouragement, and others gained new ideas about implementing their own work. Feedback to participants is an ethical imperative and reflects the researchers’ moral obligation to respect human dignity through not treating them merely as a means to an end (Fernandez et al., 2004).

**Limitations of the Study**

The study had several limitations: First, despite being one of the more frequently used measures of research use, the Knott and Wildavsky scale is not above criticism. For example, Davies et al. (2005) evaluated its heavy reliance on linear assumptions, whereby all stages of research use must occur in sequence and are deemed to be of equal importance, requiring similar effort to move across each stage. In reality, the process by which research-based knowledge moves into practice is complex and the later stages of application and impact may be far more difficult to achieve than the earlier stages of transmission and reference (Davies et al., 2005). For this reason, I decided to use the scale to capture the extent of research use rather than the complex and less predictable nature of the processes that lead to knowledge utilisation. In order to capture the nature of the research utilisation process, I complemented the survey with qualitative interviews, believing that the interviews would enable me to expand on the survey’s findings, by providing richer insights into the interactive processes leading to research use.

Secondly, the decision to sample only researchers rather than practitioner collaborators meant one side of the story remains missing. As noted earlier, I believed this boundary would maximise the collection of detailed data and provide thick analytic description without overextending the resources available to me. However, including
both researchers and practitioners in my sample would have been more consistent with a
critical realist approach which emphasises that “the actor’s accounts form the
indispensable starting point of social enquire” (Bhaskar, 1998, p. xvi). This limitation
proved to be more problematic than anticipated, since the experiences of researchers
reflected only in a very incomplete way the processes of interaction, thereby making it
very difficult to reconstruct mechanisms influencing research use. While it was not
possible to identify the entire mechanism, which in critical realist terms can never be
completely reached at the real or fundamental level, this study provided a rich and dense
description of factors considered by researchers to impact on research use, which may
offer clues as to what the mechanisms underlying research use might be. The
implications for future research are discussed in the section on Further Research in
Chapter 9.

Thirdly, although the study included a quantitative component, which enabled
inclusion of a larger number of participants, the sample size was relatively small and,
therefore, has limited generalisability. In all, the response rate for the survey was 50%
and the percentage of respondents who participated in both the survey and the
interviews was 43.3%. In addition, the initial sample was purposive and quite narrow,
since only first-named researchers who had published in journals with the FoR Code
1607 for social work in the period 1999-2007 were contacted to participate in the study.
For this reason, this sample cannot be considered representative of social work
researchers in general or of Australian social work researchers. However, by contrasting
and comparing the findings of this study to those of similar studies conducted in
different contexts and times, I hoped to develop for the reader a more comprehensive
understanding of the factors identified in this study.
Conclusion

The area of knowledge utilisation was found to be poorly conceptualised and lacking in depth empirical exploration of the research utilisation process. In response, I employed a mixed methodology, underpinned by a critical realist paradigm, comprising a quantitative survey and a semi-structured interview, to capture the experiences of researchers engaging with practitioners for the purpose of fostering research use. The survey’s responses (n=60) and the follow-up interviews (n=26) provided rich and complex data for analysis using NVivo and SPSS software. The findings from this analysis are discussed in the following chapter.
CHAPTER 5

Survey Findings

This chapter presents the findings of the survey of researchers publishing in Australia social work journals (n=60). It should be noted that this sample cannot be considered representative of the total population of social workers in Australia, since having a social work qualification is not a requirement of publishing in a social work journal. In any case, developing an understanding of the demographic profile of Australian social workers is a difficult task. Unlike the UK, social work is not a registered profession in Australia, so there is no central register for all social workers. Many social workers with accredited social work qualifications have a title other than ‘social worker’ but still associate with the profession. Conversely, many social workers without accredited social work qualifications call themselves ‘social workers’ and associate with the profession. The most reliable estimate of the number of people who have completed an accredited social work degree is from the Department of Education, Employment and Workplace Relations (DEEWR, 2008), whose work is based upon ANZSCO classifications. These figures indicate that there were 19,300 Social Workers in Australia in 2008. However, the demographic profile of this population is not known, hindering comparison with the sample in this study.

Univariate and multivariate analyses of the data were conducted:

- **Univariate analysis** was used to describe the demographic profile of participants and the strength of individual variables—extent of interaction between researchers and practitioners, organisational support, and research utilisation, and to examine relationships between single variables, such as
type of engagement (i.e., during coproduction or at any stage during the research process), and practitioners’ level of research use.

- Multivariate analysis was used to test whether the variables used to measure research use and interaction loaded onto these overarching factors. In short, whether the survey actually measured what it set out to measure—i.e., research use and interaction. It involved analysis of data on researcher-practitioner engagement with data on the six stages of the Knott and Wildavsky (1980) scale of research use.

**Univariate Analysis**

**Demographic Profile of Participants**

Univariate analysis of the age of participants showed 38(63.3%) were female and 22(36.6%) were male.

*Figure 4: Age of participants*

![Figure 4: Age of participants]

Figure 4 shows that participants were mostly older, with 25(41.6%) aged between 50-59 and 18(30%) were aged 60 and over, while there were no contributions from people aged 20-29 and only 2(3.3%) from the 30-39 age group.
Figure 5: Discipline of participants

Figure 5 shows the majority of participants identified as social workers (51.6%). Other disciplines represented in the ERA category (FoR1607) for social work were psychology (18.3%), human services (15%), sociology, psychiatry, and medicine, each with 5%.

Figure 6: Location of participants’ work

Figure 6 shows the majority of participants were employed either in universities or research centres (83.3%), with only 4(6.6%) employed in practice-based organisations and even fewer participants (5%) working across research and practice settings. The remainder (5%) had either retired completely or were retired and self-employed.

Figure 7: Highest academic qualification of participants
Figure 7 shows participants’ highest academic qualification level (using mutually exclusive categories). The majority had a PhD qualification (85%), with 3(5%) possessing a Masters’ degree, 4(6.6%) a Bachelor degree, and 2(3.3%) a Graduate Diploma. This is not an indicator of a person’s professional qualification.

**Figure 8: Practice history of participants**

The majority of participants (n=40, or 80%) reported having some clinical experience. Figure 8 shows that many reported practice experience in the last 10 years—17(28.3%) —or are currently practicing—14(23.2%). These are mutually exclusive categories, i.e., participants with practice experience during the 2000s and currently were placed in the current category.

**Extent of Interaction with Practitioners**

Figure 9 shows that all participants had some level of engagement with practitioners in the course of their work. As noted earlier, engagement was intentionally defined broadly, including all forms of contact, including research-related interaction, informal or social interaction, interaction in the course of student placements, and so on. The purpose of this question was to enable identification of any form of interaction that might be effective in facilitating research use, rather than limiting the focus of the study to research-related interaction.
Twenty-two (36.6%) participants reported that they sometimes engaged with practitioners, 21(35%) that they usually engaged with practitioners, and 12(20%) that they always engaged with practitioners. Only 5(8.3%) reported rarely engaging with practitioners. None stated that they never engaged with practitioners. While the survey captured the extent to which researchers engaged with practitioners, it did not capture the intensity or nature of these interactions. The substance of the relationships between researchers and practitioners was explored in the interviews.

Figure 10 shows the extent to which participants made efforts to produce research together with practitioners. This question captured a slightly narrower form of interaction between researchers and practitioners during the research process, where engagement with practitioners occurred either through coproduction of research or through engagement with practitioners as research subjects: 23(38.3%) participants reported that they usually produce research together with practitioners, 21(35%) that they sometimes do, 11(18.3%) that they always do, 3(5%) that they rarely do, and only 2(3.3%) that they never make efforts to produce research together with practitioners.
Organisational Support

Figure 11 shows the extent to which participants felt their organisation provided them with incentives and support to engage with practitioners.

**Figure 11: Perceived organisational support for engaging with practitioners**

In Figure 11, 21(35%) participants agreed their organisation supported their engagement with practitioners, and 8(13.3%) strongly agreed; 20(33.3%) had a neutral or mixed response; 8(13.3%) disagreed, and a further 3(5%) strongly disagreed that they received organisational support or incentives to engage with practitioners.

Research Utilisation

As shown in Table 5, approximately 48 (80%) of the sample either usually or always transmitted (Stage 1) their research to practitioners and clinicians. But fewer participants reported that their research was used in subsequent stages of research utilisation. This decrease was reflected in the participants’ mean score and was also found by Landry et al. (2001) and Cherney and McGee (2011).

A comparison of the current study and that of Landry et al. (2001) and Cherney and McGee’s (2011) findings is presented in the final three columns of Table 5. While the mean score in all three studies decreased in the later stages of research utilisation, the majority of the average scores in the current study, and in that of Cherney and McGee (2011), were slightly higher compared to those of Landry et al. (2001).
Table 5: Distribution of research use reported by academic researchers

<table>
<thead>
<tr>
<th>Stages of knowledge utilisation</th>
<th>Don’t know %</th>
<th>Never %</th>
<th>Rarely %</th>
<th>Sometimes %</th>
<th>Usually %</th>
<th>Always %</th>
<th>Mean score n=60</th>
<th>Cherney &amp; McGee (2011) n=119</th>
<th>Landry et al. (2001) n=1229</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transmission</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>20</td>
<td>40</td>
<td>37</td>
<td>4.1</td>
<td>4.0</td>
<td>3.2</td>
</tr>
<tr>
<td>2. Cognition</td>
<td>7</td>
<td>0</td>
<td>3</td>
<td>32</td>
<td>52</td>
<td>8</td>
<td>3.5</td>
<td>3.8</td>
<td>3.1</td>
</tr>
<tr>
<td>3. Reference</td>
<td>10</td>
<td>0</td>
<td>3</td>
<td>57</td>
<td>27</td>
<td>3</td>
<td>3.0</td>
<td>3.3</td>
<td>2.7</td>
</tr>
<tr>
<td>4. Effort</td>
<td>18</td>
<td>0</td>
<td>3</td>
<td>50</td>
<td>23</td>
<td>5</td>
<td>2.7</td>
<td>3.4</td>
<td>2.4</td>
</tr>
<tr>
<td>5. Influence</td>
<td>22</td>
<td>0</td>
<td>5</td>
<td>52</td>
<td>20</td>
<td>2</td>
<td>2.5</td>
<td>3.2</td>
<td>2.2</td>
</tr>
<tr>
<td>6. Application</td>
<td>23</td>
<td>0</td>
<td>8</td>
<td>55</td>
<td>13</td>
<td>0</td>
<td>2.0</td>
<td>3.0</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Also of interest, in the present study, no respondents reported never having achieved one of the stages of research use. The possible practical and theoretical explanations for this pattern of results are considered in Chapter 7.

At the first transmission stage of research use, 22(37%) participants reported that they always made efforts to share their research with practitioners, while 24(40%) reported that they usually did this. Only 12(20%) participants reported that they sometimes made efforts to share their research with practitioners, and 2(3%) that they rarely did this. No participants reported they never made efforts to share their research with practitioners. It should be noted that this question focused on researchers’ efforts to transmit their findings and was not an indicator of their success in doing so.

In the second cognition stage in the scale, 31(52%) participants reported that their research was usually read and understood by practitioners, while 19(31.6%) stated that their research was sometimes read and understood. Only 5(8%) stated their research was always read and understood, while 2(3%) believed this was rarely the case and 4(7%) did not know. As this was a self-report questionnaire, this is merely a reflection of participants’ perceptions of the use of their research.

At the third reference stage of the scale, 34(57%) participants reported that their research was sometimes cited as a reference in reports, studies, and strategies of action elaborated by practitioners and clinicians, while 16(27%) stated that their research was usually referenced. Only 2(3%) reported that their research was always referenced and a further 2(3%) stated that it was rarely referenced. None reported that their research was never referenced, but 6(10%) did not know.

In the fourth effort stage of the scale, 30(50%) participants reported that practitioners and clinicians sometimes made efforts to adopt the results of their research, while 14(23%) reported practitioners usually made efforts to adopt their findings; 3(5%) stated practitioners always made efforts to adopt their research findings, while 2(3%)
believed these efforts were rarely made, and 11(18%) didn’t know. None reported that no efforts were made to adopt their research findings.

In the fifth influence stage of the scale, the majority of participants—31(52%)—stated that their research results sometimes influenced the choices and decisions of practitioners and clinicians; 12(20%) believed that their results usually influenced practitioners, while only 1(2%) stated that his/her research always influenced practitioners; 3(5%) believed their research rarely influenced practitioners; and 13(22%) did not know. None believed that their research never influenced practice.

In the final application stage of the scale the majority of participants—33(55%)—stated that their results sometimes gave rise to applications and extension by the practitioners and clinicians concerned, while 8(13%) stated that their research usually gave rise to applications. None believed their research always led to application in practice. Five (8%) believed that they rarely did and 14(23%) did not know. No participants reported that their research never gave rise to applications by practitioners.

**Univariate Relationships**

A univariate analysis was conducted to explore the relationship between single outcome variables, such as the type of interaction (i.e., during coproduction or at any stage during the research process), level of practitioners’ research use and the explanatory variables—gender, interaction, coproduction, and organisational support to determine the empirical relationship between them—using a series of Pearson’s chi-square tests. Participants’ answers were recoded into two overarching categories, in which responses of usually and always were taken as yes categories, and responses of sometimes, rarely, and never were categorised as no. These yes and no categories were then tested against the explanatory variables.
Table 6: Gender and research use

<table>
<thead>
<tr>
<th>Gender</th>
<th>Transmission</th>
<th>Cognition</th>
<th>Reference*</th>
<th>Effort</th>
<th>Influence</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>68</td>
<td>57</td>
<td>52</td>
<td>45</td>
<td>32</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>82</td>
<td>69</td>
<td>21</td>
<td>28</td>
<td>25</td>
<td>18</td>
</tr>
</tbody>
</table>

* This symbol indicates a significant difference between the two percentages.

Table 6 shows there was a significant association between male gender and the reference stage research use $\chi^2 (1, N=60) = 5.61, p = 0.01$. This seems to suggest that male researchers’ work is more likely than female researchers’ work to be cited as a reference in the reports, studies, and strategies of action elaborated by practitioners and clinicians. On the other hand, given that this is a study of researchers’ perceptions only it is also possible that male researchers simply report that their work is cited more frequently.

Table 7: Engagement and research use

<table>
<thead>
<tr>
<th>Engagement</th>
<th>Transmission</th>
<th>Cognition*</th>
<th>Reference</th>
<th>Effort</th>
<th>Influence</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>52</td>
<td>50</td>
<td>25</td>
<td>29</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Yes</td>
<td>97*</td>
<td>77</td>
<td>40</td>
<td>39</td>
<td>37</td>
<td>27</td>
</tr>
</tbody>
</table>

* This symbol indicates a significant difference between the two percentages. The shading indicates a marginally significant difference.

Table 7 shows a significant association between ‘engagement’ (defined broadly as interaction with practitioners during and separately from the research process) and the transmission $\chi^2 (1, N=60) = 16.89, p = 0.00$ and cognition $\chi^2 (1, N=60) = 4.31, p = 0.03$ stages of research use. The associations between engagement and influence $\chi^2 (1, N=60) = 2.78, p = 0.09$, and between engagement and application $\chi^2 (1, N=60) = 3.78, p = 0.05$ were also marginally significant. Overall, the scores for participants who engaged with practitioners (yes) were higher than for participants who did not engage with practitioners (no). However, the nature of effective engagement was not examined by the survey.
Table 8: Coproduction and research use

<table>
<thead>
<tr>
<th>Coproduction</th>
<th>Transmission*</th>
<th>Cognition</th>
<th>Reference</th>
<th>Effort</th>
<th>Influence</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>58</td>
<td>52</td>
<td>30</td>
<td>30</td>
<td>26</td>
<td>11</td>
</tr>
<tr>
<td>Yes</td>
<td>91</td>
<td>74</td>
<td>36</td>
<td>38</td>
<td>29</td>
<td>21</td>
</tr>
</tbody>
</table>

* This symbol indicates a significant difference between the two percentages. The shading indicates a marginally significant difference.

Table 8 shows a significant association between coproduction (defined as interaction during the joint production of research) and the transmission $\chi^2 (1, N=60) = 9.23, p < .001$ stage of research use. The association between coproduction and cognition $\chi^2 (1, N=60) = 2.96, p = 0.08$ was marginally significant. There was no significant association between coproduction and any other stage of research use. Overall, the scores for participants who co-produced research with practitioners (yes) were higher than for participants who did not co-produce research with practitioners (no).

Table 9: Organisational support and research use

<table>
<thead>
<tr>
<th>Organisational support</th>
<th>Transmission</th>
<th>Cognition</th>
<th>Reference</th>
<th>Effort</th>
<th>Influence</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>72</td>
<td>57</td>
<td>30</td>
<td>31</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Yes</td>
<td>82</td>
<td>73</td>
<td>38</td>
<td>39</td>
<td>36</td>
<td>29</td>
</tr>
</tbody>
</table>

Table 9 shows no significant association between organisational support and research use. However, the association between organisational support and the application stage of research was marginally significant $\chi^2 (1, N=60) = 3.36, p = 0.06$. This suggests that research is perceived by researchers to be more likely to be applied when organisational support is higher. However, the survey did not investigate what forms of organisational support facilitate research application.

The findings from the univariate analysis revealed some interesting associations between different stages of research use and gender, engagement, coproduction and organisational support. It should be noted that multiple testing of variables increases the chance of false positives, meaning one should be more cautious in interpreting the
significance of p values in the range .01 to .05. The nature of these variables, and of their relationships, often remained unclear, highlighting the need for further analysis to generate a more comprehensive understanding of the research utilisation process and the factors which may impact on this process.

**Multivariate Analysis**

A multivariate analysis was conducted to assess whether the questions form valid scales. To do this, I selected those questions most relevant to interaction and research use:

- *Research use* included the six questions representing the six stages of the Knott and Wildavsky scale. I selected these questions because I wanted to confirm the questions representing the six stages of the scale correlated with one another, and reflected a single factor, i.e., research utilisation (Field, 2009).

- *Interaction* included three questions that referred directly to researcher-practitioner engagement during and separately from the research process.

Prior to conducting a factor analysis, the correlations between all the items were examined to see how they related to one another (see Table 10).

Transmit was not correlated with the other stages in the knowledge utilisation scale, but strongly correlated with variables representing engagement. This finding provided some initial insights into the possible outcomes of the factor analysis, suggesting that the first stage of Landry et al.’s (2001) version of the Knott and Wildavsky (1980) scale may have been misinterpreted by respondents in the current study.
### Table 10: Correlation between utilisation and engagement

<table>
<thead>
<tr>
<th></th>
<th>Engage</th>
<th>Co-produce</th>
<th>Shapes</th>
<th>Transmit</th>
<th>Read</th>
<th>Cited</th>
<th>Effort</th>
<th>Influence</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage</td>
<td>1.000</td>
<td>.587</td>
<td>.685</td>
<td>.610</td>
<td>.340</td>
<td>.057</td>
<td>-.095</td>
<td>.025</td>
<td>.071</td>
</tr>
<tr>
<td>Co-produce</td>
<td>.587</td>
<td>1.000</td>
<td>.569</td>
<td>.576</td>
<td>.168</td>
<td>.021</td>
<td>-.079</td>
<td>-.037</td>
<td>-.033</td>
</tr>
<tr>
<td>Shapes</td>
<td>.685</td>
<td>.569</td>
<td>1.000</td>
<td>.626</td>
<td>.232</td>
<td>-.099</td>
<td>-.121</td>
<td>-.023</td>
<td>-.056</td>
</tr>
<tr>
<td>Transmit</td>
<td>.610</td>
<td>.576</td>
<td>.626</td>
<td>1.000</td>
<td>.066</td>
<td>.008</td>
<td>-.036</td>
<td>.048</td>
<td>-.023</td>
</tr>
<tr>
<td>Read</td>
<td>.340</td>
<td>.168</td>
<td>.232</td>
<td>.066</td>
<td>1.000</td>
<td>.415</td>
<td>.314</td>
<td>.356</td>
<td>.327</td>
</tr>
<tr>
<td>Cited</td>
<td>.057</td>
<td>.021</td>
<td>-.099</td>
<td>.008</td>
<td>.415</td>
<td>1.000</td>
<td>.335</td>
<td>.364</td>
<td>.370</td>
</tr>
<tr>
<td>Effort</td>
<td>-.095</td>
<td>-.079</td>
<td>-.121</td>
<td>-.036</td>
<td>.314</td>
<td>.335</td>
<td>1.000</td>
<td>.749</td>
<td>.583</td>
</tr>
<tr>
<td>Influence</td>
<td>.025</td>
<td>-.037</td>
<td>-.023</td>
<td>.048</td>
<td>.356</td>
<td>.364</td>
<td>.749</td>
<td>1.000</td>
<td>.788</td>
</tr>
<tr>
<td>Application</td>
<td>.071</td>
<td>-.033</td>
<td>-.056</td>
<td>-.023</td>
<td>.327</td>
<td>.370</td>
<td>.583</td>
<td>.788</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Next, a factor analysis was conducted, which started with a principal component analysis of nine items, constituting the six variables representing research use, and the three variables representing interaction. A scree plot was produced, which shows the eigenvalues for each component in the data. An eigenvalue is a measure of the substantive importance of a particular factor (Field, 2009). The basic idea is that we retain factors with relatively large eigenvalues and ignore those with relatively small eigenvalues (Field, 2009).
Figure 12: Scree plot

Figure 12 shows that two components had eigenvalues exceeding Kaiser’s criterion of 1.0 and in combination explained 59.01% of the variance.

Once the factors had been extracted, it was possible to calculate the degree to which variables loaded onto these factors (Field, 2009). This can be done via either orthogonal or oblique rotation. The goal of rotation is to simplify and clarify the data structure (Costello & Osborne, 2005). The term orthogonal means unrelated and oblique means related (Costello & Osborne, 2005).
### Table 11: Rotated component matrix

<table>
<thead>
<tr>
<th>Component Matrix*</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage</td>
<td>.870</td>
<td></td>
</tr>
<tr>
<td>Shapes</td>
<td>.862</td>
<td></td>
</tr>
<tr>
<td>Transmit</td>
<td>.812</td>
<td></td>
</tr>
<tr>
<td>Co-produce</td>
<td>.801</td>
<td></td>
</tr>
<tr>
<td>Influence</td>
<td></td>
<td>.898</td>
</tr>
<tr>
<td>Application</td>
<td></td>
<td>.845</td>
</tr>
<tr>
<td>Effort</td>
<td></td>
<td>.817</td>
</tr>
<tr>
<td>Cited</td>
<td></td>
<td>.610</td>
</tr>
<tr>
<td>Read</td>
<td></td>
<td>.580</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Field (2009) noted that the choice of rotation depends on how the variables cluster on the factors before rotation. The above factor extraction (see Table 11) showed the variables clearly mapped onto two separate factors, with factor one representing engagement and factor two representing utilisation. There was no overlap between these factors, suggesting an orthogonal rotation would be successful in maximising loadings in this study. I therefore completed an orthogonal rotation to explore whether the two factors—research use and interaction—were completely unrelated. This rotation found that the two factors were indeed unrelated. However, it confirmed the indication of the correlation matrix that transmission loaded onto the factor for engagement rather than that for utilisation. This indicated that transmission of research was perceived by respondents as sharing the same conceptual meaning as questions relating to interaction. Viewed in light of this finding, the results of the univariate analysis, which identified a significant association between engagement and research transmission, need to be viewed with caution as the factor analysis suggested the question for transmission was measuring interaction rather than research use. On the other hand, given the relatively small sample size (n=60), which is just above the absolute minimum recommended
level of n=50 for exploratory factor analysis (Winter, Dodou, & Wieringa, 2009), this finding must be viewed with caution until verified with further work. Nonetheless, viewed from a critical realist perspective, it may be seen to provide some important indications of the influence of conceptual factors on the type of research use identified.

A further indicator of this was the feedback from several participants on the survey’s design—through the open-ended survey question inviting comments and reflections on their experience of knowledge utilisation or collaboration—that the survey had failed to capture their experiences and actions relating to research use:

Many of these questions don’t get at the issues that I see as being most important in the work that I do. I also don’t think that these issues can be best understood in terms of … research utilisation.

I was obliged to respond about ‘my research’ however most research I have carried out has been in conjunction with others—practitioners and/or other academics.

This comment suggested that the conceptualisation of research use inherent in the Knott and Wildavsky (1980) scale, which infers that research is produced by the researcher and is transmitted to practitioners, may stand in opposition to more cooperative conceptualisations of knowledge utilisation, where knowledge is produced together with practitioners and therefore becomes jointly owned. This would go some way towards explaining the finding of the multivariate analysis that transmission of research was perceived by respondents as sharing the same conceptual meaning as questions relating to interaction. In fact, from a critical realist perspective, I considered whether the conceptualisation of knowledge utilisation in this scale in itself represented the structures that constrained interaction. Further evidence to explore researcher’s conceptualisations of knowledge utilisation was then sought via semi-structured interviews, the findings of which are discussed in the next chapter.
Conclusion

This chapter reported the findings of the survey, which sought to identify (i) the extent to which researchers engaged with practitioners, and believed their research was used in practice, and (ii) whether there was a relationship between engagement and research use. It revealed researchers interacted with practitioners during and apart from the research process, and there was an association between this engagement and the subsequent use of their research by practitioners. The following chapter reports the findings of the semi-structured interviews, which sought to delve more deeply into the experiences and motivations of researchers that underlie interaction and research utilisation activities.
CHAPTER 6

Interview Findings

This chapter presents the qualitative findings from the semi-structured interviews (n=26) with social work and human services researchers. In keeping with the critical realist approach taken in this study, the interviews sought to get as close as possible to the participants’ experiences of research use. Based on these experiences, they attempted to identify the factors that facilitated research use and interaction within an open system. To avoid a basic listing of variables, and to make sense of the multiple factors affecting research use, the findings were categorised in terms of the explanatory framework developed by Rogers (2003). Rogers summarised the variables relating to research use into four overarching categories (set out in Table 1, pp. 39-42) in terms of which the interview findings are discussed:

1. Characteristics of the individual—practitioners and researchers.
2. The nature of the communication—how the research is communicated.
3. Characteristics of the organisation—the context of its application.
4. Characteristics of the innovation itself—the research.

To these a fifth category was added:

5. Characteristics of the relationship which are considered more cross-cutting than Rogers’ category 2: nature of the communication.

While this section discusses factors which enhance research use in these categories, they are not mutually exclusive, as often a mix of factors from each category was found to be necessary to facilitate different forms of research use.
Characteristics of the Research Process

Participants revealed their understanding of the research utilisation process in the terms they used describe it, including knowledge transfer, knowledge translation, using research, research application, policy-oriented research, research-informed practice, and evidence-based practice. Overall, participants tended to show a preference for the term knowledge translation, where knowledge was not simply transferred to practitioners (passive), but translated by the researcher (active) in a more engaged process. One participant described a preference for the term translation as it formed part of a broader shift in conceptualisations of the research-to-action process from a one-way transmission of information to a more engaged bidirectional process:

I mean knowledge transfer was quite popular a while ago. That’s now been superseded as a term at this university because of concern that it implied a one-way transmission of information. So it’s now been replaced with a broader concept of engagement which reflects the bidirectional nature of interaction. I suppose the term that we use in our research centre most is the concept of translational research (R3)\(^4\).

Knowledge translation was seen to require greater connection between researchers and the realities of practice:

I certainly use research translation or translation of research and, to some extent I use evidence-based practice. But I think that translation fits better for me, because I do think there is a difference between findings in research and what is actually possible or practical, or what can be done in a practice setting (R8).

