Using Research to Support Management Decision Making in Schools

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The gap between the researcher's world and the practitioner's world has long been recognised: research literature is generally not part of a practitioner's library (Huberman, 1990). One of the effects of this is that actions by decision-makers and practitioners are unlikely to be informed by research, and dissemination of research information and knowledge is problematic (Hillage et al., 1998). The need for practitioners to utilize the findings from research as a basis for decision making is not just an issue for schools, but is a compelling idea for the workplace as a whole (Gruber & Niles, 1973; Weiss, 1979; Huberman, 1990; Davies & Nutley, 2002; Kelemen & Bansal, 2002; Walter et al., 2003a; Walter et al., 2003b; Sutton, 2004; Percy-Smith, 2005). Many studies have explored how and why new ideas and practices are adopted (Sturdy, 2004) in an attempt to discover how practitioners and managers could be encouraged to use research to support their decision-making (Hemsley-Brown, 2005) and to increase the performance of schools (Hemsley-Brown & Sharp, 2003). The increasing interest in utilizing research findings for improving schools and providing evidence for management decision making is an important response to the rapid pace of change, the availability of electronic data and the considerably pressure to improve increasingly complex organizations. Successful and continuous improvement depends less on who has the information and increasingly on those able to make the best use of that information (Moorman et al., 1992; Hemsley-Brown, 2005). However, much of the knowledge generated by research fails to impact on a practitioner audience and although some research focuses on facilitating the utilization of research, much research effort has been devoted to explaining and justifying the gaps – the research-practice gap (Boostrom et al., 1993; Klein, 1995; Bero et al., 1998; Johnson, 2000; Huff & Huff, 2001; Kelemen & Bansal, 2002).

Use of Research

Research may not solve specific problems or make decisions, but research can provide information for managers and practitioners to use to reduce risk in the decision-making process (Oulton, 1995). Management research is also an applied discipline – the ideas, solutions and insights have application in the real world if they are shared with practitioners (Tranfield & Starkey, 1998). The benefits of utilizing research for decision-making are well known in theory, but considerable effort also goes toward documenting the reasons why this is not happening in practice (Zaltman & Moorman, 1988; Huberman, 1990; Louis, 1996; Kelemen & Bansal, 2002; Walter et al., 2003a; Sutton, 2004; Percy-Smith, 2005). A key problem is that the academic style of research is significantly different from the style preferred by practitioners, and due to poor dissemination channels and lack of communication between researchers and practitioners, potential user-managers often remain unaware of research findings (Kelemen & Bansal, 2002).

Research into school principals' perceptions of research use (Saha et al., 1995; Biddle & Saha, 2000) does show that principals judge research knowledge to be valuable; they consider themselves to be regular, thoughtful users of research and believe it is relevant to decision-making. Principals are sceptical though, and they think that research findings may be flawed or presented in a biased way largely because differences in the way research knowledge is constructed in social sciences often leads to researchers being challenged about their findings –particularly in relation to the context, generalisability and validity of the research (Hemsley-Brown & Sharp, 2003). In contrast studies also reveal that few teachers turn to research literature

to expand professional knowledge, solve problems or to meet the requirements of their job (Shkedi, 1998). Research literature is not accessed by teachers because they perceive it to be irrelevant, unhelpful and too theoretical. They claim they the lack time, do not trust the findings, and cannot understand the language or make sense of the statistics (Shkedi, 1998; Hemsley-Brown & Sharp, 2003). The reasons why research is generally not being utilized, therefore, arecomplex and whilst addressing some of the barriers might facilitate greater research use, some of the gaps between researchers and users need to be better understood.

The Research-Practice Gap

Studies of the researcher-practitioner gap (Boostrom et al., 1993; Klein, 1995; Bero et al., 1998; Huff & Huff, 2001; Kelemen & Bansal, 2002; Leseure et al., 2004) attempt to address the problem in a number of ways but principally they focus on trying to explain the reasons for the gap – there is less evidence of successful attempts to close that gap and ways of addressing these barriers are still unclear and unproven (Hemsley-Brown & Sharp, 2003; Hemsley-Brown, 2005).

