

EVIDENCE BASED POLICY PROJECT

Iterative Best Evidence Synthesis Programme Hei Kete Raukura

Evidence Based Policy Project
Report August 2006

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ITERATIVE BEST EVIDENCE SYNTHESIS PROGRAMME
HEI KETE RAUKURA
<http://educationcounts.govt.nz/goto/BES>
New Zealand



MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

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Executive Summary

This summary provides *an overview* of the report following the structure shown in the table of Contents. It also provides multiple, direct access points to the content for readers seeking *further information*. It is suggested that you read through the summary in its entirety before diving into the text via hyperlinks.

Page references are provided to make location of underlying discussion easier and to assist those searching later for something they remember reading.

Reading on screen

If you are reading on screen, put the cursor over the page number and press CTRL + click to access pertinent discussion. The back arrow on the Web toolbar will allow you to return to the Executive Summary. (To make the Web toolbar visible, select View, Toolbars, Web). You could also use the Document Map tool to move directly to particular headings and use Ctrl + F to search for keywords or phrases. (If the Document Map icon is not visible, select View, Document Map)

Introduction

The Ministry of Education is committed to aligning policy and practice to improve students' achievement. It must be informed by and respond to information about what works, under what conditions, for whom, why and how and what makes a bigger positive difference. However, not all knowledge will inform better decision making, and not all good decision-making will lead to better outcomes – the path from research to policy is not straightforward. ([p1](#))

The Iterative BES Evidence-based Policy Project (EBPP) has been developed as a change-management pilot project that seeks to influence the balance of adaptive and generative learning in the Ministry of Education through an examination of factors influencing the relationship between research and policy practices. ([p2](#))

The Iterative BES Programme is a key source of learning outcomes-linked evidence that could inform generative learning within the Ministry. ([p2](#))

To provide a framework for appreciating the contexts of policy advice, the literature review for this project focused initially on the effectiveness and impact of the use of outcomes-linked research evidence in policy development practices. Where possible literature originating in New Zealand takes priority and international findings are applied with caution. ([p3](#))

Literature Review

The changing context of educational policy advice

50 case studies in developing countries found that political context was the most important factor affecting the degree to which research had an impact on policy. (Court and Young, 2003) ([p6](#))

The critical factor influencing uptake of research was found to be the nature of the *evidence* and whether the research was credible and relevant in terms of operational usefulness and problem solution. The other major factor focused on the *social context* linking researchers and policy makers. [\(p7\)](#)

Claudia Scott documents a weakening of the relationship between research and policy following the introduction of Mixed Member Proportional Parliamentary system in New Zealand. [\(p7\)](#)

The State Services Commission (SSC) study (1999a) showed that “... policy makers react to major problems, formulate quick solutions to them, take decisions, implement these and then move on to the next set of problems. (p9). SSC sees short time frames as inhibiting in-depth research, commenting however that “if organisations do not have robust information and research capabilities to anticipate demands, they will never be ahead of the game and the quality of their advice will suffer” [\(p9\)](#)

The SSC report (1999a) notes that whether or not advice is backed by quality information, the brevity required in the presentation of advice, and the fact that advice is generally not referenced with information sources, means that there is no mechanism to assure Ministers that the assertions in advice are more than informed guesswork. [\(p8/9\)](#)

Alcorn et al. (2004) conclude that “there is clear evidence of a critical mass of nationally and internationally excellent researchers in education in New Zealand” . However they do note that a large proportion of education academics were not highly rated in the 2003 Performance Based Research Funding (PBRF) evaluation of research excellence (TEC, 2004) [\(p10\)](#)

Davies, Craig and Robertson (2004) suggest that the PBRF incentives for research dissemination, crucial to informing policy, emphasise international publication for small specialised audiences over publication in New Zealand journals and the mass media. [\(p10\)](#)

The research context

Luke and Hogan (2005) indicate that definition of terms, underlying ideologies and methodologies are a rich ground for mis-understanding between researchers, policy advisers, practitioners and other stakeholders in the wider community. [\(p11\)](#)

From the policy viewpoint, conceptualisation of ‘useful research evidence’ varies with national context in ways that facilitate or constrain application of certain methodologies. [\(p12\)](#)

Court and Young (2003) found that across these case studies, policy uptakes were greatest where influencing and communication strategies were in place from the beginning of research programme. [\(p13\)](#)

Iterative Best Evidence Syntheses

The Iterative Best Evidence Synthesis Programme embodies factors contributing to a positive relationship between research and policy in accord with Court and Young's (2003) framework of political context and purpose, quality of evidence and links between researchers and policy advisers. [\(p13\)](#)

Evidence-based or evidence informed policy?

The distinction between evidence-based and evidence-informed policy, according to Edwards (2000), centres on the degree to which research is expected to provide direct guidance about effective practice in teaching and learning in schools, or whether it 'informs' through increasing understanding of practices, processes and institutions. [\(p15\)](#)

Claudia Scott indicates that what she terms "high performance advising" will be fostered by a transformational approach to policy development and enhancing opportunities for strategic thinking and conversation. However, Behm et al concluded that public servants are quite proficient in transactional policy skills, but less so in transformational policy skills. [\(p16\)](#)

Factors in the research-policy-practice gap

Research evidence is perceived as "softly spoken" because, "empirical inquiry simply cannot make its voice heard amidst the clatter of other, political imperatives on policy making" (Pawson, 2002a). [\(p18\)](#)

The gaps and misunderstandings between researchers and users do not arise from people's faults, but from the realities of their contexts (Levin 2005). For example policy advisers see research as heavily qualified by conditional constraints and irrelevant to their concerns, but researchers suspect that the knowledge they generate is subject to the predispositions and agendas of policy advisers, with the result that it is not read, understood or used, or may even be used in a manner that distorts findings. [\(p19\)](#)

Factors affecting policy advice include:

- tensions between planned policy platforms, external political pressures, changing circumstances, unexpected events and crises
- there is never as much time as politicians and policy advisers would like to think deeply about issues
- the nature of democracy in that those on opposite sides of parliament have different purposes for considering research. [\(p19\)](#)

Good policy is likely to be the result of policy advisers and researchers working together, since researchers can change perceptions of problems and the values associated with policy, but policy advisers have better insights into influencing bureaucracy and constituents. However there are risks on both sides concerning allegiance and independence. [\(p21\)](#)

Research can influence policy

The Numeracy Development Project is an example of research influencing operational policy and practice . [\(p23\)](#)

There is some evidence that research, particularly by teachers undertaking action research, can affect teaching practice more than it affects policy. [\(p25\)](#)

Translating research into policy and practice

There is agreement in the literature that many sources of information influence policy decisions and that research will often be one of the less important factors. However, Reid (2003) could find no significant international or national body of academic research on the actual process of research integration with policy as seen from the policy advisers' viewpoint. [\(p26\)](#)

What is meant by 'using research'?

Assumptions around effective use of research are rarely discussed in the literature. Edwards (2000) notes that there is a risk that a policy maker's view of *really useful* research is that it "takes the problems which the government brings to it, contributes to their solution and refrains from adding new problems or further complicating old ones" [\(p28\)](#)

Research use, problem solving and information literacy

The SSC study (1999) showed that *policy analysis* and *design of delivery instrument, process co-ordination* and the design and management of *implementation* have been the focus of most attention in the policy cycle. However, there were gaps around *evaluation, issues identification* (which also implies problem definition), the notion of *long-term forward looking research-based policy analysis, public consultation* and *strategic analysis and management*. [\(p31\)](#)

There is a challenge in distinguishing between *genuinely* research-based evidence and the plethora of ideas that are presented *as if* they were the result of reliable research. These ideas come from governments, think-tanks, inspection regimes, auditing agencies and even researchers themselves, who have sometimes made claims beyond the evidence and their personal competence. [\(p31\)](#)

Mechanisms enhancing the relationship between research, policy and practice

Walter et al. (2005) support Pawson's (2002a) view that improving the correspondence between research and policy is more likely to be the result of exploring mechanisms that explicitly or implicitly underpin different approaches to research-policy interactions than it is of any particular intervention. [\(p32\)](#)

Walter et al. identify five mechanisms that appear to underlie interventions to improve the effectiveness of research use: dissemination, interaction, social influence, facilitation and reinforcement. [\(p32\)](#)

Use of conferences and workshops to supplement dissemination of written materials has been found to have a small positive impact on changes in practice. In addition, Walter et al note that seminars facilitating discussion of research findings, alongside provision of written material, have a positive impact on participants and may support changes in practice, but the evidence is less robust. [\(p33\)](#)

It is suggested that publication in academic journals is the most passive kind of dissemination, yet it is one for which researchers are rewarded by their institutions. Walter et al. note that seminars facilitating discussion of research findings, alongside provision of written material, have a positive impact on participants and may support changes in practice. [\(p33\)](#)

There is evidence that interactive approaches (e.g. development of partnerships and collaborations between researchers, policy advisers and practitioners) also facilitate the adaptation of research to local contexts. However success is constrained by *“the time and energy required to establish effective working relationships, differences in culture, goals, information needs, timescales, power, regard systems and language issues of project control and direction.”* [\(p33\)](#)

In the course of day-to-day work, practitioners and policy advisers turn to colleagues as a key source of knowledge. Interventions applying social influence strategies thus focus on interactions within policy and practice contexts rather than looking beyond them to interactions with researchers and their success depends at least partially on the actions of opinion leaders. [\(p34\)](#)

Facilitation focuses on the context within which research findings are to be utilised. It is defined in terms of provision of technical, financial, organisational and/or emotional support enabling policy advisers and practitioners to use research findings. Provision of professional development to increase research use capability is one form of facilitation. [\(p36\)](#)

Reinforcement approaches reviewed were more coercive in nature than the other approaches. Prompts and reminders (including manual and computer generated, separately and together) seem to be effective for a range of behaviours, but findings regarding audits and feedback are more varied other than for implementation of guidelines. [\(p37\)](#)

Creating the conditions to support initiatives across research, policy, and practice

Court and Young (2003) concluded that the context in which research is to influence policy development affects outcomes, and change management research emphasises the need to create conditions that support sustainability of change [\(p37\)](#).

In one initiative, facilitation and interaction mechanisms were supported through employment of an ‘implementation officer’ who worked directly with practitioners and service planners on issues related to the adaptation and replication of research recommendations and findings. The role was found to be pivotal in the success of research implementation. [\(p38\)](#)

Conclusions across health, education, criminal justice and social care sectors consistently suggest that for policy use:

- research must be translated, adapted for or reconstructed within the context of local practice.
- those who are expected to use research must have a sense of ownership of the project, programme or tools that it generates.
- individual enthusiasts or ‘product champions’ are crucial to ‘selling’ innovations through personal contact.
- successful initiatives are those in which the demands of the context of implementation has been analysed to create strategies supporting change.
- the use of research is enhanced where evidence is credible to the potential users, there is endorsement from opinion leaders and high-level commitment to the process is apparent.
- Strong and visible leadership can provide motivation, authority and organisational integration.
- adequate financial, technical, organisational and emotional support is important.
- research use needs to be integrated into existing organisational systems and ways of working. [\(p40\)](#)

Learning conversations

The policy development process is convoluted, the information needs of policy advisers are complex and neither of these areas of concern are necessarily apparent to research producers or BES writers [\(p43\)](#).

A series of ten Learning Conversations was conducted with policy advisors from all groups in the Ministry. [\(p43\)](#).

The role of research in general

For two people, consideration of research was seen as central to their roles and pervaded their work. For example,

“... it drives the way I think about conceptualising ideas and prioritising work, and making recommendations for interventions. I see it as being absolutely fundamental to the way I think and work.” (Participant 4) [\(p44\)](#)

The role of outcomes-linked evidence

Five participants indicated that they specifically seek out outcomes-linked research, although two indicated that this is not always easy. However, two participants expressed awareness that their attention to outcomes-linked evidence had increased only fairly recently, both attributing the change to BES activities. [\(p45\)](#)

The role of BES reports

While valuing the Iterative BES Programme reports as a prime source of relevant outcomes-linked research, participants saw a need to consider additional research sources. Some participants spontaneously provided examples of instrumental or direct use of BES research in decision making. However, several cautions emerged regarding uneven awareness of BES in workgroups, potentially superficial understanding by those lacking awareness of the developmental context of BES, and dangers of over familiarity with reports potentially leading to dissemination of inaccurate messages. [\(p48\)](#)

Features of BES that make it a significant source of outcomes-linked evidence

The focus on student outcomes, the trustworthiness of evidence and the emphasis on research from New Zealand are key features of BES that make it a significant source of research evidence for policy advisers. [\(p49\)](#)

The influence of BES development processes on thinking

Five responses indicated a direct influence on personal action resulting from involvement with BES development, with three people indicating that they now read research more critically. ... The evidence suggests that the BES development process reflects the interaction mechanisms and enabling climate conditions identified by Walter et al. (2005) as enhancing the relationship between research and policy. [\(p51\)](#)

BES as a change agent within the Ministry and in the sector

Within the Ministry, participants tended to agree that BES is having a considerable effect as a change agent, but while people are using the knowledge, they are not necessarily acknowledging that it came from BES. [\(p53\)](#)

As a change agent in the sector, the most concrete point to emerge from the Learning Conversations was that, participation in BES development by teachers began with personal interest but has moved to organisational commitment to the programme that provides continuity across representatives. However, some participants noted that across the sector understanding and utilisation of BES seem to be variable. [\(p57\)](#)

Conditions or contexts in which BES is particularly useful

The task contexts in which people turn to BES for information vary from broad direction setting, framing ideologies underlying action plans, motivating change and benchmarking international research against the national context are all important, but do not necessarily leave a verifiable trail. The basic condition indicating utility of BES was the high and obvious relevance of content to *current* tasks (mentioned by five participants). [\(p58\)](#)

Reducing barriers to the use of BES outcomes-linked evidence

The most prevalent personal action people took was simply to read. However, eight of the ten participants quickly noted that one reading was insufficient to build confidence or complete understanding. ... “our organisation could do is to be a lot clearer about acknowledging that people have only ever got so much time to read, and be very clear that reading is a significant and important part of our work.” [\(p64\)](#)

One set of dissemination strategies may be needed to establish the use of the current set of BES reports, but others will be required to keep interest in the programme alive over time, particularly in light of the way relevance of BES waxes and wanes in relation to the focus of policy tasks. [\(p66\)](#)

Resources and activities

Four people commented that the BES reports are densely written and a change in reading formats would be appreciated by some. Retention of the quality was however, important – the issue was *speedy*, not necessarily *easy* intellectual access to relevant content. [\(p67\)](#)

The value of highly digestible case studies was alluded to on three other occasions in interviews, particularly in making connections with the education sector. Scenarios produced for one BES and presented orally have been useful in engaging audience attention and publicising good practice. More of these together with two page summaries of research were requested. [\(p68\)](#)

The area of greatest agreement among participants, that oral presentations and discussion of BES content are useful as a first step to engagement and have a role in increasing utilisation of BES in policy development. [\(p69\)](#)

While oral transmission of information is an important factor, Participant 9 highlighted the importance of collaborative tasks in applying learning. A key feature of working together is however having purposes that converge, as might be found in cross-Ministry interest groups. [\(p70\)](#)

There were four comments with implications for organisational conditions related to time management, commitment and human resources. For example, throughout the interviews, time management was a recurring theme. [\(p71\)](#)

Half of the participants had difficulty giving specific examples of the contribution of BES to policy. **It does seem that at this point in its development, BES provides a general background noise that informs rather than explicitly guides policy.** [\(p75\)](#)

Dissemination Management Factors

Kirst (2000) notes a discrepancy between the pervasive view that policy research either does not reach or is not used by educational policy advisers and the frequent citation or acknowledgement of policy research in the US. He seeks resolution of this contradiction through an examination of the effectiveness of education research dissemination. [\(p78\)](#)

Kirst (2000) notes that decades of research point to five dimensions that influence the outcome and effectiveness of policy research dissemination efforts: the *source* of the communication, the dissemination *channel*, the *communication format*, the dissemination *message* and *characteristics of the recipient*. [\(p79\)](#)

Learning Conversation participants have drawn on first hand experience of the forums in which BES evidence features. They are now becoming sources of contextual and language translation themselves, although some clearly would not recognise themselves as reliable experts just yet. [\(p79\)](#)

The ideal dissemination strategy involves distinctive messages and multiple channels. Furthermore, the most effective formal and informal dissemination channels are the natural networks comprised of leaders and practitioners with an interest in a particular issue. [\(p81\)](#)

Research findings on effective dissemination of written materials are consistent with regard to formats: effective dissemination requires that these materials be jargon-free, brief and provide concrete illustration. Costs of information consumption rise unacceptably as potential users face the task of extracting information relevant to their setting, presenting it succinctly and interpolating the significance for their institutional needs. [\(p82\)](#)

Information, in the form of messages from research, is more likely to be used when it is timely and meets needs associated with the current phase of the policy cycle and the policy problem. The complexity of BES messages and the relations between them demands innovative approaches to dissemination formats e.g. ‘research nuggets’ directly influenced the focus of interventions in Liabo’s (2005) study. [\(p83\)](#)

Kirst (2000) concludes that the salience of recipient characteristics underscores the importance of a two-way dissemination strategy in which information providers acquire information about user needs, preferences and problems and in which, where possible, users participate in framing research objectives. [\(p84\)](#)

The Iterative BES Programme seeks to influence policy *and* practice in the sector. By far the largest proportion of actors in the education sector are teachers, whose characteristics as recipients of research documents from the Ministry need to be considered. For examples, outcomes-linked evidence is likely to be interpreted in terms of the teacher's experience, style, values and implicit beliefs of theories about teaching and learning. [\(p85\)](#)

With regard to the characteristics of media reporters, Levin (2004) observes that the accuracy of messages reported depends to some extent on policy advisers' ability to couch explanations for decisions in terms that minimise the possibility of misinterpretation. [\(p86\)](#)

Resource Framework and Specifications

The Iterative BES Programme is a multi-level, collaborative knowledge and capability building project, yet, no matter how high the quality of the research, one cannot assume that it will automatically have consistent or coherent influence on future research, policy or practice across the multiple audiences for whom it is intended. [\(p89\)](#)

While factors influencing the impact of research on policy have been identified and various models of the policy process have been discussed, the actual process by which research is integrated into policy remains rather vague. [\(p89\)](#)

There is no evidence offered in the literature reviewed that researchers, policy advisers or education practitioners share any sense of how research in general will be used. Consequently, the notion of 'using research' needs to be clarified with respect to the Iterative BES Programme. A critical step is to use Learning Conversations across the Ministry, not only to discover the information needs of policy advisers, but to invite their input to development of understanding of the research-policy-practice nexus from their experiences and knowledge of literature that resides in other silos. [\(p90\)](#)

At present a number of 'BES champions' have been identified, but there is no co-ordinated effort to take advantage of their potential as opinion leaders and contributors to an enabling climate (Walter et al. 2005). Providing them with resources that meet the needs of *their* audiences would build their confidence in conveying the complex messages of BES reports in formal oral presentations and discussions. [\(p90\)](#)

Promotion of ownership could be achieved through opportunities for varying combinations of researchers, policy advisers and other sector representatives working collaboratively on tasks associated with BES, but not necessarily part of the BES development process. [\(p91\)](#)

Formal and informal networks have been found to be important in promoting research uptake and working collaboratively across the research-policy divide achieves this by contributing to shared experiences of reality. It is therefore suggested that when issues groups are set up for a specific policy purpose, a research implementation/adviser role is included [\(p91\)](#)

Facilitation as defined by Walter et al. (2005) includes organisational support for the use of research yet throughout the Learning Conversations a recurring theme was lack of time and lack of recognition of the centrality of reading to the policy advice role. Changes in ways of working that encourage reading, interaction and reflection may assist, but are beyond the boundaries of the Iterative BES Programme to implement. [\(p91\)](#)

Social interaction is particularly effective as a dissemination tool and the Iterative BES Programme appears to be highly unusual in the degree of technical and financial support offered to enable participants from outside the Ministry to attend e.g. quality assurance and development meetings. Whether similar levels of opportunity and support are available to all Ministry employees is less clear. Holding collaborative dialogues with those in regional offices centred on issues *they* wish to address would address this. [\(p92\)](#)

Researchers *and* policy advisers should take responsibility for ensuring that research is used constructively. For example, it may be that reading *this* analysis of audience needs may promote discussion of innovative ways in which writers themselves can contribute to a range of supplementary resources. [\(p92\)](#)

A key message from the literature has been that one needs to listen to the intended audiences for research to understand their information requirements. For policy advice, Ministry Staff need to:

- be continuously aware of BES reports so that relevance to current policy tasks is apparent,
- have easy physical access to existing reports,
- have speedy intellectual access to report contents in part and as a whole for a variety of purposes, and
- be alerted to highly significant or influential evidence as it emerges from BES reports under development [\(p92\)](#)

To achieve this, dissemination materials and activities should all, on the basis of the capability building principles underlying BES, the literature reviewed and the evidence from Learning Conversations:

- respond to specific purposes of various audiences in and beyond the Ministry
- use the language of those audiences
- support translation of evidence and construction of understanding for local and wider issues
- be catalysts for further learning and exploration of BES reports
- provide *speedy*, not necessarily *easy* intellectual access to concepts and evidence, and
- provide succinct coverage of specific research evidence, yet make connections to the theories emerging from syntheses and across the various BES reports.