In contrast, terms like research utilisation and knowledge transfer tended to be viewed as disconnected from practice:

\(^4\) R refers to the researcher who made the statement.
I suppose the language of knowledge transfer has always struck me as a kind of acceptance of the division of labour between academics, who are somehow disconnected from practice, and practitioners … I’m not quite sure what replacement concepts I would use but it’s about trying to change the division of labour where theorists are located in universities and practitioners are separated by the demands of work—that notion, the premises underpinning that, I’ve always disliked (R6).

This comment also highlights a conflation of the research-practice divide with the theory-practice divide—i.e., the way the term ‘theory’ is used here means to include whatever is not in the day-to-day practice world. This may be seen to reflect a more general conflation of theory with abstract purposelessness, and with soft research as opposed to applied research for policy and practice (Gulson & Parkes, 2010).

Participants’ choice of terminology was not always related to a particular conceptualisation of research use. Participants used different terms to refer to similar perceptions of the research utilisation process. For example, one participant expressed a preference for the term research utilisation but described this as a socially embedded process similar to knowledge translation:

I mean research utilisation—as long as it’s seen as a socially embedded process … It’s not just the researcher produces the research and then people apply it (R14).

In some instances, participants expressed a dislike for the unnecessarily complex term utilisation:

I don’t like the word utilisation because … it just seems to convey more complexity than it has to (R15).

I find some of these terms really just a bit unhelpful. People have dreamt them up to mean something that might have been useful at the time to them but I don’t find they really tell me very much. I’ve never liked the word utilise much (R13).
Others suggested that academia might be too preoccupied with discourse and terminology and expressed the sentiment that “any term you come up with will annoy someone because it will sound a bit jargonish”. However, one participant highlighted the usefulness of terminology for engaging with universities in a language they understood and accepted:

Somewhere tucked in these lectures she very cheekily says, by using this terminology we might just succeed in talking to the animals. If you’re talking about knowledge transfer or research utilisation it helps us to engage with the way that universities now largely talk about these things (R23).

Another key finding was that participants viewed the process of research use in different ways. Some described it as a situated and context specific process, which was a direct result of interaction between researchers and practitioners during the research process. Others referred to research use as occurring outside the research process, where findings of research projects or programs conducted in certain contexts were made accessible and relevant to practitioners in other contexts through translational activities. The distinction between these different scopes of research use is highlighted throughout the remainder of this chapter.

**Forms of Research Use**

Although participants frequently spoke about the use or impact of their research, they seldom specified the type of use that had occurred, and it was sometimes difficult to determine this from their comments. However, participants spoke about the three central forms of research use identified by Weiss (1979) and others (see Amara et al., 2004)—i.e., conceptual, symbolic and instrumental. Conceptual use was generally referred to in terms of the uptake of new ideas and changing ways of thinking about things. Symbolic use was often associated with negative experiences, where research had been rejected
when it was not in line with organisational expectations, preconceived ideas, or dominant discourses. Instrumental use was most difficult to identify as participants were often unsure of how directly their research had been taken up in practice. However, instrumental use was usually referred to in terms of direct or concrete use of information. Conceptual, symbolic, and instrumental use were each facilitated by a slightly different mix of factors, although interaction was a key factor which was considered by researchers to facilitate or mediate all three forms of research use. Participants’ comments in this section showed that conceptual and symbolic uses could be both situated, and context specific, and were at times connected to the research process and at times not. Instrumental use was facilitated mainly by translational activities that occurred separately from the research process.

**Conceptual Use**

Conceptual use was generally discussed in terms of the uptake of new ideas or the stimulation of new thought processes resulting from researchers’ engagement with practitioners during the research process:

> The focus group that we ran recently, when I was asking all these people from GP clinics what their needs [were] … was really interesting because even in the process of doing that they started thinking about it. So even collecting my research is sort of disseminating the message a little bit, if you like (R4).

> I mentioned I did a study with the department … Now I very much doubt that anyone in the department has read the half dozen papers we’ve produced from that research, and the specifics of what we’ve found. But I’m pretty sure someone who’s read none of it at least knows that … career development and work, we really should be thinking about that for kids in care. What could we do about that? (R9)
These comments reflect a perception of conceptual use as connected to the research process, where researchers introduced new ideas and messages into practice in the course of data collection. Practitioners were more likely to take notice of these new ideas when they respected the researcher as a credible source:

I think you get credibility from publishing … not just in the university but also in policy and practice circles. People are more likely to take notice of your ideas if you [publish] (R9).

Some participants spoke about conceptual use in terms of the influence they could realistically expect their work to have on policy and practice:

… sometimes researchers … people do research and they make some findings, and they somehow expect whoever’s doing that practice or policy to stop it and do something else, and I just think that’s unrealistic. There are a whole lot more things that influence policy and practice than research findings, and I don’t think research influences in that linear way either – I think people just pick up some ideas—sometimes good and sometimes bad—from research, and it influences the way they think about things … I don’t accept that people are going to read my fascinating 6000 word paper and take it away and do something concrete with it (R9).

These comments reflect a view of conceptual research use as separate from the research process, facilitated by workshops or occurring in the form of ideas gleaned from research articles. For others, conceptual use was the most important outcome as their first and foremost goal was to encourage practitioners to think and take notice of new ideas:

I’m really more interested in getting people to think rather than getting people to do stuff … getting practitioners to stop and say, ‘I wonder what that’s about, I wonder how …’ but not telling them what to do (R22).
Symbolic Use

Symbolic use tended to be associated with more negative experiences, where researchers felt organisations expected to gain particular findings from research that matched with and legitimised their preconceived ideas or ways of doing things:

They had a very clear expectation of what they needed from me, to serve their purposes. If you didn’t get it, you weren’t going to get the next … consultancy because it didn’t serve their purpose (R19).

At times, this led to disagreements between participants and organisations, when participants insisted on reporting unwanted information:

I got quite adamant, and I said we have to report it. She was most upset with us (R4).

Many participants were able to mediate this through communicative techniques. For example, by finding a softer or more acceptable way of framing their message:

So there was a bit of argy-bargy and we sort of said, well, we’re going to publish anyway. So why don’t we work together and find out how we can phrase this in a more positive way, for you to take back to your people (R4).

These above comments reflect a perception of symbolic use as connected to the research production process, where research is influenced by the end-users’ expectations and shaped to fit their purposes. However, this re-framing—even massaging—of research findings could arguably take place separately from the research production process. For example, as discussed in the Literature Review on Knowledge Utilisation, practitioners might change and adapt research findings to fit the different contexts and settings in which they work.

Some participants did not make concessions in the reporting of their research findings. At times, this research was rejected because it challenged the status quo:
Some of my findings were controversial in that what I was saying at the time … was that the whole social attitude needs to change … so the findings were that until those social attitudes changed, individuals weren’t really going to be helped. Well, no-one really wanted to hear that. They just wanted to hear ‘oh we need more therapists and we need more people to investigate whether these things are true’. So that just got shoved away in a room somewhere (R15)

This quote reflects a process whereby research was produced by the researcher and then transferred to the user with little interaction between the researcher and user during the research production process. Thus there was no opportunity for discussing or re-shaping the research findings to make them more acceptable to users. One participant noted a consultancy would always necessitate some form of flexibility on behalf of the researcher with regard to the reporting of research findings:

When you do a consultancy … I don’t think it is like being an independent researcher where you can say whatever you like. I don’t think it ever is and I guess people who want to be able to say whatever they like need to stop and have a bit of a think and just hang on for a second (R23).

On the other hand, the extent to which researchers should mould their findings to bring them into line with user expectations is debatable, especially since shaping research to fit one specific context might reduce its relevance to another. An alternative could be for researchers to talk to users about the assumptions and perspectives that might be causing them to reject the research. In this way, communicating with users could become a mediating factor preventing symbolic use by fostering practitioner awareness of the influence of their assumptions on their use or rejection of research. This form of communicating might pose a challenge for researchers who produce research for policy makers, since the time-pressured nature of policy making might mean there was little time for interaction and discussion during the research process:
… in policy you’ve got multiple audiences, I suppose, and … it’s a very time pressured environment. Your main audience is a minister and a director general … as a policy maker you ring them up and say can you tell me X, Y, Z? Can you tell me in an hour? (R9).

Another participant suggested that time pressures and the need to make decisions based on a majority opinion might lead to higher rates of symbolic use in policy settings as they drive researchers to search for dominant trends rather than perspectives that challenge the general consensus:

I mean, we tend to underestimate how many different views policy makers actually grab. They don’t just go to one person. They go to many people, and they see what the flow is—what the gist of the views are, and then they look for what is the best way we can bring those views into a format that we can translate into policy. So … if you’re saying one thing and everybody else is saying something different they’re going to ignore you (R7).

**Instrumental Use**

Instrumental use was more likely to be influenced by the qualities of the research than its conceptual or symbolic use. Descriptions of instrumental use often reflected a perception of it as separate from the research process as it tended to be facilitated by the nature of the research product rather than the process. For example, instrumental use tended to occur when research had been transformed into a useable format, such as a tool kit, model, instrument, or manual that had direct practical application:

The fact is though the [identifier removed] group has been able to, in a way that seems to be understood by policy makers, put in a model of how to do it. Not everybody agrees with that model. A lot of people disagree with the model, but the point is that they’ve got the fundamental area of agreement, and then they’ve come in with an easily
understood model policy makers can translate, and so that’s why it’s been grabbed on. That’s why it’s been run on (A7).

The key point here is that in order to have direct instrumental application, research must be transformed into a useable format. At the same time, this toolkit approach may limit conceptual use, as it can discourage practitioners from thinking or reflecting critically. In order to transform research into a useable form, one participant emphasised the importance of having a program rather than a project focus:

The thing is I wanted people to get a sense of ways to think about programs—research programs rather than research projects. That’s the way to get translation done (R3)

This comment about the importance of a program orientation to foster research use suggests that in order for instrumental use to be effective, researchers should employ a programmatic mindset during the research process, which implies a more practical, applied focus. Thus, although instrumental use tends to occur separately from the research process, it still requires a certain approach to be taken during the research process.

Related to the finding that instrumental use is facilitated when research is transformed into a useable format, was the finding that instrumental use occurs when the outcomes of research are achievable and realistic:

I think the outcomes from the project were particularly achievable … so they were realistic in terms of, we can actually do some of this (R12).

Transforming research into a useable format requires a conscious effort on behalf of the researcher to move beyond knowledge production to actively shaping research into a ‘product’ fit for ‘consumption’:
So our task is to make access to research findings and things like that as easy as possible … so translation of research—both ours and others’—for practitioners’ consumption is a core function of our [research centre] (R3).

One participant described how he had achieved instrumental research use by making his research more accessible to policy makers:

I mean, my personal view is that our big chance of really orchestrating any major change in the whole country would be influencing policy … we’ve had some success with that approach … the general model that we described turned out to be a very accessible model for policy makers. So they’ve used it. It’s been adopted throughout the country and elsewhere … so that’s the sort of thing that we’ve got to try to do a lot with our research, is work out a way we got our information into a format that policy makers can actually turn into something that actually happens on a routine basis on the planner (R7).

In fact, instrumental use of research may be more common among policy makers than practitioners, as the nature of their work requires them to use research more explicitly:

They’ve all got different attitudes to research. Certainly as a practitioner I read in my field … I read lots of research … but there wasn’t any thinking about whether that produced evidence for my practice. I suppose it gave me ideas for practice … In a policy setting, you’re explicitly using research in your policy practice, or you’re trying to find out how people think about this problem, what difference—what solutions have been applied to it, and you’re using research for that (R9).

A further factor reported by researchers as facilitating instrumental use was whether research was presented or ‘sold’ to practitioners at little or no cost to their organisation or to them:
Me and a colleague have rolled it out across Australia and New Zealand. So that’s had a big impact for practitioners and they’ve picked it up quite well ... the trial information you have to sell. You have to go and do workshops, the car salesman thing ... you have to sell it charismatically (R20).

So we actually run a training program and staff from those funded services attend our training program at no cost to their agency or to them ... so that’s one very important vehicle for knowledge translation. So that we do research and then we present that research and its implications to that workforce (R3).

While shaping research into a consumable product and selling it effectively can facilitate instrumental use, one participant noted an unintended consequence of making things easier is that practitioners and policy makers become passive consumers of research, which may not actually facilitate its effective use:

One unanticipated consequence of making things easier is that people can also—practitioners can become a bit passive and really just consume stuff. So one of the things that we did is work with the trainer to look at how well people are able to actually apply and embed that in their practice (R3).

This suggests that, unless practitioners and policy makers engage actively with the research material, they may not know how to apply the research, or their use of research may be uncritical, which increases the likelihood that research lacking in quality will be applied. One participant noted that although initial interaction in the form of training had facilitated the uptake of new ideas by practitioners, in order to apply these ideas in practice, ongoing interaction in the form of supervision would be necessary:

So we’ve got about 20 practitioners who, having attended the training said, look, we would like to use this in our practice and we would like supervision (R3).
This suggests interaction between researchers and practitioners could be an essential factor facilitating the instrumental use of research in practice as this allows practitioners and policy makers to engage in an active change process.

The importance of active engagement with the research material for fostering research use implies an interplay between instrumental and conceptual use, where the development of a conceptual understanding of research is a necessary precursor to the instrumental use of that research. Another example of interplay between different forms of research use might be between instrumental and symbolic use where, even when research is presented in a useable format for instrumental application, it might be discarded if it fails to conform to organisational priorities. Thus both symbolic and conceptual factors might be seen to interact with and impact on instrumental use.

**Nature of the Communication**

Overall, engagement between researchers and practitioners during the research itself was identified by researchers as an important factor facilitating the entire research process. Participants described the importance of interacting with practitioners during different stages of the research process. Three main stages of communication were highlighted:

1. Early communication—consultation
2. Communication throughout—coproduction and feedback
3. Communication during dissemination.

While several participants highlighted the importance of interaction during different stages of the research process for facilitating research use, this form of interaction was generally associated with research use at a local level. Participants’ comments suggested that in order to achieve research use more broadly, interaction needed to occur outside the research process via workshops or training, or it needed to
target regulatory bodies with the potential to shape practice contexts and environments to be more conducive to the use of research.

**Early Communication**

On some occasions, participants noted that engagement with practitioners should begin at the earliest stages of the research during the formulation of the research question, and that research questions should be practitioner driven:

One of the things that I find interesting is that researchers develop their ideas and then go and do their research in settings where practitioners are. That seems stupid to me. It would be much better for researchers to go to practitioners and say what do you want to research and we then … bring our methodologies to their practice. That’s seldom done … we kind of impose ourselves and colonise (R22).

Interaction with practitioners early on in the research process was considered important for ensuring the relevance of the research as it enabled practitioners to inform researchers of what they wanted to know:

I wanted … the relevance of people’s research to be tested on a routine basis. I wanted people out there in the agencies, I wanted them relating to [practitioners]. I mean that’s what those units were about. I was really saying, look, get out there into the community, and make sure that your research is relevant (R3).

The research I was doing for the most part was really answering questions that the people on the ground out there needed answered. So yeah, it wasn’t me doing the research, dreaming it up, getting a grant and then writing papers or whatever. So what people wanted found out—it was more hey [identifier removed], this is what we want to know. Will you help us find out?
The implication here is that the sole purpose of research is to inform practice and the assumption behind this is that practitioner-driven, context-specific research is likely to be more relevant to practice and hence more useable.

**Communication Throughout**

Several participants emphasised the importance of involvement with practitioners throughout the research process through a process of coproduction in order to facilitate research use:

If people have been involved in the process—in the research process—I think they’re much more likely to action some of the recommendations I think than if you’re coming in as an expert and saying we’ve done this research and you should be doing this (R1).

One way that participants involved practitioners in the research process was by providing them with regular feedback and updates of the research:

I actually prepared newsletters throughout my research. So periodically, every few months, I’d send out to participants and anyone who was interested and various stakeholders. I’d send out a newsletter that was one or two pages long and just a little informal kind of update on where I was at with the research. I found that to be really effective actually. It meant that people were quite engaged because I found participants would, on receiving the newsletter … write to me with more data. Like they’d say, ‘oh you know I read your newsletter and this occurred to me’ or ‘I’ve been thinking about this since our interview’ and contributed more (R1).

I would be feeding back all the time. Really early on, before anything was published from the study, the nurses started changing what they did … that just started happening because they knew that’s what was coming out of the study and it shifted practice in a really profound way (R8).
One participant also described the creation of a research-partnership program where a researcher was placed in an agency and worked actively with practitioners to conduct research on practice-based issues and questions:

One of the things we did was that we placed our senior research fellow in one of the agencies a day a week to facilitate research there. One of the things she did was—and she worked very closely with the practitioners—and they’d say the main thing I’m dealing with is these women with emotional dysregulation and how do I know if I’m doing the right thing for people where that’s an issue? So she’d say, ‘okay, let’s measure it. Here’s the emotional dysregulation scale, all right, let’s look at what you’re doing’. So it was very much hands on working with the practitioners doing that sort of thing (R3).

Another similar project described by this participant was the creation of a social work research unit within the agency itself in order to answer practice-based questions. Research staff from the university would rotate through this research unit on a secondment arrangement. This project provoked a change in the way practitioners viewed and used research in the workplace, and stimulated some of them to continue to develop their research skills:

I think they were much more conscious of—yeah, more conscious of not just doing things because it sounded like a good idea but actually getting some evidence. They really bought the whole concept of evidence-led practice and things like that … interestingly—I don’t know what the final number is, but I know that since then—I’m not saying it’s all due to that but certainly that was a strong stimulus—one of them completed a DSW and three went on to do PhDs (R3).
Communication during Dissemination

For some participants, engagement with practitioners tended to take place at the end of the research project. For example, by involving practitioners in the dissemination process:

So I think and I believe, that having people publish with you is good and increases their use of evidence, I think it does … they actually worked with me to do the knowledge transfer, which I thought was fantastic … So I wrote the report. They worked on that with me and they produced it in their local newsletter and they did some short policy thing that went to their policy group, which was just the key findings and that was a really good process. They actually worked with me to do that (R12).

Participants also reported feeding back information to practitioners at the end of a research project by visiting their organisations. This might include practitioners who were directly involved in the research as well as other practitioners who might nonetheless benefit from the knowledge gained:

We’ve done site visits, and in those site visits we sort of feed back to the people information that we’ve got … to help them learn what’s happening in their setting, where things could be different and so forth. So it’s kind of that level of dissemination (R7).

A further method of engaging with practitioners during the dissemination process was via technology, which enabled practitioners to interact with researchers using the Internet:

The other thing that we’re doing that’s not specifically about my research is the pod talk series that’s about to launch … and that will be linked to Twitter and Facebook (R21)
However, one participant expressed concerns that social workers were not yet making sufficient use of the Internet as a means of interacting with one another and sharing knowledge and research:

So I think we need to move with the rest of the world and think about that. But one of the things that concerns me is even sometimes young social workers are not Internet savvy … It’s something about social work that has this Jungian [perception] of things to do with technology. It’s really bizarre (R21).

**Extent of Communication and Impact**

Participants differed in their opinion about the extent to which interaction could facilitate the translation and use of research beyond the context in which it was created. Achieving research use among practitioners, who collaborated with researchers as part of the research process, was not considered difficult, since these practitioners were already open to the idea of research use. Instead, participants highlighted the difficulty of moving research beyond its initial context by facilitating its use among practitioners in different agencies:

… I mean, if you think about it, the kind of practitioners and their organisations that get involved in research partnering and the enlightened ones where it’s relatively easy to transfer the knowledge, and get it translated, and they would only represent five per cent, whatever minor percentage of what’s out there. The challenge is how do you get the other 95 per cent to do it. So you can get into select places and you can demonstrate all these different things in different ways. But how do you get beyond the research project? How do you make it sustainable and work within whatever industry you are in, whether it’s a hospital or a nursing home or general practice. So that’s what I’m talking about where the challenge is (R7).
One participant felt that even when interaction occurred outside the research process via training and workshops, personal engagement with practitioners could only impact on a minimal number of people:

So if I wanted to mainly influence people’s work through training, then even if I did that full time I would reach only a fraction of the people that I could reach through writing journal papers. You’d never be able to just through personal contact alone, you’re never going to be able to influence people much (R20).

On the other hand, another participant reported that interaction with practitioners through the provision of broader training could have a more global impact. He contrasted this to interaction with practitioners at a local level, where researchers became deeply immersed in a particular agency or service. This local form of interaction, then, generally led to a more localised form of impact:

The whole method’s different. One leads to a global impact through the traditional means like travelling road shows and randomised trials and the other one leads to a local impact, in one service, where you get involved deeply with one service in a participatory way, in a collaborative way (R20).

Another participant supported the notion that broader research use was best achieved through interaction outside the research process. He suggested that the extent of research use depended on the initial target of the research. For example, he noted that research use could be achieved by influencing training centres, which then translated this information to the coalface. However, this form of activity had limited success in achieving sustained change. In order to create real change, he argued, interaction must target the bodies that regulated the agencies within which practitioners work in order to create a context conducive to applying the new knowledge acquired through training:
There are many different audiences. Some of our work is obviously directed at the coalface practitioners and picked up by us influencing training centres. So one of the ways our work is used is that we provide information to training centres so they can translate it to the coalface, and that certainly works to a point … But the other level of changing exactly what happens in a workplace, especially in areas where there’s regulation involved, then sometimes the bodies that set the regulations are the bodies that you’ve got to try to influence (R7).

This suggests that, in order to facilitate research use, interaction must either occur as part of the research process, in which case the results are not likely to be generalisable to different contexts, or else interaction must occur on a broader scale outside the research process in the form of broad-based workshops and training programs or by influencing regulatory bodies. However, influencing these initiatives would assume that research findings are translatable and relevant across different contexts. The danger of these approaches is that they have the potential to become top-down processes, where the use of research becomes a regulation, and research is therefore applied symbolically, whether it is relevant in a particular context or not. Furthermore, translating research across contexts is not necessarily achieved through communication alone. For example, it might require a focus on the qualities of the research, such as whether it is presented in a format that is capable of being shifted across contexts like an instrument, tool, or model. It might also depend on the characteristics of the relationship, as not all communication has been found to be effective in facilitating research use.

**Characteristics of the Relationship**

Although several participants highlighted a direct link between communication and research use, some characteristics of the relationship were found to be essential in mediating and facilitating communication. Researchers indicated that relational factors...
often influenced research utilisation indirectly by facilitating mediating factors, which, in turn, enhanced research use. For example, strong ties were described as a mediating force in situations where researchers and practitioners had different perspectives or competing priorities. Where strong ties existed, researchers and practitioners were found to share a common worldview, which accelerated the research process. In general, strong ties were emphasised as particularly important for enhancing various aspects of the research process, including the initiation of new collaborative projects, the formulation of the research question, the processes of data collection, the acceptance of new ideas, and effective sustained engagement in partnerships. In this way, they contributed to the production of relevant and useful research for application in particular contexts. However, strong ties tended to be associated with local projects and their impact on research use tended to be situated and limited to the context in which they were conducted. Thus, strong ties were often research focused and developed in the course of the research process. Exceptions to this were pre-existing relationships developed via other means, such as relationships between practitioner-researchers and their practitioner colleagues. These connections imply a particular kind of insider relationship where researchers are intimately familiar with, and embedded within, practitioners’ workplace culture and context. The potential implications of insider relationship are discussed below (p. 164). Weak ties, on the other hand, were more effective in reaching practitioners across different sites and contexts, for example, through the provision of workshops and training, or by accessing the practice networks of colleagues. These ties could be research focused, but also occur separately from the research process. However, the effectiveness of weak ties at facilitating the use or uptake of research in these contexts was not confirmed. Successful translation and use of research findings across different contexts and settings might require a complex mix of strong and weak ties.
The Strength of Ties

Interaction between researchers and practitioners was closely connected to the notion of strong ties. Although not generally associated directly with research use, strong ties between researchers and practitioners, characterised by trust, long-term commitment, onsite presence, friendship, and equality were frequently emphasised as having a significant impact on the success of the research process:

So the [research program] … was really an outcome of our—it was a product of our interaction with those agencies. It couldn’t have worked if we hadn’t have got the trust of those organisations and those practitioners. So we put a lot of effort into process (R3).

In particular, one participant highlighted the role of strong ties in speeding up and strengthening the research process, due to the existence of pre-existing understandings between researchers and practitioners:

I think it just speeds it up and strengthens it—gives it a stronger, more resilient, more robust starting foundation. Also, it’s just like any relationship or friendship, it actually speeds it up so you can go further faster because you’re building on pre-existing understandings (R2)

All participants viewed strong ties as an important mediating force between researchers and practitioners, enabling them to overcome competing priorities:

Often it’s not their core business or they have other priorities that don’t match yours. So that’s where the personal relationships become much more important because you can say to someone, “listen, are you going to finish this or not? If you don’t that’s fine but just let me know and then we’ll work out another solution”. Whereas, if it was someone that you weren’t friendly with or that you didn’t actually know on a personal level, it’s much more difficult to say that. So having strong, personal relationships makes it easier
… to navigate those disjunctions between what they have to do for their pay and what you have to do for your pay (R17).

One form of research use facilitated by strong ties was conceptual use, as strong ties enabled the process of challenging existing ideas and introducing new ideas into practice. Strong ties might also prevent symbolic use of research, as they allowed researchers to challenge assumptions and viewpoints that might lead practitioners to use research uncritically or partially to justify or legitimate their actions:

I would say the same for dissemination of ideas because if you’re going to teach somebody or influence somebody’s practice and challenge them you can only do that in the context of a good relationship. Just like you can say to your friend, ‘fuck off you idiot’ and they laugh. You know what I mean? But if you say it to someone you don’t know, well they’d punch you in the face … I think all change, if scientists are agents of change, then that change can only happen in the context of relationships, like therapy, but when we go and teach, and [identifier removed], our aim is to go in and intervene and challenge and to serve people and get them thinking, but to do that you have to have close relationships (R22).

Strong ties were viewed as an important investment, which could be more fruitful and have a higher rate of success than weak ties:

So that’s why I don’t look at trying to get new collaborations all the time. I’m quite happy with the group of people that I work with. Because if you’re going out trying to do lots and lots [of collaborations] you’re more likely to have many more failures and wastes of time. Because I don’t have enough time to do what I’m doing anyway, so let’s keep it small and make sure each one is likely to succeed, rather than have multitudes of many failures (R19).

However, one participant described a benefit of weak ties as enabling her to tap into her colleague’s networks to access a broad spectrum of practitioners:
Then from each or however many people there might be, it could be a little steering group or just two people or whatever, then you’ve got social network analysis. Their network is also available to you so there’s an entry [unclear] my colleague and that’s exactly what we did. I was able to tap into the social work network in [identifier removed] across all of health in New South Wales (R2).

While weak ties might be effective in reaching across networks and settings, the strength of interpersonal ties might still influence this process. For example, the participant above noted she was only able to access her colleagues’ networks because of her existing strong connections with them. In this instance, access to weak ties was facilitated by the existence of strong ties. Another participant described how his workshops were successful in translating research into practice because of the strong personal connection he managed to build with practitioners during the sessions:

If you talk about the randomised trial work and us going out to do training, me and my friend [identifier removed] who do the training, the feedback that we get is that the method’s all good and you teach it well, but what we really like is the engagement between us and the staff … Just like treatment only works if you have the therapeutic relationships (R22).

In this case, the ties between the workshop presenter and participants might have been weak from the perspective of the amount of time spent together, but strong from an emotional intensity and trust perspective. This suggests that these might be more powerful facilitators of research use than the amount of time spent together, and could be developed relatively quickly and separately from the research process. Indeed, one participant noted he experiences more success at engaging with workshop participants about an issue or research finding when they have an emotional connection to it:

So I’ve been interested in how we can create an emotional connection to an issue because I think that when people feel a set of emotions in response to something that’s
going on then you’ve got a greater capacity to communicate to them about the significance of the issue (R6).