Researchers are often accused of doing research largely in a vaccum, un-noticed and unheeded by anyone, and this can result in a perceptual gap between research and practice which creates tension between researchers and the users of research – the practitioners involved in making decisions (Ferlie et al., 2003). There are three dimensions of the research-practice gap which seem to provide a barrier to effective research utilization:
1. The mode of research, or the research itself, and how research is categorized
2. The process of dissemination or transfer of research knowledge
3. The context in which the research knowledge is utilized, for example: is research knowledge utilized by individuals, or by individuals with organizational support, or by organizations?

Research utilization is important for a number of reasons: first, researchers need to identify successful strategies to ensure that the knowledge is successfully disseminated to users; and in that context it is important to work toward not only exploring, but bridging these gaps by identifying successful facilitation strategies and by focusing on both organizations and individual users. Recommendations for facilitating research utilization focus on organizational issues, such as school structure and culture; collaborative approaches (Walter et al., 2003b); and partnerships and networking (Hemsley-Brown et al., 2002; Hemsley-Brown & Sharp, 2003; Hemsley-Brown, 2005).

But what do we mean by 'use' and 'utilization'? The different meanings of the terms associated with research use and research utilization, and modes of research, in addition to exploring fundamental terminology (e.g. the nature of knowledge) need to be clarified.

Usefulness and Utilization

Managers and researchers tend to differ widely on the factors they believe to be most important in making research useful (Deshpande & Zaltman, 1984). The problem of use has long been a concern in the field of management and a key distinction seems to be between instrumental and conceptual uses of knowledge (Deshpande & Zaltman, 1982). Instrumental use implies direct application of knowledge to solve a specific problem or to make a particular decision. Instrumental use of knowledge requires changes in behavior or practice (Huberman, 1990). Conceptual use of knowledge on the other hand refers to information utilized for enlightenment or intrinsic interest rather than any action a decision-maker might take (Deshpande & Zaltman, 1982). These different interpretations of the word use require different forms of research information, and engagement with information.

Research *utilization* (most often used in healthcare research) is 'the purposeful application

of research findings' – although this definition fails to reveal any clear differences between the term 'use' and 'utilization' (Montgomery, 2005 p.86). The NCDDR (1996) questioned the notion of dissemination as a linear, mechanical process – implied by the term *use* – and argue that research *utilization* is more than mere *use* it is a two-way process – that is, a partnership – that includes support for change.

Modes of Research

Research utilization studies focus on explaining and justifying the researcher-practitioner gap, by categorizing research and setting out the differences in aims, processes, and outcomes of different categories of research. Research has frequently been defined and categorized as *Mode 1* and *Mode 2* research (Tranfield & Starkey, 1998; Huff & Huff, 2001). Because research is categorized in this way it partly explains the research and practice gap and provides a way forward in closing this gap.

Mode 1 research is the 'unfettered pursuit of knowledge' (Huff & Huff, 2001 p. S51) and follows a traditional model of research whereby the knowledge produced is the result of academic curiosity and resides in universities, guarded by elite gatekeepers (Tranfield & Starkey, 1998). The conventional criticism of academically driven management research is one of over-domination by academic criteria and isolated from a wider set of interested stakeholders (Tranfield & Starkey, 1998; Ferlie et al., 2003). This form of research, therefore, is about conceptual use, and is not intended for a practitioner audience and perhaps it is not surprising that managers are not utilizing the findings. We cannot build a bridge to close the research-practice gap by focusing on dissemination of Mode 1 research.