A resources framework is provided in terms of the needs of potential BES users, inductees, BES independent, BES occasional, BES dependent, Project coordinators and BES Champions. [\(p92/95\)](#)

The wide range of suggested two-page communications would facilitate introducing BES to users in manageable chunks but result in fragmentation of the evidence. This is a challenge in that the unifying theories resulting from the syntheses could disappear from view. To counter that, a graphic device could be developed that illustrates the key concepts of the particular BES, highlighting the concept of the Gem or Nugget in question. References to the whole report, the original research items and to related two-pagers would be included. [\(p95\)](#)

Attention to the visual format (text, graphics, overall visual complexity) is needed and departures from traditional presentations need to be piloted with readers as there are indications that innovation does not always enhance conceptual engagement. [\(p95\)](#)

Within the Ministry, the Library could play an important part in bolstering confidence in evaluating research materials and ensuring policy advisers are aware of BES as they begin seeking information on a new issue. A two-page guide to assessing evidence that prompts comparison with the outcomes linked evidence from BES could be included with the first batch of papers/references sent from the library in response to search requests. [\(p95\)](#)

Making all BES related materials available on the Ministry website would have some advantages, but would need to be accompanied by regular reminders of the URL. Putting information on a site does not equate with its use. [\(p96\)](#)

A check of the BES reports currently available on the Ministry website found that those in .pdf format make no use of 'bookmarks' that can be on-screen as aids to navigation in long documents. Similarly, Learning Conversation participants requested what amount to conceptual maps for each BES but these too are already available through use of the Document Map function within Word. [\(p96\)](#)

The value added by digital availability is widely assumed to include:

- easy physical access and ability to print as needed, thus reducing print stocks and costs,
- provision of hyperlinks between and within documents allowing dynamic searching for information specific to particular issues across reports,
- provision of glossary items via drop down boxes or rollovers so that reading is not disrupted but sense-making is enhanced,
- provision of links to relevant issues groups or learning communities,
- links to professional development opportunities,
- access to the research behind BES through the database being constructed by NZCER, and
- options to provide feedback. [\(p96\)](#)

Looking beyond the Ministry, there would also be the potential to link practitioners with others beginning empirical investigation of particular issues in their schools. Research collaborations could be supported and their findings reported through the same channel. This has the potential to contribute strongly to a culture of inquiry and to support the implementation of a research and development strategy. ([p96/97](#))

In terms of the Ministry itself, the most pressing issue is that of discussing expectations around BES – what are expectations for its use and how is that use to be demonstrated? The answers would inform selection of the set and detailed format of the suggested resources most effective in supporting generative learning among policy advisers. ([p97](#))

Chapter One: Introduction

It takes an extraordinary concatenation of circumstances for research to influence policy directly...[rather] research helps people reconsider issues, it helps them think differently, it helps them re-conceptualise what the problem is and how prevalent it is, it helps them discard some old assumptions, it punctures old myths (Weiss, 1991, cited Whitty, 2005).

New Zealand's education system is servicing an increasingly diverse student population. The resulting challenge is to develop sustainable policies and practices that enable educators to make a bigger positive difference for *all* learners in both English and Maori medium settings. As Durie (2006) states in relation to Maori education for the future, "... a system of education is required where all learners are valued not only because of their individual work, but also because of their capacity to contribute to society and future generations" (p15). Commitment to this goal was apparent in the Ministry of Education's Statement of Intent 2005-2010:

"Educational policy and practice must align to improve students' achievement. It must be informed by, and respond to information about what works. The increased use of evidence leads to clearer transparency and understanding of the critical influences that operate throughout the education system. The analysis of evidence to inform policy and practice creates a way to drive continuous improvement." (p13)

One implication of this statement is that to improve student achievement the Ministry of Education must deepen its understanding of what works, under what conditions, for whom, why and how. To this end it has invested in recent years in the development of an information and evidence base for education (Ministry of Education Statement of Intent, 2006-2011, p23). However, writing from a baseline of New Zealand experience, Wolf (2004) opines that

"... people oversimplify when they argue that improved social knowledge will lead to better policy outcomes. Not all knowledge will inform better decision making, and not all good decision-making will lead to better outcomes." (p1)

Moreover, reflecting on the power of policy to change educational practice in the UK, Hopkins, Ainscow and West (1994) observed that while policies can set directions, only teachers can provide effective teaching and therefore implementation of policy is a critical factor. They conclude that, "What is needed is 'implementation friendly' policy that is concerned with the process as well as the substance of change" (p18). An assumption that may underlie this thought is brought to attention by Alan Reid (2004) who suggests that "most education systems operate on an understanding of educators as technicians whose job it is to implement policy and curriculum products designed by others" (p3). Drawing on Darling-Hammond (2000), Alan Reid argues instead for development of a culture of inquiry in which "educators are understood as people who learn from teaching rather than as people who have finished learning how to teach" (p3). He sees "a process of systematic, rigorous and critical reflection about professional practice, and the contexts in which it occurs, in ways that question taken-for-granted assumptions" as being at the heart of a culture of inquiry (p4). At the same time, he asserts that "No education system or single institution should simply exhort people to engage in inquiry without an acknowledgement that inquiry skills need to be built thoughtfully and systematically" (p7). This systemic approach

implies that those developing policies, as well as education practitioners, require a similar culture of inquiry and skills to learn from the evidence of what works for whom, why, when and how, particularly as the ‘whom’ increase in diversity.

In this context, not only is there a need for the education information and evidence base to be extended, it seems there is also a need for innovation to strengthen the link between evidence, policy and practice. Collaborative development of Iterative Best Evidence Syntheses (BESs) aims to contribute to required extension of the evidence base in three ways:

- by synthesising evidence concerning factors influencing student learning outcomes and generating unifying theory
- by acting as a catalyst for on-going student outcomes-linked research and development in the tertiary sector, and
- by building reflective capability essential to a culture of inquiry.

However, Nutley, Walter and Davies (2003) point to a source of resistance to such innovation:

Adaptive learning routines can be thought of as those mechanisms that help organisations to follow pre-set pathways. Generative learning, in contrast, involves forging new paths. Both sorts of learning are said to be essential for organisational fitness, but by far the most common are those associated with adaptive learning. (Nutley, Walter and Davies, 2003, p. 136)

The Iterative BES Evidence-based Policy Project (EBPP) has been developed as a change-management pilot project that seeks to influence the balance of adaptive and generative learning in the Ministry of Education through an examination of factors influencing the relationship between research and policy practices. The mandate for the project is derived from the State Services Commission’s ‘Managing for Outcomes’ requirement that departments adopt a more strategic and outcomes-focused approach to planning, management and reporting and has potential to impact upon another challenge identified in the Ministry of Education’s 2005-2009 Statement of Intent:

For successful and sustainable change to occur we need to ensure that the Ministry has a consistent and coherent voice, supported by the necessary systems, processes and infrastructure when working across the sector. An internal challenge for the Ministry is to develop a way of working that facilitates strong links across the system and a more fluid exchange of information, resources, capabilities and understanding. The focus will be on moving to:

The establishment of a learning culture supported by tools and techniques that aid learning.” (p42)

The Iterative BES Programme is a key source of learning outcomes-linked evidence that could inform generative learning within the Ministry. This programme recognises the dynamics of capturing a progressively developing understanding of ‘what works in education and why’ and recognises that “Considerable work is needed ... to translate the findings into a form that can be of most use to policy makers” (Alton-Lee, 2004a, p8). Through developing an appreciation of the ways in which Ministry staff currently work with research in general and with BES reports in particular, a basis can be seen for creating a strategy to promote development of

innovative, evidence-based, implementation-friendly policy. At the same time, developing a greater understanding of the research information needs of Ministry staff and identifying ways in which these could be better met, will inform the support offered to BES researchers in writing for multiple audiences, including education practitioners.

Two key principles have driven the project:

1. An appreciative inquiry approach begins from the strengths of individuals and groups within the organisation and builds upon these (in both individual interactions and in case studies of effective organisational practice) (e.g. Thatchenkery, 1999).
2. An advocacy approach seeks to assist Ministry of Education staff in achieving *their* work goals through the use of BESs and other outcomes-linked evidence.

The EBP pilot project aims to identify from national and international literature, and particularly from empirically-based research such as that by Nutley et al. (2003), parameters of effective relationships between evidence, policy advice and practice in a variety of contexts.

The following literature review was a precursor to:

1. creating Learning Conversations across strategic sites within the Ministry of Education about the use of outcomes-linked evidence (thus identifying both strengths and information needs);
2. recommendations for the production of a pilot toolkit or set of guidelines to assist capability-building across the Ministry of Education, and
3. scoping in-depth case studies of effective use of BES to strengthen policy quality and impact (describing examples that may assist in application of outcomes-linked evidence to decision-making and factors that could improve implementation of research-based recommendations).

To provide a framework for understanding the contexts of policy advice, the literature review focused initially on the effectiveness and impact of use of outcomes-linked research evidence in policy development practices. The review was developed further to inform emerging questions as the work progressed and as a result includes references to:

- information literacy,
- managing change in institutions
- organisational learning.
- diffusion of innovations, and
- knowledge management.

With the exception of information literacy, these categories are derived from Nutley, Walter and Davies (2003). However, a 2005 UNESCO meeting of experts from economic development, health, governance and education, concluded that high levels of information literacy are a pre-requisite for researchers, policy advisers, educators and teachers (Garner, 2006). While definitions of information literacy vary slightly, there is agreement that:

“An information literate individual is able to:

- *Determine the extent of information needed*
- *Access the needed information effectively and efficiently*

- *Evaluate information and its sources critically*
- *Incorporate selected information into one's knowledge base*
- *Use information effectively to accomplish a specific purpose*
- *Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally”*
(American Library Association, 2005)

These characteristics are the foundation of organisational learning and development of a culture of inquiry that underpins generative learning and are central skills in providing policy advice.

The literature review that follows is presented in two sections, one centring on the context for and relationship between research and policy practices, and the other on communication issues that are pivotal to dissemination management. The two sections are separated by the findings of Learning Conversations within the Ministry and discussion of their implications for organisational development. This unusual approach has been taken to ensure that current Ministry experiences of using research evidence more clearly drive recommendations for capability building and dissemination management.

Chapter Two: Literature Review

Literature Review Process

While the method for this literature review has been informed by the *Guidelines for Generating a Best Evidence Synthesis Iteration (the Guidelines)* (Alton-Lee, 2004a), the purpose of the review and the nature of the available literature do not allow for strict adherence to its precepts. Consequently, it is not a Best-evidence synthesis, rather, it is the beginning of a state of the art review of a cross-sector interaction between research and policy, the principles of which are much debated, and for which local empirical evidence is limited. Every effort, however, has been made throughout the review to distinguish between opinion, general overviews, systematic overviews, case studies and large empirical studies, and to draw attention to the effects of ideologies that underlie policy development and research. In addition, principles debated by academics and practitioners are compared and contrasted to identify points of conceptual convergence.

In common with Best Evidence Syntheses, the literature review was not solely dependent upon a search of key descriptors using electronic databases. Instead a knowledgeable search approach was taken in accord with the characteristics listed in the *Guidelines* (Alton-Lee, 2004a, p34). The review endeavours

...to deepen understanding of what works in education [policy], how context is significant, what the evidence suggests can make a bigger difference to optimise outcomes for diverse learners, and what the evidence suggests about effective [policy] development approaches” (p5).

It also takes into account the BES principle that “Synthesis calls for a cross-paradigm and cross disciplinary approach to investigating educational research literature” (p7). Further, wherever possible New Zealand research has been given primacy, but the review is not entirely systematic, nor is it exhaustive. Rather, a time-limited search and review process was instigated, based on discussion of preferred information sources and content which was weighted towards

- empirical research reports and theses, theoretical debate, systematic literature reviews and evidence-based syntheses centred on the nexus of research, policy and practice.
- peer reviewed journals and books (both print and electronically published), theses, government documents including guidelines and retrospective reports.

Walter, Nutley and Davies (2005) argue the case for more extensive cross-sector learning about how best to ensure research is used in public sector policy and have conducted a systematic synthesis of evidence from health, social care, criminal justice and education to illustrate the point. Similarly, for this review, the search was not limited to the field of education. Although publications focused on New Zealand policy settings were of particular interest, literature from Australia, UK, Canada and US was included. The search was however limited to English language publications.

This broad search strategy identified a wealth of material within which priority was given to research, policy and practice interface issues and diffusion of innovation, but empirical studies were in the minority. Items were therefore selected with regard to

authority of authors and institutions and evidence of peer regard (e.g. overlapping citations and critical commentary). Additional cross-sector systematic reviews and studies were selected where it was apparent that they offered explanatory power through generalisation or triangulation to research/policy/ practice interactions in education. This resulted in exclusion of a few medical examples. Some studies provided little information from which to evaluate the robustness of the evidence but were included because they addressed relevant issues. For example, a case study utilising an unspecified methodology is reflected on by Kirst (2000) to explore factors in dissemination management. This results in suggested strategies for optimising uptake of research information that are not available from any other source.

The review is organised around a set of issues and questions that reflect information needs of several different audiences. However, initial exploration of the literature revealed that there are inconsistencies simply in naming the roles of core audience members. These inconsistencies may be the result of differences in contextual frameworks for policy analysis and policy advice, described by Claudia Scott (2003) as being shaped by the highly contested US market which differs markedly from that in New Zealand. In the US, “government is influenced by for-profit and not-for-profit research groups, consultants and lobbyists, university academics, various stakeholder groups and other self-declared experts”. Senior advisers in this context are traditionally replaced with each new federal administration, whereas the New Zealand government is characterised by “a unicameral legislature, powerful executive and an ‘apolitical’ public service (Claudia Scott, 2003, p1) which implies greater continuity.

For clarity here the key actors will be referred to as researchers, policy advisers, educational leaders, educators and teachers, with other terms used only when necessary to retain the meaning intended in the articles reviewed.

One fundamental point of definition is that relating to ‘educational policy-making’. Luke and Hogan (2005) define this as “the prescriptive regulation of flows of human resources, discourse, and capital across educational systems towards normative social, economic and cultural ends” (p1). For the purposes of this review, those complex ends are concerned with ensuring that the learning needs of all students are effectively met, taking into account evidence emanating from research on teaching, learning and student outcomes. Debates concerning other shades of meaning will be broached as context demands.

The changing context of educational policy advice– is there a gap between policy and research?

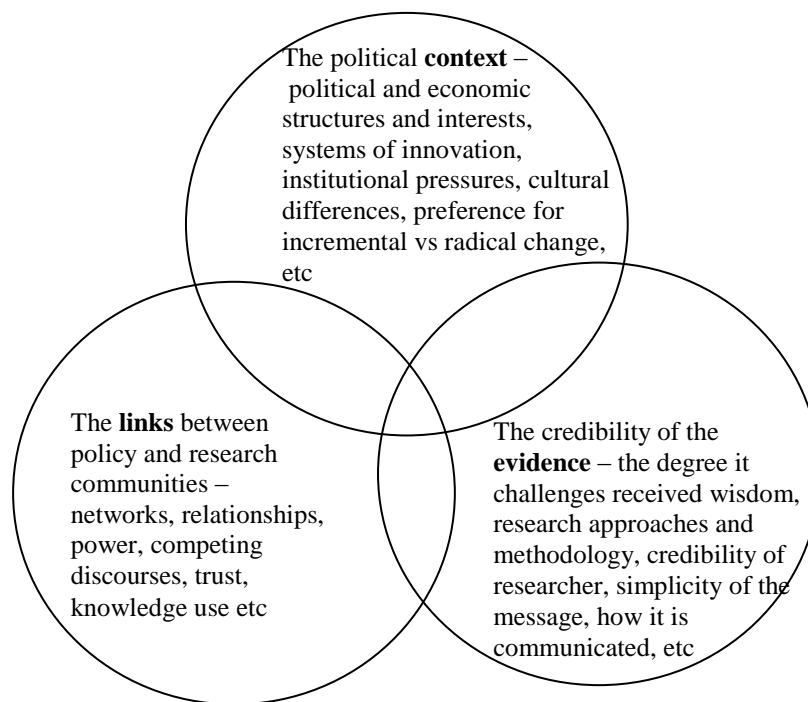
Educational policy advice is not developed or implemented in a vacuum, rather it is influenced by an array of factors and assumptions rarely acknowledged in the education literature from any one country. International comparisons have value in bringing these factors into focus. For example, Court and Young’s (2003) examination of 50 case studies in developing countries found that political context was the most important factor affecting the degree to which research had an impact on policy.

Key issues concern prevailing narratives and discourse among policy-makers; the extent of demand for new ideas (by policy makers and society more generally; and the degree of political contestation. Political resistance often

hindered change, despite the existence of clear evidence, and bureaucratic factors often distorted public policies during implementation (p vii).

Two other major themes emerged. The critical factor influencing uptake of research was found to be the nature of the *evidence* and whether the research was credible (encompassing research methodology and communication methods) and relevant (in terms of operational usefulness and problem solution). The other major theme focused on the *social context* linking researchers and policy makers and providing feedback, with issues of trust, legitimacy, openness and formalisation of networks emerging from the case studies. Court and Young (2003) summarise the relationships between these three elements as in Figure 1 below.

Figure 1: The political context, evidence and links framework, (Court and Young, 2003, p8)



This framework provides a useful tool in organising thinking about similar themes from the New Zealand perspective and the implications for providing research information to the Ministry and the education sector.

The political context

Claudia Scott (2003) provides insight into factors underlying political trends that have implications for the relationship between research and policy practices in New Zealand. Based on more than a dozen interviews with current and former senior managers and two discussion forums with current and former central agency employees, Scott documented trends in policy analysis and styles evident during the 1984-2002 period.

She notes that during the late 1980s, concerns with economic policy had given way to those centred on social policies that require greater co-ordination and coherence

across a wider range of departments and ministries. The level of challenge was compounded by the introduction of Mixed Member Proportional Representation (MMP) in 1996. This resulted in “major problems in terms of co-ordinating political support for policy developments” (p3) as the environment was no longer defined by a single government policy agenda, taking into account instead the elected government’s position as modified by multi-party consultation and coalition agreements. In this context, Scott states that

The majority party was focused on resolving policy/political conflicts and had little interest in alternative theories. There was less appetite for change, less credence given to data and more to sentiment and political considerations (Claudia Scott, 2003, p3)

Within this environment, the relationship between research and policy weakened. Concerns gradually arose to improve the quality of policy advice, as a result of which the State Services Commission (SSC) began a project to explore factors such as structures, systems, human resources and management practices that contribute to high quality policy advice. The project report, *Essential ingredients – improving the quality of policy advice* (SSC, 1999a) indicates that Ministerial perceptions at that time were that advice presented was frequently lacking in a foundation of robust information and research. Independent assessments and the frequency of requests for further information on papers were used to substantiate the claim (e.g. 18% of papers to two Cabinet committees resulted in requests for further research or information). Scott (2003), citing this report, notes identified shortcomings included “inadequate or ineffective use of policy inputs (information, research, evaluation, consultation)” and “under-investment in policy capability (including in human resource capability” (p4).

Claudia Scott (2003) also details a range of other factors that are here interpreted as potentially contributing to a gap between research and policy, including:

- an increase in policy development within parties (sometimes by inexperienced political advisers) with little input from public servants
- an increase in the extent that advice is sought outside the public sector
- increasing expectations that the role of public servants is to implement the government’s agreed policy agenda
- “some strains in terms of the ‘free and frank advice’ tradition” resulting from accessibility through the Official Information Act, and “less room for advisers to take a position that is not aligned with that of the Coalition Government” (p10).

Two other factors from Scott’s (2003) study are relevant to the use of BES reports and research evidence in general. She quotes a forum participant saying that “An increasingly post-modern society is interested in what works, not why or the theory behind it”. However, sound theory is often the foundation for longer term, transformational responses. Further, Scott observes that the Official Information Act appears to have driven an increase in consultation and government participation with the result that “lobby/interest groups have growing expectations and are using more sophisticated approaches, often offering opinions but undertaking little or no analysis” (p11). The contrast between evidence-based advice and that based on opinion can be markedly different and as Durie (2004) comments ‘what works’ “depends as much on who asks the question as who answers it” (p2). Further, the authority of advice can be difficult to determine. The SSC report (1999a) notes,

Whether or not advice is backed by quality information, the brevity required in the presentation of advice, and the fact that advice, particularly in Cabinet papers, is generally not referenced with information sources, means that there is no mechanism to assure Ministers that the assertions in advice are more than informed guesswork. (p4).

The social context

Peter Scott (1999) notes that in western countries between the 1960s and mid 1980s there was generally a much closer correspondence between researchers, policy advisers and practitioners, but since that time a gap has opened up. The existence of similar close relationships between researchers, policy advisers and practitioners in New Zealand cannot be confirmed or denied from the available literature. However, Peter Scott explains the gap in terms of a variety of social factors which are echoed by Court and Young (2003) and overlapping with the trends described by Claudia Scott (2003). Elements of each factor are recognisable in New Zealand. They include:

- changes in the nature of policy research – from “dis-interested research on reasonably long time scales with open agendas” towards “customer-driven short-term investigations, more akin to management consultancy” (p318).
- the increasing professionalisation of research in the context of higher education as masters courses, doctoral and post-doctoral programmes and research centres have been established
- geographical differences centred on differences in organisational context and models of higher education research: for example, European models have a strong policy focus particularly in developments at the macro-level, while American models have a strong focus on practice at the meso-level (institutional improvement) and micro-level (academic practice).

The consequence of the first point is taken up by the SSC study (1999a) which showed that “... policy makers react to major problems, formulate quick solutions to them, take decisions, implement these and then move on to the next set of problems. (p9). SSC sees short time frames as inhibiting in-depth research, commenting however that “if organisations do not have robust information and research capabilities to anticipate demands, they will never be ahead of the game and the quality of their advice will suffer” (p3)

Peter Scott (1999) suggests that the move towards shorter-term, market-driven research may have discouraged leading researchers in traditional disciplines. At the same time, it has not encouraged the ‘amateur’ researchers who have been displaced and perhaps excluded by the ‘professionalisation’ of research resulting from the increase in masters courses etc. The implication is that there has been a narrowing of the band of those engaged in policy-specific research. Scott does not consider the role of practitioner researchers, i.e. teachers as researchers, but he implies a difference in status between ‘professional’ and less-professional research that impacts on credibility of evidence. He concludes that,

“The demand for higher education research continues to increase as a result of national policies of reform and transformation, of emergence of new policy environments, of the massification of higher education systems and institutions and of the democratization of knowledge traditions in teaching and research. (p337)

This does not mean, however, that the research needs of policy advisers are necessarily better served.