While this comment referred to an emotional connection to an issue rather than to the emotional intensity of the relationship, it demonstrates the importance of emotional intensity to the research utilisation process. Furthermore, an emotional connection to an issue might lead to an emotional connection with the researcher presenting the issue. Even if an emotional connection were fraught, it might be possible for researchers to draw benefit from this intensity by engaging with practitioners in exploring their strong response to a research finding, and thereby commencing a process of conceptual use.

Trust was a key characteristic associated with strong ties, and was frequently identified by participants as essential to ensuring the smooth functioning of the research process, which, in turn, might facilitate research utilisation. For example, one participant highlighted the importance of trusting relationships for gaining inside information about an organisation and how research might best be conducted in this context:

I can’t see how you can do it without trust and relationships, and word-of-mouth referrals in so far [as] I get hold of you and say, ‘I want to do some research in your hospital. Who do I talk to? Where would be the best starting point? What are the internal protocols? How do I actually engage with the people I want the data from, to give them a meaningful voice?’ Those sorts of questions (R17).

The ability to gain inside information about an organisation might lead to the development of more meaningful and relevant information that was more likely to be applied at a local level.

Developing trust and confidence was aided by a direct, onsite presence by the researcher in the agency or practice context. For example, one participant emphasised
the importance of having a researcher or professor onsite as a sign of the level of investment being made:

It was really important that we had an on-site presence. That we had our room that was—had its name plate on the door—that it was the social work research unit … I think too that it was an important vote of confidence or something, or a statement of the amount of investment we were making that they were getting the professor as well (R3).

Locating researchers within the agency might enable them to gain a more thorough knowledge of the context in which their research was situated and enhance its relevance and use at a local level within the agency. Some researchers completed research within their own agency. These practitioner-researchers had a particular kind of ‘insider’ relationship with practitioners:

I certainly have a vibe towards what I would call practice based research is. I do a bit of both. I know that people like me that are actually in a department and I used to be only a clinician here, so I have that history and that connection with the staff (R8).

On the one hand, practitioner-researchers might find it more difficult to maintain an independent, critical perspective of practice (see Interaction and Critique, p. 168). For example, Kanuha (2000) described the complex challenges associated with being an “insider” with an intimate knowledge of, and connection to, one’s study population and the dual role of being an “outsider” as researcher. She suggested that this dual role generates an ambiguous and conflicting situation, which provokes, and contradictions that keep “insider” researchers in, a constant intellectual and existential crisis (p. 439). On the other hand, this insider positioning may also enhance researchers’ ability to identify the causes and mechanisms underlying practice-based problems. For example, rather than criticising practitioners for providing sub-optimal care, a deeper
understanding of the practice context may lead to a broader critique of the structures and policies affecting service provision:

Except that I think it’s—that’s got to be done with a policy understanding, so if she’s got a team that is working under pressure and there is no way of actually doing it differently, it’s fine to say that means these patients are getting sub-optimal care and that’s not good enough. But you have to probably—for it to be able to be heard, it would have to include some kind of understanding of why that’s happening (R8).

Researchers who do not have an intimate understanding of the practice context may be more likely to focus their critique at directly observable behaviours rather than at the structures and causes underlying these. This might ultimately hinder the uptake of research by practitioners who simply cannot make the necessary changes to their practice without broader organisational change.

Friendship was another indicator of strong ties between researchers and practitioners, which made it easier for them to approach each other to initiate collaborative projects, and overcome barriers to interaction:

These are most of my friends, my personal colleagues, so that’s why I can just go to service A or service B and say ‘hi, how are you and do you want to do a project together?’ (R22).

Eventually, if you want to do something more formally, you’ve got to put your hand out and you’ve got to have the bowl there ready for some alms. So it’s pretty awkward if you haven’t built a relationship up. So yes, you’ve got to sort of be in a relationship with these people before you can sort of approach them to do something that’s going to cost them money (R19).

People become colleagues and friends, not just people to whom you are providing a service and in the same way that if my colleagues here asked me for some help with something I don’t say ‘well, I’ll only do it if my workload will allow it’ (R23).
Researchers indicated that developing trust was an important factor for deconstructing power differentials between researchers and practitioners. Several participants identified themselves as holding more power than practitioners, due to their age, position, or research experience:

They were wary of me as an academic. I could feel that. I think partly being older as well because most of the folk on the working party are quite young in their careers, late 20s and 30s. So they would see me walk in as someone who has practised for many years and been an academic for 10 years (R13).

The distribution of power was also influenced by control over intellectual property rights and project funding. One participant noted that agencies and practitioners held no power when research was funded by the government:

I mean the interesting thing is that who’s got the power in the relationship. Say in that particular case where we’re funded by the government and we do research on and with practitioners and agencies. The agencies and the practitioners don’t have power in that relationship. So basically they live with what we find (R3).

One participant described her attempt at deconstructing the power differential between herself and practitioners during the research process by developing trust and friendship:

I had to work around shutting up … I did a lot of listening in the first few meetings and if there was something that I felt I could sensibly do like look up something in the library that they wanted, I’d just do that … So by the time we got down to it, it must be about two years now, I’m one of the executives of the group … It’s a great way to work I think with people, to have the opportunity to build the trust and the friendship and let them get to know a little bit about you as a person too, even if it means making the odd eccentric remark or whatever (R13).
Deconstructing power differentials in this way might help researchers to gain deeper levels of understanding of an issue or topic as practitioners might be more relaxed and willing to share information with them, which, in turn, could enhance the usefulness of the research produced for practice. Another participant described how he and his colleague deconstructed power differentials between themselves and practitioners during a workshop aimed at facilitating research translation:

We go in and smash it and have fun. We don’t turn up in our suits and all that, we just turn up in our jeans and our Converse [sneakers or joggers] (sic) and we’re relaxed and we swear and carry on, we go out and get pissed with them and all that, we’re human (R22)

He later noted that the relationship he and his colleague were able to develop through this relaxed approach was instrumental in enhancing their ability to foster research uptake by practitioners and create changes in practice.

Many participants emphasised the importance of reciprocity and equality between themselves and practitioners and rejected the idea of being an expert in favour of sharing experience:

I hate being the expert. I don’t see myself as an expert. I have a particular set of experiences that I’m happy to put on the table. But I’m by no means an expert … In its true sense, collaboration is getting a level playing field and sharing resources and all of those sorts of things. It actually therefore means you’ve got to give up some power (R17).

There’s got to be reciprocity between practitioners performing research and researchers performing practice. But the key is that there’s no power, that the power differential is moderated. They have to be equal (A22).
Interaction and Critique

While discussing interaction between researchers and practitioners, the issue of critiquing or challenging practice-based assumptions arose as a controversial issue. One participant described the dichotomy between involving clinicians in the research process and criticising them:

You can’t do it unless you involve clinicians and that is really tricky when actually what you’re finding is that there are clearly things that should be done differently and you can’t have it both ways can you, involving them and criticising them (R8).

Another participant argued that too much engagement with the field could lead to a lack of critical analysis of the field by researchers:

I think you have to stay grounded in what the practice experience of people is, if you’re going to be doing any work that’s going to be useful to them. Having said that, I think there’s a bit of a danger that some people become so grounded that the research and academic work they do doesn’t—is just within those same parameters of practice and doesn’t stretch the boundaries or ask the radical questions or something like that. So I think perhaps in social work there’s a—a personal thing—for social work academics to almost be too engaged with the field and not enough able to step back and do the critical analysis of the field (R16).

However, comments by one participant suggested that researchers must recognise what was practically feasible for practitioners to achieve in the organisational context within which they had to operate:

I find that there is a gap between … what the research has actually said and what is actually possible … and there are some—certainly some social workers … who could do everything who would say they go from one crisis to another, because—and they could probably articulate—tell you what is good practice, but there would be a gap between
that and what they’re actually able to achieve … so … workforce issues absolutely impede the uptake of some of the outcomes of research and I think that’s important to remember, that we’re not looking like the outcomes of research are criticising clinicians who couldn’t possibly be doing everything that’s [being asked] (R8).

The issues highlighted here suggest that instrumental research use might be affected by workforce issues. Placing pressure on practitioners to apply research under these conditions would lead, at best, to a symbolic use of research. Taking workforce issues into consideration, the most likely form of research use under these circumstances might be conceptual use. Over time, the new understandings and ideas gained through this could pave the way for instrumental use in some areas of practice.

Another participant highlighted the value of critique for challenging people’s assumptions and suggested researchers should engage directly with defensiveness in response to an issue or research finding as this might lead to deeper levels of exploration of the issues raised:

What I find is when you present knowledge in ways that will lessen the level of defensiveness … you sacrifice a lot in terms of your analysis and what you’re saying. What I find is that having [people] feel defensive about some things that I’m saying, I don’t find it problematical. Because if the defensiveness comes to the fore then I could engage with it and challenge it … There is a tendency at times to present knowledge and research and information in ways that lessen the level of defensiveness but then that doesn’t get to the heart of the issues (R6).

Similarly, one participant noted that disagreement did not have to signal the end of a relationship, as long at both parties were willing to weather the storm, underlining the point that characteristics of the relationship were cross-cutting, mediating factors that could facilitate communication both during and outside the research process:
…the general reflection at the end was good and the relationship remained intact but we had to go through, like all relationships we had to weather the storm. Even though there were problems, in the end it worked out fine (R22).

**Formal Interaction**

Many participants reported having been involved in formal interaction or collaboration with practitioners in the course of a research project. Formal interaction was generally defined as the transfer or division of resources via a contractual agreement between two parties:

Formally means there’s a transfer of resources of some sort, probably money. So that might be direct consultancy or it may well be a partnership on some other research grant. So there’s some formal contract between ‘us, and ‘them’ and it’s around transfer of resources (R19).

At times, the financial basis of formal interactions had a divisive influence on researcher-practitioner interactions as researchers became the ‘sellers’ of a research ‘product’ and practitioners the ‘buyers’:

Money puts a wedge between science and practice because if you didn’t need the money you’d have to go directly to the practitioners and say what do you want to do together. When you need the money, you exclude them and you create this kind of analogue service. True collaboration doesn’t need all that money. When you have money you create a false service based on research that’s not real (R22).

However, there was also recognition that formal arrangements were sometimes necessary to ensure the fair division of funding or clarify ownership, particularly in large, multicentre studies:
Well the formal stuff is more related to if you’ve got a shared grant or something and then you’ve got to have processes of how that grant is shared between collaborators. So there are formal contracts or formal arrangements ... and that can work fine (R7).

I do get that when you have a very large a multicentre study, issues around who owns that data, whose name is going to be on the publication, those sorts of things certainly can be a problem if it’s not made really clear I think. I guess that becomes a formal, yeah (R8).

Formal engagement was sometimes seen as a precursor to establishing new collaborations, where researchers and practitioners had not had prior contact:

Formal engagement [is] where you’re asked to tender for a particular piece of research or you approach an organisation you may not be familiar with and you do a formal presentation to their staff … you might just go to an agency that you’ve never had any contact with and you might just sort of do a presentation and they ask you lots of questions along those lines and you answer them. It could be the first contact you’ve had (R24).

**Informal Interaction**

Several participants highlighted informal interaction as the most effective form of interaction. It included networking activities, such as having a cup of tea, talking to people at conferences, ‘wandering around the traps’, attending morning teas and lunches, and emails and phone calls. Thus informal interaction could occur as part of or separately from the research process and was often associated with the successful initiation of new collaborative projects within pre-established relationships driven by mutual benefit and common interest rather than by funding:

The informal stuff is when I’ll just go back to [identifier removed], where I have plenty of contacts and sort of say ‘Let’s do something together. I know that you’re doing something over there and I’m interested in that. Let’s work together.’ So there’s no
transfer of resources. No cost or no mutual cost to our organisations. They would’ve had the data anyway. I’m doing the research anyway. Let’s do it and not charge one another (R19).

However, informal contact was also described as an important precursor to commencing new formal collaborations. For example, one participant described how her initial informal contact with practitioners had set the foundation for a more formal collaborative project:

How they happen is—the first meeting I can remember we had with this one organisation—the first time I saw them I had my kids with me and they were quite little. We were going through, we were on holidays, we were going through that town and I actually rang and said can we just have a chat? So I bought the kids in and we had a cup of coffee. So they sort of got to see me, which is not very professional I know … Anyway she still raves about how good my kids were. Oh my God, it must have been a good day. But it started informally, having a chat (R4).

Informal interaction was perceived as a necessary part of formal collaboration as a whole, with one participant stating that she could not imagine a formal collaboration working effectively without some level of informal engagement:

I would hope that you would always have the informal part of it and there are some situations, especially where you might have a grant involved or issues around intellectual property, where you might have to formalize that. But I can’t imagine having an effective collaboration … without fairly strong informal connections … I doubt whether it would work very well if you didn’t have that, so I can’t imagine one without the other (R8).

Informal interaction, in the form of phone or email contact, was also sometimes initiated by practitioners to obtain information or advice on using a particular piece of
research or instrument in their practice. In this way, informal interaction facilitated the process of research translation and the use of research in practice:

Mostly email, occasionally phone calls but lots of email contact. Particularly, I get a lot of emails from people that use the instruments that I’ve designed just asking about children that they see and such (R20).

**Individual Characteristics**

Individual characteristics of researchers and practitioners were often instrumental in motivating them to collaborate and engage in activities that facilitated research use and also influenced the extent to which researchers and practitioners were willing or able to overcome structural constraints to collaboration. Personal characteristics of researchers and practitioners that facilitated interaction and research use were:

1. Personal and professional attitudes and values.
2. Position and title.
3. Practice background.
4. Researcher credibility and approachability.

Individual characteristics highlighted by participants as increasing their credibility in practitioners’ eyes were their practice background, age, gender, and culture.

**Personal and Professional Attitude and Values**

Participants frequently highlighted personal attitudes and values as facilitating interaction between researchers and practitioners:

I think it’s an attitude on both the behalf of the researcher but also the practitioner (R19).
It’s the way people are wired I suppose, in the way they think about their role and their profession (R2).

Researchers who perceived interaction or collaboration as beneficial in some way were more likely to engage with practitioners:

… at first level, obviously the enjoyment of working with a lot of different people and learning things along the way, and sort of realising the sort of knowledge that different people have in different ways just helps you better understand the work you’re doing. So you’ve got that kind of benefit, but also the fundamental things, if you—it’s a marker of your research output and certainly the more I’ve collaborated my research productivity’s got—you know, it’s skyrocketed … I think the people that … [are] trying to make that jump into collaboration, maybe are people who haven’t quite grasped what collaboration potentially offers them, and how it actually enhances what they do rather than—I think some people worry that collaboration dilutes their work rather than enhances it, where there’s little doubt that it enhances it considerably—far from dilutes it (R7).

One participant noted that the most effective partnerships were those based on a genuine valuing of and ethical commitment toward collaboration, as this facilitated egalitarianism:

… as a value I try to work collaboratively. So it’s not just something that I found working collaboratively but sticking that on top of a competitive framework because that can tend to happen in academia. You try to have this language about collaboration but it really means let me work with somebody or get money from somebody in a partnership so that I can then go off and advance my own interests. For me it’s a value and that’s how I work. You’ve got to value another person. Then, when you’re working collaboratively who owns the project and all those things then becomes open to question. So it becomes really difficult if you’re working with people who see collaboration as an adjunct to competitiveness and personal agendas as opposed to
working in a genuine—to me a genuinely collaborative egalitarian—way which is an actual ethical position (R10).

At times, researchers’ and practitioners’ personal commitment to interaction led them to go to considerable lengths to overcome the structural constraints they encountered. For example, one participant described how clinicians made time to attend meetings with her research team, despite their busy schedules:

We’re working with clinicians who are really, really busy, have no time—are under resourced, but they’re coming to meetings, they’re really thinking about ways that they can change the placement, introducing new systems—so it’s actually been a really rewarding experience (R1).

Several researchers reported engaging with practitioners in their own time to generate answers to practice-based questions:

I mean I did the research that I really wanted to do at nights and weekends for the most part. That’s what I did (R5).

I think it’s the same as doing a PhD that people have to be committed. People have to realise that it’s going to happen in their own time (R21).

Others used their own money to fund their interaction or their research utilisation activities:

So I mean at one stage we started to try to keep these things going we actually paid for wine out of our own pockets to be able to keep it going. Then it just got too difficult so we stopped doing it because we didn’t feel supported by the university … their notion of partnership is at a very high level about what the university’s going to get out of this partnership (R6)
Professional values also influenced participants to engage with practitioners. Many described social work as a practice-based profession and viewed their connection with practice as an important and intrinsic element of their work:

In social work most of us who—at least those of us who would identify as social workers—have a really looser connection with practice. I mean, most of my colleagues here—I can think of only one person actually who’s employed as a social work lecturer here who doesn’t have some sort of active connection with practice in some way. There are people who having got into university do stay in their office and do that, but not in social work in my experience normally (R23).

The desire to make a difference, which many participants stated had shaped their research and writing throughout their career, was a strong motivator to engage with practitioners and in activities to promote research use:

I think pretty well all my research and writing during my employed career was sort of driven by me wanting to make a difference really (R14).

The other thing that tantalises you is making a difference. Having—sharing what you’ve learned and hopefully improving the way we do things (A2).

For some researchers, making a difference was so important they were willing to make personal sacrifices to achieve this. For example, one participant noted that he resisted institutional pressure to publish in high-ranking journals as these were less likely to be read by practitioners:

I sort of publish in journals that are lowly ranked, or were lowly ranked when they had rankings. But they’re the journals that are read by practitioners. So I get pressure brought to bear on me to publish in higher ranking journals but I resist that because, for me, the reason I’m doing the research is to actually make a difference in developing countries … so ERA will come and go, and all those things will come and go, but my
core focus is making sure what I do is going to have, as best it can, something that will improve the lives of people (A19).

Another participant described her personal decision to look beyond present-day pressures to engage in the activities she believed were important for facilitating change through research:

Well I figured having lived through—what did I count up one day? About five different secretaries, eleven ministers, eight restructures, four changes of organisational names—I think it was business as usual. I think we have constructed things in a way that we’re all too busy to do anything, and it’s much easier to run around in chaos than to step out for three minutes and think if I actually fill out this research questionnaire or whatever it might be, I actually might be able to get change (R17).

An interesting observation made by several participants, who had professed a strong personal commitment to making a difference in practice, was that they felt this commitment and focus was unusual:

So it may well be that I'm a little bit unusual in that I sort of see what I do connecting directly with communities overseas, and my responsibility to ensure that [unclear] connections are as strong as possible (R19).

Individual commitment to facilitating collaboration or research use was particularly important since these factors seldom formed part of the core business of practice-based agencies:

I just know that it comes down to, as far as I can see, individuals working out whatever they can with the folks around them. A number of the universities talk about community engagement and service as a key part of our role. When it comes down to it, we’ve got to actually make that work (R23).
However, collaborative projects based on individual commitment became problematic when individuals left or were transferred from their position, since the collaboration could often not be sustained without them:

We built up this relationship with an organisation, the fellow was going to sign off on an ARC linkage grant that we’d written, it was all ready to go and he was moved from his position. He was transferred to another agency and the other person—well, you have to start from square one, so we never got sign off. So the whole thing was done and it fell over (R12).

So we’ll continue to do the research work but we’re now going to be doing it slightly in isolation. We know that the main outcome of the work we’re doing won’t readily impact on how [identifier removed] work in this area anymore because they won’t have a—we won’t have a key person to feed that in or to work with (R19).

In fact, despite the strong impact of individual attitudes and values on the collaboration and research utilisation activities of researchers and practitioners, one participant noted that a certain degree of organisational support and encouragement was necessary to sustain and validate these activities:

Well, you need permission anyway, so support, which is not in a kudos sense but supervisory and emotional in that sort of sense, so permission. But just encouragement because it’s seen as valuable even if they can’t give you any money for it. But if there’s nil of that, the chances of sustaining it are pretty slim and people otherwise have to do it completely in their own time and the validity of that sort of coverage of the sanction, that’s got to be there to put anything on your organisation’s letterhead. So you can’t really do it as a complete, lone operator I don’t think (R2).
Position and Title

Practitioners and researchers were often more successful at facilitating collaboration or research use when they held a senior position, since this gave them the power to make decisions and create the kinds of supportive structures they required:

I was determined to do it and was senior enough to say to my regional director, I’m going to do this, it’s not going to take too much of your time. She could see that it was better for her not to try and stop me really (R2).

I mean I suppose I was in the fortunate position as head of the school to simply say, okay, that’s what we’re going to do. I actually placed myself as Director of Social Work Research in the hospital for half a day a week (R3).

Practice Background

A key factor that motivated researchers to connect with practitioners was their own practice background, which led them to continue to feel strongly connected with practice:

So I worked for a number of years with [identifier removed], so naturally I felt that I wanted to be connected to that group of people and others working in similar organisations. So my natural inclination is to seek out those collaborations … I still feel like I’m actually linked to the work that’s going on (R19).

For some researchers, having a background in practice also influenced their interest in promoting research use, and several suggested that a practice background gave them insight into the day-to-day challenges practitioners faced, thereby making it more likely that practitioners would find their research useful and apply it:

Well, I was a social worker for the first part of my career. So I was always passionate about how research and theory, as we call it, is applied in practice (R14).
… the work I was doing was still identifiable to other practitioners as coming from someone who is now an academic, but had nevertheless been a practitioner and still remembered what it was like, and therefore I wasn’t speaking to people in a way that was disconnected from the things they’re facing in their day-to-day work … So everything from individual practitioners and services talking to me about what they’ve been reading in my stuff to professional organisations and larger agencies wanting to talk to me because they recognise that I understand about practice as well as being able to research and teach it (R23)

Researchers’ Credibility and Approachability

Participants believed that researchers’ credibility and approachability were qualities that enhanced the use of their research by practitioners. Among several factors that researchers felt increased their credibility in the eyes of practitioners was a practice background:

I still get a lot of currency from when I go out into the field and talk to staff because they know that—a lot of them, they know my background. They know that I’ve worked in [identifiers removed] the frontline for over a decade so that kind of carries as lot of currency and I tend to try to talk anecdotally about families that I’ve worked with … and that very quickly communicates to people that I understand exactly what it is they’re trying to deal with (R20).

In contrast, researchers who were not perceived as being grounded in practice were often dismissed as being out of touch:

I think there’s a perception from the coalface in practice, that if you do work in a university then you’re not grounded in practice and so there are prejudices or biased perceptions of out of touch academics who don’t really know what’s going on (R6).
In fact, one participant was perceived as being out of touch with reality, despite her practice background, purely because she was no longer employed in a practice setting:

Even though there were social workers I’d worked with in practice, it was sort of like I’d gone over to the dark side and I wasn’t properly in touch with the issues anymore (R15).

Being older lent credibility to researchers as it was associated with experience and trustworthiness. However, being older could also be intimidating for practitioners, and one participant emphasised the importance of a combination of experience and a non-threatening approach for facilitating collaboration and research uptake:

To be honest, I think it could be partly that the work was mainly done by a young post-doc that I have. Now, I think we presented a good team in that I’m the experienced one, she’s the young enthusiastic one and I think that goes down well. That’s happened to me before, where I worked with another young enthusiastic postdoc-type position person and I think that’s a good combination, in that people know they’re getting experience driving it and that obviously I’ve got a solid record and that sort of thing. So they know that’s okay, it will be done well and all that stuff. But we’ve also got this enthusiastic front person who can drive things on (R12).

One participant noted that she successfully built relationships with practitioners by sending in her younger research assistant to meet them:

… one of the RAs we’ve had is just this gorgeous really unassuming but really academically—all, she’s better at stats than I am. And she has gone into situations, and because of her manner, she’s really unassuming and she—how do I word this? She doesn’t look terribly threatening either, and she’s done wonders in building relationships as well, and she’s quite flexible. So she flies around to all the different
centres for us and she just goes in, and she’s good with consumers as well as professionals (R4).

However, one participant observed that, although she was often approached by students and practitioners due to her supportive, unthreatening demeanour, she felt they were less likely to use or cite her work because they did not respect her expertise:

I mean just from experience either practitioners and/or higher degree research students I’ve supervised. It’s interesting when they’ve actually asked me to supervise them and they’ve chosen me a lot of the time—but they’re reluctant—it’s interesting. I may have published something directly relevant. They’re reluctant to use and cite the work and their manner towards me is almost like it’s [unclear]. They’ve chosen me because I’m seen as a supportive person but not in the sense of my actual expertise (R10).

This participant suggested that practitioners had certain expectations and preconceived ideas about what academics should be like, and researchers who did not fit this mould were not taken as seriously as those who did:

But whether it’s something about because of how I am in myself like my identity as a woman of colour. I’m a short person and all these things. I don’t actually meet any of the expectations of what people have as an academic to then kind of see what you look like (R10).

Comments by another participant suggested that practitioners’ preconceived ideas about researchers created a perceived barrier between them and hindered effective interaction. She likened this to the dynamic between herself and her younger undergraduate students:

I had an interesting experience in class a few weeks ago. The students were working in small groups, and one group happened to have the more mature aged students. I joined that group and we all talked happily. I left them and went to the other group, which
happened to have the younger students. They all stopped talking, and I said ‘Why have you stopped talking?’ [They said] ‘You’ve joined us’. I said, ‘So?’ [They replied] ‘Oh no, you’re the teacher, we can’t speak’. I said, ‘But you’ve just been chatting. Why is it different?’ They really struggled to identify what was going on. I think sometimes the field does that to researchers (R17)

This participant spoke about the tension between her attempts to create an equal partnership with practitioners and the simultaneous expectation that she was an expert:

It’s something about we’re in this together, we are going to have to find a way forward. I’ve got some insights and experiences that may help us. But you’re going to have some insights and experiences … I think one of the challenges of taking that approach is you somehow have a hat when you’re an academic, and you’re meant to be an expert. So it’s a bit of a mixed message (R17).

Comments by two other participants suggested that researchers themselves were responsible for perpetuating the image of themselves as experts, and of the academic world as separate, suggesting that researchers had control over how practitioners perceived them:

I think academics take themselves too seriously and it’s about you don’t take on the persona of an academic, you have to be yourself, be a normal person … we go in and smash it and have fun. Lots of academics do that. Some people glory in themselves. You know what I mean? (R22).

Yeah, I do feel that people often talk about academia as being a separate world and I think the way many academics play out that world like it is indeed separate (R13).

However, some individual characteristics that contributed to practitioners’ conceptions of researchers as credible were not within researchers’ control. For example, gender was highlighted as a factor which influenced practitioners’ use of
research, with both noting that being a man was associated with higher credibility and therefore more research use than being a woman:

The very fact that I’m a man works to my advantage because the way patriarchy works is that men listen to men in ways they won’t listen to women (R6).

One participant also observed that practitioners responded differently to white, male academics than to black, female academics:

…it is an element when I’m dealing with the practitioners but it’s expressed in ways towards me that as I said I’ve described either that they don’t deal directly with me or there is some kind of hostility or something. I don’t quite know what it is. But they don’t show the same behaviour towards say a white male academic (R10)

This participant commented that the influence of characteristics like gender and culture on credibility might be more apparent to those in the minority, who were actually experiencing it, than to those in the majority:

So if you’re marginal you’re more likely to be aware that there are heaps more than one position … but if you’re always in the middle you don’t see other positions because you just think the world is as it is (R10).