Mode 2 research output is instrumental; aims to provide more immediate solutions to management problems (Ferlie et al., 2003) and has a more practical focus for bridging the gap. However, this is also a problem because Mode 2 research output treats knowledge as a 'storehouse of facts' where 'knowledge appears beyond the reach of critical interrogation except at the level of immediate application' (Dehler et al., 2004 p.122), and yet to some extent this is the kind of knowledge practitioners seek. A study of research utilisation that specifically concentrated on the way teachers use research findings in Michigan USA (Zeuli, 1994) aimed to find out how teachers read and respond to educational research. Teachers in the study argue that research should exclusively identify strategies and techniques that could have a *direct* impact on their teaching, and they judge a study's merits on the basis of whether the findings can be translated into procedures that work (Hemsley-Brown & Sharp, 2003).

Research knowledge is rarely produced simply with the aim of applying that knowledge directly to management contexts. When managers themselves problematize an issue they become active knowledge producers instead of passive recipients (Dehler et al., 2004) which suggests that the notion of researchers as producers of knowledge and managers as recipients or users of knowledge is a naïve and simplistic one: the context in which dissemination takes place is considered to have an impact on whether research is utilized. Research cannot simply be generated by researchers, and utilized by practitioners.

The Process and Dissemination of Research

Considerable speculation and discussion focuses on the factors or barriers which prevent managers from making use of research results (Deshpande & Zaltman, 1982; Deshpande &

Zaltman, 1984; Zaltman & Moorman, 1988; Moorman et al., 1992), especially in the public sector and the management of schools (Hemsley-Brown & Sharp, 2003; Hemsley-Brown, 2005). The context of the research process accounts for a number of barriers to research utilization and these factors are broadly separated into three categories: access and dissemination; style and relevance; and trust and mistrust, which incorporate two overlapping themes, the context of the research process and the dissemination of the findings.

Access and Dissemination

With little consideration for the mode or type of research, poor access and weak dissemination channels are often identified as key barriers to research utilization (Walter et al., 2003b). Lack of access to research is a key barrier to its use, although it is not always clear whether access relates to intellectual access, or physical (or virtual) access to research, or both (Hemsley-Brown & Sharp, 2002; Kelemen & Bansal, 2002; Hemsley-Brown & Sharp, 2003; Walter et al., 2003b; Hemsley-Brown, 2005). Because management research is written in an alienating style for most practitioners and is published only in academic, rather than practitioner journals, this has a serious impact on research use by managers (Kelemen & Bansal, 2002).

These comments also seem to imply that some of the responsibility for facilitating research utilization rests with the researchers themselves – should academic researchers be involved in dissemination to users? Should researchers aim to influence management practice through the research they carry out? These recommendations fail to acknowledge the clearly different audiences for different modes of research; fail to recognize the lack of incentives; and fail to note that researchers may be focusing on dissemination channels which carry significantly more status than a user audience. Recommendations for improving access to research findings include the requirement to translate relevant research for use by managers, and to focus and localize the findings to meet specific needs (Castle, 1988; Walter et al., 2003b). Increasing use of computer technology and the internet can also support this process (Walter et al., 2003b).

Poor dissmentation channels are therefore often identifed as key barriers to research use (Kelemen & Bansal, 2002), although it is not clear who should be responsible for dissemination to manager-practitioners. Although these accusations may be true the audiences for academic publications and those who are interested in practical implications may be quite different target groups. Academic publications are not targeted at practitioners.

Style and Relevance

Research impact is affected by how finely tuned it is to meeting managers' needs (Kelemen & Bansal, 2002; Hemsley-Brown & Sharp, 2003; Hemsley-Brown, 2005) and the relevance of research to decision-making is also a barrier to research use (Deshpande & Zaltman, 1984; Castle, 1988; Zaltman & Moorman, 1988; Cousins & Simon, 1991; Tranfield & Starkey, 1998; Edwards T., 2000). The style in which academic research is written is significantly different from the style preferred by practitioners, so should researchers ensure that topics are relevant and of interest to decision-makers; specify the implications; and be more precise and realistic about claims (Deshpande & Zaltman, 1984; Castle, 1988; Zaltman & Moorman, 1988; Cousins & Simon, 1991; Tranfield & Starkey, 1998; Edwards T., 2000)?