While facets of the geographical differences to which Peter Scott refers are apparent here, O'Neill (2004) notes that according to a 2001 report New Zealand's commitment to the public funding of educational and other social science research does not compare well to other OECD countries. He observes that "The Ministry of Education is a monopoly commissioner of educational research, thus to a great extent it alone decides what research will be conducted, how, and for how long" (p1). He is also of the opinion that,

"...the teaching of Education, and the research on which this is based has always sat uneasily and struggled for credibility within university structures; while the organisation, delivery and funding of mass compulsory schooling has usually been subject to the shifting ideological whims or fancies of politicians, bureaucrats and financial controllers" (p1)

Despite this, Alcorn et al. (2004) conclude that "there is clear evidence of a critical mass of nationally and internationally excellent researchers in education in New Zealand" (p283). However they do note that a large proportion of education academics were not highly rated in the 2003 Performance Based Research Funding (PBRF) evaluation of research excellence (TEC, 2004). They explain this with reference to the bifurcated nature of education in the New Zealand tertiary sector which splits attention between theory-focused education studies and practice-focused teacher education. The former tends to focus on investigating issues relating to practice, policy and theory, while the latter concentrates on good teaching practice. Alcorn et al. state that "For some [academics] primarily involved in the professional mission of teaching rather than research, the pressure implied by the PBRF to increase research outputs will be unwelcome" (p284). They comment further that New Zealand is also characterised by very limited training in educational research methods. In this context, citing Findsen (2002) they indicate the difficulty of generating a research culture in which staff and students can work collaboratively thus developing and sustaining research capacity.

The Tertiary Education Commission (TEC) does state that, "The primary goal of the Performance-Based Research Fund (PBRF) is to ensure that excellent research in the tertiary education sector is encouraged and rewarded" (2004, p1). By 2007 this will see a complete shift in research funding allocation on the basis of equivalent full-time students to a model centred on three elements of research performance. Not surprisingly, the academic community has voiced some concern about the long term effects of this model, including that the "system risks reducing collaboration between institutions, creating narrow incentives and further marginalising applied research" (Davies, Craig and Robertson, 2004). Moreover, these authors suggest that the PBRF incentives for research dissemination, crucial to informing policy, emphasise international publication for small specialised audiences over publication in New Zealand journals and the mass media. They state that,

"Beyond the media, and a few policy journals and conferences, there are few natural forums for academics to engage with policy analysts or politicians in policy debate. Think tanks and policy workshops are rare, or come with highly charged agendas" (p1)

This echoes the SSC (1999a) conclusion that New Zealand lacks external think tanks that in other places inform government policy debate. Further, Crown Research Institutes (CRIs) and universities usually only produce research for government when specifically contracted to. “This leaves a gap in the forward-looking, environmental scanning, non-intervention specific research” (p3). The Iterative BES Programme is one example of activity that endeavours to provide a foundation of student learning outcome evidence and theories that enable educators to be forward looking.

Balancing Peter Scott’s (1999) analysis of factors influencing the research, policy, practice gap, Levin (2005) attributes the rise in interest in research in part to more educated populations in general, an increased profile of research in popular media (even if it is at times inaccurate) and greater recognition of the complex and intractable nature of some of the issues policy tries to address. These latter are the so-called ‘wicked problems’, issues with long term significance that cannot be avoided, yet have no obvious solution.

While implying agreement with Peter Scott (1999) about changes in the political economy towards “dominant discourses of markets and corporatism, economic rationalism and accountability,” Luke and Hogan (2005) expand on changes within the educational research community itself. A greater diversity of theory, method and scholarship is now acknowledged and “... there has been a rebalancing of quantitative psychometric research with a focus on qualitative and text-based work in [research] methods courses and theses ...” (p2).

Luke and Hogan see these two shifts as underpinning the current emphasis on educational performance and neo-liberal management. They note that this raises questions concerning the nature of educational performance, efficacy, outcomes, consequence, learning, knowledge and capital. This raft of questions serves to indicate that definition of terms, underlying ideologies and methodologies are a rich ground for mis-understanding between researchers, policy advisers, practitioners and other stakeholders in the wider community. Indeed, Whitty (2005) in his presidential address to the British Education Research Association (BERA) explored the extent to which the relations between education researchers and government policy advisers “is inherently one of conflict or at least a site of mutual misunderstanding” (p1). Consequently, there is an increased need for those in the education sector to develop skills in critically evaluating research and distinguishing the unique strengths and weaknesses of particular approaches in different situations and, in accord with Court and Young, (2003) underlining the need also to consider methods of communication.

The greater levels of participation in government, noted by Claudia Scott (2003), have an implication here as well, as the issues and evidence need to be understood and evaluated and used by multiple audiences with multiple purposes.

The research context

“What counts as validity, rigour and explanatory power in educational and psychological research is deeply contested” (Alton-Lee, 2004b, p10).

Despite the lack of agreement indicated by Alton-Lee, Court and Young (2003) found that the credibility of evidence was a major factor in bridging the gap between research and policy, but from the policy viewpoint, conceptualisation of ‘useful

research evidence' varies with national context in ways that facilitate or constrain application of certain methodologies. By way of illustration, Luke and Hogan (2005) note that in the UK, policies have led to the development of multi-level statistical procedures that assess, at the school level, the value added by schools to student learning, taking account of key national performance indicators, prior achievement levels and family background characteristics. Meta-analysis of large-scale quantitative studies is therefore facilitated. In contrast, in Australia previous policy decisions have resulted in a lack of consistent and comparable data sets within and across states and this absence has hindered similar national inter-school and cross-systems evaluations.

From the research viewpoint, what counts as evidence tends to be dependent upon the purpose for investigation, the methodology developed as fit for that purpose and the ideology espoused by the research user. Moreover, different methodologies may produce findings that appear to be in conflict, particularly when comparisons are made across the traditional paradigm silos (e.g., educational psychology and sociology of education), across quantitative and qualitative methodologies or across different contexts of education. Despite that, comparisons may be extremely fruitful in assisting in reframing issues and revealing relationships critical to policy development.

The complexity of research synthesis in this context has implications for both advancing knowledge through academic debate and for developing evidence-based policy and practice. For example, Goldstein and Woodhouse's (2000) discussion of school effectiveness research implies that within the research community itself, the frame of reference, expertise and methodological preferences of critics impact on the quality of debate. Of particular concern to these authors is the 'failure of some 'qualitative' critics properly to understand the nature of quantitative techniques. Paradoxically, acknowledgement of a greater diversity of theories, methods and scholarship, identified by Luke and Hogan (2005) as a factor in evidence-based policy, makes it more difficult for researchers themselves to keep abreast of the technicalities as research methodologies evolve. If the research community has limited ability to critique its own output, what chance the wider audiences?

Research synthesis

Just as multiple approaches to policy evaluation have emerged, Pawson (2002a) has suggested that that the same will be true of the research synthesis methods that form the foundation of evidence-based policy. Indeed, Davies (2000) defines 'research synthesis' as a collective term for the family of methods for summarising, integrating and where possible cumulating the findings of different studies on a topic or research question. He then defines members of the family including:

- traditional qualitative, narrative literature review (as in the current case) that attempts to identify what has been written on a subject or topic, and for which selection criteria may range from clearly specified to the haphazard or even opportunistic
- 'vote counting' reviews that focus on how many results are statistically significant in one direction, how many are neutral and how many are statistically significant in the other direction in order to identify the 'typical' finding

- meta-analysis that combines effects into a ‘pooled’ treatment effect for all studies and allows researchers to go beyond the limitations of single studies to establish consistencies across large, aggregate studies
- best evidence synthesis that demands that reviewers apply consistent, well justified and clearly stated *a priori* inclusion criteria for studies to be reviewed
- meta-ethnography that attempts to summarise and synthesise the findings of qualitative studies, especially ethnographies and interpretive studies.

Each of these approaches has strengths and weaknesses that may not be apparent to readers, especially in summaries or communications that do not reveal the type of synthesis carried out. Further, as Davies (2000) says, teachers, learners, parents and educational administrators tend to have particular and context specific concerns about education, but systematic reviews usually provide only generalised overviews, this in turn may lessen their apparent relevance.

‘Realist synthesis’ (Pawson, 2002b) is a sophisticated additional member of the family of methods that may better meet the diverse needs of the audiences identified by Davies. Its purpose is to extract information concerning what “works for whom in what circumstances”. Rather than endeavouring to identify the ‘best’ approach in terms of exemplary cases (narrative review approach) or ‘best buys’ (meta-analysis), the aim is to develop “a ‘tailored, transferable theory’ (this programme theory works in these respects, for these subjects in these kinds of situations)” (p342). The strength of realist synthesis is that it takes what Pawson refers to as a ‘generative approach’ to causation, revealing the complex factors that facilitate or inhibit programme success. However, it produces just the kind of conditionally constrained research results that Kirst (2000) and Levin (2005) report as sparking resistance from non-researchers. The consequence is that not only is it essential that the terms ‘research synthesis’ and ‘systematic reviews’ are defined and underlying assumptions made apparent, but that communications strategies need to be developed to assist the various audiences in drawing valid conclusions and translating the research findings to their own context. Court and Young (2003) found that across 50 case studies, policy uptakes were greatest where influencing and communication strategies were in place from the beginning of research programme. Communication and dissemination issues are explored later in this report, following consideration of Learning Conversations conducted within the Ministry.

Iterative Best Evidence Syntheses

So where is the Iterative BES Programme positioned within the family of research synthesis methods? What distinguishes it from other incidences of best evidence synthesis? Its characteristics are discussed in terms of Court and Young’s (2003) framework of political context, evidence and links.

Context and Purposes

For a full account of the origins and purposes of the Iterative BES Programme, see Alton-Lee (2005). In brief, the programme originated in the “need for a community and system development to be more responsive to diverse learners” (p2) that was at least partially prompted by recognition that New Zealand’s students show relatively high levels of disparity in achievement (PISA study, OECD, 2001& 2004). Its prime purpose is “to support sustainable educational development whereby a whole

education system and its communities strengthen a range of desired outcomes for all learners through iterative processes of shared knowledge building and use” (Alton-Lee, 2005, p1). The BES iterations are:

intended to deepen understanding of what works in education, how context [of teaching and learning] is significant, what the evidence suggests can make a bigger difference to optimise outcomes for diverse learners, and what the evidence suggests about effective educational development approaches (the Guidelines, Alton-Lee, 2004a, p 5)

Evidence

A critical distinctive feature of the iterative BES approach is that at the outset it brought together

“leading New Zealand educational research methodologists working from different perspectives to forge agreement about what counts as validity, rigour, explanatory coherence and power, adequacy and usefulness to inform policy and practice” (Alton-Lee, 2004b, p11).

The programme is characterised by a rigorous pluralist approach to research design and methodology in terms of the studies synthesised. As described by Davies (2000), this is achieved through provision of highly consistent, well-justified and clearly articulated criteria for selection of studies through the *Guidelines for Generating a Best Evidence synthesis iteration*. It builds also on strengths of meta-ethnography with respect to inclusion of qualitative as well as quantitative research. However, it is based in realist synthesis (Pawson, 2002b) as extended on the advice of Associate Professor Haig of Canterbury University. The BES programme has additional distinctive characteristics that are part of its fit-for-purpose approach in that by design its processes are:

- geared to contribute to capability building in research and development,
- aim to achieve policy relevance, and
- promote accessibility for educators (Alton-Lee, 2004).

Further, the BES programme seeks to be evidence-based concerning understandings of and approaches to educational change in addition to its focus on what works for learners.

Since the impact of changes in policy settings in the wider communities are also of concern, BES echoes elements of Ellwood’s (2003) dynamic analysis of long term effects (see later), although at this point the longitudinal data required for isolation of policy effects may not be as rigorous as one would like. As will be seen, networks and linkages between researchers, policy advisers, practitioners and the wider education community are contributing to the continuing evolution of methods.

Overall, Luke and Hogan (2005) rate New Zealand’s Iterative BES Programme as the “most comprehensive approach to evidence”, noting that,

“the willingness to consider all forms of research evidence regardless of methodological paradigms and ideological rectitude, and its concern in finding contextually effective, appropriate and locally powerful examples of “what works” is the distinguishing feature of this approach” (p6).

Based on their own work on systemic reform of curriculum and pedagogy, Luke and Hogan support this approach ahead of that taken, for example, in the US. They state categorically that they share with Alton-Lee (2004), the core assumption that:

“[Contextual variables] can be optimally studied through a rigorous multi-disciplinary social science – and not narrow, selective psychometrics – that examines socio-demographic data, data on the contexts of schools and teachers, studies of face-to-face pedagogy, and a broad array of educational outcomes.” (Alton –Lee, 2004, cited by Luke and Hogan, 2005, p6.)

The approach is focused on what the Luke and Hogan describe as “the complex, multi-levelled and multi-mediating ‘black box’ of everyday student/teacher pedagogical interaction around knowledge, artefacts and text” (p12). However, unpacking that black box, interpreting and communicating the evidence for multiple audiences, has its challenges.

Links – feedback, communication, and relationships

The multiple audiences represent not only those closely involved in the education sector, but also other government agencies and, on occasion, proactive city councils. Relationships between a wide range of stakeholder representatives have been forged through opportunities to discuss concepts, monitor progress and provide feedback to BES writers. Unusually, feedback to writers involves researchers, policy advisers, teacher educators, teacher unions and practitioners, as well as international experts, critiquing work in progress rather than commenting on final reports. The iterative nature of the programme means that as evidence within ‘black box’ of student/teacher interaction is expanded and unpacked, members of this community contribute to the evolution and refinement of what counts as valid, rigorous evidence across their various concerns and the processes underlying the programme are transparent.

Currently, BES reports are released in print form, which are distributed on request, and are available on the Ministry’s website. However, although they are the focus of a continuing dialogue for a nucleus of the education community closely involved in their development, the vast majority of that community comes to the reports without necessarily having clear understanding of the characteristics that distinguish iBES from other forms of research synthesis. Responses to the complexity of the findings have prompted discussion of strategies for use, to which the EBPP intends to contribute through developing understanding of how BES reports are currently used in policy advice and through this review of factors impinging on uptake of research in policy and practice.

Evidence-based or evidence-informed policy?

Having examined three contexts of change that impinge on the use of research the nature of policy advice now comes into focus.

The extent to which policy decisions are evidence-based or evidence-informed is widely debated in the international literature, with differences of opinion often exacerbated by cross-disciplinary mis-understandings. The central issue according to Edwards (2000), concerns the degree to which research is expected to provide *direct guidance* about effective practice in teaching and learning in schools, or *‘informs’* through increasing understanding of practices, processes and institutions.

Examination of the debate from opposing positions (e.g. Hammersley, 2005 and Chalmers, 2005) suggests that distinctions are due to opinions about the nature of evidence and the role of judgement in its interpretation and application. However, there is agreement across perspectives that “although good research is essential for improving policy and practice, it is insufficient” (Chalmers, 2005, p229). Thus there is acknowledgement on both sides that a wide range of factors, including personal experience in policy-making and professional practice, needs, resources, priorities and preferences, influence policy. Although the international literature is not explicit, and the New Zealand literature reviewed remains silent, one gets the feeling that some discomfort surrounding the use of the two terms arises from a popular perception that ‘evidence-based’ policy decisions imply rigid application of particular types of ‘evidence’ to the detriment of other kinds of ‘evidence’ (e.g quantitative rather than qualitative, academic research over practical experience). On the other hand, there is a suspicion that ‘evidence-informed’ is a ‘soft’ option, permitting claims of taking account of evidence that may be difficult to substantiate.

Logically, regardless of which term is used, one might expect to be able to audit the policy process for evidence of research use. However, ‘research use’ and the policy process are less amenable to logical decision-making than one might expect. Both educational practice and policy advising are described as having strong leanings towards ‘craft’ models (Alton-Lee, 2005; Hattie cited Salmond, 2003; Claudia Scott, 2005) that do not necessarily require engagement with research on pedagogy. In accord with the *Guidelines* (Alton-Lee, 2004a) the term ‘evidence-based’ will be used throughout this report, but should be understood to include a wide range of sources of evidence and pluralistic research methodologies.

Pawson (2002a) suggests that the ‘current explosion’ of interest in evidence-based policy is the result of a concern to ‘learn from the past and Chalmers (2005) provides a compelling reason:

“Every year... each of over half a million British children embarks on more than 15,000 hours (Rutter et al., 1979) of compulsory educational treatment and childcare in our schools (Fitz-Gibbon, 1999). It is inconceivable that some of this treatment is not doing more harm than good, possibly on a massive scale. Surely it is important to find out how to protect children and students from the adverse effects of practices and policies based on inadequately tested theories.” (p239)

Claudia Scott (2003) attributes current moves in New Zealand towards more rigorous and robust policy analysis, monitoring and evaluation to the evidence-based policy movement itself. She asserts that a requirement for value-adding policy advice is a foundation of well-argued policy frameworks with research-based analysis informing recommendations. In illustration, she cites evidence from a study by Behm et al. (2000) distinguishing between *transactional* and *transformational* policy skills. Transactional skills relate to delivery of factually correct, well-informed policy products, whereas transformational policy advice goes beyond immediate facts and conclusions to create more innovative advice that combines vision, political awareness, risk sensitivity and overall understanding of the government’s aspirations. Scott indicates that what she terms “high performance advising’ will be fostered by a transformational approach to policy development and enhancing opportunities for strategic thinking and conversation. She refers to the Liedtka model in which

strategic thinking is characterised by five elements: a systems perspective, intent focus, intelligent opportunism, thinking in time and a hypothesis-driven approach (Lawrence, 2003, cited Scott 2005). She states that, “Strategic thinking questions underlying assumptions and parameters and is sometimes regarded as analogous to double-loop learning... at its best [it] disrupts status-quo-driven thinking by creating a gap between today’s reality and a more desirable future” (p13).

Based on interviews with Australian ministers and senior officials, Behm et al. concluded that public servants are quite proficient in transactional policy skills, but less so in transformational policy skills. While a shift towards transformational policy advice has raised concerns in some quarters, Claudia Scott (2005) states that the model has found favour with senior managers in Australia and New Zealand as promoting a more strategic approach to policy development. However, determining whether policy advice springing from transactional skills is evidence-based is likely to be easier than that based on transformational skills for the very reason that the latter demand going *beyond* the evidence, preferably without running counter to it.

Claudia Scott (2003) does not comment on New Zealand policy advisers’ transactional and transformational skills but notes that the ‘capabilities’ problems identified in the SSC (1999a) report need further examination as they could be a function of for example, individual skills, organisational capabilities, changing public expectations concerning the role of policy analysts or the advent of MMP. As a result, moves towards transformational policy development and demands for greater rigour in a policy environment that is increasingly complex are likely to require a wide range of strategies focusing on capability building and change management. The Iterative BES programme contributes to those strategies through its aim to build capability and to act on evidence concerning change management within a policy context.

Exploring the forces contributing to the perceived gap (or gaps) between research, policy and practice may assist in formulating some of those strategies.

Factors in the research-policy-practice gap

In an opinion piece for the *Social Policy Journal of New Zealand*, Wolf (2004) suggests that research can fail to be policy relevant when too little attention is paid to the ‘why’ and ‘how’ of policy change in the real world. She suggests that conflation of ‘information’ with ‘evidence’ makes it difficult to discriminate between problems of availability and those of relevance.

In New Zealand, the ‘availability’ (of information) problem predominates, expressed as either a lack of New Zealand specific information, or a lack of ways to make better use of a flood of mostly international information ... an ‘evidence’ problem is apparent when very little of the vast stock of information available makes its way into policy arguments... or where the information that is asserted in support of a policy decision is unpersuasive (p2).

According to Wolf, setting priorities to improve the availability of New Zealand information is a common response to this situation, as reflected by the Ministry of Education’s investment in the development of the information and evidence base for education (*Ministry of Education Statement of Intent, 2006-2011, p23*). However, despite indicating that increased availability of social knowledge does not necessarily

lead to better decision-making, Wolf (2004) does not consider the alternative explanation that research evidence is perceived as ‘softly spoken’ because, “empirical inquiry simply cannot make its voice heard amidst the clatter of other, political imperatives on policy making” (Pawson, 2002c, p227).

Assuming the availability of policy-relevant evidence, Walter, Nutley and Davies (2005) observe that “active uptake in policy development ... rarely occurs unaided” (p336). Recognition of this has resulted in a range of initiatives in a variety of sectors to improve the connection between research, policy and practice. Ironically however, Walter et al., in a highly systematic and extensive synthesis of studies from health, education and criminal justice, state that many of those initiatives are themselves poorly informed by what is currently known about promoting better use of research. One intention of this BES Evidence-based Policy Project is to ensure that the Ministry of Education’s BES programme is well-informed and can promote better use of research.

In accord with Walter et al.’s observation, a case study report by Kirst (2000), states that “Research can influence policy, but it is not easy or a direct line from study results to policy use” (p389). Kirst suggests that this is because education policy research is unlike research in hard sciences such as chemistry – often it identifies *probable* outcomes and *general* principles that have *conditional* application in various social settings. Consequently, while education researchers may focus on producing significant, long-term change in people’s behaviours, thinking and abilities, policy advisers have to make difficult decisions concerning allocation of resources to support those changes while the research is largely silent on the most appropriate choices.

Levin (2005) suggests the problems in this relationship are easier to understand if one actively acknowledges that researchers and policy advisers inhabit different, but connected worlds. Account needs also to be taken of a third influential group consisting of the media, think tanks, lobbyists, and “policy entrepreneurs” (Mintrum 2000, cited Levin 2005). In his model of interactions between these groups and the general social context of all, Levin does not distinguish between policy advisers and politicians; however, Claudia Scott (2005) does, drawing attention to the roles and timeframes within which policy advisers and politicians operate. Going a step further, Hawke and Wintringham (2005) state that,

“The field of academic research and teaching must encompass the understandings of society held within the Government, where the latter is comprised of both politicians and officials. And it must include understanding the constraints which are imposed on the Government by other sectors of society, notably business entities, non-governmental organisations and bodies of public opinion” (p3).

They also see a requirement to take account of strong pressures arising from Ministers’ needs to respond to issues that have come under public scrutiny. Add to all these considerations the challenges of day to day educational practice and implementation of change management in schools, and it is little wonder that Levin (2005) concludes that people move between contexts and their relationships “run in multiple directions” as they actively construct knowledge in their own settings.