Some participants also described their misconceptions and stereotypical perspectives of practitioners, which were often eliminated during collaborations with them:

When I think about that one, that was where I had some of my stereotypes challenged a bit, because there were some people from the [identifier removed]. I thought, oh my God, what are they going to do, and they were fantastic. They were progressive. Yes, so there’s always the chance to be surprised by days like that (R16).
Characteristics of the Research

The three key characteristics of research that enhanced its use by practitioners were its:

1. Timeliness and relevance.
2. Achievability.
3. Clarity and simplicity.

Only one participant highlighted research quality as facilitating research use. As noted earlier, the characteristics of the research itself were most strongly associated with instrumental use.

Timeliness and Relevance

Timeliness and relevance to practice were identified by researchers as factors strongly associated with research use, with participants commenting that, in order to be used, research needed to be of value to or fit with practice. Where research targeted a common area of need or a broader social challenge it was found to be relevant across contexts and even across countries:

When you’re thinking about the question that you are going to research, you need to think about what’s going to be of most value to practitioners. If you get that right, it really takes care of itself (R21).

We got emails from all over the world from people—practitioners saying ‘thank God somebody’s writing about this and this really needs to be said and we found your paper really useful’ (R15).

I feel like that one is probably the most direct one where we’ve seen that there are going to be changes and things done about it … the challenges of ageing communities is a big challenge for councils. Although they may not have much money to put into it, they do realise they have to do something. So maybe the time was right (R12).
This suggests relevance might be a factor facilitating research translation and use across contexts. Research was considered to be relevant when it was based on a practice-based issue and when the researcher demonstrated an understanding of the complexity of decision-making in relation to that issue:

It’s about researchers really understanding the complexity of decision-making and that when the practitioner has to take action or make decisions it’s really hard sometimes to see the relevance of research, because it paints things out—often as more straightforward that it really is (R17).

**Achievability**

Research pointing to achievable interventions was more likely to be used by practitioners. In particular, participants noted that policy makers required research to make realistic, practicable suggestions for change:

I think that the outcomes of the project were particularly achievable … they were realistic in terms of—because there were interviews with community members but also stakeholders, so they were realistic of the level of, we can actually so some of this (R12).

**Clarity and Simplicity**

Closely related to the notion of achievability was the need for research to be presented clearly and simply. One way in which research could be communicated in this way was through the development of instruments, manuals, and models, which were also highlighted earlier as facilitating the instrumental use of research. Some participants reported having received feedback or a request from a practice-based organisation or practitioner at some point asking them to present their findings succinctly and engagingly:
When I’ve done stuff for [identifier removed], I gave up the first draft to someone … and they took me aside and said, you’ve got to learn to write for the public service. So every paragraph, first sentence of each paragraph has to be just one line in length. It’s got to be bolded and it’s actually got to be a summary statement for that paragraph (R19).

This final comment raises an important point about social work and social work research, namely, that social work is a complex field and that there are no easy ways of understanding problems in this area, let alone the possible solutions. Rendering the complex clear and simple might help to promote research use. However, it might also compromise the validity and therefore the value of the findings. This could all too easily lead to a manual and ‘tick-box’ proforma driven practice taking the place of professional judgment and critical reflection. This issue is discussed at greater length in Chapter 7.

Several participants described their efforts to provide clear summaries of their research findings. For example, these could take the form of a list of recommendations at the end of a journal article, as an electronic resource or in the form of a newsletter:

Most journal articles that I write have—before the conclusion, or wrapped into the conclusion, policy recommendations or lessons learned. There’ll be a section of the piece of work will be, maybe five or six dot points to say, these are the policy recommendations or these are the lessons learned. So I’ve made it as clear as I can (R19).

We’ve been contracted by another organisation to run what’s called, we call them GEMS (Gathering Evidence that Matters). GEMS are a two page electronic resource that the aim is to synthesise and put into practical language research for practitioners to read that’s actually relevant, and we always have in them a practice implications at the
end … I keep track of how many hits we get of those—but they’ve been really useful, and we get a lot of feedback from those (R4).

I find when you’re working with busy clinicians they don’t have time to read a publication. So usually I would prepare a one or two page summary of things. Something that I did in my PhD research … I actually prepared newsletters throughout my research. I found that to be really useful. It meant that people were engaged (R1).

Participants’ comments suggested that, although they valued research presented clearly and simply, this was not well-respected among the academic community. For example, one researcher reported that her colleague described this as *Women’s Weekly* writing, reflecting a perception of simple, engaging writing as lower in quality and value, and ascribing it to women’s writing:

I did the—not that they were particularly interested but I did the articles in the journals and then they asked me to write a—we called it—someone I used to work with for quite a while used to call it Woman’s Weekly writing. I’m not sure if that’s a very nice term but anyway, you can write in a very expressful way. Write the findings in a very plain, simple English way … they worked on that with me and they produced it in their newsletter and they did some short policy thing that went to their policy group, which was just the key findings and that was a really good process (R12).

Others described the critique they had received from academic colleagues for writing clearly and accessibly, or the pressure they had experienced to write in an academic way. One participant suggested that academics purposefully use technical language to distance themselves from the general population to enhance their specialist and intellectual status:

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*Australian Women’s Weekly* is an Australian monthly women’s magazine.
They’re trying to beat it into me I’ve got to write in the academic way… I think there is that tension, but I still try to write in the most simple way possible. In fact, I’m not very good at discursive discussions of discourse (R17).

I can remember somebody saying to me years and years ago that if I wrote articles in a way that the general public could understand I would be threatening my academic career. There is a view that academics should write in a language and style that only a select group of other academics can understand and if you write accessibly, that is if you write in a way that can bridge outside of the academy into a non-specialist audience somehow or other you’re not being scholarly or sufficiently intellectual (R6).

From this perspective, academics who tried to bridge the research-practice divide by making research more accessible might be viewed as outside the academic elite and might therefore be marginalised by academic structures and processes. For example, one participant reported that her work had been placed in the practice section of a journal because it was not considered scholarly enough to be included in the main section. This participant also suggested that placing a practice section at the back of the journal created a separation between academic and practice-based knowledge in which practice knowledge was less valuable:

I remember there was quite a bit of ‘despite’ about it being published, because it was published in the practice section of a specialised section of the journal…If you’re writing in the practice field, which used to be a small section at the back of the [identifier removed] journal, that used to say, ‘and here we have the good stuff and by the way here’s the practice stuff’. And you didn’t have to write as well I was told. That’s actually where my publication got put because it wasn’t sufficiently academic (R5).

However, some participants also noted that technical language might at times be the most appropriate for discussing certain issues and finding other, simpler terms
would make the discussion inaccurate or fail to capture the nuance and complexity of the issue:

I mean with my work a lot of the language I use—I have to use very technical words because the terminology’s quite technical around—if you don’t say those words then actually you’re saying something that’s inaccurate so that’s a challenge (R20).

On the one hand there’s no doubt in my mind that some language that academics use is unnecessarily obtuse and esoteric even, and difficult to comprehend. On the other hand, I do think that there are some ideas that academics are developing and if you need academic concepts to articulate those ideas it may not be part of the common language. At one stage I was at a conference and I was chatting with a few people. I was talking about the impact of neoliberalism on practice and one said ‘Well, why do you have to use all these jargon words?’ So neoliberalism was seen as a jargon word that wasn’t part of everyday conversation. But the concept of neoliberalism was an important thing to get your head around to understand how practice is shaped by forces outside of your immediate practice (R6).

Organisational Characteristics

Organisational culture and infrastructure which supported and valued interaction and research use were strongly associated with researcher-practitioner engagement in collaboration and research utilisation activities. However, genuine organisational support for these activities was limited. Some participants noted that, while their organisation, in theory, supported collaborative activities in line with current government priorities, this support was conditional upon the extent to which the outcomes of these activities were in line with the organisation’s core priorities, which largely revolved around generating financial profit and traditional research output. Asked whether he felt supported by his organisation, one participant said:
For the most part, yes. Because—and the reason’s simple—because I produced the outcomes. What’s outcomes? It’s research dollars, consultancy dollars, peer reviewed journal articles, PhD students. I mean government policies come and go, but they’re still the basic outcomes that academics are supposed to produce, and I produced them (R14).

Where participants had been able to secure a large amount of government money to support collaborative activities, they tended to perceive university support for their activities to be high:

Yeah, absolutely, I should explain something—My current role is director of a research centre [identifiers removed]—it receives Infrastructure Funding from the State Government. So our letterhead has the name of the centre and then under it says “A Partnership between the [identifier removed] Government, the University of [identifier removed] and [identifier removed] University. So our whole research enterprise is very geared as a partnership. I think that’s really important. They give us AUD1 million a year for our particular area of research … that really arose out of a very major research project we did for the government … after we finished all of that we then approached the government and said, well look this has been a good experience, it’s worth ensuring that this independence of research and collaborative way of working with government and the agencies is protected in some way. So they said write us a business plan. So we wrote a business plan to receive five years of funding (R3).

On the other hand, where participants’ activities had not generated large financial profit, they perceived a distinct lack of support from the university:

There are all sorts of ways in which I think the university espouses collaboration and partnership and actively discourages it on the other hand—an example would be, some of my colleagues were recently approached to—by a non-government organisation—to do some research for them. They had limited money but they were able to pay something towards the cost of the academic involvement. When—and the colleagues needed to get permission from the university to allow this to happen. The response they
got was that you’re not charging enough. You’re not charging a rate high enough for us to justify letting—releasing you from university time to do this research. Unless you can get double what they’re prepared to pay then we won’t support it (R6).

Several participants noted that partnerships based on equality and a desire to be of genuine value to practitioners were becoming more and more difficult to achieve since the foremost priority of universities was to generate partnerships for profit:

I think [genuine partnerships] are really important but I think it’s increasingly difficult to pull that off in the university culture I think. Because when I hear other people talking about partnerships with industry, they really seem to often be talking about a partnership where the industry will put money into the university (R13).

Financial cutbacks were highlighted as a possible reason for universities’ strong focus on generating money through researcher’s collaborative activities, since there was not enough money to support research from within many universities, placing academic jobs at risk:

The problem is that 10 per cent of our staff have been fired recently. There’s a lot of change going on at Uni and if we’re not getting money and we’re not publishing in high impact journals we’re at risk (R22).

In contrast, one participant highlighted the power of US universities to make a difference through research, due to their enormous financial resources:

It’s the people in America who work at Stanford and Chicago, they have money that’s beyond all conception. The amount of studies and trials they do simultaneously boggles the mind. They’re the people who really make a difference. We’re like tiny parasites on their back (R22).

The pressure on universities to generate funding had a detrimental impact on some participants’ interactions with practice-based organisations. For example, one
participant noted that her university had deducted almost 40% of the funding she had received to do research for a philanthropic organisation to pay for ‘overhead costs’ like her computer, office, and electricity, which had caused problems in her relationship with this organisation:

It’s close to 40 per cent that the university will take out on overhead costs, and I was new to the university, and I can remember saying ‘What are these overhead costs?’ They’re things like my office, electricity, computer, and I said ‘But if I don’t bring the money in the university pays for that anyway’. [The response was] ‘Yeah, but because you’re bringing the money in it has to pay for that.’ It’s Catch-22. I couldn’t believe it. One of the grants I brought in was $145,000. I showed it to the university—the people who were in charge of finance—and they changed it and put in all these overhead costs, and I flicked it to the philanthropic organisation who had an absolute hernia and said ‘We’re not paying for this, this and this.’ (R4).

Pressure on universities to procure funding also gave organisations significant power and control over the research process and product. In particular, several participants highlighted the power funding gave governments to shape and determine research activities and research outcomes:

In fact, the government does have power because it funds us and they certainly haven’t been shy in occasionally saying to us that could we express our findings a little differently … I think one of the things to be perfectly honest that hinders the final step [in research utilisation] is the controlling nature of the government funder of the main service providers we work with. So, for example, one of the things that we did was that we placed our senior research fellow in one of the agencies a day a week to facilitate research development there … so it was very much hands on working with the practitioners doing that sort of thing. Then we struck a problem with the government department that funds the service saying “Hey, you guys are interfering with our data collection because people are interested in collecting your data and they’re neglecting
completion properly of the minimum data set that we require”. Of course then the managers got a bit apprehensive about that because their funding was dependent on client figures that they were able to show. So there were very much barriers put in place not by the practitioners themselves but by the government funders and secondly by the managers of those services who then became frightened (R3).

Participants expressed concern that this form of control might jeopardise the integrity of the research findings, particularly if the organisation commissioning the research already had a stake in a particular outcome:

So the university is in danger of then focusing on the big players like government departments or like maybe organisations that have already got a stake in a particular outcome (R13).

Several participants described how they had retaliated against government attempts at controlling the dissemination of research findings:

I sort of did up I think about 30 copies of the summary of findings and distributed them to all the agencies and the individuals that had helped me with this work. The department was furious about that but I just sort of felt that ethically I couldn’t not allow those things to come out (R15).

…we did publish sort of anonymously with the data … but we fought back to them (R19)

In response to the lack of organisational support, some participants also became very adept at integrating their collaborative or research utilisation activities into their job:

I’ve got to fulfil my job, my day job, as it were. But look for an opportunity where the synergy will be there and I can sort of wrangle it and graft it into an extension of what is our normal job, our normal service (R2).
Others sought support from peers and collegial networks with similar interests:

…it’s a very tight-knit kind of group of people with a fascinating topic to study. It’s just part of the culture should we say … a very vibrant network which is committed and interested. Now there’s an international group of social work so it really is different. It is a rich, fertile pocket (R2).

Attempts to overcome structural constraints to collaboration and research use were described by one participant as the ‘third way’, which he noted could always be achieved against all odds:

The key to it is to—there is always a third way, there’s always a way to get what you need done. I don’t see that as a long-term problem (R22).

**Conclusion**

The findings of the semi-structured interviews confirmed the finding of the literature review that research use is complex, takes on many meanings and forms, and is facilitated by a range of factors in combination. Added to this is the complexity of the social work field, which demands complex solutions in response to the significant and diverse challenges of a diverse world. The critical realist framework used in this study, which views causes and their effects as part of open systems, enabled the complexity of research use in social work to be taken into account rather than oversimplifying it into a simple listing of variables.

The interviews reflected participants’ recognition of the multifaceted, socially-embedded nature of research utilisation in social work, with many respondents showing a preference for terms like research translation, indicating a relational perception of the research-to-action process. The importance of relational factors in facilitating research use was suggested by the finding that interaction was the only factor reported by researchers as facilitating or mediating all three forms of research use, namely,
conceptual, symbolic, and instrumental use. Strong ties were reported to be particularly effective at facilitating research use, although they tended to have a more situated, local impact as they often required time and commitment to develop. However, where researchers were able to develop emotional intensity and trust quickly, they found these strong ties to be highly effective at fostering broader research use outside the research process itself. A key finding of the interviews was the important role that individual motivation and personal values of researchers played in facilitating research use and interaction, and in overcoming structural and organisational constraints to these activities. The following chapter discusses these findings in light of the literature and theory documented in the Literature Review, and the findings presented in the Survey Findings and Interview Findings chapters.
CHAPTER 7

Discussion of Findings

This chapter discusses the major findings of this study as presented in Chapters 5 and 6. The Survey Findings documented the results of a survey of 60 Australian social work researchers, which investigated the existence of a relationship between researchers’ interaction with, and the extent to which their research was used by, practitioners. The majority of survey respondents identified as social workers, while others were from the fields of psychology, human services, sociology, psychiatry and medicine. Most respondents were aged 50-59 years, employed primarily in an academic capacity in a university or research centre, and had a PhD qualification or higher. This suggested they were experienced social work academics. However, more than half also reported relatively recent or current practice or clinical experience, indicating they continued to foster strong links to the practice community. It should be noted that this survey was intentionally designed to attract a sample of researchers with a particular interest in forging links with practice in order to examine whether there was a relationship between these connections and research use by practitioners. Findings from the survey showed that researchers perceived research use to be high in the early stages of transmission and cognition, although decreasing levels of utilisation were reported in the later stages of effort, influence and application.

The Interview Findings documented the experiences of 26 Australian social work researchers, selected from the survey sample, in relation to their interaction with, and the use of their research by, practitioners. Overall, interview participants tended to view knowledge utilisation as a complex social and relational process involving
numerous stakeholders. All reported engagement with practitioners in the course of their work and most described this as an important element of their work, which was strongly connected to, and driven by, their personal values. Participants described how their interaction with practitioners—both during and separate from the research process—was a key factor facilitating conceptual and instrumental research use, which, at times, helped to minimise symbolic use. Participants’ comments suggested that interaction tended to influence research use indirectly by facilitating a range of mediating factors, which, in turn, enhanced research use. For example, researchers described strong ties as a mediating force in situations where their perspectives or priorities differed to those of practitioners. Where strong ties existed, researchers reported sharing a common worldview with practitioners, which accelerated the research process. Participants described common experiences associated with the development of effective interactions with practitioners and the way in which this personal factor influenced the research process. However, not all interaction led to research use, with several participants describing occasions when poor communication had a detrimental impact on the research process, or led agencies to reject their research findings.

This chapter first discusses the findings of the survey, with particular reference to previous studies which used Landry et al.’s (2001) version of the Knott and Wildavsky (1980) scale. It proceeds to a discussion of the central insights gained from the semi-structured interviews, with a focus on exploring more deeply the factors that researchers believed influence research use and, in particular, the relationship between research use and interaction. Four major approaches to interaction for the purpose of facilitating research use were identified and discussed in relation to current theories and models of research use (see Table 2, pp. 44-45). Using critical realism as a lens through which to view the research findings, the relationship between interaction and research
use was explored as part of an open system, in which many factors operated simultaneously and affected the working of one another in a complex, heterogeneous system. This exploration informed the development of an Integrated Model of Research Use to extend current research utilisation frameworks (discussed in Chapter 8).

Before commencing the discussion, several caveats must be made. The results are derived from a small sample of Australian social work researchers and hence may not be representative of patterns of research utilisation across social work more broadly. The small sample size also limited the power of the statistical analyses undertaken. Finally, the results are based on self-reported data and therefore might have resulted in inaccurate responses if respondents either overestimated or underestimated the use of their research. In relation to this latter point, the adopted research design, which included follow-up interviews with a smaller sample of the survey participants, went some way towards minimising this limitation by examining exactly how researchers perceived their research to have influenced practitioner and professional decision making, and the types of applications it led to. Finally, the following chapter discusses research use from the perspective of researcher’s only as the perspectives of practitioners were not unexamined in this study, which means that one side of the story is missing. The implications of this limitation for further research are discussed in Recommendations for Further Research (pp. 261-271).

**Complexity of Knowledge Utilisation**

As was found in the Literature Review (Chapter 2), knowledge utilisation is a complex and wide-ranging field within which a myriad of theories, models, terms and frameworks have been proposed to describe the process by which research becomes used in practice. Despite these efforts to explain the research utilisation process, the literature reflected a tendency toward superficial understandings of research use and the processes by which it might be achieved. Consequently, understandings about how
research utilisation might best be achieved have remained limited. Hence, the present study sought to gain a deeper understanding of the research utilisation process in order to extend current theories of research use. In particular, it explored the relationship between interaction factors and research use from the perspective of researchers.

In recent years, there has been a shift in the focus of knowledge utilisation models from a narrow and linear perception, to recognition of the complex and relational nature of research use. Several models were uncovered in the literature, which embody this new multidirectional perspective on research use, including socio-organisational, translational, interactional, linkage and exchange, and hybrid models (see Table 2, pp. 44-45 for a description of these models). These models were considered more likely to facilitate research use in social work, as social workers were found to have a preference for information gained through personal interaction (Booth, 2003; Cha et al., 2006; Gray & Schubert, 2012, 2012; Kjorstad, 2008; Marsh, 2002; Trevithick, 2008).

**Extent of Research Use**

In this study, research use referred to the complex process by which research-based knowledge comes to be applied in practice. To enable meaningful comparison of results and contribute to the development of a reliable and valid measure of research use, the extent of research use was measured using Landry et al.’s (2001) version of the Knott and Wildavsky (1980) scale of knowledge utilisation, which reflects a linear notion of the utilisation process from the transmission of research (Stage 1) to its application in practice (Stage 6). The survey results reported in Chapter 5 were broadly supportive of previous studies which employed this scale (Cherney & McGee, 2011; Landry et al., 2001). When measuring research utilisation using this scale, decreasing levels of research impact in the later stages of the scale were revealed. While a high number of respondents invested in knowledge-transfer activities related to transmission (i.e., Stage
one of the utilisation scale), there was a marked decline in reported levels of effort, influence and adoption by practitioners and clinicians (i.e., stages four, five and six of the utilisation scale). Cherney and McGee (2011) suggested the activities required to successfully reach the later stages of knowledge utilisation carried greater costs for researchers noting that, in order to advance knowledge utilisation, “researchers need to invest heavily in acquiring skills, expertise and the know-how to engage policy-makers and practitioners, in conjunction with efforts at customising research that is tailored to end-users” (p. 156). This was a significant investment for researchers already facing time pressures, demand overload and a lack of organisational support.

In the literature review, a lack of organisational incentives and support was emphasised by researchers as a key factor hindering them from reaching the higher stages of knowledge utilisation (Jacobson et al., 2004; Maxwell, 2005; Stone, 2009). The survey sought to examine the impact of organisational support on research use and found that almost half of the survey respondents agreed or strongly agreed that their organisation supported their engagement with practitioners. It identified a significant association between organisational support and the final application stage of research use. This suggested that, while other factors may influence the earlier stages of research use, the actual application of research within an organisation requires some form of organisational support. Landry et al. (2001) and Cherney and McGee (2011) found that support in the form of funding from internal university sources was not related to research utilisation, while funding from external sources was significantly and positively associated with research use. These findings suggested that not all forms of organisational support fostered research use and that the specific nature of organisational support and incentives which did facilitate research use required further investigation. Findings from the semi-structured interviews offered further insight into the relationship between organisational support and research use.
Importantly though, a small proportion of the sample of researchers did report that their research usually or always influenced the decisions of nonacademic users and led to applications by practitioners and professionals. In fact, the average scores in this study and that of Cherney and McGee (2011) tended to be slightly higher compared to those of Landry et al. (2001). This might reflect an increasing awareness about research impact issues among Australian researchers as a result of intense debate about the implementation of the government’s Excellence in Research for Australia initiative since 2008. Successful movement to the higher stages of utilisation was, to some extent, related to researchers’ interaction activities, where interaction was significantly and positively associated with the first two transmission and cognition stages of research use. There was also a marginally significant association between interaction and research use in the later stages of the scale. In addition, there was an upward trend in research utilisation scores across all stages for researchers who interacted with practitioners compared with those who did not. The strong relationship between interaction and research use in the earlier stages of the scale seemed to indicate a stronger link between interaction and conceptual use of research-based knowledge, where the findings of research are transmitted and understood by practitioners but not necessarily instrumentally applied. The upward trend in research utilisation scores across all stages for researchers who engaged with practitioners indicated some association, albeit non-significant, between interaction and the later stages of research utilisation. This was supported by the findings of Landry et al.’s (2001) study that linkage factors were significantly and positively related to the use of research in social work and industrial relations. Cherney and McGee (2011) also reported that Australian academic sociologists and criminologists, who reported high levels of utilisation, were distinguished by their investments in linkage and exchange activities. The association
between research use and interaction was explored more deeply in the semi-structured interviews.

A notable finding of this study was that researchers were able to reach the later stages of the Knott and Wildavsky (1980) scale even if they failed to pass the earlier stages. For example, some participants reported the influence and application of their research but not cognition or reference. Instead, movement into the higher stages of research use was facilitated by a combination of researchers’ interaction activities, individual attributes, and the characteristics of the organisation, and of the innovation itself. This suggested that research use in social work is not achieved via a linear, cumulative process as suggested by the Knott and Wildavsky (1980) scale, but that each stage is influenced by investment in different research utilisation activities by researchers and practitioners. Nonetheless, viewing research utilisation as a staged process enabled identification of social work researchers who had succeeded in reaching different stages of the scale, and the extent to which interaction affected their ability to do so (Landry et al., 2001).

The survey results showed that scores for research use in social work were comparable to those in sociology, criminology (Cherney & McGee, 2011), and the social sciences (Landry et al. 2001). A comparison of these studies was meaningful because they used the same instrument to measure research use. As identified by the Literature Review (133-148), the knowledge utilisation field is currently characterised by a lack of definitional and conceptual clarity, which remains “one of the major obstacles to establishing a sound measure of research use” (Estabrooks & Wallin, 2004, p. 7). The most widely-used approach to measuring research use is to design a new measure with little attention to “standard psychometric methods or to post-use evaluation of the measure’s performance” (Estabrooks & Wallin, 2004, p. 7). This hinders the development of a reliable measure of research use which would facilitate.
meaningful comparisons of results (Estabrooks & Wallin, 2004; Hanney et al., 2003). Until such a measure is developed, the ability to determine the extent of research use or the factors affecting this remains questionable (Estabrooks, Wallin, & Milner, 2004). This highlights the danger of simply comparing the results of studies in the knowledge utilisation field without an awareness of the different ways in which they measured or defined research use. The use of an instrument in this study, which had been applied several times previously, enabled meaningful comparisons to be made between studies and contributed to the development of a sound measure of research use.

A unique finding of this research was that the transmission stage of the knowledge utilisation scale strongly loaded onto the factor representing interaction rather than the factor representing research use, suggesting respondents perceived research transmission as sharing the same conceptual meaning as variables relating to interaction. Comments by some participants that the survey did not accurately capture the interactive nature of their research activities or their conceptualisations of research use, suggest that the question regarding transmission of research findings may have been interpreted in terms of engagement with practitioners, since it is the only question that implies some form of contact between researchers and practitioners, albeit a tenuous association. The Oxford Dictionary defines transmit as ‘causing (something) to pass on from one person or place to another’. Thus, there is an implication that the act of transmission may require some form of personal contact. For example, a virus cannot be transmitted without physical contact. It is therefore conceivable that researchers who place a particular emphasis and value on interaction for the purpose of facilitating research use would interpret the act of transmitting their research to practitioners as involving some form of personal contact. Given the confusion regarding conceptualisations and definitions in the knowledge utilisation field highlighted by the literature review and confirmed by the findings of this study, it is even more likely that
participants may have misinterpreted transmission as an interaction variable. This finding and its implications for future research are discussed in the Conclusions and Recommendations chapter.

The Literature Review (Chapter 3) painted a rather dismal picture of the state of research use in social work. Despite recognition of a recent movement towards greater utilisation in many areas of social work practice, criticisms persisted regarding the lack of research use in practice (Bellamy et al., 2006). In fact, the social work profession was emphasised as being the slowest to generate and take up knowledge in evidence-based practice (Gray et al., 2009). Overall, the survey results suggested that social work’s reputation for exceptionally low research use may be unsubstantiated. In line with Landry et al.’s (2001) findings, the results of the present survey showed that research use in social work may be higher than previously thought. This finding might, in part, have resulted from the way in which research use was measured in this study. The scale of knowledge utilisation used to measure research use in the current study, viewed research use as a process rather than a single event. Measuring utilisation across a spectrum in this way enabled the identification of higher levels of utilisation than instruments that measure research use as a single event (Cherney & McGee, 2011), leading to a far less dismal view of research impact in social work.