Practitioner-managers are often unable to decode academic research because it is written for other academics, with different aims, and in a style that alienates many practitioners (Kelemen & Bansal, 2002). There are of course incentives and advantages for researchers in 'using a more esoteric style because by writing in "code" the likelihood of our ideas being used by managers is

decreased' (Sutton, 2004 pp28-9) 'being difficult to understand or even completely incomprehensible can increase prestige' (Sutton, 2004 p. 29). No surprise then, that research findings are rarely used by managers and practitioners. Successful initiatives in research utilization are those that target specific barriers to change: the context and relevance of the research to potential users needs to be a priority (Walter et al., 2003b) and the sources need to be both Mode 2 and relevant Mode 1 research.

Trust and Mistrust

Furthermore, there is also skepticism among practitioners about the credibility of academic research conducted almost entirely in universities, and this results in a lack of trust in what practitioners view as essentially practical knowledge (Sutton, 2004). However, these conclusions rarely acknowledge different categories and modes of research: this is a good description of Mode 1 research, which is not aimed at practitioners.

Therefore, there seems to be a mistrust of research and a concern about the quality and design of research studies (Zaltman & Moorman, 1988; Moorman et al., 1992; Boostrom et al., 1993). What seems to be lacking is the development of mutual understanding between practitioners, managers and researchers which might potentially increase users' trust of the research provider. Strategies to build greater trust between managers and researchers could contribute to improved research utilization, but this trust can only be built through working in collaboration and partnership.

The Context of Research Utilization

Following the identification of barriers to the use of research and to research utilization, authors frequently make recommendations for facilitating research use. The relevance of the source information was a key factor in the utility of research findings and respondents (principals and district staff) are more likely to use research when the findings meet their information needs. The perceived sophistication (how finely tuned it is to match local needs), value, relevance, and timeliness of the information has a positive impact on its use (Cousins & Leithwood, 1993; Hemsley-Brown & Sharp, 2003). More practical suggestions for facilitating research utilization include:

1. making information readily available
2. enabling teachers to devote time to reading research
3. using outside consultants
4. providing evidence of the benefits of using research
5. ensuring that research has practical application

School improvement is an organisational change process, schools are social systems and knowledge is socially constructed, therefore, social learning needs to take place in order for research utilisation to occur. In order to promote social learning school improvement information should be shared and practitioners should be involved in the design, delivery and follow-up activities associated with school improvement (Cousins & Leithwood, 1993; Hemsley-Brown & Sharp, 2003)

A common recommendation for improving research use, therefore, relates to the culture, structure and collegiality of the school – promotion of a collegial atmosphere between researchers and teachers and developing a collaborative culture (Hemsley-Brown & Sharp, 2003). For this reason, the recommendations for improving research utilization in all sectors including schools predominantly focus on the organization (Corwin & Louis, 1982): organizational structure and researcher-manager interaction (Deshpande & Zaltman, 1982). Organization culture, particularly a collaborative organizational culture, networking and partnerships are the most

frequent recommendations, although research to demonstrate the effectiveness of these strategies is hard to find (Hemsley-Brown & Sharp, 2003; Walter et al., 2003b; Hemsley-Brown, 2005). A long term study, carried out in Austin, Texas (Hipp & Huffman, 2007) from 1995-2000 confirms that the development of a collegial relationship as part of a professional learning community for school principals, other school leaders, staff, and school office staff enabled the school to build the capacity and supportive conditions to share in the learning process. The authors argue that schools and districts were struggling with initiating and implementing reform measures, and there is a need to convince colleagues that decision should be made based on *real data*. This successful initiative involved: shared and supportive leadership; shared values and vision; collective learning and application; share personal practice; and supportive conditions (Hipp & Huffman, 2007).