He emphasises that,

“An important implication of this conceptualisation is that the gaps and misunderstandings between researchers and users do not arise from people’s faults, but from the realities of their contexts” (p616).

It follows that understanding those realities may assist in the development of strategies within the BES programme to facilitate communication and co-operation between them. This view complements that of Whitty (2005) and Kirst (2000) who identify ‘understanding the characteristics of research recipients’ as a key factor in effective diffusion of research.

Characteristics of policy advisers’ and researchers’ realities

Mutual mis-understanding is reflected in Levin’s (2005) list of complaints about educational research from policy advisers, who see research as heavily qualified by conditional constraints and irrelevant to their concerns. Levin points to documentary evidence from France, Britain, USA, Canada and Australia to indicate a sense of dissatisfaction with educational research, some of which comes from within the research community itself. However, he also reports researchers’ complaints about policy advisers, including a suspicion that the knowledge researchers generate is subject to the predispositions and agendas of policy advisers, with the result that it is not read, understood or used, or may even be used in a manner that distorts findings. Court and Young’s (2003) findings would point to the need for building a sense of trust here.

Hawke and Wintringham (2005) indicate another factor potentially underlying general dissatisfactions here in New Zealand.

“Even when policy managers have a broad appreciation of research, and when researchers want to contribute to public issues as well as attract public funding, the coincidence of agendas tends to be limited by the difference in motivation” (p3).

More specifically, from the policy standpoint, Peter Scott (1999) states that criticism of the relevance of research to policy and practice takes three forms: focus, procedural and presentational. There are claims that the topics researched address the wrong themes and topics, that research projects take too long and therefore lose currency for policy purposes, and that language used in presentation is inaccessible to non-academic audiences. In a study of knowledge transfer in the New Zealand State Sector, Cranefield (2005) similarly found that abstract, technical, and ambiguous language was a powerful barrier, particularly when the words used had meanings that were different to their common usage, or were the same or similar as existing organisational terminology.

Levin (2005) reveals some of the tensions affecting policy advisers, both in relation to Government and to research. The first set of tensions is between planned policy platforms, external political pressures, changing circumstances, unexpected events and crises.

Current policy has a certain momentum, thus an incoming government has to address some issues that do not match its preferences or plans. Claudia Scott (2005) makes a similar point adding that departments may be ‘addressing ambitious policy outcomes involving multiple, often conflicting goals’ (p11) in situations where there is little

agreement about the nature of the problems. Against this backdrop, she states that public servants in New Zealand report that design of new policy is a lesser focus of their work compared with implementation and consultation and that some suggest that the policy environment has discouraged innovative approaches, particularly for sensitive policy issues.

Furthermore, Levin observes that “governments have to be in whatever businesses the people see as important.” People not only expect the government to deliver rapid responses on a range of sometimes conflicting issues, they may not be overly consistent in their demands. Levin comments also that “as most people get their information about public events from the mass media, an issue that is played up in the media often becomes something that a government must respond to, regardless of its centrality to policy or plans” (p618). To highlight the uncertainty of well-laid plans, Levin cites Dror (1986) “at any given moment there is a high probability of a low probability event occurring. In other words, surprise dominates” (p 618). Levin suggests that the events of September 11, 2001 are the perfect example of how plans are derailed by the unpredictable.

This leads to the next tension – there is never as much time as politicians and policy advisers would like to think deeply about issues. Important decisions may need to be made on the basis of partial information and the standpoint of public attitudes and political implications. Levin suggests that the sheer pressure of events is such that, even with the best intentions, it is difficult to ensure that there is time for monitoring effects of these decisions. At the same time of course, mistakes can be politically expensive. There is therefore a need for timely and extremely sound information presented in a manner that assists policy advisers in evaluating the relevance and reliability of the evidence on which it is based.

A third tension originates in the nature of democracy. Assuming that policy advisers and politicians are not personally dismissive of research or unable to comprehend the nuances of methodologies well, Levin (2005) suggests those on opposite sides of parliament have different purposes for considering research. For example, the opposition may be committed to demonstrating how ill-advised particular actions are. Levin speaks from personal experience when he reports that permission to release a research report was withheld by a Canadian Minister because, “You don’t ask a dog to fetch the stick you use to beat it” (p621).

The contrasting cultures or realities of researchers and policy advisers are further illuminated by Ellwood (2003) who reflects on the “schizophrenic impulses” he experienced as an academic working in the world of policy:

- Policy advisers focus on values and ideology that are central to democracy, whereas researchers are supposed to seek ‘truth’ and are often suspicious of ideologically driven findings, to the extent that ideological adherence can undermine academic credibility.
- Politicians pay particular attention to the interests and concerns of those most loyal to the party and its candidates, while researchers value independence above all.
- Politicians and policy advisers want to get laws passed or policies adopted, while “researchers fantasise about creating a new idea or insight that fundamentally reshapes the way in which people explore issues” (p8).

- Time is of the essence for those in policy yet ‘researchers don’t even seem to have timeliness as a value ... truth and good ideas cannot be rushed’ (p8).
- Simplicity and certainty help explain and sell policies, minimising exploitation of ambiguity by opponents and the media, yet the truth is rarely simple and research results are always ambiguous. In contrast, the researcher draws attention to limitations of studies, and delights in the complexity and richness of findings.
- Governance always involves compromise across a range of factors while “researchers stand on principle above all else” (p8)

Moreover, the operational details of policy and implementation are often of little interest to researchers. However, Ellwood notes that few ‘law-makers’ spend much time on thinking about implementation either. It is not clear whether he is referring to policy advisers in this statement.

From the perspective of evidence-based management, Pfeffer and Sutton (2006) sum up the challenges of implementing evidence-based approaches to decision-making:

- there is too much evidence,
- there is not enough *good* evidence,
- the evidence doesn’t quite apply,
- reward systems may lead people to mislead others as their purposes differ,
- we mislead ourselves by ignoring evidence that goes against our own beliefs,
- implications of a ‘cure’ may not be fully considered yet may outweigh the expected advantage, and
- good storytelling is often more effective than evidence.

Moreover, Chalmers (2005, p239) states that

“...uncertainty and humility among policy advisers, practitioners, activists and researchers are the preconditions for wider endorsement of [evidence-based decision making]. Progress will be slower than it need be when influential people – whether practitioners, academics, activists or politicians – lack the humility to acknowledge that their interventions in the lives of other people may do more harm than good, and continue to believe they can rely on theoretical arguments, unsupported by reliable empirical evidence, to guide decisions in policy and practice. Theories may well seem an impeccable guide to policies; but what matters is whether it can be shown that acting on them in practice does more good than harm” (p239).

Research dimensions of the research-policy divide

Davies (2000) comments that some academic researchers may not see that policy issues and their resolution are their business at all, while others think that addressing issues such as the effectiveness of educational policy and practice is a legitimate task of academic research. Ellwood (2003) observes that,

“...to many researchers, coming up with an idea that is powerful enough to shift both the intellectual and the policy dialogue is the ultimate dream – evidence of real impact. But researchers whose ideas do help shape the debate often become quite controversial - precisely because they are influential” (p22).

He comments further on the scarcity of researchers able to generate big ideas and engage in the detail of developing sound policy. More basically, Lynd (1930, cited Edwards 2000) insisted that social scientists had a duty to be ‘troublesome’, to disconcert the habitual arrangements by which we live and to demonstrate the possibility of change. Ellwood (2003) agrees, declaring that “one of the critical roles of scholarship is to frame the way in which people think about a problem, its causes and its consequences” (p11). He recognises that the news that researchers have may not be what the policy maker wants to hear, but “Ignorance of the real behavioural forces is not bliss” (p23).

Alignment versus independence

Despite the marked differences in perspective described earlier, Ellwood (2003) believes that good policy will be the result of politicians (*sic*) and researchers working together, since researchers can change perceptions of problems and the values associated with policy, but policy advisers have better insights into influencing bureaucracy and constituents. Thus establishing a variety of working relationships based on mutual trust and respect could result in enormous gains, if the timeframe and other tensions can be accommodated. However, while working across the research-policy boundaries and partnerships can increase trust and understanding, Ellwood (2003) indicates that there are risks on both sides. As a researcher himself, he indicates that the researcher is likely to be more loyal to his or her ideas and principles than to a politician when compromise is required. He also suggests that a researcher who gets too closely involved with government officials or programmes may be suspected of “subjugating his or her principles to maintain influence with the party” (p9). The consequences of loss of research independence is alluded to frequently in the literature (Edwards, 2000; Goldstein & Woodhouse, 2000). For example, Edwards (2000) notes that researchers have, on occasion, been captured by a politically dominant discourse, narrowed their horizons in response and, as they have taken up statements of political intent, have documented how that intent was carried out, and how it was or was not working – the example being ‘marketising education’ in the UK. The point is that educational policy can be influenced by research findings, but what *gets* researched may also be influenced by politics.

Goldstein and Woodhouse (2000) draw attention to the other side of the coin, the ‘capture’ of research findings by policy advisers. The ‘enthusiastic espousal’ of School Effectiveness research, or at least elements of it, by New Labour in UK has, in their view, been an important factor in arousing criticism of the field. The school effectiveness research methodology was somewhat contentious in the first place and this uneven uptake in political realms of elements taken out of context is seen as feeding criticism. The implication for the BES programme, despite its highly transparent methodology, is that mixed or inaccurate messages may eventuate from it simply because of uneven or inappropriate emphasis on particular findings or recommendations. Further, just as Goldstein and Woodhouse called for a degree of distancing the school effectiveness research programme from government through more independent funding, the BES programme needs to retain and make transparent the academic integrity of its writers. Rigorous peer review, both within the development of a BES and in the context of conferences and academic publications are part of a process to ensure that academic integrity and independence is demonstrable.

While the need for independence of researchers is recognised, Salmond (2003, p2) states that “Research should ask what strategies deliver better social and economic outcomes for them, trial initiatives in a systematic fashion, and report the results without fear or favour”, in contrast, in the world of the policy-maker, the direction, and even at times the outcomes, of research may quite properly be controlled ‘in the public interest’ (Edwards, 2000).

Research can influence policy – the case of the Numeracy Development Project

Given the complexities of the realities described above, it is not surprising that the SSC (1999) report identified the shortage of “policy advisers and managers able to bridge the science/policy divide” as a factor contributing the difficulties of sifting and evaluating information (p3). Despite this however, a positive relationship between research, evaluation and policy is evident in development of the Ministry of Education’s numeracy policy which aims to improve student achievement in numeracy through building teacher capability (Higgins, Parsons & Hyland, 2002).

The project through which this is to be achieved is consistent with and has links to the government’s literacy and numeracy project, the assessment strategy, the development of exemplars, the curriculum stock take, web site development and development of curriculum support materials. The context in which it originated was strongly influenced by converging evidence from several sources. An Education Review Office report (1997), the Third International Mathematics and Science Study (TIMSS) report, and the National Education Monitoring Programme (NEMP) all highlighted students’ poor performance in mathematics. A Taskforce was therefore set up to provide advice on improving teaching of mathematics and science and to identify the kind and level of support needed by classroom teachers to make curriculum reforms work (Higgins et al., 2002).

Key issues identified by the Taskforce included developing teachers’ pedagogical content knowledge, improving teaching quality and confidence, providing resources to support mathematics teaching and learning, making research information more readily available and accessible to teachers, and emphasising the importance of mathematics education prior to school entry. Evidence from literature covering maths education, effective teaching, teacher learning, professional development and educational change all helped refine the focus of the Numeracy Development Project. While international literature contributed to knowledge of developing children’s understanding of maths however Higgins et al. (2002) note that it was important that the diagnostic tools and number framework to be used throughout the project were appropriate to New Zealand.

Empirical evidence from pilot and exploratory studies focused initially on professional development issues but that focus was subsequently refined. The quality of implementation was closely monitored by the Ministry of Education through milestone reports and site visits and Higgins et al. note that

“Although the implementation phase existed concurrently with the phases of policy formulation and policy accountability (or evaluation), the phase was distinguished by the order and logic arising from the nature of the

infrastructure setup. This involved the alignment of difference aspects of the policy process through formal and informal mechanisms” (p166)

Since the Ministry alone could not address the issues identified by the Taskforce, a deliberate strategy for inclusion of a wide maths community was required. As a result, academics, teacher educators, national and regional co-ordinators, facilitators, principals and teachers were involved as policy actors who contributed to and used the policy as it evolved. There is evidence that for the policy actors ‘implementation’ has been distinguished by an emphasis on them taking a key role as “policy mediators”. Higgins et al. conclude “...Talking to teachers at a really practical level about how to implement [the Numeracy Development Project] has been really critical” (2002, p166). They suggest that the success of the project has rested on the “explanatory framework that gives direction for responding effectively to children’s learning needs and the use of the diagnostic interview that focuses on children’s mathematical thinking” (p166). In addition, the professional development has taken place in the teachers’ classrooms’. All professional development facilitators participate in six days of national training a year and meet regularly in regional meetings. They are also provided with professional readings and opportunities to share experiences. Aspects of the project are also included in initial teacher education.

Overall, Higgins et al. report that the strategies for involving the maths community have resulted in the development of a learning community characterised by high levels of trust, confidence and ownership. “The rapid growth of the project has highlighted the importance of articulating a vision, sharing the history and underpinnings of project development with the people involved” (p168). This finding is in accord with Salmond (2003) who, in the context of the 2003 Social Policy Research and Evaluation Conference, opined that “The interests of those at the receiving end of policies and strategies must be at the forefront of research into social issues” (p2). Similarly, the approach seems to be providing ‘implementation friendly’ policy that is concerned with the process as well as the substance of change (Hopkins et al., 1994). It also accords well with Court and Young’s (2003) findings that putting influencing and communicating strategies in place at the beginning increases impact of research on policy.

However, while factors concerning context, credibility of evidence and links and feedback, as described by Court and Young (2003), are apparent in Higgins et al.’s account of the Numeracy Development Project, the parallel evaluation of the impact of policy implementation set this case study apart. “From the beginning the Numeracy Development Project was conceived as a dynamic initiative based on evidence.” (Higgins and Parsons, 2005, p9). Over four consecutive years, annual monitoring studies reveal compelling evidence of raised student achievement and improved teacher knowledge, skills and confidence in mathematics (Higgins and Parsons, 2005). That evidence has been collected as an integral part of project implementation in a process Patton (cited Higgins et al. 2002) terms “intervention-oriented evaluation”. The emphasis has been on enhancement of programme outcomes through meaningful data collection that simultaneously meets needs of the range of users of evaluation information, judging merit or worth and generating knowledge.

Higgins and Parsons (2005) conclude that

Policy review and refinement are on-going, informed by formal and informal feedback generated through the project’s collaborative process, and the

preliminary and final evaluation findings from the annual evaluation/research cycle. The project's developing evidence base and increasing depth of mathematics education community knowledge provides a strong platform for strategic policy development. ... Evaluation and research findings from the project have captured the changes occurring in the teaching of mathematics on a nations scale" (p9).

A second case study of research impact on policy is included here since it illustrates the way research evidence can be revisited and result in major changes in the direction of policy. No similar studies have been identified in New Zealand, but current media coverage of poverty suggest it may have additional relevance as a model. In the context of a 1994 study by Bane and Ellwood in the US, Ellwood (2003) traces a major shift in perspectives on poverty. Beginning with the question: how long will single parents stay on welfare benefits? Ellwood and Bane initially concluded that nearly half the single parents receiving welfare benefits will require them for two years and only 14 percent will require support for ten years or more. Questioning could have stopped there and confirmed that welfare assistance was meeting short-term needs. However, when *episodic* need for welfare assistance was considered, the same dataset showed that only 8.5% will be independent within two years and 56.6% will remain on welfare for 10 years or more. This apparently contradictory conclusion drew attention to the issue of how people move in and out of poverty and directed both policy advisers and researchers to focus more on facilitators and inhibitors rather than the allocation of benefits. As a result, attention moved to employment rather than provision of benefits. Ellwood (2003) refers to this kind of approach to research and policymaking as 'dynamic analysis' that is founded on collection of longitudinal data that facilitate isolation of causality and behavioural change.

A similar shift towards dynamic analysis may be needed to resolve the conflict underlying the comment from Salmond (2003) that,

"Policy advisers congratulate themselves on increasing Maori and Pacific participation in tertiary education, resolutely ignoring the fact that most of this is in short-term training courses, not in those degrees that lead to high-income jobs or professions." (p4)

The timeframe required for collecting longitudinal data that affords dynamic analysis in education runs counter to the timeframes within which policy advisers usually work, but projects such as the Numeracy Development Project with annual research/evaluation cycles could contribute to future identification of unexpected trends.

A caution regarding unevenness in impacts of research on policy comes from Whitty (2005). Referring to the importance of formative assessment and the concept of assessment for learning, he identified a research synthesis by Black and William as being particularly influential. However, he suggests that in England, it seems that the research has influenced *teachers' practice* more than it has *policy*. This points to a differential 'take up' of research information based on perspective and purposes of the users. As a further example of positive effects of research on teaching practice Whitty draws attention in general terms to those teachers undertaking classroom action research who have changed their practice in response to the evidence from their own research and their exposure to a wider research literature.

Ironically, in England, the government decided to phase out its Best Practice Research Scholarships designed to encourage and enhance this process before it had received the results of an evaluation designed to consider its effectiveness. (Whitty, 2005, p9).

In more general terms, Levin (2005) cites studies from Australia and the US which found that large majorities of school principals and policy advisers believe that research actively, but indirectly, informs their work. He also gives nine examples of issues in which research has played a substantial role in shaping policy and practice, ranging from understanding the importance of early childhood experiences in shaping later outcomes, to realising the importance of providing high quality professional development for teachers. However, all of the examples cited have emerged over a considerable length of time and as Levin and others point out, they are not the result of a simple linear relationship between research, policy and practice. To understand why not, one needs to take up Wolf's (2004) challenge to pay more attention to the 'why' and 'how' of policy change in the real world.

Translating research into policy and practice

Weiss (cited Kirst 2000) notes that evidence concerning the way that research findings percolate into and through the policy process does not necessarily imply that decision makers act upon what any specific research has to say. There is agreement in the literature (e.g. Hammersley, 2005; Chalmers, 2005; Luke and Hogan, 2005) that many sources of information influence policy decisions and that "[research] will often be one of the less important factors" (Levin, 2005, p621). However, Reid (2003) could find no significant international or national body of academic research on the actual process of research integration with policy as seen from the policy advisers' viewpoint.

In her masters thesis, Fiona Reid (2003) suggests that the generally reported calls for greater timeliness, relevance, availability, comprehensiveness, reliability and replicability of research imply adherence to a rational decision model of policy making in which research has a direct and specific influence. This so-called 'engineering model' of the relationship is one of four described by Sylva, (2000, citing Smith and Smith 1992) and was thought largely to have been abandoned in the 1980s, although it may be lingering in the minds of some.

Hammersley (2000) critiques the engineering model thus,

"The image portrayed by the engineering model – of researchers showing practitioners what it would be best to do – is one that sometimes appeals to both parties; albeit for different reasons. But the problem is not just that it is at odds with the nature of human social life; at least as envisaged by much qualitative and some quantitative research. It is also systematically misleading, in giving the impression that practical prescriptions can be derived solely from factual research findings. This has the effect of obscuring the value assumptions that are always involved in the use of research." p394)

Behind the engineering model is a whisper of hope that simple 'magic bullets' can be found to solve complex problems.

The second model Sylva (2000) describes is the ‘Political Arithmetic tradition model’ which recognises more of the complexity of issues and has the double intent of engaging in the sociological task of describing and documenting the state of society, while addressing central social and political issues. This model attempts to marry a value-laden choice of issue with objective methods of data collection.

The third model, ‘Research and enlightenment’, appeared in the 1970s and coincides with the work of Weiss and others. Weiss is clear that values permeate research, not just in the choice of topic (as in the political arithmetic tradition), but in the choice of methods. The model suggests that research influences policy indirectly as intellectual and social climate change and policy and practice emerge slowly from consideration of a range of studies rather than a few definitive studies (Sylva, 2000). Hammersley (2000) notes that this model in many ways matches the assumptions about the nature of social life typically adopted by qualitative researchers.

Finally, rather than theory giving rise to research and empirical evidence, in the ‘Value critical research model’ practice and theory develop together with neither taking the lead, indeed, practice and policy may be used to justify theory. Smith and Smith (1992) in discussing this model, note however that “concepts, ideas and knowledge have no meaning independent of their use” (cited Sylva, 2000, p296).

Taking the wider view that research is just one source of information policy advisers consider in their work, rational decision-making is put into perspective by the very terms used to describe alternative processes. Authors cited in Fiona Reid’s (2003) p18) literature review refer to it in terms of

- incrementalism - an irrational and complex model that goes beyond the actions of individuals and groups when “somehow a complex set of forces together produces effects called ‘policies’ “ (Lindblom, 1980).
- ‘garbage-can’ model - a rather anarchic process in which decisions are less “made” than “come about” and outcomes are separated from intentions since, in a process similar to incrementalism, factors beyond the individual or group influence the result. (Cohen, March and Olsen, 1979)
- decisionless decisions - situations where a series of smaller decisions commits each participant to a bigger decision that would not have been otherwise contemplated (Parry and Morriss, 1974)
- power bargaining – situations where political processes, within individual or between policy areas, result in bargaining and construction of trade-offs or the imposition of political power to gain a larger share of resources (Minogue, 1993)
- the heroic model – where politicians determine to achieve their goals
“without recourse to supporting or opposing evidence - And the nuisance from the researchers’ point of view is that this is a legitimate point of view in a democracy: election legitimises the weakest and craziest of policy beliefs. They derive from value preferences that can, but need not be, affected by knowledge” (Kogan, 1999, cited Reid 2003, p 22)

Taking an only slightly less cynical view, Fiona Reid (2003) refers to Perri 6 (2002) who argue that policy makers make extensive use of information (of which is research is a crucial form) in a variety of ways that are then described in terms of games. There are the:

- poker players who keep control of ‘valuable’ information, especially that which maintains or improves their position
- chess players who value and share information within their own department according to well-defined rules
- snap players who make opportunistic use of unstructured information, particularly to enhance personal influence, and
- football players who work like snap players but have the team interest at heart.