While the survey provided useful insights, it also revealed a need for further exploration of the nature of the factors that facilitated research use, and of the relationships between them. This confirmed the importance of conducting follow-up interviews with participants, to deepen understandings of research utilisation and interaction gained from the survey. Cherney and McGee (2011) noted that, to fully understand research impact, a variety of impact measures need to be adopted. These included quantitative approaches to examine broad patterns of research use to enable statistical generalisations and qualitative methodologies, to trace specific patterns of
research utilisation to understand the processes and interactions influencing the use of research (Davies & Nutley, 2008). However, neither Cherney and McGee (2011) nor Landry et al. (2001) supplemented their quantitative survey design with qualitative techniques. Comments by some respondents in the open-ended section of the survey—that the survey did not allow them to provide accurate responses and the focus on research utilisation did not effectively capture the issues they found most important in their work—indicated their experience may not have been captured by the survey. These concerns were confirmed by the follow-up interviews in which several participants described their discomfort with the term research utilisation, since it did not reflect the relational and social nature of the research-to-action process. While Cherney and McGee (2011) emphasised the analytical benefit of the Knott and Wildavsky (1980) scale, in that it enabled the identification of factors to explain why some researchers succeeded in moving through the various stages of knowledge utilisation while others did not, respondents’ comments in the present study suggested this scale might not have generated an altogether accurate reflection of participants’ research-to-action activities. The use of a mixed-method approach in this study provided a unique opportunity to examine the extent to which the survey was able to accurately capture broader patterns of research use in social work that reflected participants’ real world experiences.

**Researchers’ Perceptions of the Research Utilisation Process**

The Interview Findings (Chapter 6) showed that social work researchers viewed research use as a complex, socially engaged process in which multiple stakeholders, such as policy makers, service users, practitioners and researchers, might be involved. In general, participants tended to show a preference for terminology reflecting this relational focus, such as research translation, over terms reflecting a narrower, more linear perspective of the research-to-action process in which practitioners were passive recipients of research findings, such as research transfer. In this way, participants’
perceptions of the research utilisation process reflected the broader trend towards more interactive, relational forms of research use identified by the literature review (see for example, Belkhodja et al., 2007; Bowen & Martens, 2005; Elliott & Popay, 2000; Hanney et al., 2003; Innvaer et al., 2002; Landry et al., 2001).

In line with the literature review, which found an abundance of terminology and conceptual confusion in the knowledge utilisation field (Estabrooks et al., 2006), findings from the interviews revealed a lack of clarity and consistency in participants’ use or understanding of terminology. For example, several participants used different terms to describe similar processes and perceptions of research use. While most participants described perceptions of research use as an interactional process, some reported using terms that did not correspond with these conceptualisations—i.e., terms like knowledge utilisation and knowledge transfer—in order to communicate effectively with government and funding bodies. This finding highlights a tension between participants’ perceptions of research use and the perspectives they were expected to demonstrate. In fact, several participants described their efforts to meet the fiscal requirements of their job while simultaneously looking for opportunities to do the interactive, cooperative work they thought was more important.

From a critical realist perspective, this latter point may be indicative of a structural mechanism affecting the research utilisation process. It suggests that dominant discourses about research may influence the way in which researchers talk about their work, which is not representative of their actual activities or perceptions. This leads to the kinds of hidden activities or ‘shadow structures’, described by Klein (1996), in which researchers operate in complex systems or networks of mode 2 activities below the surface organisational structure oriented to mode 1. One implication of this form of concealed activity is that it hinders the accurate identification and measurement of research utilisation, and the subsequent development of models and
theories having the capacity to effectively enhance research utilisation processes. This highlights the fundamental importance of supplementing quantitative approaches to measure research use with more exploratory, qualitative approaches in order to enable identification of the activities and beliefs underlying participants’ responses.

While a central focus of the knowledge utilisation literature was on the coproduction of knowledge for the purpose of generating relevant and useable knowledge for practice, participants in this study viewed the process of research use in different ways. Some described it as situated and context specific, limited to those involved in the research, and a direct result of interaction during this process. Others referred to it as occurring outside the research process, where findings of research projects or programs conducted in certain contexts were made accessible and relevant to practitioners in other contexts through translational activities. This latter form of interaction tended to be associated with broader forms of research impact across contexts. However, upon closer examination of participants’ comments through the lens of key research utilisation models and theories (see Table 2, pp. 44-45), a gradation of communication approaches became apparent, which resulted in differing forms of research use, and which reflected different knowledge utilisation models and theoretical approaches. These different forms of interaction, related to utilisation, are discussed in the following section.

**Interaction and Research Use**

The primary aim of this research was to investigate the existence of a relationship between interaction and research use, and to explore the nature of this relationship in order to identify how interaction can best lead to research use in social work. The interviews confirmed the survey’s finding that there was a relationship between researcher’s interactions with practitioners and their reporting of research use by practitioners, which was significant in the earlier stages of research use, and a trend
overall. In fact, interaction was a key factor identified by researchers as influencing conceptual and instrumental use, and had the potential to minimise symbolic use. However, researchers’ responses indicated that the impact of interaction on practitioner’s use of research was often complex and indirect, and usually functioned in combination with a range of other factors (see facilitators of research use in Table 1, pp. 39-42). Further, not all forms of interaction were perceived as facilitating utilisation. Researchers’ responses indicated that the form and quality of an interaction together with the right combination of factors had the potential to influence the research utilisation process. The nature of an interaction, and the way in which it combined with other factors to facilitate or inhibit research use, is now discussed.

**Forms of Interaction**

Interview participants described different forms of engagement with practitioners, from intensive interaction and coproduction in the context of application, to brief connections targeted at traditional means of dissemination. Various forms of engagement tended to have a different impact on research use. Four major approaches to interacting with practitioners for the purpose of fostering research use were identified: (i) situated—intensive interaction or coproduction in the context of application; (ii) engaged—continuous consultation and feedback throughout the research process while maintaining researcher independence; (iii) programmatic—interaction for the purpose of creating, marketing and selling a research product; and (iv) conventional—brief interaction targeted at traditional dissemination of research findings. While these forms of interaction are presented as stand-alone processes, most participants applied a combination of elements from different approaches.
Situated approach

Situated interaction was characterised by intensive and ongoing engagement or coproduction of research with practitioners in the practice setting. An example of this form of interaction was the research-partnership program described by one participant, where a researcher was placed in an agency and worked actively with practitioners to conduct research on practice-based issues and questions. This form of interaction resembles Gredig and Sommerfeld’s (2008) hybridisation model in which knowledge was formed cooperatively “in the context of action” (p. 295). Their model combines various forms of knowledge derived from different reservoirs of explicit knowledge—both scientific and practical into a “‘third sphere’ of knowledge in its own right” (Dewe, 2005, p. 368). Similar researcher-in-residence schemes have also been created in the UK (see Phipps & Shapson, 2009).

Achieving research transmission or cognition by practitioners, who engaged in situated interaction with researchers, was not considered difficult by study participants, since the research produced was highly relevant to the particular practice context, and the practitioners and organisations involved in the interaction were already open to the idea of research use. It confirmed the finding of the survey that there was a significant association between research coproduction and the first transmission stage of research use, and a marginally significant association between research coproduction and the second cognition stage of research use. However, beyond this, there was no significant association between coproduction and any other stage of research use. This finding contradicted Landry et al.’s (2001) finding that the likelihood of research utilisation increases the more scholars invested resources in supplying idiosyncratic knowledge for one or more users. Participants who engaged in situated interaction often spoke about the importance of process, noting the new ideas and messages that were introduced into practice in the course of a research project were just as important as the final research
product. This suggests that situated interaction tends to foster conceptual use throughout the course of the research project, but this focus on intensive interaction does not guarantee the instrumental use of research findings.

A challenge of situated interaction was that it tended to be time consuming and resource intensive for researchers. Researchers who chose to engage in this form of interaction usually sacrificed a portion of their personal time, and some even used their personal expenses to support the running of the project. For example, in describing a project she had been involved with for many years, one participant noted that she had, at times, completed the work pro bono and had even funded her own travel to the international location where the project was being conducted. In this study, participants considered individual attributes and values of researchers and practitioners instrumental in motivating or enabling them to interact with one another and engage in activities to facilitate research use. In fact, the characteristics of the individual, such as their values and position, played an important role in mediating organisational barriers to interaction and research utilisation. One participant described how he had used his senior position to determine that his staff would engage in activities to foster research use. Many participants also described how their value base and desire to make a difference motivated them to overcome barriers to engaging with practice, in the interests of fostering research use. The disadvantage of this facilitator of engagement is its heavy reliance on the individual who possesses the particular characteristics needed to sustain the research. Interaction based on individual commitment became problematic when individuals left or were transferred from their position, since the engagement often could not continue without them.

When compared with the survey finding that almost half of the respondents agreed or strongly agreed that their organisation supported their engagement with practitioners, findings from the interviews painted a slightly different picture. Although
many respondents agreed their organisation supported their engagement with practitioners in theory, this support was often conditional on the amount of profit to be gained from such collaboration. For many participants who engaged in situated interaction, organisational support was minimal, since many noted that the practice-based organisations with which they worked did not have the funds to pay for their time. In fact, the pressure to generate funding had a detrimental impact on some participants’ interactions with practice-based organisations. For example, one participant noted that her university deducted almost 40% of the funding she had received to do research for a philanthropic organisation to pay for overhead costs like her computer, office and electricity, which had caused problems in her relationship with this organisation. This lack of support forced participants to merge their work with practitioners into an extension of their normal job. These comments suggests that, although the survey might have provided an overview of professed organisational support, it failed to capture participants’ actual experiences of this support, which were often far less favourable.

From a critical realist perspective, participants’ efforts to engage in situated interaction alongside their standard workload, and despite the organisational barriers they encountered, reflected an attempt to overcome rather than change structural constraints. Bhaskar (1986) distinguished between the transformation of social structures and the alteration, or amelioration, of states of affairs, arguing that true emancipation could only be achieved where constraining structures were transformed. The lack of attempts made by participants to change structural constraints might be indicative of the influence of deeper structural mechanisms on their attitudes and behaviour. Several researchers, who professed a strong commitment to engaging with practitioners, also commented that this commitment might be unusual. This comment suggested participants might believe that they fell outside the norm and therefore had no
reason to change a structure that supported the activities of the majority. This also echoed the earlier observation that researchers used particular terminology which was congruous with dominant discourses about knowledge and its use, but which did not reflect their actual activities. Upholding researchers’ belief that their strong commitment to engaging with practitioners was unusual was in the interests of organisations, as this meant they did not need to take responsibility for making changes to support these researchers.

Nonetheless, the survey found a significant association between organisational support and the final stage of research application showing that participants, who either agreed or strongly agreed that the organisation within which they work provides incentives and support for collaboration with practitioners, were more likely to report reaching the final stage of the knowledge utilisation scale. In light of the findings from the interviews, that participants often experienced this support unfavourably in the form of pressure to generate funding, the survey finding may reflect an association between organisational pressure to engage with practitioners, rather than actual support of these activities, and research use. When asked about organisational support for their engagement with practitioners, several participants referred to the job requirements or professional targets set by the university. This suggests that researchers for whom interacting with practitioners is a job requirement may be more likely to engage with practitioners, thereby increasing the use of their research.

While the resource-intensive nature of situated interaction represented a challenge for researchers, one of the key strengths of this form of interaction was that it provided an ideal basis for the creation of strong ties between researchers and practitioners. Strong ties characterised by trust, long-term commitment, onsite presence, friendship and equality were frequently emphasised by participants as particularly important for enhancing various aspects of the research process and for motivating
researchers and practitioners to overcome barriers to research coproduction and use. One participant noted that, although relationships took time to strengthen, they ultimately sped up the research process due to the existence of pre-existing understandings between researchers and practitioners. Another participant said he preferred to focus more energy on creating strong links with a small number of organisations than weak links with a large number of organisations because stronger links heightened the sustainability of his research project and the likelihood of achieving research use.

Although strong ties which developed in the course of a situated interaction might facilitate research production and use, this strong connection might also increase pressure on researchers to re-frame or mould their research findings to fit with organisational requirements or expectations. For example, one participant described a research project she had conducted in which practitioners were involved intimately in generating and publishing the research findings to the point where every word had to be agreed on. In addition to being incredibly time-consuming, this level of collaboration led one to question the capacity of the researcher to maintain an independent and, where necessary, critical perspective on practice. Elliott and Popay (2000) emphasised the importance of researchers as knowledgeable outsiders, who could provide a critical perspective on practice. In their study, independence was perceived as an important feature of the researcher-user relationship as it enabled researchers to maintain a critical perspective rather than merely legitimate practitioners’ views. Thus, while strong ties developed through situated interaction might have a significant impact on research use, a quality interaction also required researchers to maintain an independent voice.

While situated interaction may compromise researcher independence, it is possible that researchers who have an intimate connection to the practice context—e.g., practitioner-researchers—may be less likely to make incorrect conclusions about
practice-related problems which may lead to unfair criticism of practitioners. For example, one participant who conducted research within her own agency noted that, although at times critiquing the actions of practitioners is necessary, it is imperative to make this critique with regard to organisational policies and conditions which may affect their ability to provide optimal services. Researchers who do not have an intimate understanding of organisational conditions and policies may be more likely to attribute problems in service provision to the inadequacies of individual practitioners than to social structures, thus possibly reducing the potential of their research to contribute to changes in practice.

**Engaged approach**

The engaged approach to interaction was characterised by continuous consultation and feedback throughout the research project, while maintaining researcher independence. This form of interaction was concerned primarily with the translation of research into practice and is therefore consistent with the translational model of research use (see pp. 44-45). While in many ways similar to situated interaction, engaged interaction assumed the existence of a separation between research and practice to the extent that translation between these two contexts was required. The translational model emphasised using multiple constituents—i.e., consumers, researchers, practitioners and policy makers—within the research pipeline as a means of converting basic knowledge into practical applications (Hudgins & Allen-Meares, 2000). However, it still viewed research and practice as two essentially separate spheres between which a translational bridge must be built (Allen-Meares et al., 2005).

Researchers who engaged in this form of interaction consulted with practitioners to identify their most pressing practice-related questions and then provided feedback to them throughout the project in the form of short reports and project summaries. Many observed high levels of success in achieving conceptual use through these forms of
interaction, reporting that even the simple act of asking practitioners about their practice-based problems influenced them to adopt new ideas and think in different ways about their work. As with situated interaction, this highlighted the importance of process, where new ideas and messages were introduced into practice in the course of a research project and resulted in conceptual research use. These findings confirmed the results of the survey that engagement with practitioners was significantly associated with the first two, transmission and cognition stages of research use. However, in addition to this, there was a marginally significant association between engagement with practitioners and the later influence and application stages of research use. The survey revealed an overall stronger relationship between engagement linking researchers and practitioners more generally—either during or separate from the research process—than between research coproduction and research use. In contrast to Gredig and Sommerfeld’s (2008) hybridisation model, this finding suggests researchers may not need to engage in intensive situated interaction with practitioners in order to maximise the chances that their research will be used.

A central benefit of engaged interaction was that it required less investment of time and fewer resources than situated interaction. For example, researchers engaged in this form of interaction tended to spend less time in direct contact with practitioners but were nonetheless able to build strong ties with them. An important finding of this research was that strong ties could be triggered through a single powerful encounter. For example, one participant described her first meeting with a group of Indigenous practitioners she wanted to work with. On this occasion, she had taken her children with her, which proved to be highly culturally appropriate and effective in building rapport with the practitioners. This was not an isolated incident. Many participants recounted similar occasions, where a chance decision had proved invaluable for building effective relationships with practitioners. These encounters were often informal in nature, which
served to diffuse power differentials between researchers and practitioners and revealed researchers’ personalities. Since engaged interaction was less resource intensive, the individual costs for researchers were lower, since researchers required less personal motivation to counter organisational barriers.

The finding that encounters that led to the development of strong ties were often informal in nature were congruous with participants’ own comments that informal interaction tended to be more effective in facilitating research use than formal interaction (Bowen & Martens, 2005; Huberman, 1990). Informal interaction included networking activities, such as having a cup of tea, talking to people at conferences, ‘wandering around the traps’, attending morning teas and lunches, and emails and phone calls. Thus, informal interaction could occur as part of, or separately from, the research process. However, informal interaction was perceived as a necessary part of the research process with one participant stating she could not imagine working effectively with practitioners without some level of informal engagement. Interactions initiated through informal contact were considered to be driven by mutual benefit and common interest rather than by funding. Conversely, formal interactions, defined as the transfer or division of resources via a contractual agreement between two parties, were sometimes found to have a divisive influence on researcher-practitioner interactions as the research became a product over which disagreements about ownership ensued.

The combination of strong ties developed through meaningful informal interaction, along with a separation between research and practice maintained through a focus on consultation and feedback, made it easier for participants to tread the fine line between interaction and critique. This form of interaction allowed researchers to retain an independent perspective while continuing to build a strong connection with practice. The issue of critiquing or challenging practice-based assumptions arose as a controversial one. One participant described the tensions arising from involving
clinicians in the research process and criticising them. Another participant highlighted the value of critique for challenging people’s assumptions and suggested researchers should engage directly with defensiveness in response to an issue or research finding as this might lead to deeper levels of exploration of the issues raised. Researchers who were able to engage with defensiveness effectively, and were able to any associated conflict, tended to report having strong rapport with practitioners, while still retaining an independent perspective.

Participants who adopted an engaged approach to interaction placed a high value on presenting research findings in a way that made them accessible to practitioners. They attempted to increase accessibility by writing clearly and simply and generating recommendations and key messages for practice and writing executive summaries. One researcher noted that he wrote a one-line bolded summary statement for each paragraph. Other researchers tried to omit academic jargon from their writing and present their findings in everyday language. While presenting their work in this way enhanced its accessibility for practitioners, this form of writing was not well-respected or rewarded among the academic community. One researcher noted her colleague had described her work as Women’s Weekly writing, reflecting a perception of simple, engaging writing as lower in quality and value than academic writing. Others described their academic colleagues’ critique and pressure to write in an academic style. This reflected a form of mutual control by academics, where those who ventured outside the sphere of the academic elite were marginalised. It might also be indicative of broader sociocultural processes, in which identities—including scientific identities—were formed through language and language acted as a gatekeeper for entry into specific communities (Brown, 2013). Both of these communities had their own language, which formed part of the cognitive toolbox of the individuals who functioned within them, and enabled them to communicate quickly and efficiently. In the academic world, scientific language
provided “a means of international communication and indexing of scientific phenomena” (Brown, 2013, p. 1). Some participants alluded to this, stating that often academic concepts provided the most accurate means of articulating certain ideas. These language differences provided support for the two communities theory, which assumed a cultural difference between researchers and policy makers that hindered communication and prohibited knowledge utilisation (see Table 2, p. 44-45). This highlighted the importance of teaching students the academic vocabulary necessary for dealing with science—not just the words—but also the linguistic processes and patterns for delving deeply into and acting upon that content (Wilhelm, 2007). However, where researchers were not sacrificing quality or accuracy by using clear and simple language, the criticisms of their colleagues seemed unwarranted and served to create additional barriers to research use.

**Programmatic approach**

Programmatic interaction was characterised by the creation, marketing and selling of a research product for the purpose of answering practice-based, real-world problems. Participants engaging in this form of interaction spoke about the importance of thinking about research programs rather than research projects. Although these participants viewed research production as a separate process to research use, they employed a very practical, applied focus throughout the research production process. This approach often resulted in the generation of tools, instruments or models for application in response to concrete practice-based problems. In this way, programmatic interaction strongly resembled both problem solving and evidence-based practice models, where research was applied in response to a specific decision or problem. Research entered practice either by: i) research that already existed was drawn upon according to need (in which there was an element of chance in moving from problem to decision) or ii) research was commissioned to fill a knowledge gap (Weiss, 1979). This focus was in line with
demand-pull theories, which viewed research use as occurring in response to a demand or need for information. However, programmatic interaction also shared commonalities with dissemination and diffusion models, which tended to focus on the endorsement of knowledge products.

Participants applying a programmatic perspective tended to place a strong emphasis on the nature of the research as a factor influencing research use. They tended to focus on the development of a useable research product suitable for direct consumption. The characteristics of research most frequently associated with its utilisation were timeliness and relevance, achievability, clarity and simplicity. Rather than supplying idiosyncratic knowledge for one or more users, these participants aimed to identify topics that were timely and relevant in a wide range of contexts. They often received positive feedback and enquiries about their research across contexts and even countries. Research pointing to achievable interventions, presented clearly and simply, was also more likely to be used by practitioners. Programmatically-focused research, comprising instruments, manuals, tools and models neatly packaged into useable products made them easier to market and sell and was most strongly associated with instrumental use. Some participants even tracked the use of their product by requiring users to contact them prior to receiving access to it. A problem that might arise when research findings were over simplified into tools or instruments, was, that they might become unsuitable or unhelpful for application to the complex situations often encountered in practice.

Despite the programmatic emphasis, interaction through consultation and feedback with practice-based organisations, both during and separately from the research production process, remained an essential factor reported by researchers as influencing the uptake of their research. While participants emphasised the importance of developing good relationships with these organisations, the interactions they
described tended to be based on respect and trust rather than on friendship and collegiality. They were more akin to a good business rather than a personal relationship. Engagement with practitioners could also occur separately from the research process, which often took the form of workshops and presentations of a completed research product. These interactions were considered more successful in facilitating research uptake when participants were able to build strong connections with practitioners. Participants employing a programmatic approach were also more likely to use electronic media to facilitate public awareness of their work. One participant described using a blog to present and discuss his research findings to a diverse audience of readers, in addition to more traditional journal publications.

The focus of programmatic interaction on marketing and selling a research product was in line with the values and aims of the knowledge economy. For this reason, participants employing this approach tended to receive financial and organisational support for their work. Organisational support usually took the form of endorsement of researchers’ activities and the increased allocation of university resources, such as administration and support staff, to researchers. Since there were fewer structural barriers, participants required less personal motivation to overcome constraints to interacting with practitioners for the purpose of fostering research use. In programmatic interaction, personal attributes were more important for enhancing interaction with practitioners leading to research use. For example, one participant mentioned the importance of selling research charismatically. Others reported they were often contacted by practitioners because they were approachable and accessible. Other factors that researchers felt enhanced research use were their credibility and reputation. Participants emphasised the importance of their academic record and their practice background for facilitating research uptake by practitioners. This complex mix of
personal factors was considered by researchers as having a considerable impact on their success at marketing and selling their products to practitioners.

Gender and culture were also highlighted as influencing practitioners’ use of research, with one participant observing that practitioners were more likely to use research written by white male authors, and less likely to use research produced by female authors from an ethnic minority background. The survey findings too, showed a significant association between male gender and the reference stage of research use, suggesting that practitioners may be more likely to reference the work of male, than of female, researchers. On the other hand, as noted earlier, given that the current study examined researchers’ perceptions only, this survey finding may also indicate that male researchers are simply more likely to report the use of their research. The survey sample was too small to test the combined effect of gender and culture on research use. In combination, these two characteristics might have had a stronger impact on research use than gender alone. Since only one participant highlighted this as an issue in the interviews, it was not possible to determine whether this was a common experience. However, from a critical realist perspective, a single comment might indicate a structural constraint, suggesting this issue should be researched further. In addition, drawing on life-story interviews with nine migrant women in full professorial posts in UK academia, Sang, Al-Dajani, and Özbilgin (2013) highlighted the discrimination experienced by female academics, who stood at the intersection of gender and ethnic disadvantage, suggesting the experience of the participant in the present study might not be an isolated incident.

Another key focus of programmatic interaction was engagement for the purpose of generating wider structural change. One participant noted that interaction must be targeted at the bodies regulating the agencies within which practitioners worked, in order to create a context conducive to applying the new knowledge acquired through
training. Interaction was also targeted at governments in order to obtain large-scale funding for research utilisation projects. This funding gave participants more power to overcome structural barriers to research use in organisations. For example, one participant described a training program run by his research centre, which funded the attendance of agency staff at no cost to their agency or to them. The successful outcomes of these kinds of research utilisation programs were then used to advocate for further funding. Thus, programmatic interaction was targeted at different both micro and macro levels to influence practitioners and the structures within which they worked.

The danger of influencing organisational structures was that this could result in a top-down approach, where the application of certain research findings or interventions became a requirement of practice, which practitioners needed to meet without critically engaging with the research material. This issue was highlighted by one participant who noted that an unintended consequence of making things easier was that practitioners and policy makers became passive consumers of research, which might not actually facilitate its effective use. This suggested that unless practitioners engaged actively with the research material, they might not know how to apply the research, or their use of research might be uncritical, which increased the likelihood that research lacking in quality would be applied. While critical realism argued that transforming structures, rather than alleviating circumstances, was important for achieving true emancipation, this change must be instigated from the bottom up, and practitioners must be given opportunities to engage actively and critically with research material in order to decide whether the application of research was appropriate in the particular contexts and situations they faced.

It should be noted that researchers who engaged in programmatic activities generally did not do so in isolation, but functioned as part of a larger group or network of colleagues who shared a common goal. At times, these researchers had been involved
in informal supportive networks with one another for many years before generating the funding to support their more formal collaboration. These supportive collegial networks were considered an important motivating force by participants, with one participant noting that the encouragement and support of her like-minded colleagues was an important factor in sustaining her commitment to interacting with practitioners. Participants described how they had worked together to build a vibrant network of academics who were committed and interested and worked together on common goals, with one participant noting that ‘it's just part of the culture shall we say’. This highlighted an important difference to the aforementioned experience of policing among academics (p. 227). By creating their own supportive network of colleagues, these researchers created a *culture within a culture*: a culture of researchers, who supported one another in interacting with practitioners, within a broader academic culture that might not support these activities. Once they had attained large-scale funding support to engage in these activities, they then also received more support from broader academic structures.

*Conventional academic approach*

The conventional approach involved brief interaction targeted at the traditional linear dissemination of research findings in the knowledge transfer and engineering model of research use. In this approach, science and practice were seen by respondents as two separate spheres or systems, where the dividing line between them could be transcended in the form of a transfer, whereby knowledge moved from the context of application to the context of utilisation. From the perspective of the engineering model of research use, utilisation would occur when the imperatives of technical advancement were too great to ignore (Landry et al., 2001). These models reflected a demand-pull perspective on research use, where the findings of research moved into practice in response to demand.
Interaction in this approach tended to take the form of traditional conference presentations, workshops and journal publications, after the research production process had been completed. One participant conducted workshops or presented her work to particular organisations when invited. Although she considered her personal connection with practitioners during these presentations was beneficial, she did not believe it was essential for facilitating the uptake of research. Another participant reported a preference for publishing in high-ranking journals and limited his interaction with practitioners to occasions when he was approached to discuss his research. This participant tended to avoid conferences as most conference participants had no particular interest in his area of study and were therefore unlikely to use his work. Instead, he preferred to target his publications at high-ranking journals that specialised in his field of study and had a captive audience. In this way, he felt his work would more likely be read by those in a similar field, with an interest in applying his results. Personal interaction with practitioners through coproduction or training would never have the wider impact that could be achieved through writing journal papers. More important for him was interaction and the exchange of ideas with academic colleagues via emails, phone calls and visits. This suggested that researchers who employed a conventional academic approach might place more value on writing for their academic peers than for practitioners, who, it was perceived, did not read such works. These researchers reported having relatively infrequent and brief interactions with practitioners and, instead, relied more heavily on individual characteristics to facilitate research use, in particular, the credibility of their work as a factor in facilitating research uptake by practitioners. For them, credibility came from publications in high-ranking journals and a strong practice background.

One participant noted that practitioners were more likely to take notice of his work because they knew of his clinical background and felt he understood the context in
which they worked. Another described how she had built a connection with practitioners during workshops and presentations by referring to her own clinical practice background. Another personal factor that researchers felt facilitated research use was approachability, which they felt was also strongly related to their practice or clinical background. As one participant noted, practitioners felt they could approach him because they still viewed him as a practice colleague. Thus, researchers employing a conventional approach tended to invest less energy in instigating interactions with practitioners but were open to approaches from practitioners to discuss their work. This reflected a stronger focus on demand-pull theory, where the demand or need for research drove its movement into practice or into the academic lexicon.