The recommendations and good practice in facilitating research use focus mainly on organizational issues, school or organizational culture and collaborative approaches – despite the barriers, which are often individual. These recommendations are based on the argument that research utilization requires social learning to take place, and social learning is facilitated most effectively in a collaborative culture.

Individual or Organizational?

The barriers are associated with the aims, process and outcomes, usefulness, and types of research; and individual barriers have been identified as those associated with: access and dissemination; style and relevance; and trust and mistrust. But can collaboration and partnership address individual barriers, and problems of mistrust and the mode of research? Many authors assume that research is utilized by individuals, and by individuals within organizations but others assume research is utilized by organizations. One of the main barriers to knowledge use, according to Louis (1996) (who studied schools in the US) is at organizational level rather than individual level; frequently the culture of the school does not encourage management learning through the use of research (Hemsley-Brown & Sharp, 2003). In contrast, however, Simon (1991, p125 cited by Van der Sluis & Poell, 2002) claims that all learning is *individual* learning and that an organization can only learn in two ways: by the learning of its members, and by embracing new members who have prior knowledge. So can research utilization only take place through individuals, or can this be achieved through organizations? The notion of organizational learning however, 'proves particularly slippery in the interface between the individual learning and organizational learning' (Popper & Lipshitz, 2004 p.37). To a great extent the work conducted thus far on research utilization is focused on individual barriers to learning but organizational factors such as structure and culture, collaborative approaches and organizational learning play a key role in promoting research use.

Structure and Culture

Factors associated with organizational culture and structure, are also consistently perceived as strong barriers to research use: more decentralized and less formalized organizations are more likely to make greater (and perhaps better) use of research than centralized and formal organizations (Deshpande & Zaltman, 1982). A large organization which is highly centralized may have difficulty in implementing results from research. For purposes of implementing research a highly centralized school system may need to decentralize decision-making at least during the implementation phase (Deshpande & Zaltman, 1982). This approach favors devolved

decision-making at national, local, school or even departmental level. The benefit of strong and visible leadership is also highlighted, and seems to provide motivation, authority and enthusiasm for using research, particularly at higher levels in an organization – that is, at management decision-making level (Walter et al., 2003b).

Many of the factors which facilitate research use generally demand an organizational culture that supports learning (management learning) and the key to research utilization is organizational learning. In order to facilitate research utilization a new culture needs to be created within the school – a culture that focuses on, and values organizational learning as well as individual learning. Most authors who write about organizational learning agree that both the individuals and the organization learn (Örtenblad, 2002).

Organizational Learning

Organizational learning is 'a process in which an organization's members actively use data to guide behavior in such a way as to promote the ongoing adaptation of the organization (Edmondson & Moingeon, 2004). For schools, organizational learning is a process of continuous school improvement through the use of data and research – utilization of research and data. By promoting a culture of organizational learning the findings from relevant research might be more readily used by managers of schools for organizational change and adaptation. Research utilization approached in this way is part of knowledge- and evidence-informed practice: a co-creation of knowledge approach. Organizational learning is a process of acting, assessing and acting again – an on-going cycle of reflection and action that cannot be taken for granted (Edmondson & Moingeon, 2004).

If research utilization is facilitated through organization learning and learning organizations, then perhaps a transformation will need to take place followed by a demand for research intelligence to meet that need. Once organizations transform themselves into learning organizations, then there might be greater demand for research intelligence, which could then be met by research and researchers. This cultural shift needs to take place in schools before there is sufficient demand for research intelligence. Incentives are the key: sufficient incentives for academics to collaborate in providing relevant knowledge, and sufficient incentives on both sides of the partnership. Policy makers in most countries believe that with proper incentives schools can be encouraged or required to become better consumers of research results. Popular documents funded by a variety of agencies in the USA aim to pave the way toward better understanding of the connection between research knowledge and good school practice. However, that knowledge is political and political contexts are critical to understanding knowledge use.