Fiona Reid’s (2003) series of eight exploratory qualitative interviews conducted with policy advisers at the Higher Education Funding Council for England led her to conclude that,

“there was little recognition of the rational decision model of policy-making, though it had potential as a normative model. The enlightenment model, by which policy could be said to be ‘evidence-informed’, if not ‘evidence-based’, was more strongly supported. However, the dominant model of policy-making was, rather, one of power bargaining and negotiation. Evidence was explicitly welcomed in this context as an indispensable weapon in the struggle to control and justify policy direction.” (p3).

Even within this small sample, conceptualisation of ‘evidence’ varied significantly. Although most respondents assumed ‘evidence’ to be synonymous with ‘systematic research’, some also regarded professional consensus, received wisdom and the judgements of authorities as evidence. All did however desire access to good quality, timely, ‘researcherly’ evidence, much in accord with the ‘chess player model’ cited above. There was, however no suggestion that this evidence would be simply ‘applied’ to a policy problem. Indeed, Fiona Reid states that the concept of ‘research use’ was contested partly since interviewees found it difficult to articulate how policies came about. Research appeared to be valued more indirectly for its potential to lend credibility to policy in the face of any criticism than for the guidance it could provide. She concludes that the enlightenment model “seriously underestimates the importance of the ‘presentational force’ of evidence-based policy” (p55).

What is meant by ‘using research’?

Fiona Reid’s (2003) study highlights an issue that appears to be raised only rarely in the literature - that of assumptions around effective use of research. Walter et al. (2005) conclude from their review that notions of ‘effectiveness’ are shaped by ways in which ‘research use’ is defined. At the same time, Levin (2005) writes that the wording of ‘producers’ and ‘users’ is itself problematic in that it implies a one-way flow of information and a passive role on the part of ‘users’ (p617). As indicated, there is a strong two-way flow of information for participants in BES development processes, but BES reports are disseminated more passively to the vast majority of educators.

Sylva’s editorial (2000) frames uptake of research in terms of how immediately and transparently *useful* it is, but, particularly when multiple audiences are concerned, one must then ask, useful to whom and for what purpose and how do we know? (Recall Durie’s (2004) comment that conclusions about ‘what works’ depend as much on who asks the question as who answers it.) Researchers, policy advisers, educators and teachers are likely to evaluate the usefulness of any report according to their current

short-term purposes. Rather cynically, Edwards (2000) notes that there is a risk that a policy maker's view of *really useful* research is that it "takes the problems which the government brings to it, contributes to their solution and refrains from adding new problems or further complicating old ones" (p304). Another facet of research *usefulness* evident in Edward's paper is that of the inclusion of research recommendations that are realistic and achievable in terms of financial and/or political constraints and competing pressures on government. Edwards argues that for researchers to take these fully into account may be in conflict with their obligation to 'disturb fundamental assumptions and orthodoxies' that may have larger effects on policy somewhere in the future.

More generally, Whitty (2005) in a conference address, begins to explore the purposes that constrain notions of usefulness, distinguishing between research *for* education and research *on* education, the latter being *educational* and having implications for teaching and learning, while the former might be more descriptive of the state of education. Similarly, in discussing the findings of a case study in the Australian tertiary sector, Wheelahan (2001) distinguishes between research to *inform* policy development and that to analyse policy *effects*.

These distinctions may appear to be pedantic, but they reflect varying purposes and frames of reference for conducting research and assessing its impact, which may translate into different forms of alignment with policy and practice. Indeed, the Ministry of Education's *Evaluation Strategy* (2005) is founded on considerations of the needs of those utilising evaluation research information. In similar manner, Davies et al. (2005) suggest that end-users of research should have a more prominent place on PBRF panels.

Moreover, in research generally, Goldstein and Woodhouse (2000) point out that, "*it is not incumbent upon every research endeavour to provide a strong theoretical basis of the kind that allows interesting predictions and shapes our interpretation of the world being studied*" (p360).

Rather there is often an important period during which empirical evidence accumulates as the basis for development of coherent theory which has implications for any assessment of utility.

Even when research is seen as 'immediately useful', judgements concerning its effective use may be extremely difficult to make. That relationship between research and user purposes is reflected too in strategies for producing policy-relevant evidence. For example, Wolf (2004) states that researchers must engage more proactively with users, and vice versa, to elicit more clearly the needs of users and attune users to research ideas and information.

The literature systematically reviewed by Walter et al. (2005) generally side-steps issues of defining effective use of research, but the authors were able to categorise 'research use' in terms of effects on

- raising awareness of research findings,
- changing knowledge, attitudes and understanding (conceptual engagement),
- directly influencing policy decisions or service delivery.

Walter et al. emphasise that research use is in practice a messy, iterative process and that research-use studies generally fail to examine relationships between the changes

listed. To provide some clarity, they distinguish between *conceptual* and *direct*, or *instrumental*, use of research. The former effects changes in knowledge, attitudes, perceptions and behaviour, whereas the latter results in identifiable changes in policy and practice.

While Walter et al. uncovered evidence of both subjective and objective measures of ‘research use’, they found that systematic reviews from the healthcare literature emphasised objective measures of the process or outcomes of care to a greater extent than those associated with ‘conceptual research use’. Diverse methods were used to assess research use and Walter et al. imply that the robustness of each method needs to be judged in terms of appropriateness in individual studies.

Levin (2005) shares with Walter et al. (2005) and others, the view that ‘using’ research is dynamic and constructive in nature – active rather than subject to passive knowledge transfer. This accords with the recognition that research is just one of many sources of information considered in problem solving. It follows that attempts to increase research use will need to adopt multiple strategies specific to the desired kinds of use and supportive of the constructive nature of the endeavour in a context in which many information sources and other factors are clamouring for attention.

Research use, problem solving and information literacy

The previously discussed models of policy advice and characterisations of policy advisers as individual users of information are somewhat in contradiction of logical expectations. Indeed, Bardach (2005) characterizes policy analysis as more of an art than a science. He has however developed what he calls an “Eightfold Path” as a framework, rather than a concrete model, to lend a degree of organisation to thinking about the policy process.

- *Define the problem*
- *Assemble some evidence*
- *Select the criteria*
- *Construct the alternatives*
- *Project the outcomes*
- *Confront the trade-offs*
- *Decide*
- *Tell the story!*

Bardach is quite clear that policy analysis is an iterative problem-solving activity and that therefore each of these activities is repeated in response to information gained and other factors that must be taken into account. As he states,

These steps are not necessarily taken in precisely this order, nor are all of them necessarily significant in every problem. However, an effort to define the problem is usually the right starting place, and telling the story is almost inevitably the ending point (Bardach, 2005, p xiv).

There are marked similarities between this framework and the information literacy thinking-process models that guide academic research and inquiry learning in the education sector (e.g. Andretta, 2005; Alberta Learning, 2004; Grassian and Kaplowitz, 2001; Moore, 2000). Although varying in the number of phases described, most agree that formal inquiry requires definition of the problem, location and selection of appropriate information sources, analysis, evaluation and organisation and preparation of information for dissemination, presentation or sharing

with an audience. The dynamic nature of problem-solving and the need for continuous reflection on process and revision of strategies is a key characteristic of many models of inquiry (Moore, 2000).

Bardach's model of the process falls slightly short of the information problem solving models as it glosses over the challenges of evaluating the authority and accuracy of information from a wide range of sources. It also ignores the need for evaluation of policy in terms of accountability and effectiveness of outcomes as well as the power of evaluation research to inform future advice.

The SSC study (1999) concerning improving the quality of policy advice identified a less fine-grained range of steps comparable with Bardach's and explored actual attention to each. Initial work showed that *policy analysis* and *design of delivery instrument, process co-ordination* and the design and management of *implementation* have been the focus of most attention in the policy cycle. However, there were gaps around *evaluation, issues identification* (which also implies problem definition), the notion of *long-term forward looking research-based policy analysis, public consultation* and *strategic analysis and management*. One implication of these findings is that some facets of the thinking processes underlying information literacy may not be well supported in the policy environment. It may also be that policy analysts as well as researchers do not have clear mental models of the policy development process upon which to reflect to gauge progress and effectiveness of information strategies.

Further, Hammersley (2005) identifies an insidious problem for those concerned with evidence-based policy and practice in particular. There is a challenge in distinguishing between *genuinely* research-based evidence and the plethora of ideas that are presented *as if* they were the result of reliable research. He notes that these ideas come from governments, think-tanks, inspection regimes, auditing agencies and even researchers themselves, who have sometimes made claims beyond the evidence and their personal competence. (Claudia Scott's (2003) observation that "lobby/interest groups have growing expectations and are using more sophisticated approaches, often offering opinions but undertaking little or no analysis" (p11) indicates that this challenge is likely to be present in New Zealand.) Within the public sphere, the media compound the problem, since there is in general insufficient attention to how information from any source was produced and little thought concerning sources of error that undermine reliability and credibility. In addition, Levin (2005) comments that while not everyone is a doctor or an engineer, they have all been to school and this tends to detract from the professional status of the knowledge emanating from education research, a fact that may contribute to his later observation that for politicians, "what people believe to be true is much more important than what may actually be true" (p621).

Hammersley (2005) continually points to a need for researchers, policy advisers and practitioners to be critical readers, to evaluate information and be mindful of that need, even with familiar documents such as guidelines intended to improve research and practice. This view is strongly endorsed in the report from a cross sector UNESCO meeting resulting in recommendations to governments concerning information literacy and lifelong learning. The skills underlying information literacy were seen as critical to sustainable economic development, health and human services, governance and citizenship, each of which was seen to be founded on

developing information literacy in education (Garner, 2006). These skills include those associated with evaluating information not only in terms of both relevance to a 'problem' and an eventual audience, but developing an ability to reflect on information processes and strategies to improve inquiry and problem solving.

Mechanisms enhancing the relationship between research, policy and practice

Having explored the differing realities of researchers, policy advisers and education practitioners, and the changing contexts surrounding the policy environment, one might be forgiven for feeling a little despondent of achieving greater coherence and consistency across research, policy and practice.

Walter et al. (2005) support Pawson's (2002a) view that improving the correspondence between research and policy is more likely to be the result of exploring mechanisms that explicitly or implicitly underpin different approaches to research-policy interactions than it is of any particular intervention (cited Walter et al. 2005). Indeed, they, like Kirst (2000) suggest that the effectiveness of particular approaches to evidence-based policy development is more likely to be predictable when the theoretical basis of an approach has been explored and the conditions under which it worked are understood. However, as a result of their systematic review of literature evaluating evidence-based practice in four public sectors, they conclude that knowledge of factors in promoting effective research use is promising, but limited in extent and nature. This conclusion is true of New Zealand literature as well with few examples other than the Numeracy Development Project providing a broad evidence base that has implications for improving research/policy/practice relationships. Where possible, in the following section New Zealand literature is cited to illustrate local perspectives on Walter et al.'s findings. In Chapter Three the experiences of policy advisers within the Ministry of Education are then explored through Learning Conversations to identify factors specific to the use of the BES reports and to prepare the ground for recommendations specific to New Zealand.

The evidence reviewed by Walter et al. (2005) is weighted towards UK healthcare sector studies that report on experimental trials concerning changes in the process or outcomes of care, but these rarely provide specific evidence about critical success factors improving the connection between research, policy and practice. As a consequence, while there is relatively firm evidence about the success of specific interventions, conclusions concerning underlying mechanisms are more tentative and transfer of strategies to other sectors may not meet with similar levels of success. Within these limitations, Walter et al. identify five mechanisms that appear to underlie interventions to improve the effectiveness of research use: dissemination, interaction, social influence, facilitation and reinforcement. They note that in practice the mechanisms frequently work in combination rather than in isolation so they include multifaceted interventions as a separate category. The mechanisms are described below and instances of strategies that are supported across sectors are indicated.

Dissemination

The model underlying strategies where dissemination has been the key mechanism in increasing research use is that of a traditional, linear process in which the user group is seen as a relatively passive recipient of knowledge. Walter et al. describe

dissemination as the “simple circulation or presentation of research findings to potential users, in diverse and more or less tailored formats” (p342). A one-way flow of communication may be assumed by disseminators (often researchers) who often focus on adapting the research to the audience. It is suggested that publication in academic journals is the most passive kind of dissemination, yet it is one for which researchers are rewarded by their institutions.

Walter et al. identify two strands of theory underlying this kind of approach: cognitive theories of individuals as rational information seekers who will seek out and use research, having weighed costs and benefits, preferences and harms; and adult learning theories in which personal motivation is seen as the key to behaviour change. They conclude that the evidence from health care settings suggests that providing written materials alone is insufficient to changing practice. (This is not hard to understand given that research is just one of many sources of information impinging on potential communicants.) However, they also report instances where circulation of research-based guidelines can result in modest improvements in practice (in the health sector), which may thus make them a cost effective option. Factors in enhancing compliance include the characteristics and quality of the guidelines and the extent to which they have been tailored to their audience.

As with any policy endeavour, implementation of recommendations and guidelines is the critical factor and Hammersley (2005) warns that

“Guidelines that remind us of what must be taken into account will be valuable so long as they are not treated as routine checklists, but they cannot eradicate the judgment that is involved in the process” (p92).

The need for critical reading is ever-present.

Use of conferences and workshops to supplement dissemination of written materials has similarly been found to have a small positive impact on changes in practice. In addition, Walter et al. note that seminars facilitating discussion of research findings, alongside provision of written material, have a positive impact on participants and may support changes in practice, but the evidence is less robust. In the example given (Weyts et al., 2000, cited Walter et al., 2005) it was found that many professionals believed that awareness, knowledge and practice had been changed as a result of seminar attendance. On a similar level, Kirst (2000) notes that informal contacts are a crucial channel for policy research diffusion and while research sometimes becomes part of a policy argument as a result of its findings merging with a policy maker’s prior advocacy position, at other times it changes how issues are framed or it questions basic assumptions about how to solve a problem. Effective use of research in terms of conceptual change is likely to be the catalyst for instrumental change, either in planning positive action or facilitating disaster avoidance.

Interaction

Walter et al. (2005) define ‘interaction’ strategies in terms of developing stronger links and collaborations between the research and policy or practice communities. Here the flow of information is expected to be two-way, with research users gaining better knowledge of and access to research, and the researchers being better able to address users’ needs and perspectives. There is evidence that interactive approaches (e.g. development of partnerships and collaborations between researchers, policy

advisers and practitioners) also facilitate the adaptation of research to local contexts. Some support for this view comes from an overview of evidence-based management practice by Pfeffer and Sutton (2006) who state that the power of joint experiences has been established in every setting examined, from “string quartets to surgical teams, management teams to airplane cockpit crews” and involves communication, mutual understanding and respect and the ability to work together for a long period of time.

The theoretical underpinning of this approach is identified by Walter et al. as being constructivist in nature, recognising that research users need to ‘adapt and renegotiate findings within their own contexts’ (p343). Changes in both conceptual and instrumental forms of research use appear to be related to sustained interactivity between researchers and practitioners. From the literature reviewed, the approach appears to facilitate research use even in environments that are initially hostile.

The most pertinent example from Walter et al. (2005) is an evaluation of the School-Based Research Consortium Initiative that set up partnerships between schools, local education authorities and universities to support teachers as researchers. (See Cordingley, Bell, Thomason and Firth (2005) for the full report).

“Evaluations of individual projects and the initiative as a whole reported improvements in teachers’ skills and capacities, gains for pupils, and school-wide changes in knowledge and attitudes that resulted from engaging with research. This evidence also suggests that to use research, teachers need to negotiate its meaning within their own classroom contexts” (Walter, et al., 2005, p344).

Higgins and Parsons (2005) report identification of similar success factors and effects of the Numeracy Development Project.

While partnerships and collaborations have positive effects on research use in healthcare, social care and education settings, Walter et al. (2005) observe that establishing such linkages is not without challenges. Their review identified the following barriers to success:

- *“the time and energy required to establish effective working relationships*
- *differences in culture, goals, information needs, timescales, power, regard systems and language*
- *issues of project control and direction”* (p344).

These findings come mainly from evaluations of initiatives in which partnerships were formalised, but in practice, the authors note that, for example, informal networks are also of value in promoting better use of research.

Social influence

The third strategy identified in Walter et al.’s (2005) review is grounded in social influence and social learning theories. A range of studies is cited, the findings of which agree that in the course of day-to-day work, practitioners and policy advisers turn to colleagues as a key source of knowledge. Interventions applying social influence strategies thus focus on interactions within policy and practice contexts rather than looking beyond them to interactions with researchers. However, Walter et al. conclude that while social influence approaches to promoting evidence-based

practice seem promising, the evidence concerning their effectiveness is both mixed and limited in extent.

The success of social influence depends at least partially on the actions of opinion leaders - those individuals with a particular influence on the beliefs and actions of their colleagues. For example, within healthcare settings, educational interventions that involved discussion between peers and practice experts appeared to have positive effects on changing practice. Walter et al. also cite a study by Cousins and Leithwood (1993) demonstrating that social processing is a key factor in teachers' use of research. However, they indicate that in the health sector, some systematic reviews of studies of the effectiveness of opinion leaders offer mixed results, while evaluations of large-scale programmes in the health and criminal justice sectors suggest opinion leaders have a critical role in getting research used.

One explanation for these somewhat contradictory findings is that the definition of 'opinion leaders' is problematic and may vary within and between studies in ways that are not captured by cumulative systematic reviews. For example, the evaluation of one health study found that expert opinion leaders had an important role endorsing innovations in initial stages of projects, but peer opinion leaders were more influential in wider implementation. There is a loose parallel here with Cranefield's (2005) finding that in New Zealand's state sector, the activities of those at the interface of knowledge transfer (rather than knowledge construction) between organisations change as a project develops. Activities shift from advocate to flag-bearer, to translator and interpreter then to facilitator, story-teller and finally provider of expert advice. Cranefield's study focused on those nominated to do a specific task (promote management for outcomes) whereas the studies Walter et al. synthesised focused on broader research to policy relationships which are more chaotic in nature. It is not hard to imagine however that the activities Cranefield identifies would be spread across more players in the case of evidence-based research and policy and that those players would exert different influence at different phases on the process.

Suggestions of other factors to consider come from a less robust study in education from which Walter et al. observe that expert opinion leaders may differ in the manner in which they promote perceptions of research implementation. Opinion leaders viewing an initiative in terms of coercive processes, rather than negotiation, could be expected to exert social influence in very different directions.

Facilitation

The focus of the fourth strategy identified by Walter et al. (2005) in promoting research use shifts to the context within which research findings are to be utilised. Facilitation in this case is defined in terms of provision of technical, financial, organisational and/or emotional support enabling policy advisers and practitioners to use research findings. This support often includes professional development to increase research use capability, which in turn complements straightforward dissemination approaches by affecting motivation and person skills in accessing and interpreting research.

Facilitation approaches draw on change management and learning theories, but Walter et al. note that evidence for their effectiveness is less robust than for other approaches. Looking at 160 educational interventions in the health sector (which are

here interpreted as involving professional development) they conclude that “passive and didactic approaches and interventions of one day or less, were consistently found to have little or no effect in changing practice” (p347). Across all sectors included in the review, they identify the following features that seem to facilitate the effectiveness of initiatives:

- *“adequate resources, in terms of training, skilled staff, administrative support, money, materials, time and ongoing assistance*
- *leadership, commitment and support at a sufficiently high level*
- *buy-in, motivation and a sense of ownership among frontline staff*
- *agency stability and good communication.” (p348)*

Whether the fact that a programme is research-based has positive or negative effects on programme success cannot be indicated as Walter et al. observe that there is very little evidence from which to draw conclusions. Similarly, there have been few studies made of organisation-wide initiatives to facilitate better use of research, but they do cite a study of a health sector initiative in which outcomes varied across the organisation, seemingly because “specific institutional and historical barriers limited implementation” (p346).

With regard to other facilitative approaches, Walter et al. (2005) note that practitioners may be involved in development of research-based tools, programmes and systems to ensure that these are context sensitive, but users of these do not have to engage with research directly and may in fact be unaware of the research base. For example, systematic reviews of evaluation of computerised support systems for evidence-based practice in healthcare and implementation of guidelines generally present positive results. There are also findings from a less robust review that suggests provision of wall charts and stickers may also support changes in evidence-based healthcare practice. Hammersley’s (2000) caution concerning the need for critical evaluation rather than checklist compliance comes to mind once more.

Walter et al. conclude their review of facilitation approaches to research use by citing evidence that levels of investment in resources to support research uptake are not always predictive of levels of success. Several studies indicate that enabling cultural change may be as important in situations where ideological buy-in for research-based projects is absent.

Reinforcement

Behaviourist theories of learning underpin the Reinforcement strategy that Walter et al. (2005) identified as predominant in (mostly) healthcare literature concerning research use. Overall, they again indicate that evidence for the effectiveness of this approach is limited in extent and mixed in findings. It relies on the use of reminders, audits and incentives to encourage dissemination of research and reinforce appropriate evidence-based practice.

Walter et al. note that reinforcement approaches reviewed were more coercive in nature than the other approaches they describe. They report that prompts and reminders (including manual and computer generated, separately and together) seem to be effective for a range of behaviours, but findings regarding audits and feedback are more varied other than for implementation of guidelines. One of the challenges of judging evidence on the effectiveness of audit and feedback as reinforcers is that the

information, timing of feedback and method of presentation differ may differ substantially between studies.

One area that may be worth considering in the context of New Zealand education is that there is some evidence from Switzerland that research funding incentives can encourage promulgation and use of research findings. In addition, a Canadian initiative aimed to stimulate growth of partnerships between researchers and practitioners by offering partnership development grants and increased funds for dissemination (Walter et al., 2005). However, a caution from Larner and Mayow (2003) is worth considering. Reflecting on a project involving researchers and local communities in New Zealand, they conclude that the term ‘partnership’, in terms of both policy and research, needs clarification. They state that there is little if any consensus as to what a partnership approach to research might look like and, based on their recent experience, suggest that it may be better to think about partnership as a process that requires the support of a range of principles and conditions. The nature of collaborations and co-operations needs to be specified carefully, particularly when potential partners have very different purposes for engaging in initiatives, research or otherwise.