The emphasis of the conventional approach on the dissemination of research findings via traditional publication reflected a stronger focus on the characteristics of the research itself as facilitating research use. The characteristics of research with which participants most strongly associated its use were relevance and timeliness, and its quality and reliability, as signified by publication in highly ranked, peer-reviewed journals. In particular, several participants reported having received enthusiastic feedback from practitioners upon publishing research on practice-related topics that had received little previous attention. However, this participant was not able to confirm whether these practitioners had actually applied his work. While participants made efforts to present their findings clearly and concisely, they did not pay particular attention to making their writing accessible to practitioners, with some suggesting this might compromise the integrity of their work. Again, they had no means of identifying the extent to which their published research findings had been used.

It should be noted that only a few participants’ research activities fell squarely into the conventional approach. Most participants who employed this approach also engaged in other activities and forms of interaction with practitioners. The conventional
approach was often used by participants to supplement other activities, and served as a means of engaging in dialogue with their academic colleagues. For example, several participants, who generally adopted an engaged approach, stated that they often wrote a report for their partnering organisation, which they presented in an accessible language and format, and a separate article for publication in an academic journal. However, the more deeply engaged participants were with practice, the more likely they were to prioritise the particular audience and readership of a journal over its status or ranking. For example, several engaged participants reported making a choice to publish in less highly regarded journals because these were the journals practitioners were more likely to read them. On the other hand, participants who fit more squarely into the conventional approach did not make these compromises.

**Conclusion**

Researchers’ experiences of research use, and the factors they associated with its occurrence, were found to be multifaceted and complex. Although researchers highlighted interaction as an important factor influencing research use, their reports suggested that its effectiveness was dependent on its *quality*, the *form* it took, and its interplay with a range of interconnecting factors, such as the research itself, the individual and the organisation. This complexity was not captured by the survey, highlighting the importance of supplementing quantitative techniques, such as the Knott and Wildavsky (1980) scale, with a qualitative approach. Furthermore, the application of critical realism to the analysis and discussion of the research findings proved valuable for developing a rich and dense description of potential factors influencing research use in open systems, and enabled some initial inferences to be made about potential mechanisms underlying researchers’ activities.

The findings from this study advanced current research utilisation models and theories, which tended to present more superficial understandings of the research
utilisation processes and, in many cases, consisted of a listing of variables. However, rather than creating a new theory or model, Chapter 8 presents an Integrated Model of Research Use, which was informed by elements of existing models and theories supported by the findings of this study. Chapter 9 examines the implications of the study’s findings for social work and makes recommendations regarding areas for further investigation.
CHAPTER 8

Developing an Integrated Model of Research Use for Social Work

This chapter presents an Integrated Model of Research Use suggested by the findings of this study. Given the complex and difficult terrain of the knowledge utilisation field and its myriad terms, models and theories of research use originating from diverse disciplines, the present study explored the potential of one research utilisation model, in particular—the interactional model of research use (De Goede et al., 2010; Weiss, 1979)—for enhancing research use in social work. Using critical realism as a lens through which to view the research findings, it examined interaction and research use within what Bhaskar (2008) termed an “open system”, that is to say, a complex heterogeneous system in which several mechanisms operate simultaneously and interfere with the working of each other. By examining interaction in this way, it was possible to map the interplay of interaction with other key factors identified by researchers as impacting on the research utilisation process such as individual characteristics, the research itself, the communication and the organisation. This enabled the identification of hidden structures which create barriers to research utilisation, such as the mode 2 shadow activities (Klein, 1996) of researchers and mutual controlling behaviour among academics. The new understandings gained through this deeper exploration of the research utilisation process served to mitigate some of the limitations identified in prior knowledge utilisation studies. They enabled a movement away from superficial listings of variables to the development of an Integrated Model of Research Use (IMRU) depicting the interplay of various factors (see Figure 13, p. 233). By taking the relationship between factors into account, it was possible to identify the way in which interaction between researchers and practitioners might best lead to research use, from the perception of researchers.
The literature revealed a trend towards more engaged, relational approaches to facilitating research use across disciplines, which were considered more likely to generate relevant research in response to the complex issues encountered in day-to-day practice, therefore making it more likely to be used. A review of interaction and research use in social work suggested that the social and contextual nature of the interaction model might have the potential to increase the uptake of research in social work practice. The findings from the survey confirmed the existence of a relationship between research use and interaction in social work, although this relationship appeared to weaken in the later stages of research for effort, influence and application. The findings of the interviews revealed four key approaches to interaction for the purpose of facilitating research use, termed ‘situated’, ‘engaged’, ‘programmatic’ and ‘conventional’. These approaches reflected a graduation from intense interaction and coproduction in the context of application to brief interaction targeted at traditional—linear—approaches to the dissemination of information. Engaged and programmatic approaches were found to be most effective in facilitating conceptual and instrumental research use and in minimising symbolic use by practitioners (see Chapter 7). In general, neither situated interaction nor conventional knowledge transfer approaches were found to facilitate research use beyond the transmission, cognition or referencing stages of research use. Situated interaction was often conducted with minimal organisational support and, therefore, required researchers to make a considerable personal investment to sustain these projects, usually driven by their individual values and desire to make a difference. A great deal of energy in this approach was spent on mitigating the barriers to interaction, with less emphasis on shaping research findings into a functional format or on translating this format into practice. The conventional approach focused almost solely on the transfer of research findings, with no attention to structural, individual, or interaction factors and little effort made by researchers to
translate the findings of their research into a useable format for practice. This research confirmed that there is little evidence to suggest the effectiveness of the conventional approach at facilitating research use in social work practice. However, its focus on the quality and reliability of research evidence holds strong relevance and value for the knowledge utilisation field, which, traditionally, has focused almost exclusively on useability, while issues of research quality have been sidelined.

The development of the Integrated Model of Research Use (see Figure 13, p. 233) is based on an ideal type of interaction between researchers and practitioners drawn from the discussion of approaches above. Although the model integrates different aspects of these approaches, it draws more heavily on the engaged and programmatic approaches than the situated and conventional approaches. Although the situated approach has been quite commonly used by social work researchers, it does not make a prominent contribution to the model because it leads to localised rather than wider research use, is labour intensive, and may reduce researcher independence and criticality. The conventional approach did not make a strong contribution to the model as it represents traditional academic processes of research transfer via publications and conferences, which have been found relatively ineffective at facilitating research use in social work practice.

Thus, the Integrated Model of Research Use is based mainly on a combination of the engaged and programmatic approaches, although relevant elements of situated and conventional engagement are also incorporated. It integrates elements of the key models and theories of knowledge utilisation presented in Table 2 (pp. 44-45). However, the theories represented most strongly are: (i) the problem-solving model, which holds that research will be drawn upon according to need (Weiss, 1979); (ii) the dissemination model, which focuses on the endorsement of knowledge products (Rogers, 2003); (iii) the translation model, which engages multiple stakeholders in
converting basic knowledge into practical applications (Bowen & Martens, 2005; Hudgins & Allen-Meares, 2000); and (iv) the socio-organisational model, which acknowledges the interactive and contextual nature of practice and assumes that interaction between researchers and practitioners, and the fit with personal values and beliefs, will improve research use (Landry et al., 2001). It should be noted that this flexible model is intended only as a guide and can be modified to suit researchers’ particular circumstances. Although the model depicts a process of research coproduction, research utilisation does not require researchers to engage in every stage of the process. For example, researchers who have already completed research can enhance the use of this research via the shaping and translation components of the model.

**Programmatic Consultation**

The first stage of the Integrated Model of Research Use is fairly intensive, involving: (i) consultation and relationship building with key stakeholders; (ii) assessment of organisational barriers and facilitators to research use in both the research and practice environments; and (iii) assessment of individual attitudes and values towards research use and interaction by the researchers and practitioners involved. The intensity of interaction with practitioners in this component is dependent on the extent to which there is a pre-existing relationship. For example, one participant noted he tends to work repeatedly with the same organisations as this saves him the time and energy of creating new connections. Where pre-existing ties have not been developed, researchers need to invest some initial effort into creating a connection with practitioners.
Figure 13: Integrated Model of Research Use

**PROGRAMMATIC CONSULTATION**
Consultation with trigger experience and deconstruction of power differentials

**STRUCTURAL ASSESSMENT**
Organisational context, barriers and supports

**INDIVIDUAL ASSESSMENT**
Individual attitudes and value base

**FEEDBACK and ACTIVE ENGAGEMENT**
Regular feedback and contact with practitioners to enable active engagement with emerging research material

**STRUCTURAL NEGOTIATION**
Alleviate structural barriers and encourage structural supports

**INDIVIDUAL INVESTMENT**
Sustain motivation and enhance individual skills and confidence

**SHAPING FOR FUNCTIONALITY**
In consultation with practitioners, shape research into a functional format or ‘product’ which is achievable, simple & clear

**STRUCTURAL CONSIDERATIONS**
Ensure research format takes into account broader organisational functioning and barriers to application

**INDIVIDUAL CONSIDERATIONS**
Ensure product fits with practitioner value base

**TRANSLATION and DISSEMINATION**
Communicate or market research findings charismatically and creatively and establish ongoing mentoring program to facilitate research uptake

**STRUCTURAL TRANSFORMATION**
Together with practitioners, advocate for structural change of regulatory bodies and apply for further funding

**INDIVIDUAL DEVELOPMENT**
Establish systems to sustain individual motivation and continued development of research skills
In this study, strong ties were found particularly effective at facilitating interaction and research use. Comments by some participants suggested that developing strong ties can be very time and energy intensive. However, several participants described powerful trigger encounters with practitioners, which enabled them to build strong connections with them relatively quickly. These encounters were characterised by their emotive content and informal, personal nature. For example, some researchers described taking a young enthusiastic research assistant to meetings with practitioners, as this functioned as an ice-breaker in forging informal connections with practitioners. Another participant described workshops in which he and his colleague dressed informally, ‘swore and carried on’, and ‘had fun’ with practitioners during informal social activities. Yet another participant described a process of ‘stirring the possums’ by deliberately speaking about a controversial topic or making provocative comments to engender an emotional reaction from practitioners, before engaging directly with their defensiveness. While this kind of trigger experience cannot guarantee the forging of a strong connection between researchers and practitioners, it represents an interesting option for creative engagement.

Another central element of the programmatic consultation stage is to generate an assessment of the organisational context in order to determine the viability of the research project. This assessment should focus on: (i) practitioners’ access to, and skills in using, email, Internet and other digital media; (ii) the organisational context and culture, including the supports available to sustain interaction and research use (e.g., potential leaders or ‘champions’ in senior positions); (iii) researchers’ own collegial and organisational supports; and (iv) barriers to interaction and research use inherent in both the research and practice organisations.
Next, an assessment of individual characteristics and values of researchers and practitioners should be conducted, including: (i) practitioners’ attitudes, assumptions and values regarding research use and interaction with researchers, including any previous experiences they may have had; (ii) practitioners’ level of confidence in engaging with research; and, (iii) researchers’ own value base and attitude towards interaction with practice and research use.

The extent of organisational support identified would indicate the role that individual factors might play in the research utilisation process. Where organisational support was low, individual characteristics, such as a strong commitment to making a difference and a senior position would play a key role in mediating barriers to interaction and research use. Where organisational support was higher, individual characteristics, such as a researcher’s practice background, credibility and approachability, would play a key role in facilitating research use by practitioners. The latter characteristics are more associated with practitioners’ perception of researchers, while the former are more related to researchers’ and practitioners’ resilience. This highlights the complex way in which different factors may interact to influence the research utilisation process.

At this early stage, a programmatic response would be essential to facilitate the design and development of research in a way that ensured its relevance to, and achievability in, practice. For example, several participants noted that consultation with practitioners should begin at the earliest stages of the research, during the formulation of the research question, and that research questions should be practice driven. Where research questions were ‘use-inspired’, research utilisation was generally found to be higher, even where subsequent interaction with practice was low. For example, some participants sought interaction with practitioners for the express purpose of identifying practice-relevant issues and questions but did not pursue ongoing interaction. Several of
these participants reported high rates of research use by practitioners, based on its relevance to their practice.

Even at this early stage, interaction could facilitate research use by practitioners. Participants highlighted a number of occasions when simply talking with practitioners about their work led to the uptake of new ideas or the stimulation of novel thought processes. For some researchers, generating conceptual use via engagement with practitioners formed the central aim of their work and was not dependent on the completion of the research. In this way, research projects that remained incomplete had the potential to have an impact on conceptual research use in practice. However, without the existence of a final research product, which could be evaluated for quality and rigor, the chances of poor ideas making their way into practice, either conceptually or symbolically, increased. Hence the important role of academic publication, which opens research to scrutiny by other researchers through peer-review processes.

**Feedback and Active Engagement**

During the phases of data collection and analysis, i.e., the programmatic consultation, the central aim of interaction would be to provide feedback to participants. This could take the form of reports, summaries, newsletters, stories, or even movies and podcasts. Taking into consideration the organisational barriers to engaging with research, which practitioners might face, such as time constraints and workload pressures, feedback should be clear and brief. One participant noted that many public service organisations expected researchers to present their work in an easy-to-read format, such as a one-line bolded summary statement at the beginning of each paragraph. In addition, researchers could enhance practitioners’ ability to understand and engage with the emerging research material by explaining key terms and research processes, thereby bridging any cultural and associated linguistic gaps which might exist between the research and practice community. Where possible, researchers could also provide, or inform
practitioners of, available training on research methods and skills and locating appropriate literature. For example, one participant described his efforts to help practitioners build research capacity by advocating for key individuals from the practice-based organisation to attend relevant university lectures and workshops on research methods. Innovative approaches such as this could help to minimise barriers to research use by building practitioner confidence and skills in engaging with research.

Given that active and critical engagement with research was found to minimise the likelihood of symbolic research use and enhance conceptual and instrumental use, it would be important to maintain regular contact with, and remain accessible to, practitioners during the feedback stage. Researcher accessibility was found to be a key characteristic facilitating research uptake by practitioners. Contact might occur face to face or via email, telephone or video conferencing, where available, to enable practitioners to engage actively and critically with the emerging research material and process. For example, one participant reported that verbal feedback provided to participants during the research process led them to make immediate changes to their practice. Providing regular updates to practitioners in this way also provided an opportunity for researchers to gain feedback and input from practitioners. For example, one participant prepared newsletters throughout the research process, providing practitioners and other stakeholders with an informal update of the research. On receiving this newsletter, practitioners would often contact her to contribute further data, information and feedback.

At times, practitioners might express concern or seem defensive in response to research findings. Several participants described occasions when unfavourable research findings were rejected by practice organisations, particularly when they threatened their receipt of funding. While, at times, disagreements about research findings led to the termination of a relationship or research project, several researchers described the
opportunities inherent in these events. For example, disagreements about emerging research findings often resulted in compromise between researchers and practitioners, where researchers re-worded findings to sound less critical or negative, while retaining the central message. This increased the likelihood that research would inform changes in the organisation. On some occasions, researchers were able to engage with practitioners’ defensiveness directly, by challenging pre-existing assumptions or beliefs. This not only facilitated the research utilisation process, but also strengthened the bond between researchers and practitioners, who had ‘weathered the storm’ together. Thus negative or defensive responses to feedback could offer an opportunity to enhance research use and improve relationships between researchers and practitioners. Several researchers noted that they used their social work skills, such as communication and reflection, in this process, suggesting that social work researchers might be particularly well-equipped for engaging effectively with conflict and defensiveness, and challenging preconceived assumptions.

**Shaping for Functionality**

Ideally, the process of shaping research into a functional format was iterative and began during the feedback and active engagement stage. While programmatic consultation and feedback tended to facilitate conceptual—and at times symbolic—research use, the way in which research was shaped exerted a strong influence on instrumental use. In particular, presenting research in a useable and achievable format, such as a tool, model or instrument, tended to increase its use by practitioners. Shaping research findings into a useable format inferred a metaphorical structuring of research as a tool judged in terms of its utility rather than its methodological quality. This has been criticised as a costly mistake leading to the uncritical use of poor quality research with erroneous conclusions. Making research too accessible or easy to use could also lead to practitioners becoming passive consumers of information and using ‘tick-box’
approaches to research uptake. This increased the likelihood that poor quality research would be used uncritically or symbolically and heightened the importance of interaction between researchers and practitioners, enabling practitioners to engage critically with research findings to minimise symbolic use and support the conscious and deliberate use of research in practice.

**Translation and Dissemination**

Ideally, research translation should commence at the very beginning of the research project and be continuous throughout. Several participants reported that simply talking to practitioners about possible research questions, or asking questions during data collection, facilitated conceptual use by bringing new ideas and ways of thinking into practice. Ongoing active and critical engagement by practitioners with the research material also facilitated conceptual and even instrumental research use, and served to minimise symbolic research use. In this way, activities targeted at research translation throughout the research process could enhance research use by practitioners.

However, researchers did not always have opportunities to engage with practitioners throughout the research project, particularly in cases where research results were disseminated to a broader audience of practitioners not involved in the initial study. In addition, even where translation occurred throughout the research process, deliberate activities aimed at translating and disseminating research played a central role in facilitating research use in practice. In particular, participants noted the importance of establishing adequate supports within the practice setting in order to achieve effective, sustained research utilisation. For example, one participant described setting up a mentoring program in which researchers provided ongoing support and advice to practitioners in applying research into their practice and decision making. This participant also targeted particular organisations in order to generate the structural changes necessary for moving research into practice. This might be construed as
problematic since it insinuated a top-down movement of research into practice, which could result in the forced or uncritical use of research by practitioners. However, when done in cooperation with practitioners, it could lead to effective structural change.

When applied appropriately, dissemination and diffusion approaches focusing on marketing or selling a research product could be highly effective at facilitating research use, particularly the broader use of an instrument or model across contexts. Although perceptions of knowledge associated with the knowledge economy might, in many ways, stand in opposition to perceptions of knowledge in social work and the broader human services, the fields of economics and marketing offer useful techniques for enhancing research use, which should not be disregarded or rejected in principle. On the contrary, marketing has been found to lead to client self-determination and empowerment in social work (Boehm & Freund, 2007). Although many products of poor or questionable quality were marketed successfully, providing consumers with the skills and information to evaluate these products enabled them to make an informed judgement about whether or not they wanted to use them. In this case, marketing might serve to make users aware of the existence and potential of the product. A common barrier to research use was a lack of access to, or awareness of, research. Thus dissemination or diffusion techniques that facilitated practitioners’ awareness of research findings and their potential to enhance decision making in practice might enhance research uptake.

The nature of the interaction would play a critical role in facilitating the translation of research into practice during this final translation and dissemination stage. One participant reported receiving feedback from practitioners that, although they had found his model useful, the way in which he had presented it and the connection he had developed with them, had been essential to facilitating their uptake of his research. While some researchers might build this connection during the research process, those
who aimed to translate their research into practice more broadly might need to develop this connection during workshops and presentations after the research had been completed. Some participants had been able to develop strong connections with practitioners in a short amount of time via powerful trigger encounters, which were either emotive or informal in nature.

Effective interaction and research translation were also facilitated by the individual characteristics of the researcher, such as having a practice background, being charismatic and having a strong academic or publication record. Two further characteristics, which might influence research use, were gender and culture, with one participant suggesting that her gender, combined with her ethnic minority background, decreased the use of her work by practitioners. In particular, the importance of a strong publication record for facilitating research use by practitioners pointed towards the conventional approach, with its strong emphasis on publication in highly ranked journals. At times, practitioners viewed a strong publication record as an indicator of the quality and reliability of a researcher’s work. In the context of the paradigmatic disagreement and confusion in relation to quality issues identified in this study, viewing researchers’ success in publishing articles in highly ranked, peer-reviewed journals might be highly appropriate.

**Conclusion**

This chapter presented an Integrated Model of Research Use based on the findings of this study, which depicted an ideal type of interaction between researchers and practitioners, drawn from the discussion of approaches mentioned above. Applying a critical realist perspective, it ‘mapped’ the interplay of interaction with other key factors that researchers believed had an impact on the research utilisation process, such as characteristics of the individual, the research itself, the communication, the relationship and the organisation. Taking the relationship between these factors into account, it was
possible to identify the way in which interaction between researchers and practitioners might best lead to research use. The final chapter examines the lessons of this study for social work practice and makes recommendations regarding areas for further investigation.
This study makes a key contribution to the fields of knowledge utilisation, knowledge production and social work. Although it primarily investigates utilisation, it found that research use was influenced by and could occur throughout the knowledge production process. Thus, it provides insights into the nature and form of knowledge production that facilitates research use. It is the first Australian study to explore the relationship between interactions—both during and separate from the research process—and research use in social work from the perspective of researchers. As such, it makes a distinctive contribution to the social work profession, which has been found to lack attention to knowledge utilisation processes and the ways in which research is translated to practice (see Chapter 3). Further, it offers a unique and detailed description of the nature of interactions perceived by researchers as leading to research use by practitioners. While other studies mention the importance of the personal factor as the crucial variable influencing research use, this factor has not been explored thoroughly in the knowledge utilisation literature, despite political discourse about the importance of interaction for facilitating research use.

Although the relationship between interaction and research use forms the main focus of this study, this relationship was explored as part of a larger, open system, in which many different factors were seen to interact with and impact on one another in a complex, heterogeneous process. The knowledge utilisation literature highlights the complexity of research utilisation. However, few studies have examined the way in which different factors combine to impact on research use. Viewing utilisation in this way facilitated the development of an integrated model of utilisation, which amalgamated existing key theories and models and their inherent meanings and
conceptualisations of research use. This model extends upon previous attempts to organise variables into overarching groups or categories (see for example, Landry et al., 2001; Rogers, 2003). Finally, the use of a critical realist approach offered a unique lens through which to view the findings of this study. This perspective facilitated a deeper exploration of underlying factors, which often influence the research utilisation process in indirect ways and are not clearly discernible without a specific focus on the social and cultural structures that underlie them. The use of this theory contributed to rectifying the atheoreticism identified in the knowledge utilisation field, which has led to a superficial understanding of research use and the processes by which this might be achieved.

This chapter brings together the major findings from the study: researchers’ perceptions of the nature of research use, the factors they identify as impacting on research use, and their experience of the research utilisation process, contextualised within the findings of the literature review. Drawing on this critical synthesis, it argues for the importance of an integrated analysis of the research utilisation process, which takes into account the way factors interact in open systems to impact on, and facilitate, the use of research. The discussion concludes that researchers viewed research utilisation as a complex and interactive process, which is influenced by their activities, values and perceptions, but is also strongly influenced by the social and organisational context in which it occurs. It makes research recommendations about: (i) the need to clarify conceptualisations underlying research utilisation instruments and study designs, (ii) the potential of theoretical and philosophical perspectives to contribute to the development of deeper and more integrated understandings of factors impacting on research use, and (iii) the importance of enhancing existing research designs to develop a more comprehensive understanding of research use. Finally, it highlights their key implications of this study for social work researchers and practitioners wishing to
engage together in activities that foster research use. As a starting point, and for reference throughout the concluding discussion, Table 12 provides a summary of the major findings, research recommendations, and lessons for practice across these domains.

**Major Findings and Conclusions**

**Research Use Occurs in a Socio-political and Cultural Context**

This study found that it was important to take into account the cultural and socio-political milieu in which research utilisation activities occur. The identification of broader structural factors impacting on researchers’ activities highlighted the connected and interdependent aspects of the macro and micro spheres, and confirmed the relevance of critical realist philosophy for making sense of the findings of this study, and in the development and interpretation of future studies of research use. Critical realism views the social world as an open system in which many factors operate simultaneously and influence each other in a complex, heterogeneous system (Bhaskar, 2008). Further, critical realism’s ontological perspective assumes the existence of a reality beyond our knowledge claims, about which our empirical observations and impressions can only provide clues (Barrett, 2010). This focus on going beyond the observable and investigating the factors behind events has a considerable bearing on the interpretation of the findings and subsequent recommendations made.
<table>
<thead>
<tr>
<th>Nature of Research Use</th>
<th>Factors Identified by Researchers as Having an Impact on Research Use</th>
<th>Experience of Research Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major findings</td>
<td>Researcher’s perceptions indicate that the use in social work may be more common than previously thought.</td>
<td>Researchers perceived research use as socially engaged and relational, rather than unilinear.</td>
</tr>
<tr>
<td></td>
<td>Research use was perceived as a complex, interactive process that involves numerous factors functioning simultaneously.</td>
<td>Researchers function within a paradoxical environment in which they face competing demands.</td>
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<td></td>
<td>Research use was perceived by researchers as occurring as part of or separate from the research process.</td>
<td>Researchers who engaged in meaningful consultation and feedback were more likely to report research use by practitioners that researchers who engaged in intense, situated coproduction or conventional academic approaches.</td>
</tr>
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<td></td>
<td>Research use was described as taking the form of conceptual, instrumental and symbolic research use.</td>
<td>Research use was mediated by strong ties characterised by trust, commitment, friendship and equality.</td>
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<td></td>
<td>Research use in social work is more often conceptual than instrumental.</td>
<td>A combination of factors was considered essential to effectively and sustainably facilitate research use.</td>
</tr>
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<td></td>
<td>Conceptual use was perceived as a requisite for minimising non-critical or symbolic research use by practitioners.</td>
<td>Research use is impacted by broader structural factors in ways not easily discernible, which can be misidentified as individual shortcomings.</td>
</tr>
<tr>
<td>Research recommendations</td>
<td>Develop and enhance mixed research designs which take into account the complexity of the research utilisation process.</td>
<td>Conduct research based on sound theoretical and philosophical frameworks to enable deeper explorations of the research utilisation process.</td>
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<td></td>
<td>Test pre-existing, validated instruments to contribute to the development of a reliable measure of research use and enable meaningful comparisons between studies.</td>
<td>Explore the ways in which different factors combine to facilitate research use in different disciplines, contexts and settings.</td>
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<tr>
<td></td>
<td>Explore the impact of utilisation instruments, which are shaped by theoretical or conceptual underpinnings not closely aligned with the overall conceptual framework of the study.</td>
<td>Apply systems-oriented research approaches, which enable investigation of the combined impact a range of factors on the utilisation process.</td>
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<td>Explicitly state the theoretical or conceptual basis of the study and define key terms.</td>
<td>Study research use in large samples, and within different cohorts, such as practitioners, to gain a fuller and more accurate picture of research use.</td>
</tr>
<tr>
<td>Practice implications</td>
<td>Recognise the complex, relational nature of the utilisation process.</td>
<td>Engage with practitioners both during and separately from the research process via consultation and feedback rather than via intense coproduction or conventional academic approaches.</td>
</tr>
<tr>
<td></td>
<td>Challenge existing assumptions about research and researchers, and about practice and practitioners.</td>
<td>Engage in informal, personal and emotive interaction to aid the development of strong ties.</td>
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<td></td>
<td>Ensure criticisms of practice are made with regard to organisational policies and conditions which may affect practitioners’ ability to provide optimal services.</td>
<td>Assess structural and individual supportive factors early in the research process to evaluate viability of interaction and research use.</td>
</tr>
</tbody>
</table>
Encourage awareness among researchers and practitioners of structural factors that may inadvertently constrain their activities in order to minimise feelings of defeat, isolation and incompetence.

Harness networks of likeminded colleagues to challenge and transform the structures that impact on interaction and research use as a group.

Experiment with shaping research findings creatively into functional formats in addition to traditional academic publication.

Consider the use of electronic media such as blogs, Facebook and Twitter to facilitate public awareness of research.

Network with likeminded colleagues to set up academic support systems of individuals committed to and interested in working together on common goals.

When presenting research findings pay attention to personal attributes such as informal clothing, charismatic presentation style and uncomplicated language.