The focus of research use needs to shift from a personal level to an organizational level: it is simplistic to blame individual practitioners for their failure to access or use research (Hemsley-Brown, 2005). A two-way relationship between practitioners in organizations and academics in universities is one approach – they each need to continue to learn from one another and share in developments and ideas, to achieve utilization of research. Mode 1 research does not have a monopoly over new ideas, and there can be a reciprocal situation where ideas are developed by practitioners themselves: research utilization works best in settings of collaboration and mutual support (Hemsley-Brown & Sharp, 2003; Hemsley-Brown, 2005).

Collaboration

A collaborative organizational culture that values learning and values the insight that research provides is a key recommendation for improved research utilization (Hemsley-Brown &

Sharp, 2003; Walter et al., 2003b). There are eight broad categories which reflect the mechanisms which drive research impact in different interventions: dissemination; education; social influence; collaboration; incentives; reinforcement; facilitation; multifaceted initiatives (Walter et al., 2003b). So there is not a magic answer, and no single factor facilitates research use – a multiple-methods approach is needed to improve the use of research for decision-making. The development of communication networks, links between researchers and practitioners, and greater involvement of practitioners in the research process are also strategies which improve research impact, but with the possible exception of Huberman (1990) the research evidence to demonstrate the success of these approaches is still hard to find (Hemsley-Brown & Sharp, 2003). One of the many benefits of collaborative approaches to research use is that this approach generates a sense of ownership and enthusiasm for new knowledge, which considerably increases the likelihood of utilizing knowledge (Hemsley-Brown & Sharp, 2003; Walter et al., 2003b; Hemsley-Brown, 2005).

Conclusion

First, research on the barriers to research utilization seems to be unclear about which type of research users should have access to, and it would be a mistake to assume that all research in education management is intended to be 'useful' to practitioners. This is partly because of differences in the aims of research in the two contexts, which necessarily creates a gap between the two worlds. Research on the barriers to the use of research to support decision-making focuses on research 'use', rather that 'utilization': utilisation implies that users would have some involvement in the process of generating research knowledge, but 'use' implies that the research can be applied more directly. The relationship between educational research and practice is not a linear relationship, although it is all too easy to assume it is. The notion of research use suggests a clear, identifiable, measurable and direct relationship, but a multi-layered, unpredictable, interacting process of engagement between the researcher and the educator is much more realistic (DETYA, 2000; Hemsley-Brown & Sharp, 2003).

There are three aspects of the research-practice gap in terms of research utilization: the research itself or the mode of the research; the process of dissemination; and the context of dissemination. Knowledge is local and specific, especially utilitarian knowledge, and knowledge created elsewhere needs to be compatible with existing belief structures so that it becomes legitimised and has utility within the local setting (Louis, 1996). All three aspects of the research-user gap need to be addressed before appropriate management research can be utilized to facilitate improvement in schools. These recommendations are summarized in Table 1, alongside the barriers (Hemsley-Brown & Sharp, 2003; Hemsley-Brown, 2005)

Secondly, much research conducted by academics has been accused of failing to focus on the needs of user-practitioners – but to some extent this is because of the way research is categorized, and because of the different demands of funding bodies, and the targets which need to be met by researchers themselves and the organizations they represent. Funding bodies as well as the researchers themselves drive the process and the expected outcomes. Research-based knowledge, particularly when the agenda is set by the curiosity of the researcher, is necessarily 'imprecise, inconclusive, complex and contingent (Nutley & Davies, 2005). The metaphor of 'blue skies' research – often used to describe such research – gives the impression of research which has no constraints, such as finance, utility or application (Calvert, 2002). Users on the other hand, may use knowledge only when it gives clear guidance and is presented in simple terms which can be directly applied (Nutley & Davies, 2005). Users seem to be less concerned with the process of conducting research and the pursuit of knowledge for its own sake, but rather more

focused on the *outcomes* or the potential use of the research in practice (Huff & Huff, 2001; Kelemen & Bansal, 2002).