Multifaceted interventions

Walter et al. (2005) state that,

“Systematic reviews and overviews of studies from the healthcare field overwhelmingly conclude that multifaceted strategies to promote research use are more likely to be successful than single interventions” (p350).

However, there is little evidence to clarify the nature of the relationship between the number of intervention components and the size of the effect on research use. Further, for all of the foregoing success factors, the nature of ‘research use’ has been glossed over, yet definition is essential to assessing the success of any intervention towards evidence-based policy and diminishing the gap between research and policy.

Creating the conditions to support initiatives across research, policy, and practice

As concluded by Court and Young (2003), the context in which research is to influence policy development effects outcomes and change management research, such as that by Hopkins et al. (1994), emphasises the need to create conditions that support sustainability of change. Focusing on three case studies of large-scale multifaceted approaches to implementation of evidence-based practice, Walter et al. (2005) identified common factors that could be expected to contribute to their success. Here those factors have been regrouped slightly in terms of contextual characteristics.

Change management:

- A clear model of change
- Sufficient resources (time, money, skills)
- Strategies to address barriers to implementation
- Good project management
- Involvement of key stakeholders from the beginning
- Training and on-going supervision

Enabling climate

- Supportive opinion leaders
- Local adaptation and ownership
- Collaboration between researchers and practitioners
- Strategies to avoid perception that researchers are involved to impose their views
- Advocacy - benefits of interest to frontline staff
- Integration of new activities within a committed organisation

Relevant evidence

- A strong [transparent] evidence base
- An interactive approach that linked research to current practice

While the above list provides useful insights, Walter et al. emphasise the fact that ‘our knowledge about what mechanisms are most appropriate in what contexts and how different mechanisms interact, is incomplete’ (p352). However, there is a striking correspondence between Walter et al.’s list and the themes identified by Court and Young (2003): context, evidence and social links.

To illustrate the connections between the above conditions and the mechanisms for enhancing research/policy connections previously discussed, a project specifically examining the relationship between what works for children and what works in research implementation is summarised below. Liabo (2005) describes a research and development programme on social care for children in the UK that was designed as both a theory generating exercise and a pilot project for research dissemination. This particular study has some similarity of purpose with the BES programme in its focus on what works for children and the promotion of evidence-based practice, but differs in that it does not require commissioning a series of best evidence syntheses.

In terms of Walter et al.’s mechanisms, Liabo’s project draws mostly on interaction and facilitation, but exemplifies change management, enabling climate and relevant evidence factors that encourage consideration of research in policy and intervention design and implementation. The study involved literature review, document analysis, reflective practice within the research team and discussion with Children’s Fund staff. Ten interviews were conducted with project managers at a variety of points in establishing or managing projects to determine what was working in research implementation.

Development of the ‘What works for children’ project emphasised research implementation rather than primary research production, thus setting up specific expectations among participants. For example, one focus was on the creation of resources to assist project managers in implementation (facilitation mechanism). Facilitation and interaction mechanisms were supported through employment of an ‘implementation officer’ who worked directly with practitioners and service planners on issues related to the adaptation and replication of research recommendations and findings. Working daily alongside programme staff subjected this officer to many of the pressures they experienced and the report implies that the officer’s background in education and research was important for credibility with practitioners and in

establishing partnerships. Liabo (2005) concludes that this role was pivotal in the success of research implementation.

A research implementation model from the Canadian Health Services Research Foundation was adopted and is based on acquisition, assessment, adaptation and application of research. One aspect of facilitation and interaction reflecting the model came from a research team, set up in response to requests from the sector, to assist in access to and understanding of research through a range of paper, face-to-face and web-based materials. This team provided an 'evidence request service' through which literature was searched, appraised and presented as a summary list including information on strengths and weaknesses. Thus the evidence base was not as extensive as that developing through the BES programme, but it was responsive to sector. The evaluation of the project found that this service highlighted the need for 'implementation research' (how do we put research into practice?) as well as studies of what works. Liabo reports that detailed information on costs and staffing, and practical tips on challenges and obstacles in setting up and running a programme were almost as important as information on the intervention's ability to create change.

In common with some BES writers, the evaluation of Liabo's project identified a paucity of outcome research relevant to current practice and that when relevant research was found, important information on implementation was frequently absent.

In regard to research use she also comments that

"Some service planners may have a deeply sceptical view of research and, when working with them, raising research awareness may be the most realistic aim. Implementation of research findings – building them into project planning – may be more achievable with those more open to research. It is one thing to acknowledge that research is of interest to a service, and quite another to see it as important information in decision making, including changing programmes" (p4)

The implication is that the project worked on levels of research use similar to those identified by Walter et al. (2005) – awareness raising, changing knowledge and direct influence in decision making. The on-going evaluation of the project found evidence that engagement with succinct summaries of research evidence, written in plain language and including details of success factors, costs, training and theoretical background did influence action. For example, a manager reported that reading a 'research nugget' "shifted us from an initial idea about developing a crime-prevention mentoring programme to a more holistic parenting school-based programme with mentoring as part of that" (p6). Other resources produced within the project supported service planners in considering evidence in planning proposals and in reviewing programmes.

Overall, a key finding was that "to be successful, research implementation strategies must respond to the needs of service planners who are caught between national priorities and local context issues" (p2). (This finding may strike a chord with the position of those in the Ministry of Education's regional offices.)

Motivating support for evidence-based policy and practice

Despite Walter et al's (2005) caveats concerning limitations of current knowledge, implications for creating change are apparent from the consistent conclusions that can be drawn from the health, education, criminal justice and social care sectors and specific studies such as Liabo's (2005).

- Research must be translated, adapted for or reconstructed within the context of local practice. Straightforward dissemination is not sufficient to this.
- Those who are expected to use research must have a sense of ownership of the project, programme or tools that it generates. (In terms of the advocacy stance of the BES programme, the project must be assisting them in achieving their purposes.)
- Individual enthusiasts or 'product champions' are crucial to 'selling' innovations through personal contact.
- Successful initiatives are those in which the demands of the context of implementation has been analysed to create strategies supporting change.
- The use of research is enhanced where evidence is credible to the potential users, there is endorsement from opinion leaders and high-level commitment to the process is apparent.
- Strong and visible leadership can provide motivation, authority and organisational integration.
- Adequate financial, technical, organisational and emotional support is important.
- Research use needs to be integrated into existing organisational systems and ways of working.

In terms of knowledge in general, the first point in Walter et al's list above is supported by Cranfield's (2005) masters thesis concerning knowledge transfer across seven organisations in the New Zealand State Sector. She found that the role of those actively engaged in translating and interpreting new knowledge for colleagues was particularly important in promoting knowledge uptake. Although evaluations of organisation-wide initiatives to increase research use are few in number, Walter et al. (2005) add the observation that research use is supported when initiatives are aligned with local and national policy demands.

Further, as a result of interviews with departmental chief executives in New Zealand, Hawke and Wintringham (2005) concluded that research relevant to certain kinds of issue appears to be particularly likely to attract policy advisers' attention. One assumes that they would attract practitioners' attention, but the authors do not consider this. They are:

- Issues that require responses from more than one agency ("whole of government" interest in 'wicked' issues and the challenges of developing coherence and consistency across departments).
- Problems that require co-operation or collaboration between public sector interests and community organisations
- Recognition of interactions between national policy development and the need to take account of international obligations and implications constraining decision making.

Cross sector initiatives may have great potential for increasing coherence between research policy and practice, but as Walter et al. (2005) indicate, development of interactive partnerships and collaborations does have its challenges. While collaboration between various parties in the research, policy and practice nexus is clearly favoured across a variety of literatures, Claudia Scott (2005) draws attention to a potential need to change the culture of organisations to accommodate more collaborative ways of working.

Looking at the wider New Zealand context, Hawke and Wintringham (2005) observe that,

“Perhaps the most fundamental challenge facing the public service is the creation and maintenance of trust on the part of both Ministers and public – to the point where both separately believe that ... innovation is to be welcomed (Hawke and Wintringham, 2005, p6).

Hammersley (2005) agrees with Walter et al. (2005) that research findings must always be interpreted or translated in their application to personal contexts. Indeed, he points out that the role of practical judgement in this may be greater in some fields than in others, simply because of the nature of the problems and constraints practitioners face. Further support for this view comes from Hawke and Wintringham (2005), Claudia Scott (2005) and Desforge (2003). The latter highlights among other things, the pedagogic knowledge of teachers, “their wisdom and judgment in making specific decisions at all stages of the teaching process”, the regulatory and accountability systems in which they operate and the culture and subcultures of teaching. “The bodies of knowledge and belief... constitute the major focus of teachers’ decision-making about their practice” (p7). He poses critical questions that touch on the anxiety that often accompanies change, the common tendency to reject, discount or ignore information that runs counter to current beliefs and practices and concludes that “Evidence-informed practice will take a lot more than evidence” (p9). Indeed, Pfeffer and Sutton (2006) suggest that managers (like 85% of medical practitioners identified in research) substitute the following for use of best evidence: obsolete knowledge, personal experience, specialist skills, hype, dogma and mindless mimicry of top performers.

Pfeffer and Sutton (2006) assert that evidence-based management (that presumably contributes to education and policy-making) demands a distinct mind-set that clashes with the way many managers normally operate. That mindset requires suspension of belief and conventional wisdom and substitution of “an unrelenting commitment to gather the necessary facts to make more informed and intelligent decisions.” They suggest that modelling evidence-based approaches by requesting evidence of efficacy to support proposed changes and thinking aloud through the underlying logic (particularly in exposing methodology of non-experimental research and seeking alternative explanations for findings) will assist others in being more disciplined in their own thinking.

“When people ... see senior executives spending the time and mental energy to unpack the underlying assumptions that form the foundation for some proposed policy, practice or intervention, they absorb a new cultural norm.” (p72)

Drawing on the collective wisdom of others in this exercise is expected to defuse any sense of being overly critical of the work of others.

Predicting exhortations to explore the actual information needs of policy advisers and heeding Pfeffer and Sutton's advice on modelling the unpacking of assumptions, the EBPP was designed to engage proactively with BES users to learn about their information needs and to support them in achieving their work goals. Chapter three describes the methodology and findings of ten Learning Conversations conducted with current users of BES reports to further thinking about the kinds of resources and activities needed to enhance research-policy relationships. Chapter four then examines the communication literature for specific implementation details underlying successful dissemination management.

Chapter Three: Learning Conversations

Purpose

It is apparent from the foregoing literature review that the policy development process is convoluted, that the information needs of policy advisers are complex and that neither of these areas of concern are necessarily apparent to research producers or BES writers. Several of the authors and studies previously cited indicate the need to build bridges between policy advisers and researchers and to create greater understanding of the realities on both sides of the divide. This section of the BES Evidence-based policy pilot project aimed to begin:

- to learn about the role of research and outcomes-linked evidence in Ministry of Education policy development
- to discover if and how interaction with BES development processes influences thinking
- to begin to explore any influence BES may be having as a change agent within the Ministry
- to identify conditions under which BES reports are particularly useful or are eclipsed by other considerations
- to focus on the challenges individuals experienced in understanding the content of BES reports
- to identify resources and activities that would facilitate use of BES reports.

The entire project is strengths-based in that it intends to build on what is working well and to reduce the impact of factors that limit current success. In addition, the project seeks to assist Ministry of Education staff in achieving *their* work goals through the use of BESs and other outcomes-linked evidence, hence the emphasis on *learning conversations* in which both participants learn rather than interviews in which one person gains information from another. Evidence of their experiences of using outcomes-linked research was therefore sought in order to inform recommendations for resources and professional development activities appropriate to the iterative nature of the BES programme and the continuing growth of the body of knowledge it represents.

Methodology

A series of ten Learning Conversations was conducted within the Ministry of Education. In accord with the above purposes and principles, the following selection criteria for identifying potential participants in ten interviews were agreed by BES team members in consultation with external adviser, Lorna Earl:

- those who have already referred to BES in policy documentation
- those who have particular interests in existing BES reports (e.g. representatives of ECE and schooling, Maori and Pasifika, GSE)
- those potentially able to demonstrate a clear link between BES and policy decisions
- members of the Effective Teaching Team
- representatives of Research and/or the Evaluation Strategy
- those who have exhibited a clear change in attitude toward BES use.

An information sheet (see Appendix A) with the key questions attached, together with a consent form covering the interview itself and audio recording, were sent in confidence to ten potential participants. All accepted the opportunity to participate and were subsequently recorded while being interviewed, having been assured of confidentiality and that the tapes would be held securely and destroyed at the conclusion of the study. A confidentiality agreement was also signed by a transcriber.

Interviews lasted approximately 45 minutes and following transcription, transcripts were returned to participants for minor revisions and clarifications. Content analysis identified key themes and cautions and reflected categories arising from the foregoing literature review, e.g. research use (Walter et al., 2005).

Given the small sample size, it is not possible to make broad generalisations concerning research use in the Ministry, rather insights are provided that suggest areas for further investigation. Nor can it be assumed that interview content reflects more than the immediate concerns of those interviewed. A complete picture of their research use is not available.

To preserve a degree of anonymity, quotes in the following are not attributed in terms of gender or role within the Ministry of Education and references that would identify workgroups have been made non-specific where necessary. Finally, participants often referred to 'the BES' or 'the BESs' making little distinction between those already completed and those in preparation. Specific references are given where possible but in general items are referred to throughout as BES reports.

Findings

With policy people, there are very few facts. It is the interpretation of the facts. The irony about using evidence to drive policy is often about perception and ideology frameworks. (Participant 4)

The role of research in general

Responses to questions focused on aspects of work in which participants consider research and outcomes-linked evidence overlapped somewhat, as people often drifted from discussion of considering research in the general case to considering outcomes and evaluation research or BES reports.

Three main categories of response emerged: task contexts in which research was considered, the level of engagement or research use (Walter et al. 2005) and the social roles participants adopted in promoting research use by others (Cranefield, 2005).

For two people, consideration of research was seen as central to their roles and pervaded their work. For example,

"... it drives the way I think about conceptualising ideas and prioritising work, and making recommendations for interventions. I see it as being absolutely fundamental to the way I think and work." (Participant 7)

While only one of ten participants explicitly mentioned provision of policy advice initially as a task demanding reference to research, research was an important factor for two more in identifying policy issues and keeping abreast of changing knowledge

focused on specific education sectors. In these cases, there were clear indications that the speakers were engaging conceptually (Walter et al. 2005) with research, but the point at which research use shifts to instrumental decision making was less clear cut.

While three people provided examples of a direct relationship between research and decision making (policy implementation through evidence-based design of interventions, evidence-based improvement of interventions that have been performing at less than desired level, and development of action plans), one participant indicated that it was more realistic to think of the research/policy in terms of ‘research enlightenment’ and commented,

That is what Sandra Nutley talks about, doesn't she? She says [evidence] "informed" is a better way of framing this because it seems a causal relationship otherwise between research and policy, when we know that the policy process is not purely evidence-based because it operates in a political system and a policy system as well. (Participant 5)

In illustration of the complexity of the research/policy relationship two participants, both of whom indicated their conceptual engagement with research, also revealed that they refer to research *after the fact* of decision making. It seems reasonable to infer that at least sometimes, as a result of conceptual engagement, they assimilated research findings and applied that knowledge later, but then needed to substantiate their views by seeking the supporting research. Both of these speakers described the need, in other aspects of their work, to ensure that presentations to the education sector convey accurate, evidence-based messages and similarly both were aware of the role they were playing in extending research awareness of their audiences by to some extent modelling evidence-based practice. One was particularly conscious of the need to translate research into forms relevant to the context of various audiences and to be a source of expert information (as in Walter et al. 2005 and Cranfield, 2005).

For two speakers, constraints around engaging with research surfaced in response to this first question. Both indicated that generally there is a paucity of research relevant to their central concerns, but that this is changing slowly. A third participant perceives a routine requirement to conduct literature searches personally. One strategy used to address time constraints in this case is seeking advice of knowledgeable colleagues in identifying pertinent resources to inform policy development (akin to the knowledgeable search strategy of the BES *Guidelines*).

The role of outcomes-linked evidence

‘Outcomes-linked research’ was not defined explicitly in the interview and as a consequence, responses did not distinguish between:

- considering whether published research is outcomes-linked,
- specifically seeking outcomes-linked evidence, and
- activities evaluating outcomes of Ministry projects or programmes

While saying that outcomes-linked research and evaluations are considered, one participant commented that,

I am also aware that sometimes I don't stop often enough and think, I can read a bit of research, how is this linking through to outcomes so I don't stop and

think deliberately enough about the methodology and think about, well, what is this telling me about outcomes, as opposed to, this is telling me something that may not be about outcomes. While I have a general interest in that area I might not always be always conscious enough that when reading particular research. (Participant 10)

Five participants indicated that they specifically seek out outcomes-linked research, although two indicated that this is not always easy. Outcomes-linked research has specific value to one participant in the context of policy advice:

It helps us in our work, because basically we provide advice across the Ministry. Our advice has to be based on something that could stand up to scrutiny (Participant 4),

and to another in designing interventions:

It is the step before that where you actually have some basis for working towards an outcome, and working towards that outcome is based on some evidence of what you are proposing will actually work. (Participant 6)

However, two participants expressed awareness that their attention to outcomes-linked evidence had increased only fairly recently, both attributing the change to BES activities, for example,

I think one of the things I was aware of ... was that we did a very extensive search of our own ... and very little of that writing made any real references to impacts on student learning. While I was generally aware of it at the time, it didn't look like there was a lot of options, and that is one of the things that the work of people like Viviane and others who are working on the leadership BES have identified and are looking to address. I think that will be really important, because probably over the last 3 or 4 years I have tried as much as possible to find material that has some reference to student outcomes. (Participant 2)

The third aspect of outcomes-linked research apparent in responses referred to evaluation activities conducted by the participants themselves. Two people provided descriptions of projects intended to clarify desired outcomes and identify appropriate strategies or interventions to achieve them. In one case, the initial activity was not successful,

But we are on a journey of trying to again, like the BES, as the BES says, to work out what data we need, what is our focus, what is the data we need around [the intervention] to create the discrepancy, the discordance that actually gets them thinking about [practice] in a way which gets them moving in what they are doing. So it is not just research and outcomes-linked, but it also the processes you use to get there as well. (Participant 8)

While the above responses indicate a conceptual level of engagement with formal research and outcomes-linked evidence in internal inquiry, what is missing is an indication of connection with the underlying educational theories that shape research. Admittedly, no specific questions were posed to expose theory or even underlying assumptions, but theoretical and methodological understandings are needed in assessing the relevance and value research can bring to bear on policy decisions. The BES programme is itself driven by theory and recognition of this was voiced obliquely in later references to framing ideologies for interventions.

The role of BES reports

Only one of the ten participants rarely referred to the Best Evidence Syntheses for guidance on what makes a difference to student learning. In this case, BES was valuable as a model, as an object of study:

as a form of evidence and its use in the Ministry, I could say that my gross point of connect is around the practicalities of usefulness. But other than that, I don't use BES per se.

Participant 6 put BES in perspective with other forms of Ministry research:

I guess what we all knew when it started was that this was a different approach to thinking about pulling together research information and the sort of criteria and the rigour around that. I guess there is a heck of a lot of other research going on in the Ministry. There are heaps of other evaluative research. We have a lot more partnership research going on within the sector, schools working on achieving higher standards, etc, and I think that research is also really important. The only thing for me is that the BES has a role to play, but I think it is part of a research portfolio that the Ministry has to be engaged in.

The priority given to BES and its utility were described by most participants. For example, one said,

I think I look to BES first. Because ... the BES quality teaching is really the only piece of work that brings together that kind of outcomes-linked research and considers and takes into account the complexity of the environment that teaching occurs in New Zealand schools and values the different kinds of research whilst still connecting to that criteria of linking to outcomes. But you can also recognise the importance of teacher's voice and student's voice. While still scientific, it is the multiple approach to research...Mainly it is recognising the different contexts the Ministry participates in. (Participant 1)

Similarly, for another, BES is “the first port of call” and is used to identify research that needs further in-depth consideration. Given the strict selection criteria for inclusion of studies in any particular BES, this is partly a time management strategy:

You have only ever got a certain amount of time – we don't have the luxury of infinite amounts of time, obviously, and no one really does, so then the tricky part is working out which is the most robust and the most worthwhile pieces of work to track down. That is one of the reasons why using the BES as a base document is helpful. You have some assurance then of the robustness and the relevance of that particular reference. (Participant 2)

For me, I feel my desperate dearth of up-to-date knowledge. So I am going back to that before I speak to people to check my messages. It is really about checking the messages and getting a broader understanding. (Participant 3)

However, two participants noted that because the BESs are highly selective there is a need to supplement them with an appropriate balance of research from other sources to complete the picture.

In terms of instrumental use of BES in decision making, one participant provided an example of how evidence from the syntheses is influencing external contracting:

In professional development, the quality teaching and the PD BES are embedded in the contracts. They are generally embedded where it is relevant in the requests for tender so that we are always up-front saying this is what the research has shown us to date. You need to consider this in your proposal or whatever. (Participant 8)

While this illustrates a very concrete way in which BES is being utilised to ensure the sector at large considers evidence in a manner similar to that that described by Liabo (2005), the respondent hinted at the challenges of assimilation of BES use into “business as usual”

We probably don't see it as much because we have probably internalised quite a lot of both the PD and the quality teaching BESs, but we also reference the communities and families BES and the key findings of that and to some degree the quality teaching for diverse students BES.

However, once findings are assimilated, they may become a little distorted in memory. This point is elucidated in response to a later question.