Avoid enforcing research use via a top-down approach as this encourages passive, uncritical and inappropriate utilisation.
Existing literature and studies on research utilisation pay relatively little attention to the wider context in which research utilisation activities occur (Lambert, 2006; Poole, 2008). In neglecting a macro or structural analysis, these sources tend to strengthen the notion that barriers to research use are inherent to practitioners themselves and are caused by personal shortcomings, such as a lack of interest in research or a tenacious adherence to practice wisdom. A notable exception is the ‘Cultures in Context Model of Research Use’ (Holzer et al., 2007), which recognises and explicitly includes social, institutional and political contextual factors. From a critical realist perspective, maintaining a focus on individuals’ defects relieves organisations of their responsibility to review their own shortcomings and bring about change. Instead, practitioners become the main points of assessment and intervention. In contrast, this study provided evidence and impetus for a more critical analysis of the connections between structural factors and research use by practitioners.

Similarly, the influence of broader social structures on the activities of research has seldom been explored. The increasing weight placed on research performance and productivity, as a result of globalisation and the associated discourses of the knowledge economy and neoliberalism, is shaping academic researchers’ identities, careers and activities (Scott, 2009). This study found that the language and activities researchers are expected to use and engage in within this context often did not coincide with their own personal and professional values. This leads them to engage in interactive shadow activities with practitioners, beneath the surface of their day-to-day work and often at a personal cost. Several researchers noted feeling that their commitment to facilitating research use through personal interaction was outside the norm and did not conform to their own institutions’ requirements. This impression was strengthened by their academic colleagues from whom they experienced pressure to conform to the language and actions of the academic elite or risk being ostracised. From a critical realist
perspective, researchers’ beliefs that their attempts at facilitating research use by practitioners lie outside the ‘norm’, may hinder them from recognising and critiquing the social structures impacting on their actions.

Most of the participants in this study were employed in research centres or universities. In these settings, they were under increasing pressure to demonstrate the impact of their research (Davies & Nutley, 2008; Donovan, 2007, 2008). This was occurring as a result of university research assessment exercises, such the ‘Excellence in Research for Australia’ initiative (Biglia & Butler, 2009). Such assessment exercises have focused on research quality indicators, which aim to measure research impact through citation counts and journal impact measures (Biglia & Butler, 2009; Coryn et al., 2007; Donovan, 2008). While these measures enable governments to determine whether they are getting value for the money they invest in university-based research, current quality indicators have been critiqued as providing an incomplete picture of research impact (Donovan, 2007; Watson, 2008). In particular, they fail to capture the impact of social research in domains outside academia, such as policy and practice, in which knowledge is often not accessed via academic journals (Nutley et al., 2007). This stands in contrast with the UK Research Excellence Framework (REF), where 20% of the overall rating is now attached to research impact, which denotes impact in the wider social, economic and cultural world, and expressly excludes academic impact.

At the same time, many authors have observed changes in the relationship between science and society, with society becoming a far more active partner in the creation of knowledge (Scott, 2009; Estabrooks et al., 2008; Gibbons et al., 1994; Nowotny et al., 2001). As a result of these changes, researchers are supported to engage with organisational or industry partners in developing research through interaction and coproduction. This support often takes the form of job requirements or performance targets, which researchers are expected to meet, but which are not adequately resourced,
acknowledged, or rewarded, unless a large financial profit is made. This highlights the need to modify existing quality measures and take account of the different forms of impact resulting from engagement with practice communities, compared with more traditional academic modes of research (Hessels & van Lente, 2008).

A critical realist analysis views researchers’ activities as situated within, and influenced by, a paradoxical research environment in which the demands of research are driving seemingly contradictory phenomena. On the one hand, the boundary between research and society has softened, resulting in a trend towards more reflexive and interactive research in the context of application (Scott, 2009). On the other hand, the drive towards more corporate research management to improve research performance is increasing, which has resulted in the creation of research rankings and hierarchies (Scott, 2009). Research activities associated with the latter are rewarded, while interaction in response to the former is not. Because engagement with practice seems to be excluded from indicators of research performance, a problem arises, whereby researchers who invest more time in research productivity are more likely to be valued and supported than researchers who prioritise engagement with practice over research performance. When viewed through this lens, new understandings about the broader factors that underlie researchers’ activities can be gained and this can serve as a foundation to challenge the structures and conditions that impact on research utilisation.

Another contextual issue worth noting is that this research was conducted with a primarily Western sample of researchers, so it documents research use within one cultural group only. Nonetheless, the issue of cultural differences did surface in this study, with one participant observing that practitioners and academic colleagues were less likely to read or apply her research, or interact with her directly, due to her gender and ethnic background. From a critical realist perspective, this observation may be indicative of a broader issue, where racial prejudice functions in a concealed manner to
exclude certain ethnic groups from the research utilisation process. A similar covert racism was revealed by Porter (1993), who applied a critical realist perspective to interactions between white nurses and non-white doctors in a hospital setting. He identified two structural factors operating at the same time: racism and professional ideology. Nurses tended to make open criticisms of junior doctors, which they rationalised by claiming that the doctors were professionally inept. Where doctors were highly skilled, the nurses’ opportunities to make racist remarks were curtailed. Their racism, while still evident in private discussions, was not openly expressed because they could not find a professionally acceptable reason to criticise the doctors. It is conceivable that similar factors function in Western academia, which tends to be predominantly white, male-dominated settings. This highlights the importance of examining the experiences of different groups, such as gender, culture and even age within a Western research context.

Finally, the activities of researchers in this study must be viewed as part of an epistemic research culture. Like all cultures, research cultures determine how researchers ‘live’ in academic research. This includes the norms and values of their workplace, how they make and break social ties and their ideas and beliefs about what it means to be a researcher (Felt, 2009). Practitioners likewise function as part of a unique culture with its own language, norms and behavioural rules. Interactive and collaborative research activities by researchers and practitioners occur in the juncture between these two cultures. The cultural difference between researchers and practitioners is encapsulated by the ‘Two Communities’ theory of research use (Wehrens, 2013), which argues that there is a lack of fit between the research and practice domains. According to this theory, the cultural barrier hinders communication and prohibits knowledge utilisation due to a lack of shared norms and values related to knowledge production, interpretation and dissemination (see Amara, Ouimet, & Landry,
2004; Oh & Rich, 1996). Arguably, however, the meeting of cultures can be an interesting and rewarding, as well as a challenging experience. At any rate, there is considerable scope for additional research into the development and experiences of research use in different cultures and contexts.

**Research Use in Social Work May be More Common than Previously Thought**

In this study, the experience of researchers indicated that research use might be more common than previously thought (Bellamy et al., 2006; Nutley et al., 2009). The findings of this study, about the extent to which Australian social work researchers reported that their research was used by practitioners, were comparable to those of previous studies exploring the extent of research use in the broader social sciences, including economics, political science, sociology, anthropology and criminology, both nationally and internationally (Cherney & McGee, 2011; Landry et al., 2001). Although this research identified decreasing levels of reported impact in the higher stages of Landry et al.’s (2001) research utilisation scale, a proportion of the sample did report that their research had influenced practitioners’ decision-making and led to applications by practitioners. These findings give cause for optimism for a profession that has been criticised for lacking a systematic scientific knowledge base informing decision-making in social work practice (Cnaan & Dichter, 2008; Dominelli, 2004).

With the exception of a few Australian studies (see Arney et al., 2009; Cherney & McGee, 2011; Holzer et al., 2007; Ritter, 2009), very little is known about the use of social science research in Australia, let alone, more specifically, the use of social work research (Holzer et al., 2007; Osmond & O’Connor, 2006). Overall, however, the findings of existing Australian studies have indicated that the extent of the use of social work research in Australia is low. In the international literature, criticisms have also persisted regarding the lack of research use in practice and insufficient attention to knowledge utilisation processes, or the ways by which research is translated into
practice (Bellamy et al., 2006; Landry et al., 2001; Proctor & Rosen, 2008). The challenges associated with the actual implementation of research in social work practice are becoming more apparent and pressing as evidence-based practice is increasingly accepted in the profession (Gray et al., 2009; Proctor & Rosen, 2008).

The view that social science research in general, and social work research in particular, have a marginal impact on practice may have arisen from narrow conceptualisations of knowledge utilisation, which too often associate utilisation with the instrumental use of research in practice (Landry et al., 2001; Weiss, 1979). However, the present study focused on, and researchers reported, the use of social work research across a spectrum of applications, ranging from the conceptual to the symbolic and instrumental, and encompassing various stages from research transmission to application. Respondents identified higher rates of research use in the lower transmission and cognition stages of Landry et al.’s (2001) scale, which were associated with conceptual use, confirming the results of previous studies that research use in social work and the broader social sciences is more often conceptual than instrumental (Cherney & McGee, 2011; Landry et al., 2001).

The predominance of conceptual research use in social work should not be interpreted as proof that social work research is rarely applied, or that it is perceived as irrelevant by social work practitioners (Cherney & McGee, 2011). Weiss (1980) pointed out that social science research impacts on practice through a process of “knowledge creep” (p. 381) whereby research has a cumulative, percolating effect upon practice that can be both direct and indirect. In the context of the practical application of social work research, conceptual research use has been emphasised as an important foundation for understanding how research-based knowledge can be applied in an instrumental fashion (Cherney, 2009). In this study, conceptual use was viewed by researchers as a requisite for minimising non-critical or symbolic research use by practitioners. A conceptual
understanding of the research material was considered important for ensuring that providing research findings in clear, simple and accessible formats did not result in passive research consumption by practitioners. For some researchers, achieving the uptake of new ideas and messages in practice was the primary goal of their research utilisation activities. Future research investigating the variety of ways in which research uptake and adoption can occur in social work may lead to a less dismal view of research impact in the field.

It should be noted that the sampling method employed in this study may have resulted in some bias. First, a major limitation of this study is its sampling of researchers only, which leads to a rather one-sided picture of research use. Second, researchers who were interested in fostering research use may have been more likely than others to participate, thus generating an overly optimistic picture of research utilisation in social work. The potential bias of the survey sample towards engagement and interaction approaches may also have influenced the survey finding, that respondents attributed the same conceptual meaning to research transmission as to questions relating to interaction. A further reason for the (mis)interpretation may have been the conceptual and definitional confusion identified in the knowledge utilisation literature. The literature review found an abundance of terminology relating to knowledge utilisation, which has largely remained undefined, leading to considerable conceptual disarray (Watkins, 1994/1995; Weiss, 1979) and variation in research outcomes in the field today (Estabrooks et al., 2006, p. 25). This conceptual confusion was also reflected in the findings from the interviews, which revealed a lack of clarity and consistency in participants’ use and understanding of terminology. In lieu of a clear definition of transmission, respondents may have attached their own meanings to this term, in line with their strong interaction focus. A final point which supports this hypothesis is the feedback provided by some respondents that the research utilisation
questions failed to capture what was most important in their work. This suggests that the way in which questions about research use are conceptualised and formulated may have had a considerable impact on the extent of research use identified by participants. Extending current measures of research use to incorporate a broader range of understandings and conceptualisations of utilisation might in fact enable the identification of even higher rates of research use in social work. In addition, further research employing a more representative sample, with a less intense focus on interaction, would aid the development of a more accurate indication of research use in social work.

**Research Use is an Engaged Process Enhanced by the Quality of an Interaction**

This study found that social work researchers viewed the research utilisation process as socially engaged and relational, rather than as a unilinear movement of research from the context of production to that of application. This was reflected in a general preference for the term research translation, which conveys recognition of the relational nature and complexity of the knowledge-to-action process (Strauss, Tetroe, & Graham, 2009), rather than research transfer which infers a more linear notion that tends to overlook its complexity (Gredig & Sommerfeld, 2008). In fact, many participants commented that engagement with practitioners formed a core component of their work and was strongly consistent with their personal and professional values. These perspectives were in line with interaction models, which emphasise the social nature of research use (De Goede et al., 2010; Weiss, 1979).

Existing literature on knowledge utilisation indicates that interaction could considerably enhance research uptake by practitioners (Allen-Meares et al., 2005; Belkhodja et al., 2007; Bowen & Martens, 2005; Elliott & Popay, 2000; Hanney et al., 2003; Innaver et al., 2002; Landry et al., 2001). In addition, the social work literature found that social workers preferred to gain knowledge through personal and interactive
points of contact, such as workshops, consultations and face-to-face exchanges, than through textual resources (Cha et al., 2006; Chagnon et al., 2010; Marsh, 2002; Trevithick, 2008). This suggests that interactive approaches may be particularly appropriate and effective for enhancing research use. In this study, researcher’s responses indicated a significant positive association between interaction and research utilisation in the earlier transmission and cognition stages of research use, and a marginally significant association was identified between interaction and the final influence and application stages of research use. This indicated that researchers who engaged with practitioners were more likely to report research use—both conceptual and instrumental—than researchers who did not.

This study confirmed findings in the knowledge utilisation literature that certain interactions were more likely than others to facilitate research use (see for example, Belkhodja et al., 2007; Bowen and Martens, 2005; Dobbins et al., 2007; Hanney et al., 2003; Huberman, 1990; Kothari et al., 2005; Levin & Cross, 2004; Landry et al., 1999; Osterling and Austin, 2008; Bowen & Zwi, 2005). Specifically, it revealed that the nature of the communication and the characteristics of the relationships which researchers developed with practitioners were seen to affect research use in practice, confirming Bowen and Marten’s (2005) finding that the quality of an interaction—what they called the ‘personal factor’—might be the crucial variable influencing knowledge use. A central finding of this study was that effective interactions did not necessarily depend on the amount of time or resources invested by researchers. This contrasts to the assumption of interaction models that the more resources invested in linkages between researchers and users, the higher the use of research by practitioners (Landry et al., 2001). In fact, this enquiry found that researchers who invested in intensive coproduction of research were less likely to report research use by practitioners than researchers who engaged in broader forms of interaction. This suggests that the kinds of
interactions that foster research use by practitioners are not inherent in coproduction activities but can occur at any time during and separately from the research process.

Central to quality interactions was the development of strong ties, characterised by trust, commitment, friendship and equality. The literature on knowledge utilisation tends to view the development of strong ties as requiring long-term intense interaction between researchers and users (Bowen & Martens, 2005; Bowen & Zwi, 2005; Dobbins et al., 2007; Hanney et al., 2003; Levin & Cross, 2004; Huberman, 1990). While researchers in this study found that intense situated interaction provided an ideal basis for the creation of strong ties, they also identified occasions where strong ties developed rapidly via powerful trigger encounters, which were informal, personal and emotive in nature. This finding has significant implications for researchers wishing to engage with practitioners for the purpose of facilitating research use, as the development of quality interactions may require fewer ‘costs’ in terms of time and resources than previously thought.

The term ‘trigger’ refers to interactions characterised by heightened emotion, discomfort or defensiveness. This term was adopted from Brookfield (1987), who proposed different phases of critical thinking, beginning with a trigger event, which prompts a sense of inner discomfort and perplexity, followed by a period of self-reflection and exploration of new ways of understanding or interpreting the event and, finally, the integration of the new knowledge into practice. In this study, researchers who responded to defensiveness and emotions directly were able to engage practitioners in active critical reflection about the research material and process, and to develop a more powerful bond with them, which ultimately enhanced their uptake of research in practice. This confirms an important link between critical thinking and research, originally identified by Profetto-McGrath et al. (2003), who examined critical thinking as an individual disposition (i.e., traits, attributes, or habits of mind) and found this
correlated significantly and positively with all forms of research utilisation, with the exception of symbolic use. This study makes an important contribution in highlighting the role of interaction in facilitating critical thinking by practitioners, which provides an interesting foundation for future research. It confirms findings in the knowledge utilisation literature that informal interactions were strong facilitators of research use by practitioners (Belkhodja, 2007; Bowen & Martens, 2005; Huberman, 1990). Informal contact could involve enjoying a cup of tea, talking to practitioners at conferences, ‘wandering around the traps’, attending morning teas and lunches, writing emails and making phone calls, wearing informal clothes, engaging in social activities, and using informal language. Closely connected to the notion of informal ties were researcher’s descriptions of personal interactions, which enabled practitioners to ‘get to know a little bit about [the researcher] as a person’ and reduced power differentials resulting from the researcher’s age, position and research experience. These included making ‘making the odd eccentric remark’, enabling insight into personal aspects of one’s life, and working with young enthusiastic research assistants or co-researchers who served as ice-breakers. Unfortunately, the specific qualities that characterise effective informal and personal interactions between researchers and practitioners are seldom detailed in the literature. Deeper exploration of the nature and impact of informal, personal interactions that lead to research use would enhance understandings of the research utilisation process.

**Interaction Best Facilitates Utilisation in Combination with Other Factors**

In this study, researchers reported that a combination of factors was required to effectively and sustainably facilitate the use of social work research by practitioners. Although interaction was identified as instrumental for enhancing research use, its impact was less powerful, and almost impossible to sustain, without the right mix of individual and organisational factors. Further, it was less likely to be reported as leading
to instrumental use without taking into account the nature of the innovation. The finding that research use was perceived by researchers as facilitated by multiple factors was consistent with literature on the causes of knowledge utilisation (Barratt, 2003; Holzer et al., 2007; Shonkoff, 2000; Walter et al., 2004). However, this study added to previous multi-factorial explanations by suggesting there are some common processes, associations and pathways evident between the factors described by this sample of participants.

The literature review attested the multitude of factors that can impact on and facilitate research use. In fact, the literature boasted an extensive array of variables for effective knowledge utilisation (Chagnon et al., 2010). However, rather than offering formal heuristic devices, these variables were presented with more of a list-like (Landry, Lamari, & Amara, 2003) content and form (Jacobson, 2007, p. 119). Although attempts were made to organise them into overarching groups or categories (for example, Landry et al., 2001; Rogers, 2003), these categories were generally discussed separately and were rarely researched en masse. For example, interaction has regularly been cited as a factor that may enhance research use by practitioners (Belkhodja et al., 2007; Crona & Parker, 2011; Huberman, 1990; Kjorstad, 2008; Lomas, 2000), and many authors have highlighted the potential for factors to have a combined impact on research use. However, the relationship between interaction and other factors has rarely been investigated, and never in relation to the use of social work research in Australia.

Using a critical realist perspective, it was possible to highlight the interdependence of factors perceived by researchers as affecting research use in social work. The perspective that social systems have a mutually interdependent relationship highlights the strong links between critical realism and other theoretical approaches, such as complexity and systems theory (Clark, 2008). These theories have rarely been applied in the knowledge utilisation literature. In fact, the literature reflects a general
atheoreticism in the knowledge utilisation field, which has led to a technical rather than a critically reflective or creative approach to examining research use. Consequently, the knowledge utilisation literature has been characterised by relatively superficial, surface understandings of research use and the processes by which it might be achieved. Future understandings of the research utilisation process would be enhanced by the application of theories, such as critical realist, actor network, or systems theory, and more comprehensive investigations of the complex connections between the different factors that impact on research use.

The finding of this study, that researchers perceived research use as best facilitated by a combination of factors, highlights the challenge of finding the right mix of factors for enhancing research use in social work. Given the complexity and diversity of the social work field, it is conceivable that more than one mix of factors may be necessary for facilitating research use across the different areas of practice, services and client groups with which social workers are involved. Although this project was able to identify common factors identified by researchers operating in a range of practice contexts, there is a need to examine the ways in which factors combine and influence one another to facilitate research use within a wider range of social work settings and contexts. Finally, an investigation of research use from the perspective of practitioners is imperative in order to develop a more complete picture of the way in which factors combine to facilitate research use in social work practice.

**Recommendations for Further Research**

The major findings discussed above highlighted the contributions of this research to the fields of knowledge utilisation and social work, as well as some important areas for future research. The recommendations discussed in this chapter draw on my experiences of conducting this research, including the lessons that emerged from the strengths and
limitations of the study. Once again, I write in the first person to make my presence, stance, and decision-making processes explicit and transparent.

**Clarify Conceptualisations Underlying Research Utilisation Instruments and Study Designs**

This study confirmed the conceptual disarray in the knowledge utilisation field, identified almost a decade ago (Watkins, 1994/1995; Weiss, 1979), which continues to account for the conceptual confusion and variation in research outcomes in the field today (Estabrooks et al., 2006, p. 25). Estabrooks and Wallin (2004) noted that this lack of conceptual clarity has led to persistent and unresolved problems of measuring utilisation reliably and validly. Although some existing measures have been used more than once, the most common approach to measuring research utilisation has been to develop new measures without much attention to standard psychometric methods or post-use evaluation of the measure’s performance (Estabrooks & Wallin, 2004). These measures often embody different conceptualisation of research use that are poorly defined, making it difficult to identify what was being measured in the first place. Therefore, comparing the findings of these studies arguably leads to inaccurate and meaningless representations of research use.

As Weiss (1979) noted, before the important issue of whether social science research is actually ‘used’ in practice can effectively be addressed, “it is essential to understand what ‘using research’ actually means” (p. 426). This conceptual confusion became apparent to me while completing the literature review, where I noted an abundance of terms, models and theories relating to knowledge utilisation, which were often poorly explained or defined. I attempted to reduce this confusion in my own research by: (i) conducting a comprehensive literature review to bring order to the multifaceted, multidisciplinary and sometimes disparate field of knowledge production, (ii) providing clear definitions of, and adhering to, my chosen key terms; (iii) using a
validated instrument for measuring research use to enable meaningful comparison between studies; and (iv) developing an Integrated Model of Research Use (Figure 13, p. 233) in which I amalgamated existing models and theoretical approaches to research use. Nonetheless, conceptual issues influenced my research methods and findings in unforeseen ways, highlighting lessons for future research.

There were several indications of the existence of a conceptual issue in my research. The first was the feedback I received from some survey respondents that the questions relating to research use failed to capture their perceptions and actions. This feedback was confirmed by participants’ comments during the semi-structured interviews, in which several reported feeling ‘uncomfortable’ about the wording and terminology in the survey questions, which they suggested did not allow for the expression of collaborative perceptions of the research utilisation process. As noted earlier, participants reported a strong preference for the term *translation*, which conveys recognition of the relational nature and complexity of the knowledge-to-action process. While several participants rejected the terms research transfer and utilisation for their linear connotations, others simply ascribed relational meanings to these terms. These findings suggested that, on the one hand, the participants’ conceptualisations of research use were implicitly interactive and relational in nature. On the other hand, there was no common agreement on an explicit definition or term which represented this conceptual meaning. Thus, participants attributed their conceptual meanings to a range of terms in an implicit rather than a conscious process, leading to an overall lack of conceptual clarity.

A further indication of the existence of a conceptual issue in my study was the finding that survey respondents had interpreted the question regarding the transmission of their research as conceptually related to the factor for interaction. This was a surprising finding since this question formed part of a validated scale. In fact, I had
chosen to use this scale despite its linear assumptions, which did not seem to fit with the interaction focus of my project, to aid the development of a reliable measure of research use. The finding that respondents had misinterpreted one of the questions in this scale suggested that the wording of this question may be vulnerable to conceptual misperception under certain conditions. The conditions which may have led to a misperception of this question were: (i) the lack of clarity relating to conceptual definitions of knowledge utilisation discussed above, which may have led respondents to ascribe their own conceptual meanings to the term transmission; and (ii) a misfit between the linear assumptions underlying the knowledge utilisation scale and the strong implicit emphasis on interaction inherent in the survey and displayed by participants. Since this is the first study to apply the Knott and Wildavsky (1980) scale to these specific conditions, the reasons put forward to explain this outcome remain unsubstantiated.

The conceptual challenges relating to knowledge utilisation identified in the course of this study reaffirmed the pressing need to attain greater clarity of meanings and conceptual definitions in the knowledge utilisation field. While several authors have attempted to review and categorise terms and definitions used to describe the research-to-action process (Estabrooks & Wallin, 2004; Graham et al., 2006; Landry et al., 2003; Rogers, 2003), this is still an area in need of further attention. In particular, the fit of conceptualisations underpinning particular instruments, with those of the overall research design and focus, have received little attention. Future research should explore and clarify the theoretical and conceptual assumptions underlying existing research utilisation instruments, and the impact these have on an instrument’s sensitivity to complexity and nuance in the research utilisation process in certain settings and among particular cohorts. It might, for instance, ask whether the Knott and Wildavsky (1980) scale, which embodies a linear conceptualisation of research utilisation, has the capacity
to capture the multifaceted and relational nature of the research utilisation activities of social work researchers, who highly value interaction and collaboration with practice. Further, how would the questions in this scale be perceived by social work practitioners, who view research-based knowledge as connected to experience, reflection, context and interpretation? In other words, what is the impact of using a research utilisation instrument, which is shaped by theoretical or conceptual underpinnings that are not closely aligned with the overall conceptual framework of the study? In order to answer this question, future studies must clearly and explicitly specify their conceptual and theoretical basis. Estabrooks and Wallin’s (2004) found that knowledge utilisation studies were rarely informed by particular theories. Although studies may not explicitly state their theoretical or conceptual basis, they nonetheless comprise, and are shaped by, certain implicit assumptions. By clearly delineating the assumptions, conceptualisations, theories and definitions informing the design and focus of research, future studies may minimise the likelihood of a mismatch between the conceptual assumptions underpinning a selected research utilisation instrument and those informing the design and focus of the study.

Use Theory to Develop a Deep and Integrated Understanding of Factors that Impact on Research Use

This study found that structural factors can have a decisive impact on the utilisation-related activities of researchers and practitioners. These structural factors were often latent and hidden and therefore easy to misinterpret as individual shortcomings. According to Bhaskar (1998), because reality is independent of our senses, we can be fooled by illusions, and we can misinterpret empirical data. Critical realism provided a useful lens through which to view research utilisation activities in this research. By recognising the potential for misinterpreting events, and looking beyond immediate observations and experiences to examine the deeper structural causes that underlie them,
critical realism offers a valuable means for future research investigating the research utilisation activities and experiences of researchers and practitioners.

The relevance of critical realism to social work research and utilisation has been identified by several authors (see Houston, 2010; Kjorstad, 2008; Kontos & Poland, 2009). However, to my knowledge, this is the first empirical study to apply a critical realist perspective to the exploration and analysis of research use in social work. This theory enabled me not only to identify individual contextual factors that influenced the research utilisation process, but also to develop an understanding of the way in which a range of different factors interact with, and are influenced by, contextual factors, and how these interactions influenced research use. In this way, the study makes a unique and significant contribution to the field of knowledge utilisation, which has been found to lack attention to theory for facilitating understandings of the research utilisation process, and where efforts at understanding research use have focused on identifying and listing individual variables impacting on use (Kontos & Poland, 2009).

The contribution of critical realism to this study draws attention to the potential for future studies to benefit from philosophical and theoretical perspectives that originate from outside the knowledge utilisation field. Theories from inside the knowledge utilisation field often tended to be underdeveloped, leading Nutley et al. (2003) to suggest that “models may be too grand a term for much of what has been written in this area” (p. 132). Further, they seldom enable explanations of how utilisation factors are interconnected, or how these interconnections might impact on, the research utilisation process (Kontos & Poland, 2009). Either there exists a deep bias in favour of viewing structural properties as over-influencing the individual actions (e.g., two communities theory), or quite the reverse, individual factors are viewed as the primary characteristic or driving force of research utilisation behaviour (e.g., problem-solving and evidence-based practice theories). The former approach leads to feelings of
helplessness in the face of seemingly insurmountable structural barriers, while the latter leads to individual blame when research utilisation does not occur.