Therefore, the gap between researchers' perceptions of research and users' perceptions of research can be partly explained by their different perceptions of the aims of research, and whether the focus is on process or outcomes. Closing the gap may not be feasible, indeed, explaining and justifying the reasons for the gap has been the most frequent approach to addressing this issue. It is unsurprising that pure research, blue skies research, or Mode 1 research are not easily accessible, understandable, or used by non-academics, since the aims of this mode of research are not based on utility, usability or application by practitioners.

The Mode 2 research approach or a problem-solving model might be more appropriate in terms of providing useable research findings for practitioner-managers, but the demand for this kind of research needs to be stimulated through the creation of appropriate funding streams and through the development of learning organizations which demand such research intelligence. There should perhaps be more of a two-way relationship between practitioners in organizations and academics in universities – they need to continue to learn from one another and share in developments and ideas: a co-creation of knowledge approach. Good links established prior to and during a research study contribute toward a more energetic approach to dissemination of the findings from research (Huberman, 1990). A utilitarian approach based on Mode 2 research or a problem solving approach cannot exist in isolation and ignore the complexities and conflicts raised by curiosity-driven research such as Mode 1 research but nonetheless it is Mode 2 research that is most readily applied by practitioners for management decision-making. Such an approach can be naïve and superficial, however, unless it is combined with Mode 1 research. As a possible solution, authors have suggested developing Mode 3 research which combines the best of both Modes 1 and 2, to facilitate greater research utilisation (Ferlie et al., 2003).

If research utilization is facilitated through organizational learning and learning organizations then a transformation needs to take place before managers start to demand research intelligence. This cultural shift can only take place if sufficient incentives (e.g. status, recognition, effectiveness as well as financial incentives) are made available on both sides of a partnership to enable academics to become involved in collaborative research utilization. There is a need to work towards creating, developing and supporting learning organizations and moving towards greater research utilization. When this becomes a reality then perhaps there will be an increasing demand for research intelligence to support this climate, and researchers and practitioners can work more closely together to close the research-practice gap.

Table 1.

Summary of factors which hinder and facilitate research utilization

Factors which hinder research utilization	Factors which are claimed
The research itself and the mode of the research	The research should be:
Categorization of research into Mode 1 and Mode 2 (Tranfield & Starkey, 1998), Mode 3 model proposed (Ferlie et al., 2003).	Accessible and relevant or focused, and meet the Zaltman, 1984; Castle, 1 Hemsley-Brown & Sharp, 2
Research is inaccessible (Bracey, 1989; Walter et al., 2003b), both intellectually and practically, and is not useful (Deshpande & Zaltman, 1984) or relevant (Kelemen & Bansal, 2002) to user-managers.	must be translated (Walt Statistical information & Sharp, 2003; Hemsley-B be made of computer tech
The process of the dissemination of research	The Individual Users sho
Poor access and weak dissemination channels (Walter et al., 2003b); being difficult to understand or even completely incomprehensible can increase prestige (Sutton, 2004).	Targeted and users shoul ownership (Hemsley-Brown Hemsley-Brown, 2005)
Skepticism among practitioners about the credibility of some academic research	Enthusiastic – Individua process of research impa ideas and practices. Per (Walter et al., 2003b).
The context of research utilization	Organizations should see
A highly competitive environment contributes to this mistrust of research	Collaboration, partnersh networking (Wenger, 1998 & Sharp, 2003; Hemsley-B researchers and practiti element of surprise (Des Strong and visible leade particularly at higher l authority and organizati 2003b). Support, education and t Parahoo, 2000; Hemsley-B those implementing chang Financial, technical and incentives and dedicated to the success of sever

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