A second concrete example of direct or instrumental utilisation of BES resulted from checking research awareness within a work group. An initial comparison between a BES and current practice in one group showed little alignment between practice and evidence of what makes a difference. As a result:

We did a quick wee straw poll, thinking we would ring a few people up, not research based. In asking people about that [BES], hardly anyone actually knew a lot about it. If they did, they might have had one weak sort of discussion around it and then before they had another chance to have another discussion what they had already learnt was lost. ... [Now though] I think that for us [BES] is key. I think that having originally set up a critical friends strategy to draw out information, ... that was really helpful and that sort of raised the profile of BES. We read everything we could find. We read all the BES and all the papers we would get flicked from Adrienne. ... So I think it had an influence not only in the content but also in the way it [our project] is developed. (Participant 9)

From this it is evident that as well as considering personal use of BES, there was a tendency among participants to reflect on the utility of the programme reports within their work groups or with external partners. Two people perceived a risk in this. For example, one spoke of those in another Ministry thus,

There is a negative and a positive thing there. ... They are saying that for ... economic prosperity, education plays a big role. We acknowledged that as well. Then they hook up a goal or something around effective teaching and then go on to the best evidence synthesis on diverse students and families and communities, which is fine. But my worry is that they are hooking onto something that they don't really have a lot of understanding about. (Participant 7)

The same point was also made more generally,

I think there is a danger with it [BES]. I will put the positive first. Yes, and I think in terms of the insight around some of the things that do make a difference. Having that reliability. Let me be clear - knowing that there has

been a robust methodology there, linking through in terms of what makes a difference through student outcomes is good, and having it synthesised in terms of the level I am operating at is very valuable. The danger is they are complex pieces of work and you can always oversimplify or misuse. So there is a danger of not having enough familiarity or not enough ongoing familiarity with the work to ensure that [people are] drawing on it in the right way and in the right time. (Participant 10)

Overall, the Learning Conversation participants were, as one would expect from the selection criteria, generally ‘research aware’ and drawing on research to change knowledge (Walter et al., 2005). There were indications that several were aware of increasing their attention to outcomes-linked research and to BES reports in particular. While valuing the BES programme products as a prime source of relevant outcomes-linked research, participants clearly saw a need to consider other research sources to expand and complement BES content coverage. Some participants spontaneously provided examples of instrumental or direct use of BES research in decision making. However, several cautions emerged regarding uneven awareness of BES in workgroups, potentially superficial understanding by those encountering BES without awareness of its developmental context, and, at the other end of the scale, dangers of over familiarity with reports potentially leading to dissemination of inaccurate messages.

Features of BES that make it a significant source of outcomes-linked evidence

Questioned explicitly about the characteristics that make BES significant in their work, six participants identified its focus on student outcomes. The following quotation illustrates perception of the programme’s underlying intent:

What makes it significant to me? I think because it goes a step further and wants things to be better as a result. As a programme, it strikes me it is not just there to be research, but it sort of pushes the boundary as to – to me it seems like it wants to make a judgement about what is worthy to be picked up out in the field so that kids actually have something better happen as a result. (Participant 9)

However, the concept of student outcomes in the policy arena was explored further in one response that expressed a caution:

I think the BES is significant because we have always struggled with that notion of outcomes for students. There is a real issue in all the work we do, I think, about what are the outcomes that a particular intervention can be held responsible or accountable for. And the notion that you can take the outcome for students as a starting point, and that is what the BES does, it says “what evidence have we got that what we are going to do is [going to] impact on students?” I still think there is some debate in there, I don’t think it is as cut and dried as saying that everything that [BES] says must be good and everything else must be bad. I don’t think it is as simple as that, but at least it [BES] gives us a steer as to what to support and guide[s] some thinking about what might be the better way to use Government funding, to use scarce resources in another way. ... I think that is what the BES is [but] there is a danger in that, that it becomes the Holy Grail. It becomes all things. I think

we are probably maturing a little bit around that. But I still think it does give us at least some solid basis for reassessing our folk wisdom or whatever we might call it. (Participant 6)

The trustworthiness of the evidence contained in BES reports featured prominently in the guises of references to selection of research by experts (2 participants), systematic synthesis (3), the quality assurance process (2), use of rigorous methodologies (2). Two quotations summarise the thoughts of several participants:

I suppose – in one sense it is convenience isn't it? In the sense that a methodology that has tried to synthesise a lot of different evidence, make an assessment of – a methodology for assessing its validity and reliability in terms of impact on student outcomes and then pulling together some key messages. It is probably a bit like a supermarket mentality, isn't it? But it is the reality of having something like that is actually quite powerful. Some of the hardest bits of how you access research have been resolved in terms of making the judgements about, well where does this sit in the scheme of things, how would I think about this bit of research? How do I think about this bit of research in the context and related to all the other bits of research? Because often to the sort of relative lay person, research can be conflicting or you can't be sure about what is the robustness of the methodology underlying it. So that is one of the great strengths. (Participant 10)

One of areas I think that as an analyst I felt most insecure about was the fact that I didn't feel necessarily in a position to judge the relative merits of the different pieces I was reading. I had to make those decisions on the hop as I was reading them. And especially, again, as a non-expert analyst I am pretty much always learning a new topic as I am analysing it. I am never secure in the depth of my understanding and my ability to make those kinds of judgements. It is hugely more useful to have a robust source. (Participant 2)

In this context, the selection of research relevant to the New Zealand education sector and the practice of teachers was appreciated (two explicit mentions each). Other significant factors were that the whole programme is grounded in partnerships and that it is influencing thinking even while it is in development (1 mention each).

I have seen that when we have had some think tanks around the BES professional learning where researchers who have been involved in other initiatives, perhaps ICT is an example, have in the process have been exposed to different ways of thinking, different theories, frameworks, theoretical frameworks, and have taken that away and thought differently about how they go about their work. And not just researchers, actually practitioners as well, union people, see things in a different way. Of course we don't have any evidence apart from discussions with those people. I have heard it and seen it and continue to hear it. (Participant 1)

The general need for trustworthy information in policy advice was captured by one person who characterised BES thus:

What we want is not just consistency around quality teaching but also evidence-based quality messages around effective teaching/quality teaching. And here we have it all synthesised in the introduction, but also from two quite different perspectives in those two [BES] documents. There is certainly a

flavour of ‘ there are ways that are appropriate’ in the gently moving context or specific curriculum areas. But the underlying principles and theory base, and outcomes focus and rigour should be the same. That is a really good example of how access to that kind of development can help people.
(Participant 1)

This focus on change in action is central to a later question, but a caution sounded by one participant in regard to utilisation of BES within and beyond the Ministry raises interesting points:

BES is trying to go in two directions at once in some ways (policy and practice). So that question around intended use for intended users, BES frames it for practitioners as well as policy makers. Does BES look different the way you frame it for policy users? Are they the same enterprise or would you do them in subtly different ways? So, can that one product meet the requirements of those two separate things? (Participant 5)

This response reflects the issues raised in the literature review concerning ‘research use’ (Walter et al., 2005; Levin, 2005, Fiona Reid, 2003) and challenges of meeting the information needs of audiences who experience different realities (Levin, 2005; Ellwood, 2003). These will be the focus of a separate literature review in Chapter Four in terms of dissemination management.

In summary, relevance and credibility of the student outcomes-linked evidence presented in BES reports contributes to their use as a primary source for this group of policy advisers. The emphasis on the New Zealand context appears to be partially addressing the problem of availability of information identified by Wolf (2004) while the relevance and credibility of evidence meets needs identified by Levin (2005) and Fiona Reid (2003). There are indications that the process of selection, evaluation and synthesis underlying the BES programme is assisting participants in managing time constraints and supporting them through the challenges of evaluating research for themselves. However, that is balanced by a perception in accord with the intention of the programme that BES reports should not be considered as the *only* source of evidence.

The influence of BES development processes on thinking

While some participants had had a close connection with the development process of the BES programme, others had participated only occasionally in meetings or received papers on various aspects of the thinking behind BES. However, all claimed awareness of the developmental and quality assurance processes associated with each BES. One participant had alluded to the value of partnerships previously, but here the effects of interaction during development of BES and any sense of ownership came into sharper focus.

The importance of trustworthiness and confidence in the quality of the BES reports was again explicitly confirmed in two responses to this question and implied in a third. In each case there were indications of changes in thinking and the actions subsequently afforded by confidence in BES development processes. For example, three people indicated that their conceptual frameworks had changed with wide-ranging effects. Think tanks had sharpened one person’s perceptions of the

differences between espoused and real theories of professional development. For another, the BES development process had provided a foil for conceptualising relationships between research, policy and evaluation.

What that touches on also is what is the nature of how policy is done in an organisation, how do you practice policy here, what are our standards for good policy. It started everyone thinking that if we are talking about having standards for evaluation practice, and evaluative thinking, then how do we turn our attention to the rigour of our policy which then leads directly to a question about how do people use things like BES. How do people engage with those things? How does BES best engage with the policy process? So, in a way, the route we are taking to that through the evaluation strategy is to embed evaluative thinking into existing processes. (Participant 5)

Five responses indicated a direct influence on personal action resulting from involvement with BES development, with three people indicating that they now read research more critically. However, one participant noted that this personal attention to rigour had come at a cost.

[I am] probably a more demanding consumer of research material. And in a sense a far more frustrated one too, because it is worrying. In particular, I know that ... while I drew heavily on the families and communities best evidence synthesis, I also wanted to look at what the Ministry was currently involved in that related to families and whanau and the nature of how we were evaluating that. I found it quite shocking that our evaluations of the work that we were doing seemed so weak ... actually off the top of my head I don't recall any that I thought had a really robust outcomes-based relationship. In most cases it was based upon the perceptions of teachers, the perceptions of parents. ... And also it seemed to me there were excuses made about the fact that they had only been running for 2 or 3 years, whereas when I saw other pieces of work where student outcomes clearly resulted from the intervention, those outcomes were achieved over the course of a couple of terms. There was that sort of difference in the scale, whereas with other pieces of work people were saying you can't expect outcomes to change because it has only been running for 3 or something years. (Participant 2)

Other manifestations of greater personal rigour were apparent in shifts towards outcomes-based management, explicit modelling of evidence-based practice in team interactions and the use of evidence in discourse with the education sector:

The other important way that BES has influenced my thinking is in terms of rigour and being outcomes focused. ... It is the questions I ask my team. It is a way of thinking and working. (Participant 1)

A more wide-ranging effect is seen in the following response:

I think it has changed an understanding of how the Ministry can work with researchers in quite a demanding way. I think [Adrienne Alton-Lee] has modelled that really well. I think the other part around the knowledge of the process is, if you are engaged in one of those reference groups around the BES you do just pick up one heck of a lot of knowledge through the discussions that are going on in those forums. They have been really very valuable. I think the other thing they have done is they have kind of reinforced

that view that you can constantly challenge people you work with to make the links to student outcomes. I think that is a key piece of understanding you get.

However, the tension between timeliness of research availability and the pressures of policy advice also emerged as one person lauded the usefulness of currently published BESs and indicated that, as a consequence, it was worth delaying action:

Knowing that the leadership stuff is coming up makes me want to hold off. That is an area of work, as I said, that I am particularly interested in. I want to hold off and have that stuff [Leadership BES] before I am doing some of the speaking engagements. (Participant 3)

Finally, while identifying the benefits of involving a wide range of people in the development of any programme, one participant noted that:

That has its own particular challenges. It is certainly not the easy path to take. It is much more challenging. As soon as you do more than consult in that token way that we may have done in the past there are responsibilities that attach to that to show people how these things can be read and used and feed it back to them, that whole moving forward cycle. That would be the major thing. (Participant 1)

The responses above suggest that the BES development process reflects the interaction mechanisms and enabling climate conditions identified by Walter et al. (2005) as enhancing the relationship between research and policy. However, one must ask how widely that impact is felt.

BES as a change agent within the Ministry and in the sector

Of all the questions asked, that probing change agent issues drew the most extensive responses from participants, but the evidence was weighted towards anecdote (17 comments) and substantiation against examples of personal experience (12) rather than sources of documentary evidence (three comments).

Within the Ministry

That few references were made to documentary evidence of BES influencing policy may be at least partially explained by Participant 1, who noted that within the Ministry,

[BES] is probably having a lot more effect that we might realise. People are using the knowledge, mainly from the quality teaching BES as they make decisions, but not necessarily acknowledging that that is where they got it from. So I guess the other risk is that that knowledge becomes watered down or changed or filtered, because if you are not forced to revisit it and you are not forced to clarify your thinking or your understanding or your knowledge of what is being challenged.

An example clarified the need for caution,

There is a wonderful quote from one of the literacy materials around what matters most is what teachers do in the classroom moment by moment. Then I actually picked up the quality teaching BES again and it was a long time since I had read right through this and I thought, oh, it's about so much more than just teacher/student interactions. Because if we focus too much on the interaction and the learner – this is what I read – then we are not taking into

account those other things you can't see, those interactions between each other and the environment that the teachers are working in that they set up and manage That was a bit of a flag, as you think you are becoming more familiar with the BES quality teaching, you start to automatically integrate it. You do, you filter that BES and it changes and you get seduced by the by-lines and key messages. (Participant 1)

This caution regarding over-assimilation or over-confidence was the only concern to arise in this context. A suggested solution was to use the publication of each new BES to prompt a personal check on accuracy of the messages conveyed from established BESs.

Comments supported by strong documentary evidence came from three speakers, two of whom referred to the Statement of Intent and the third made reference to Ministry publications in general. The first speaker said that

The framing of the three vital outcomes in the Statement of Intent - that is BES. ... Where else would the Ministry have come up with families and communities? Told of it may be, but we wouldn't have been listening enough to get it in the Statement of Intent with that profile. No, I think there is serious intent, and I think deliberate intent is a good start. (Participant 8)

This participant and one other, who also referred to the language used in publications, had detected changes after returning to the Ministry after an absence. The latter commented that,

I am reading things and all the Ministry publications are so much stronger than I would have seen before. Like 'all children', all means all. Diversity, evidence. (Participant 9)

Asked whether this was really attributable to BES, she replied

I don't know, but I would imagine BES has had quite a strong profile in there. The language is similar to BES. I can spot the speech writing. (Participant 9)

Participant 7 saw the influence of BES in a similar shift in language:

In the early days I think it [BES] was really difficult for people to understand, buy into diversity as a theme. But I think I have seen the conversations change. That is how I have experienced it. I have seen conversations change in terms of this is what is coming through the BESs and influencing our work. I guess more and more of our policy work is building on what is happening there. I think first of all it is the way people have seen it as not a piece of work that is out there, but something they can include in their work.

Four other participants (1, 3, 4, 5) supported this perception of change in conversations with reference to decision making, shifts in thinking and explicit reference to BES in discussions. As Participant 4 put it:

At almost every conversation I have ever had there is something about the BES or something from the BES or they are getting evidence from the BES that is part of that conversation. ... I would say that anything I've been in, any meeting, any conversation, any dialogue or debate that I have been in during the last month or so, at least at some point in that conversation, whether explicitly, 'in the BES it says this' or implicitly 'evidence shows that in

families and communities'. I would say that is definitely linked to the BES work.

While providing some supporting evidence, Participant 5 also commented that, *I don't have a real sense of how people use it [BES], under what conditions do they use it, what they know about what it can tell them and how do they approach it with a question. How do you interrogate the BES for what purposes? That is like subterranean tacit stuff around how people do things that people don't talk about anyway. We don't talk about how we do policy, and we don't talk about how we do evaluation.*

An indication of the effect of BES on thinking about evidence came from Participant 9, who said that

We believe that there is a very large piece of learning to go on around what you can count as evidence, let alone the next step. ... If you are working with a child, to me it is reasonable to arrive at a stable base line and do some post-intervention assessments that give you data to show something is different/better for the child as a result of your intervention.

Asked whether this constitutes modelling use of evidence, the response was:

We are trying to. And that is something we picked up from BES. Not only BES, because the other thing that has been a strong driver for us has been whole managing for outcomes focus or approach.

However, while some participants could identify specific ways in which the BES programme was contributing, others referred to the uneven use of BES reports within the Ministry, for example, Participant 2 said,

My sense is that, as an organisation, the best evidence synthesis has kind of been reliant on the good will of those people in the organisation who believe it is worth while and that those people who have a problem with it have been allowed to continue to have a problem with it. In a sense, there has been rhetoric about it being a foundation piece of work for the organisation, but there has been a lack of organisation-wide pressure, if you like, I suppose, to surface concerns and get them out of the way. There are still a few people who are suspicious of them [the BESs] or possibly creating barriers to full uptake of them across the organisation.

As an indication of those barriers, the speaker later suggested that

There seems to be a bit of, "I want to be the one who decides for myself what is the best evidence, thank you very much, and not be told by somebody else." I think there is a little bit of that going on with some people. Or protection of one's own perception of one's own expertise, maybe.

A complementary view on BES uptake was expressed by Participant 10

Within the organisation I think it is a bit variable. Obviously the sort of key insights have been drawn on in terms of overall direction priority setting. I think you have particular people who have been against it [and now] have bought into it. I think there is a big gap in the middle where people are aware, either perhaps it is influencing their thinking at the margin or perhaps they are a little bit unsure about how it should impress them. I think there are

three levels of response. I think the majority of the organisation has not yet impacted enough in buying the product.

This view was fully supported by Participant 2, who focused attention on commitment by senior management but was uncertain that it was flowing through all management levels. In addition, Participant 4 questioned the nature of general commitment, implying superficiality and the need for

... going beyond the co-option of the language. And you do need to see others around you committed, and you need to see the benefits of that and the quality of the policy and then the outcomes.

The same participant also pointed to a need for an explicit strategy for the use of BES,
Apart from the notion that they are embedded across the whole system, everyone is using it, there probably needs to be some mechanisms that helps that to happen.

However, a strategy facilitating engagement with BES is just one factor. In comments reflecting on the whole interview, Participant 10 directed attention to the nature of the Ministry:

I think it [BES] is one of the great assets of the Ministry. It is one of the great things we have done in recent years. In that sense it is hugely positive. It is just a question of how we deliver it, how we get the full return on the asset, if you like. I think we have still got a way to go, which isn't so much about the project but about the way we operate in the organisation. ... I think one of the questions is to what extent are we getting enough ownership at the outset for commissioning pieces of work, and again I am not close enough at the moment to judge that, but my suspicion might be a bit variable.

One factor affecting that variability appears to be that engagement with BES is dependent to some extent on high relevance to current tasks of policy advisers. A response to Question 4 prompted a suggestion that while there may be strong commitment to being involved in BES, there may be stages in policy adviser's work where they have to step back and keep an eye on it from a distance, returning to it at a later date. If this waxing and waning of engagement exists, it may partially explain variability and modest general uptake. Participant 7 agreed that the scenario is probably accurate but continued,

Also the earlier BESs were more a strategic framework, if you like, whereas the curriculum ones are much more operational, much more focused, which is probably why the bigger pieces were much more appropriate for us with the BES.

Another participant saw a link between BES as a change agent and the Organisational Development Plan, opining that creating change within the Ministry may be more difficult than within the education sector,

You have got to bring both the operational schooling side with the curriculum policy people. You have to bring all of that closer together. It is not close together, so you have people over there working in their little hole and people like us in the regions out there working in our reality. There is just far too little link. (Participant 3)

As an aside, the speaker drew attention to the value of working groups and networks in creating change, a point that emerged in the dissemination management literature reviewed for this study.

I was first a little bit sceptical about the effective teaching team, about whether we were getting any differences, but what I am seeing this year is the personal connects we have got out of that and the personal little subgroups we have formed working away from that meeting. Our connects have become really more and more important. While I haven't seen the wider Ministry crossing over very well, what I have seen is that I at least have the personal connections myself now so we feel we are working together at a personal level. But the organisation itself isn't doing it particularly effectively at a higher level.

It may be that cross-Ministry issue and task groups are a fertile ground for facilitating BES use.

BES as a Sector change agent

The focus on change in the wider education sector resulting from engagement with BES drew fewer comments from participants. The most concrete points of reference were that, having begun with personal involvement Teacher Unions participated in the BES development process and have now expressed commitment to the programme at the institutional level that provides continuity across representatives.

I think the debates that have gone around in the major organisations, which have been generated by the best evidence synthesis work, have been such that we were able to come to an agreement quite quickly. So the major leg work, the donkey work, the tough stuff and the fights about what constitutes evidence and why certain material has been privileged over other material, and that kind of thing, has largely been since this best evidence synthesis has been developed, and the unions and the organisations have been debating it themselves about whether or not they would come on board with it [the BES programme]. (Participant 2).

However, while some participants detected some shifts in thinking (Participant 6) and increased openness to discussion in the sector (Participant 3), Participant 4 was concerned that sector understanding of BES remains superficial,

I think they are really struggling from the people I speak to. They have surface understanding of certain parts of it, but they haven't maximised the depth or the richness of it.

Again, understanding and utilisation of BES seem to be variable. Participant 10 implied that while some people in schools are conceptually engaged with BES, others are merely aware of the programme,

Obviously there are examples where schools have picked it up and have used it to drive their thinking. That is one area. I think the fact that it exists and there is a good deal of awareness is helping to create a stronger focus on evidence-based thinking within the sector. Not so much, it may not have got to the point where the schools are implementing programmes drawing off insights, but at least people are aware and they are thinking about those things and it may be shaping their thinking in more subtle ways. Then I think

the process by which the BESs are now being developed with sector engagement and sector involvement is actually quite – there is a by product, a benefit from the process itself even though it is a product which is really beneficial in terms of encouraging some of the key stakeholders in the sector to think more systematically about the evidence base and the knowledge based professionalism and the like.

Comment concerning awareness versus conceptual engagement (Walter et al. 2005) among providers of professional development came from Participant 8.

The most contact I would have [with the sector] is with our professional development providers and with key academics. So ... I see evidence of the BES at times, the professional development providers are certainly aware of them and they are tasked to use them and it would be in the degree to which it is really deeply understood and embedded versus 'we are getting to understand the intellectual framework.' That is a process and a step that you go through. (Participant 8).

The need for in-depth reading and reflection time has been mentioned in relation to the Ministry but Participant 2 offered disturbing experiential evidence concerning the effort some in the sector were willing to expend. Again, workload and time pressures may underlie the issue.