These limitations highlight the importance of applying systems-oriented research approaches and theories to the exploration of research use, which enable investigation of the combined impact of a range of factors on the utilisation process. In this way, the development of a deeper understanding of the research utilisation process could be facilitated. For example, Jacobson (2007) highlighted the potential for social epistemology to aid understandings of knowledge in relation to the total environment—physical, psychological, and intellectual. The present study also identifies several factors reported by researchers as impacting on the research utilisation process, including critical thinking, culture and gender. These factors highlight the potential for theory, such as feminist, systems, anti-oppressive, critical, structural, and learning theories, to inform investigations of research utilisation. Given the breadth and complexity of the knowledge utilisation field, the lack of attention to these theories in the literature is surprising. Future research employing these approaches and theories would enable deeper explorations of the complex and multidirectional ways in which factors combine and influence one another in ‘open’ social systems.

**Improve Research Designs to Develop a Comprehensive Understanding of Research Use**

The literature review found a range of different studies, which examined various aspects of the research utilisation process, using diverse methods and research designs. Most studies in this field adopted either a quantitative or a qualitative methodology, while fewer used mixed methods. The use of a mixed methodology in this study proved to be important for determining broader patterns and regularities and for subsequently exploring these more deeply. Investigating research use as a process rather than a discrete event also facilitated identification of higher rates of research use and enabled
in-depth analysis of the complex dynamics involved in translating research into practice. However, there were also limitations to the current research design, such as the relatively small and potentially biased sample, which limited the generalisability of the findings and the narrow focus on researchers, which meant that one side of the story was missing. The strengths and limitations of this study highlight opportunities for advancing research designs in future studies to aid the development of a more comprehensive understanding of research use.

By using a pre-existing, validated instrument for measuring research utilisation, this study contributes to the development of a sensitive, valid, and reliable tool (Estabrooks & Wallin, 2004). As discussed earlier in this chapter, this measure may not have captured the experiences and actions of the particular cohort of Australian social work researchers included in this study as effectively as anticipated. In addition, it was found to be vulnerable to misinterpretation under certain conditions. The strength of the survey is its ability to reveal broader patterns and regularities. For example, it identified a significant and positive association between research use and interaction, and to a lesser extent, between research use and coproduction as reported by researchers. It also provides initial clues as to the existence of relationships between research use and factors such as culture and gender. However, given the statistical power of the sample and its considerable potential for bias, reflected in its focus on researchers alone and the fact that researchers have to estimate to what extent practitioners use their research, its ability to make far reaching conclusions about research use in social work is limited. Finally, the sample of researchers in this study was primarily from a Western cultural background, so this study documented research use within one cultural group only. In order to develop a more complete picture of research utilisation, interaction and other variables that may affect research use should be tested in larger samples, with different cohorts, such as researchers and practitioners, and in different settings and contexts.
Questions for future research include how accurately does the Knott and Wildavsky (1980) scale adapted by Landry et al. (2001) capture the experiences and actions of researchers or practitioners in non-Western countries? Is there a difference in research use depending on the age, cultural background or gender of the researcher? Do social work practitioners report similar rates of research use to their researcher counterparts?

Thus, there remains a great deal of potential for continuing to test, develop and refine current measures of research use.

This research highlights the imperative of delving deeper into the complex and multilayered core of the research utilisation process. For this purpose, qualitative enquiry is arguably most useful. Quantitative techniques tend to investigate utilisation variables as part of closed systems, in which certain mechanisms operate in an undisturbed way and produce empirically observable regularities. While this form of exploration enables identification of relationships between variables under certain controlled conditions, it provides limited insight into the way in which factors operate within a broader system. In this study, the use of qualitative techniques provided opportunities for examining the ways in which factors operate simultaneously and impact upon each other to bring about research use. Further, while the capacity of quantitative research to explore the nature of factors impacting on the research utilisation process was limited, the semi-structured interviews enabled a deeper exploration of the nature of interactions that lead to research use, revealing the quality of an interaction as the crucial factor identified by researchers as facilitating utilisation. Future research could experiment with different combinations of quantitative and qualitative enquiry, either using qualitative techniques to deepen understandings gained through quantitative methods, as in this study, or by using qualitative enquiry to gain initial understandings, which might aid the enhancement of quantitative techniques.
Either way, this project highlights the importance of using a combination of different methodologies for the development of a comprehensive understanding of research use.

While the qualitative part of the mixed method design in this study enabled a very rich and dense description of potential factors that constitute important elements contributing to research use, it did not succeed in identifying the mechanisms that explain how a certain fact or phenomenon emerges and is reproduced. The pragmatic choice to restrict the sample to researchers posed particular difficulties for the identification of research utilisation mechanisms, since researchers’ experiences alone could not capture how exactly factors interact to form mechanisms, and what mechanisms under what circumstances produce research use. Deeper levels of understanding of the research utilisation processes and the mechanisms which impact on this might be achieved via (i) an ethnographic research design to obtain direct access to research utilisation processes and to counter methodological limitations of previous studies in the knowledge utilisation field which tend to rely on secondary reporting of research utilisation activities by researchers or practitioners and (ii) a grounded theory approach to the description of mechanisms to facilitate the development of a sound theory of research use.

By measuring research utilisation as a process, this study was able to identify that research use in social work as perceived by researchers may be higher than previously thought. This corresponds with findings in the knowledge utilisation literature that instruments measuring utilisation across a spectrum tend to identify higher levels of utilisation than instruments measuring use as a single event (Cherney & McGee, 2011; Landry et al., 2001). The univariate analysis, which examined the relationship between individual variables for research use and interaction, identified a significant relationship between researchers’ interaction with practitioners and their reporting of research use in the earlier transmission and cognition stages, and a
marginally significant relationship between their interaction with practitioners and their reporting of research use in the higher influence and application stages. By measuring research use as a process, future studies may identify higher rates of research use in social work, leading to a far less dismal outlook for the profession. As noted above, the potential for bias in the sample and the reliance on researchers’ estimations of the use of their research by practitioners limits the extent to which wide-reaching conclusions can be drawn from this study. Further research should include the views of practitioners and perhaps examine citation rates for the particular project under study to confirm the validity of the findings of this study, and those of Cherney and McGee (2011) and Landry et al. (2001), which point towards higher rates of research use in social work. It should also be noted that the Knott and Wildavsky (1980) scale has been critiqued for its linear assumptions. The findings from the interviews showed the research utilisation process as perceived by researchers is, indeed, not as linear as the stages of the scale would suggest. In fact, researchers reported an ability to reach the later stages of the scale without achieving the first. Future studies might examine more closely the interplay between different stages of the scale and the factors that impact on researchers’ ability to reach certain stages but not others.

The literature review highlights an absence of longitudinal studies on research utilisation. Only two longitudinal studies (Estabrooks et al., 2008; Wallin, 2004) were identified. Wallin examined research use among nurses during their first five years of practice and found a clear trend of increasing utilisation during this period. Estabrooks et al. (2008) conducted a longitudinal author co-citation analysis, providing an overview of the intellectual structure of the knowledge utilisation field and how it changed over six decades. Important conceptual and measurement issues with regard to research utilisation could be better addressed if research were undertaken longitudinally. For example, although this study explores the nature of what researchers felt were effective
interactions, and the way in which interaction combines with other factors to facilitate research use, the impact of these factors on utilisation over time was not explored. Examining the long-term impact of factors such as interaction between researchers and practitioners on research utilisation would represent an important extension of current understandings of research use.

**Lessons Learned for Facilitating Research Use in Social Work Practice**

Table 13 presents key lessons for researchers and practitioners wishing to engage in activities aimed at facilitating research use that were drawn from the Integrated Model of Research Use described in Chapter 8 (see Figure 13, p. 233). Although this study focused on research utilisation from the perspective of social work researchers, the lessons and insights drawn from the data might also be perceived as beneficial by practitioners. Table 13 summarises the lessons learned and their implications for action.

**Conclusion**

This study makes a unique and significant contribution to the fields of social work, knowledge production and knowledge utilisation. As a rigorous mixed-method exploration of the research utilisation process in social work, it provides statistical evidence of the existence of a relationship between interaction and research use, as well as a rich and detailed description of researchers’ experiences of engaging with practitioners for the purpose of fostering research use. In doing so, it contributes much needed understandings of research utilisation in social work, which has tended to lack attention to knowledge utilisation processes or the ways in which research is translated to practice (Bellamy et al., 2006; Landry et al., 2001).
### Table 13: Lessons learned and implications for action

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<td>Pre-existing ties require less effort to initiate and sustain.</td>
<td>Weak ties were found to be effective at accessing practitioners across a range of settings and contexts. Moreover, pre-existing ties were found to make it easier to initiate a new project and to sustain interactions and projects over time. Where possible, utilise your personal networks and those of colleagues to generate new collaborative relationships through weak ties. Do you or your colleagues have a practice background? What connections do you and your colleagues already have to practitioners that you could draw on to initiate a new research project with practitioners?</td>
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| Strong ties can, at times, be created quickly via powerful ‘trigger’ encounters, which are informal, emotive and personal in nature. | Where there are no pre-existing ties available strong ties can, at times, be created quickly via powerful ‘trigger’ encounters. In this study, these encounters usually:  
  - Were informal (including, casual clothing and language, meetings over tea or coffee, participation in social activities)  
  - Deconstructed power differentials (researcher accompanied by an individual—research assistant or even their own children—who served as an ‘ice-breaker’)  
  - Involved emotive content or discussion (conversations or presentations aimed at engendering an emotional response)  
  - Were personal in nature (the researcher revealed something about themselves as a person that practitioners could relate to)  

Consider how best to engage practitioners in a joint project, or to disseminate your work. What are the particular characteristics of the organisation, and what methods of contact might be most effective in this context? What possibilities are there for invoking an emotional response to the area of research or issue you are discussing? How can you use this encounter to share something of yourself with practitioners? Who will you be taking with you and why? What will you wear, and why?
Early assessment of organisational and individual facilitators and barriers will determine viability of the research project.

Assessment of structural and individual supportive factors inherent within research and practice contexts early in the research process is important to evaluate the viability of engaging together in research utilisation activities.

Depending on the mix of support factors inherent in the particular research and practice environments, research utilisation activities will require more or less input of time and resources by researchers and practitioners.

Consider your assumptions and expectations of the research process, and about practice and practitioners. What are your reasons and motivations for conducting this research? What organisational and personal supports are available to you in conducting and sustaining this research? What individual qualities and organisational supports are present in the practice-based organisation? What expectations do practitioners have of the research process and outcomes? To what extent do your values and conceptualisations fit with those of practitioners?

These questions should be explored in person together with practitioners, not conducted by the researcher alone. Through this discussion, both parties become aware of the facilitators and barriers inherent in their own, and in the others’, setting. Consequently, decisions are made jointly with an appreciation of the possible challenges to be encountered, which minimises unrealistic expectations and misunderstandings.

Early consultation is important for building relationships and joint identification of practice-relevant research questions.

When combined with active feedback, effective consultation was found more effective in facilitating research use than intensive and situated engagement.

The focus at this stage should be on building quality relationships, characterised by trust, commitment, friendship and equality. These may take some time and effort to build up, but an initial investment at this early stage may be crucial to the success of the project.

During this early process of relationship building take care not to neglect administrative and junior staff—more success is guaranteed when relationships are fostered with staff at the ‘coalface’ than by
**A programmatic focus ensures research questions are practice relevant**

From the outset, a programmatic mindset rather than a project focus will ensure the practical, applied focus of the research.

Programmatic research begins with a use-inspired question. Consider what questions practitioners most want answered. What practice challenges do they face? What are the realities of their day-to-day practice, and how might they impact on their ability to implement research findings in their practice?

The programmatic focus should be maintained throughout the project and should guide considerations of the feasibility of each incremental step in the research process.

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**Active feedback throughout the research process can lead to changes in practice prior to the completion of the research, minimises symbolic or passive research use, and decreases the likelihood of misunderstandings and consequent rejection of the research.**

When combined with effective consultation, active feedback was found to have a positive impact on interaction and research use. In fact, this form of interaction was more effective in facilitating research use than intensive and situated engagement.

Taking into account the time constraints and workload pressures faced by practitioners, provide feedback via clear, easy-to-read reports, summaries, newsletters or even stories.

Enable and encourage practitioners to engage actively and critically with the emerging research material. Regular personal engagement—either online or face-to-face—during this stage ensures practitioners have opportunities to ask questions and provide additional information about the emerging research material.

An onsite presence by the researcher during the provision of feedback was found to be particularly effective in facilitating interaction and research use as it reflected the commitment of the research team.

The successful negotiation of disagreements and problems can strengthen relationships between researchers and practitioners who manage to ‘weather the storm’. Rather than avoiding conflict, address defensiveness directly using core social work skills such as counselling and reflection.
Awareness of the cultural ‘gap’ between research and practice, which is characterised by different languages, values, and interests, minimises the likelihood of stereotyping and misunderstandings. This research found support for the ‘Two Cultures’ model of research use. However, rather than simply highlighting the barriers to interaction presented by these different cultures, an awareness of this can enhance your ability to engage with practitioners effectively.

Identify and challenge stereotypes practitioners have about researchers and research, and equally, be prepared to have your own stereotypes about practitioners and practice challenged.

This process is facilitated by open dialogue throughout the research process. It can also involve not acting like an academic, and highlighting the commonalities between yourself and practitioners, such as your practice background if you have one.

Enhance practitioners’ confidence and competence at engaging with research language and culture by providing them with information and advocating for their attendance at selected workshops and classes on research methods.

Show your own willingness to learn about the culture and language of practice and, if possible, attend relevant practice-based meetings and presentations.

Informal engagement is more effective in fostering research use than formal engagement, and is essential for ensuring effective formal engagement. Even when collaboration was formally funded, informal interactions were found essential for facilitating effective research coproduction with practitioners.

Be open to engaging in personal, social activities with practitioners, including:

- Tea and coffee breaks
- Drinks after work
- Joking and laughing
- Parties and events
- Friendly phone or email contact

During informal interaction, pay attention to small details such as wearing informal clothing and using informal, ‘normal’ language.
| Research outcomes that are achievable and presented in a clear and functional format are more likely to be directly applied in practice. | The way in which the research findings were ‘packaged’ was found to have a strong impact on their instrumental use by practitioners. Ensure research outcomes are presented in a way that is achievable and easily applied. For example, create an instrument, model or tool, and clarify the implications or key lessons of particular statistical outcomes for actions or decision making in policy or practice.

While there is a danger that making research too accessible might lead to symbolic or passive utilisation, this can be minimised by enabling practitioners to engage actively and critically with the research material, either during or after the research process.

Where tools or instruments are made widely available, engagement with practitioners can be fostered by making contact with the researcher a requisite of receiving access to the research product. An additional advantage of this would enable researchers to track the use of their research.

While a key contribution of research to practice is its independent and critical perspective, challenging existing practices must be done in the context of a broader critique of organisational structures and policies affecting service provision. Thus, criticisms of practice should recognise the organisational policies and conditions which can affect service provision, and be alert to the difficulty of implementing research findings when they contradict or critique broader structures and policies. |
| --- | --- |
| Establishing longer-term supports helps to ensure that research utilisation is sustainable. | Where possible, set up longer-term supports for sustained research use by practitioners. For example, establish mentoring programs between researchers and practitioners, or advocate for participation by practitioners in relevant university classes and workshops.

Identify individuals in management with an interest in research use who might act as ‘champions’ or leaders in supporting ongoing research utilisation activities by practitioners and advocating for organisational change.

Where possible, advocate for structural changes together with practitioners, ensuring this is not a top-down process that excludes and disempowers practitioners.

Use positive experiences and outcomes of collaborative projects to advocate for more funding to support interactive projects with governments and regulating bodies. |
Marketing approaches hold strong potential for facilitating research use in practice across different settings and contexts. Participants who reported high rates of instrumental use in this study used creative and engaging dissemination techniques and strategies to market or sell their work. Experiment with the use of electronic media such as podcasts, Facebook and Twitter or writing a blog to facilitate awareness and encourage discussion of research findings amongst practitioners.

Literature on relationship marketing and personal relations approaches may offer new and interesting perspectives on research dissemination.

While on the surface, marketing approaches might not appear to fit well with social work values, as they engender fears of manipulation or exploitation, marketing has been found to lead to client self-determination and empowerment in social work.

Researchers aiming to achieve research use across different contexts and settings would do well not to dismiss lessons from marketing about the effective production and distribution of products and services to a wide audience.
By examining more deeply the nature of effective interaction, and the complex and multidirectional dynamics of factors impacting on the research utilisation process, this research is able to propose, for the first time, an integrated model of how interaction can best facilitate research use in social work, in combination with other factors. It provides a foundation for future studies examining the activities, factors and structures that impact on, and facilitate research use in, social work, and more broadly. It highlights the importance of applying theoretical and philosophical perspectives to counter superficial understandings of research use. The application of a critical realist perspective in this investigation sheds light on underlying structural factors that impact on research utilisation activities. It highlights the need to acknowledge and challenge existing social arrangements, systems and ideologies that impact on effective engagement and research use. This requires interventions which shift the main responsibility for research use from individual practitioners to the social structures which shape and support their work. The insights and recommendations provided by this project move the knowledge utilisation field forward, from emphasising the need to enhance research utilisation processes, to making concrete suggestions for how this might be achieved.
References


Belkhodja, O., & Karuranga, E. (2008). Revisiting the organisational perspective of knowledge utilization: Contributions of the firm’s absorptive capacity and social integration mechanisms. Paper presented at the 8th International Conference on Knowledge, Culture and Change in Organizations, Cambridge University, U.K.


Appendices
## ABOUT THIS RESEARCH

**Project:** How Can Interaction Best Facilitate Research Use in Social Work?

**Researchers:** Prof Mel Gray, Dr. Elaine Sharland, Ms Milena Heinsch

**Ethics Approval:** No. H20110235

### Purpose:

The purpose of the research is to examine research use from the perspective of researchers. It considers how research use in social work and the human services might best be enhanced through interaction between researchers and practitioners, and what form this interaction should take.

### What will I be asked to do?

In addition to requesting some demographic information the survey asks 20 questions about interaction with practitioners/clinicians and the use of your research. It will also ask you to indicate whether you are willing to be contacted for a 30 minute follow-up telephone interview to elaborate on your responses to the survey questions. This interview will be recorded using digital audio equipment. As only a limited number of interviewees are being sought, it may not be possible to interview all who volunteer, but your willingness would be greatly appreciated!

The survey should take 10 minutes to complete.

**Please note:** If you choose to participate by returning the survey, you are NOT obligated to agree to an interview. What are the risks and benefits of participating?

There are no risks to you by participating in this research. There may be no personal benefits to you from involvement in this research. However, the findings and recommendations may benefit you by providing guidance on how you can forge effective research links with practitioners.

### How will my privacy be protected?

All of the data we collect from you will be treated in a confidential manner. If you choose to participate in the survey only, your response will remain anonymous. However, where you have given your name for contact the survey will not be anonymous. Any information collected by the researchers which might identify you will be stored securely and only accessed by the researchers. The data will be entered into a database for analysis and will be stored on a password-protected file. Raw data will be retained for a minimum of five years beyond final publication. Individual participants will not be identified in any reports or publications arising from the project.

### How will the information collected be used?

The data generated by the research will be presented at national and international conferences and submitted for publication to social work and social science related journals. The findings will also be reported in a thesis to be submitted for Ms Heinsch’s degree. All participants will receive a summary of the findings from the researchers.

### Further information:
If you would like further information please contact Professor Mel Gray, Project Supervisor, on 02 4921 7322 or email: mel.gray@newcastle.edu.au. Alternatively you can contact Milena Heinsch on 0423 826 022 or email: milena.heinsch@uon.edu.au.

Should you have any concerns about the conduct of the project you can contact the Executive Officer, Human Research Ethics, University of Newcastle, on 02 49216333, email: HumanEthics@newcastle.edu.au.

What do I need to do to participate?
If you would like to participate, please complete the electronic survey below and submit it. Submitting your survey responses is taken as implied consent to participate in the survey part of the study. Once you submit the survey, your response cannot be returned or excluded from the analysis, as it cannot be singled out from the anonymous surveys, unless you have provided your name and contact details in the survey.

Please note: We can only include your response in our study if you answer ALL of the questions.

To commence the survey click Next at the bottom of the page. The survey is expected to run until December 1st 2011.
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<td>6. <strong>Professional roles currently held</strong></td>
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<tr>
<td>□ Academic</td>
</tr>
<tr>
<td>□ Practitioner / Clinician</td>
</tr>
<tr>
<td>□ Manager</td>
</tr>
<tr>
<td>□ Consultant</td>
</tr>
<tr>
<td>□ Other (please specify)</td>
</tr>
<tr>
<td>[ ]</td>
</tr>
</tbody>
</table>
7. Most recent practice / clinical experience (if any)

<table>
<thead>
<tr>
<th><strong>PART I</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Please indicate your responses to the following statements</td>
</tr>
</tbody>
</table>

8. I engage with practitioners / clinicians in the course of my work
- Never
- Rarely
- Sometimes
- Usually
- Always

9. I develop knowledge cooperatively with practitioners / clinicians
- Never
- Rarely
- Sometimes
- Usually
- Always

10. My interaction with practitioners / clinicians shapes the direction and focus of my work
- Never
- Rarely
- Sometimes
- Usually
- Always

11. The organisation within which I work provides incentives and support for interaction with practitioners / clinicians
- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

<table>
<thead>
<tr>
<th><strong>PART II</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Please indicate your responses to the following statements</td>
</tr>
</tbody>
</table>
12. I make efforts to transmit my research to practitioners / clinicians

- Never
- Rarely
- Sometimes
- Usually
- Always

13. My research reports have been read and understood by practitioners / clinicians

- Never
- Rarely
- Sometimes
- Usually
- Always
- I don’t know

14. My work has been cited as a reference in the reports, studies and strategies of action generated by practitioners / clinicians

- Never
- Rarely
- Sometimes
- Usually
- Always
- I don’t know

15. Efforts have been made to adopt the findings of my work by practitioners /
Clinicians

- Never
- Rarely
- Sometimes
- Usually
- Always
- I don’t know

16. My research findings have influenced the choices and decisions of practitioners / Clinicians

- Never
- Rarely
- Sometimes
17. My research findings have given rise to applications and developments by the practitioners / clinicians concerned

☐ Never
☐ Rarely
☐ Sometimes
☐ Usually
☐ Always
☐ I don’t know

18. I consent to being contacted for a follow-up interview to discuss these issues further

☐ Yes
☐ No

19. If you answered yes to question 18, please provide your name and contact details in the space below


20. Any comments you can provide about your experiences of interacting with practitioners / clinicians or research use are welcome


Thank you for participating in this survey!
Information Statement

Professor Mel Gray  
School of Social Work  
Faculty of Education and Arts  
The University of Newcastle  
Callaghan NSW 2308 Australia  
T 02 4921 5341  
F 02 4921 7818  
Mel.Gray@newcastle.edu.au

Information Statement for the Research Project:  
Researchers' Collaborative Activities: How Can They Best Facilitate Research Use?  
Document Version 2; dated 17/10/2011

The Research Team
Professor Mel Gray, School of Humanities and Social Science, The University of Newcastle.  
Dr. Elaine Sharland, School of Education and Social Work, the University of Sussex.  
Ms Milena Heinsch, School of Humanities and Social Science, The University of Newcastle.

You are invited to participate in the research project identified above which is being conducted by Professor Mel Gray and Ms Milena Heinsch from the School of Humanities and Social Science at the University of Newcastle, and Dr. Elaine Sharland from the School of Education and Social Work at the University of Sussex.
The research is part of Milena Heinsch’s PhD studies at the University of Newcastle, supervised by Mel Gray, Professor of Social Work at the University of Newcastle and Dr. Elaine Sharland, Senior Lecturer in Social Work and Social Care at the University of Sussex.

**Why is the research being done?**

The purpose of the research is to examine research use from the perspective of researchers. It considers how research use in social work and the human services might best be enhanced through interaction between researchers and users, and what form this interaction might take.

**Who can participate in the research?**

We are seeking highly cited Australian human service researchers, whose work is assumed likely to be influencing policy and practice. Your name was selected through a search of peer-reviewed social work journal publications in the period 1999-2007, from the 2010 Excellence in Research for Australia (ERA) ranked journal list (FoR Code: 1607).

**What choice do you have?**

Participation in this research is entirely your choice. Only those people who give their informed consent will be included in the project. Whether or not you decide to participate, your decision will not disadvantage you in any way.

If you do decide to participate, you may withdraw from the project at any time without giving a reason and have the option of withdrawing any data which identifies you.

**What would you be asked to do?**

If you have received this information statement you have already completed the online survey and have indicated your willingness to be contacted for a follow-up interview.

If you agree to participate in a follow-up interview you will be asked to take part in a telephone interview to elaborate on your responses to the survey questions.
How much time will it take?
The interview should take about 30 minutes to complete.

What are the risks and benefits of participating?
There are no risks to you by participating in this research. There may be no personal benefits to you from involvement in this research. However, the findings and recommendations from the research may benefit you by providing guidance on how you can forge effective collaborative links with practice.

How will your privacy be protected?
All of the data we collect from you will be treated in a confidential manner. If you choose to participate in the survey only, your response will remain anonymous. However, the survey will ask whether you consent to be contacted for a follow-up interview. Where you have given your name for contact, the survey will not be anonymous. However, any information collected by the researchers which might identify you will be stored securely and only accessed by the researchers. The data will be entered into a database for analysis and will be stored on a password-protected file. Raw data will be retained for a minimum of five years beyond final publication. Individual participants will not be identified in any reports or publications arising from the project. Interview transcripts will be sent to a professional transcription service.

How will the information collected be used?
The data will be reported in scientific journals; in a thesis to be submitted for Ms Heinsch’s degree; and in national and international conferences. You will be able to review the recording and/or transcripts of the interview to edit or erase your contribution. All participants will receive a summary report of the research findings.

What do you need to do to participate?
Please read this Information Statement and be sure you understand its contents before you consent to participate. If there is anything you do not understand, or you have questions, contact the researcher.
If you would like to participate, please sign and return the consent form by email, or alternatively, we can mail you a reply paid envelope. We will also obtain verbal consent from you prior to commencing the interview, which will be digitally recorded.

If you would like further information please contact Professor Mel Gray at Mel.Gray@newcastle.edu.au or Ms Milena Heinsch at Milena.Heinsch@uon.edu.au

Thank you for considering this invitation.

Mel Gray
Professor in Social Work
The University of Newcastle

Milena Heinsch
PhD Candidate
The University of Newcastle

Complaints about this research

This project has been approved by the University's Human Research Ethics Committee, Approval No. H- [2011-0235].

Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email: Human-Ethics@newcastle.edu.au.
Appendix C: Semi-Structured Interview Schedule – sample questions*

**Introductions**

Give participant a brief overview of the study. Reiterate information about confidentiality, and withdrawal from the study. Ask for oral consent to participate in the study.

**Background**

Would you like to tell me a little bit about your research and/or practice background?

Why did you choose to be a part of this study?

**Interaction**

Can you please tell me a bit about your experiences of interacting or collaborating with practitioners?

- How did this interaction/collaboration come about?
- What motivated you engage with practitioners?
- Did you face any challenges to your interactions with practitioners?
- If yes, what did you do to overcome these?
- What, if any, benefits did you perceive from your interaction with practitioners?

**Research Use**

Can you please tell me about the use of your research by practitioners?
☐ Are you aware of any occasions on which your research influenced practice?

☐ In what way did your research influence practice?

☐ What do you think facilitated the use of your research in practice?

☐ What do you think hindered the use of your research in practice?

Do you think the term ‘research use’ accurately represents the process by which research comes to impact on practice? If not, what other terms might you use, and why?

Do you have any further comments? Are there other things you would like to say or add?

Concluding Information

Let participant know they will be receiving a summary report of the research findings at the completion of the project. Thank you.

*These questions were modified for each participant according to their responses to the survey.