I was a bit depressed about the fact that when I am talking to people like the facilitators of the school strategy workshops and their reaction to anything longer than a page was really quite powerful and negative. I think it was coloured a bit by their sense that they were going to have to facilitate meetings where there was only about half an hour for each topic – effective teaching in half an hour - and that they were worried that their audience wouldn't react well to being asked to read anything longer than a page.

From the foregoing it appears that the BES programme is influencing thinking and policy to a certain extent through personal engagement with both its products and its development process. However, while there is documentary evidence at a high level reflecting that influence, most evidence is anecdotal and it is apparent that this group of BES users is aware that uptake of the outcomes linked evidence in policy is variable. While the significance of the BES programme to the work of the participants has been explored, attention to the contexts or conditions of high utility require clarification.

Conditions or contexts in which BES is particularly useful

Some participants had partially answered this in the context of earlier questions and here confirmed or expanded previous responses. The basic condition indicating utility of BES was the high and obvious relevance of content to current tasks (mentioned by five participants). For example, in the context of a teacher education project, one said,

That is about how we might better help those people who teach the teachers. We have many opportunities. ... There are obvious connections with the BES programme, not just the BES quality teaching but families and community and early childhood professional development, [also] the draft future ones. (Participant 1)

However, as will be seen later, intense engagement with BES can be episodic, as task-relevance is not uniform across the work of policy advisers.

The contexts in which people turn to BES for information vary from broad direction-setting for policy and framing ideology (two responses) to provision of research evidence central to specific interventions (own response).

First of all, it is fundamental because in the policy group you are framing ideology. It is a contesting of ideas. So when you are developing your ideas, or beliefs, or ideologies which are then your facts upon which you interpret a policy or however you are going to frame it, BES is right in there. They are for me fundamental to the framing of ideology and investment logic. I use it quite a lot for the policy side of things. ... In fact BES is not just useful for the front end, but all the way through. The depth of BES is in the use of it in an ongoing way. You have to unpack it and unpick it and look through the richness throughout it in your operational work. So I think if you have only ever worked on the front end of whatever you do and you use BES at a very surface level then you miss the richness of it in the way you actually conceptualise anything or operationalise it. (Participant 4)

Another broad context for utilisation of BES was seen by one person as a tool in motivating change:

I just see the BESs as being a very powerful force for how we can get to that change, and that is where the PD BES comes in in terms of the characteristics and sets out the change. So it is not just about PD, it is also about change. What is it that motivates people to change, what are the triggers that will actually bring people to a point where they go, I have got to do this differently. Or what makes an examining practice in the first place. (Participant 8)

Two others echoed this view, combining it with the ideological framing of action plans and acknowledging subsequent mining of BES materials for case studies to exemplify how broad concepts appear in practice. This kind of use of case studies provides clear documented evidence of how BES is utilised in a form that facilitates translation to local school contexts. As the participant said,

In most cases all of the material we drew on is referenced in some way in the best evidence syntheses. Or it is coming through in the ones that are being drafted at the moment. (Participant 2)

Concern to facilitate similar translation of research evidence emerged in the context of preparing presentations to the education sector. In this case, the speaker was aware of returning to BES documents frequently to check the accuracy of the messages to be delivered and thus build personal confidence that 'good' practice was being promoted.

Taking a different approach, one participant talked about checking emerging trends in international literature against BES for local relevance and applicability. While this is important, a caution was sounded by another speaker, who drew attention to the fact that research evidence is summarised in BES, not presented in full:

I guess the danger, if you like, rather than the limitation, is that sometimes there is no substitute for actually going back to the original material and understanding that and understanding its relevance. So, I mean a question, that I don't know the answer to, is the applicability of a BES to a specific question as opposed to a more general set of questions maybe. I don't know,

but there may be an issue there about context specific. You would hope the synthesis actually caters for that. But, does it always? ... There is a danger, isn't there, of it becoming – we want it to be a gold standard in one sense, but there is always that context. That's why it is iterative, isn't it? There is always new knowledge being created. There is a danger that it could become perceived as sort of fixed, which I know is not the intent, but there is a misinterpretation. (Participant 10)

The above responses looked at the general case of BES use but a further question (Question 5) sought specific examples of independently verifiable use. What strikes one about responses to this question was the difficulty some participants had in giving such examples, thus highlighting the challenge of demonstrating that policy is evidence-based rather than evidence-informed.

Four participants did cite particular strategies (Schooling, Maori, Pasifika education, GSE action plan) for which a direct influence can be demonstrated through Ministry publications and a cabinet paper. There may be other cabinet paper references, but these were not at the forefront of other participants' thinking and as SSC (1999) pointed out, cabinet papers usually lack references to authoritative information sources. A fifth participant (Participant 6), quoted extensively below, illustrated the way knowledge of BES content percolates through a wide range of policy development activities:

I think that whole BES has transformed the way we think about intervening in schools around the professional learning of teachers. I think it has given us some solid understandings of principles, of characteristics, of approaches, of conditions, right down to some methods which seem to get better results than others. And before that, I think we were just going on very kind of loose experience of individuals. That professional learning [BES] ... I have used it quite a bit in helping the Ministry think through strategies for bringing about significant improvement on the West Coast. I did some work there around intervening to support resource teachers of Maori-medium literacy. I have used that BES in particular to think about the nature of interventions. ... It is a shift in where we are prepared to put Government money, I guess. The other one that I am working on now is the whanau one. I think this one is the one I am particularly interested in because we've put a lot of focus on effective teaching as the kind of system level lever that we can use to bring about outcomes for students. My understanding of the whanau engagement work is that it is now telling us that if we can get families and whanau engaged with schools in the learning process of their kids you get a plus/plus out of that. That really interests me because it shifts the whole focus of what you might be wanting to do with whanau in something that I am working with, working with iwi partners within a region. ... So it is not just about them becoming board of trustee members, as an example. It is actually about empowering and enabling whanau so that they can be much more engaged in thinking about learning and then supporting that learning at school and at home with the kids. It is that kind of stuff that shifts the way we work. (Participant 6)

Support for this global shift in emphasis came from Participant 10, who simply stated that,

I think that [BES] has been quite an important organisational prioritisation, helpful in shaping the implementation priorities.

More narrowly, one participant mentioned reference to using BES reports in Ministerial speech writing, but other examples given were more ephemeral. For example, three participants (1, 7 and 10) reported referring to BES reports during discussions in the sector, sometimes simply keeping people abreast of the developmental phase of a particular BES and expected release date or referring to the evidence therein.

There are formal discussions when I meet Ministry personnel. It is things like having coffee with the ICT team, talking about when the release of the BES professional learning is, what is happening, do they want access to the draft document and when it would be available to them if they want it. (Participant 1)

As will be seen in the following chapter, formal and informal oral presentation of research information is an important factor in dissemination management but a later question revealed that oral presentation is not a well-established feature of the policy environment in the Ministry.

The question concerning task contexts in which BES is particularly useful and seeking specific examples has served to identify a few of the purposes underlying policy work. Direction setting, framing ideologies underlying action plans, motivating change and benchmarking international research against the national context are all important, but do not necessarily leave a verifiable trail. In addition, as Pawson (2002c) says, research is softly spoken and may be overshadowed by other considerations at times.

Situations in which information from BES is out-weighted or eclipsed by other considerations

As one would expect, the tension between the differing policy and research realities was apparent in the responses to a question to identify whether other considerations eclipse evidence from BES reports. Interestingly, one participant voiced some discomfort (in the context of question 5) concerning use of international research rather than BES. The observation was made that

The special education policy frameworks need revisiting. It [the reference to evidence within the framework] was a general reference. What they did reference was a UK piece of research around particularly special education students, but it is consistent with the BES quality teaching but [applying] different kinds of strategies. I felt uncomfortable, that maybe they should be referencing BES quality teaching as well. It is almost like it is devaluing it, I felt. We didn't give it – you know what I mean. Because we know it so well we don't actually need to treat [the quality teaching BES] like it needs its own separate reference. I got that sort of feeling. (Participant 1)

Asked whether the speaker thinks BES is becoming invisible, the reply was,

Yes, I suppose I am. I have no basis for saying that, because I don't know what went on in the person's mind who wrote it. I think it might be. I don't know whether that was the reason for that. But it could well be, I don't know.

...[BES] doesn't lose its status and its credibility and its value because it is increasingly in common use. It does need to be treated in a particular way, I think. ... And the disturbing thing is that in many ways BES has more international credibility and more celebration in the international research community than there has been here. (Participant 1)

This speaker was also concerned that there is potential for BES reports to be under-emphasised where broader relevance is not highlighted in their dissemination. The suggestion was made that something extra was needed to raise the profile of some reports:

[To remind] us of the ones that tend to slip off, like early childhood professional development, which is really useful. It is one we don't use very much. I think that is a sector thing - people think it only has relevance to early childhood, whereas the framework things are really useful.

While this perception may not be widespread, it signals an issue that will need to be addressed as the range of BES reports increases and policy staff associated with their development leave the Ministry or change roles.

Taking an alternative view, one person commented that,

... there are still views around the place that we have overemphasised it [the quality teaching for diverse students BES]. (Participant 10)

This perception may be partially addressed by another suggestion arising in response to question seven – that there needs to be discussion concerning how products of BES are expected to be used.

Several answers were however, more superficial, which may suggest that the possibility that BES information was eclipsed in some situations had not been considered previously. As one participant put it,

The theoretical answer is probably no and the practical answer is yes in the sense that policy processes aren't pure, I don't think. There is a whole range of factors come to bear. There is obviously the political imperative, which is one, and hopefully over time the political decision making process gets better informed. I think that BES can impact at different levels and over different timeframes. The fact that it exists and perhaps becomes more generally understood sort of helps to shape and inform the overall political debate over time. But, there are political drivers that get the can open. There are also realities in terms of change management and relationships (Participant 10)

While another responded that,

I think that is an interesting [question]. It is about what do we value, what knowledge do we value and what knowledge do we think is robust and credible. Because that whole move to policy being evidence-based, and I am not a policy analyst strictly speaking, I think we all are in many ways, but then what is the evidence that we value? Do we value the conversation with 10 teachers as much as we value a meta-analysis of countless research projects? I suspect that at the end of the day the Ministry has to take all of those into account. But I do think that the BES ... almost I think starts to act as a little filter that can be used. You might talk to a reference group or you might have a whole range of stuff that is getting the information, but it could all just be

folk knowledge if you like. I think that the BES does give you a benchmark against which people do use as a framing for other pieces of information, whether it be research information, however you define that. ... It provides a foundation for thinking about other pieces of information. (Participant 6)

The political imperative came into focus in the words of a third respondent, *What I suppose I am afraid of is that given the kinds of pressures that the Ministers are under in terms of wanting to have speeches written, or whatever, that they are looking for material that can appear in quite short order. We need to, I think, develop a bit of a library of robust outcomes linked case studies that we can – they might be written up in two or three pages – chunk them down into small references. So we have something to give the Minister to meet his needs, but do have a good research base in behind them (Participant 2).*

The notion of a bank of case studies was partially endorsed by Participant 1 who saw the power of case studies, but also saw that particular examples have a short life, *I think we have to be careful that we don't keep using the same story to do that because then people get 'Oh, God, not that case study again.' Or, 'I have heard that', and that puts them off. They think that is old, I don't want to hear that. I want to hear a new version.*

One factor in Participant 2's response is the time constraint (mentioned by three others) that is a critical element in realities experienced by policy advisers. While the existence of BES ensures that evidence relating to student learning outcomes is available, issues of relevance to the task at hand and indeed the profile BES has in the minds of readers at the time of potential application were mentioned by three participants as mitigating factors. In addition, as one participant noted, at this point in the overall programme, BES is silent upon some subjects. Moreover, before one can apply BES evidence in creating change in schools, attention may be required to set up the conditions that will sustain that change. One person described a previous job and the relevance of BES thus,

It is just that opportunities to influence were less. You are more a doer. It is more at crisis management level, [in a] schools job. There is the school improvement drive, but there is the proactive part of it and there is the message giving part of it. But 75 percent of it would have been managing difficult issues. ... It is more about this is where we are at, you deal with the problem. You get a school back to a position where it can even start thinking about teaching and learning. It is a different context. (Participant 3)

Finally, one person raised an issue around the sustainability of BES as a change agent, saying,

People are going to refer to it and use it in their thinking around their work. It needs to help them along. You can't just rely on a person to do that. It is a bit like heroic leadership. They can't just be thinking 'Adrienne', they have got to be thinking 'BES'. I think I actually do both at the moment, so that is good. But there are limits. (Participant 1)

One would not expect BES reports to be relevant to all policy work, but from these responses, critical pressures points from other factors cannot be identified clearly.

The notion of mental models around factors affecting the policy process as discussed in the literature review comes to mind. One wonders whether development of such models would assist policy advisers and researchers alike in understanding what makes research evidence so softly spoken on occasion (Pawson, 2002c) and to develop strategies that better support evidence-based policy making.

Reducing barriers to the use of BES outcomes-linked evidence

Question 4c focused on reducing barriers to BES use and question 7 examined personal experiences of BES, together with participants' thoughts concerning resources and activities that would encourage take up within the Ministry. Responses to these questions tended to overlap and to draw attention to the kinds of intervention Walter et al. (2005) discuss in terms of facilitation (resources that assist in enhancing the relationship between research and policy) and interactions from oral presentations to co-operation and collaboration. They also point to ways of working and organisational factors within the Ministry.

The questions were intended to focus on intellectual access to BES reports within Ministry offices, but participants alluded to issues in the wider education sector as well. These are addressed in the context within which they arose.

Personal experiences

Asked "how did you get your head around BES information?" most respondents answered in terms of 'personal actions', but there were also comments on what might be categorised as 'organisational conditions' and 'cautions'.

As one would expect, the most prevalent personal action people took was simply to read. However, eight of the ten participants quickly noted that one reading was insufficient to build confidence or complete understanding. As one said,

I haven't [got my head around it]. No, I haven't. I think you have to go back and reread, and I had to reread quite recently and I will have to do another one. I have to keep going back to it so I don't know whether I have got my head around it. I feel extremely ignorant. ... I think there are core messages and I don't feel secure that I understand it well enough. It is a complex lot of information that you are putting together. I think it is a big job getting your head around it. It is not a small job. (Participant 3)

Another confirmed the need for multiple readings saying,

And every time I go back, oh that makes more sense now. When I first read it I thought, oh this is tricky, but every time you go back the messages have to be repeated and you have to keep on going back, absolutely. (Participant 9)

There is also a suggestion that workload pressures may exacerbate this challenge:

There are a hell of a lot of things going on in your mind. You will remember bits of it. So being able to internalise it is a challenge really. (Participant 10)

That suggestion is perhaps confirmed by three people who made comments about organisational constraints on reading and the time required for reflection. They are

summed up by one who pointed to a level of commitment to the importance of reading in Ministry work.

I don't know if I can think of a way you can get inside that kind of material without reading it in the detail.... It is partly time but also knowledge. What I think our organisation could do is to be a lot clearer about acknowledging that people have only ever got so much time to read, and be very clear that reading is a significant and important part of our work. And to say, given that you have limited time, these [BES reports] are the things we really think you have to read. It is very easy to wander around reading random pieces of work that come through in journals and look like they might be interesting, or whatever, and turn out not to be anything new particularly, or relevant to your work. (Participant 2)

Evidence that organisational conditions *can* accommodate reading commitment came from another speaker who said,

I think it was a decision we made in the team firstly that this is a piece of work we needed to be involved with on an ongoing basis. So two of us in the team read the initial BES work. We read every BES report there was. I guess one of the things that really enthused us was you read, say, the families and communities BES and there was a reflection of [all communities] there. ... So for us it was OK, this is long and hard to read but at the end of the day it is reflecting the kind of work you are trying to effect change. ... When we have had new people coming onto the team, again that has been the experience. We say you have to read up all of this as part of your background. And they go OK, give me the time to read this. So they come back after having read that to be enthused. So I guess that it was a decision I made as a Manager in the team that here is a significant piece of work and we actually need to be aware, knowledgeable, ... because that is helping us in our work when we look at our community. It seems like when people read it they are enthused by it. (Participant 7)

In other areas, time and work pressure constraints may underlie an approach outlined by a respondent who reflected on the strategy and its limitations,

I don't know whether - I think what people do ... [is] take out of the BES what they actually need. They don't have the overview and the in-depth knowledge that the researchers gain from developing it and the team here get with working with them and monitoring it. I think people go into it and use stuff for the pieces of work they are doing. (Participant 6)

Support for the view that a 'dip in' strategy was in operation came from the one participant for whom BES is not a critical tool. The views expressed have implications for engaging those new to the concept of the BES programme in sustained reading and raise some interesting questions about perceptions of BES reports as resources.

[I did] occasional dips into it. I found the documents themselves quite off putting, to be honest. ... Their density, and I haven't been back to them recently so I am just reflecting back on what I thought last time I tried reading one when I picked one up. I have an impression there has been a fair level of dissent around the organization, too, about their standing. I don't mean dissent, but equivocalness. I have a sort of sense in which we are not really

sure how to treat them in some ways. ...As an organisational resource ...there is nothing else like them. That [raises] an interesting question about how do you introduce them to people as a tool they can use. How might you pick one up? How might you use it, how might you refer to it? Then there is the basic question about the usefulness of written reports as mechanisms. In some ways you are just talking about traditional dissemination. It is like people need to have a picture of each BES in their head about what is in it. (Participant 5)

That picture seems to be at least partially developed through personal contact, discussion and attendance at presentations by Adrienne Alton-Lee. Four participants mentioned the importance of these oral, face-to-face presentations of the content and/or the thinking behind BES as catalysts for personal in-depth reading. For example one said,

First of all it was through conversations with her and then when it came out it was my own personal reading of it, thinking about it and thinking about my work, and having ongoing links and discussions with Adrienne to check my thinking, or being involved in tasks or meetings and forums when she was speaking. (Participant 7)

The question of ‘getting one’s head around BES’ prompted two people to reflect on the iterative, developmental process underlying the programme and to identify some challenges – one set focused on the nature of BES and the other on purposes and personal knowledge:

When they [BESs] first came out they were new, like everything, so it was highly contested as well as there was a lot of interest. I think the further on the BES goes, the richer and deeper and more rigorous they get. [However] I don’t think you can assume that people’s interests continue at that same level. You are going to have to work harder. ... I don’t think you can control the BES. You can’t keep it pure. You have to trade off. It gets owned and it gets stretched, and it gets changed. That might be the nature of ownership. ... When it gets owned it gets changed, it gets reinterpreted, it gets re-framed, all those sorts of things. But I think that is a good thing in some ways, because the main thing is [that BES] is still on their lips, it is still in the debate, it is still informing practice albeit however broadly defined. You can’t keep it too pure, too precious. (Participant 4)

In contrast, Participant 5 drew attention to the temporal influences on interpreting implications of evidence in a policy setting;

How might their relationship with the BES, for want of a better term, evolve over time and in the context of their work? It is that thing where you pick up something and you read it and you think, oh, yes, and then you come back to it a few months later and then your organisational context or your other understandings and knowledge have shifted somewhere, you read the same thing and it means something entirely different.

While it seems quite normal that the focus of a policy adviser’s role means that attention to BES waxes and wanes, changes alluded to by this participant could be dramatic but difficult for the BES team to address. It also seem from the first speaker quoted above that one set of dissemination strategies may be needed to establish the use of the current set of BES reports, but others will be required to keep interest in the programme alive over time.

Resources and activities

While two people could not think of anything that would have assisted them personally with the task of becoming familiar with BES, there was no shortage of ideas for activities and/or resources to assist others. These can be grouped around organisational features of BES reports, opportunities to talk, timing and relevance, and collaboration.

Organisational features of BES reports

This small sample of interviews highlights the variety of purposes people have for reading BES reports and that some of those purposes create a tension. Having talked about repeated in-depth reading of BES, one participant also said,

...I think you want to pick up something light and easy to read. ...The BES is a great big document. ...For us, you see, we have a very tiny little team. We provide [advice] right across the organisation. So for us we need something to take on the run, but at the same time not dumbing it down to such an extent makes us a sound show when we are giving this advice. (Participant 7)

One participant reflected on this kind of tension at length,

...it seems to me in some ways you have to be clear about purpose. There is the sort of argument that to make something really useful you need to prescribe its purpose at the outset so that it is shaped in such a way that it will be useful. So it is one thing to produce a BES, but there is another thing to think about; how do we want this to be used and therefore what are the questions of interest that might shape it distinctly now. It means that that makes the content of the BES much more situational. (Participant 5)

While total emersion, i.e. repeated reading cover to cover, maybe necessary for deep engagement with the content, there is evidence that people also turn to the reports seeking just-in-time, issue-specific information or to check understandings and memory of key messages. In addition, their purposes may change over time and dependent upon their level of knowledge of both the research behind BES and the problem they are trying to solve, their questions may vary in complexity, perhaps starting from basic awareness building during induction to the Ministry. The participant continued,

I think there are a range of devices you could use to hook people better. ... It is also about sophistication of the questions in which people engage with the BES as well. It is like evaluation, you can't read an evaluation with the expectation that it will tell you the answer. You still need to approach it with a purpose and a frame of inquiry. (Participant 5)

The implication is that those at the beginning of an inquiry, or with only a superficial understanding of what BES is (or is not), may seek 'the answer', while the more sophisticated user may be seeking a stepping off point from which to explore further and construct a more conditional answer.

In response to the specific question on reducing barriers to BES use, four people commented that the reports are densely written and a change in reading formats would be appreciated by some. Retention of the quality was however, important – the issue was *speedy*, not necessarily *easy* intellectual access to relevant content. The following responses were typical,

I think the other thing is that ongoing complaint from the sector about how do they get an easier entrée into the BESs. My line is that they are, while not particularly short, an incredibly good investment for your reading time, but that doesn't necessarily sit well with everyone. That is that whole thing about how do you take that kind of material and present it in a way that is usable without losing the quality of it. It is a very tricky one. Case studies are perhaps one part of that process. But again you don't want to use them in isolation. (Interview 2)

I understand entirely the arguments about, well actually we don't want – teaching and learning is a complex process, we don't want to oversimplify. But are there ways of making the material more accessible or not? I think it is an open question in my mind, because BES is already in a sense collating and condensing from research. Do you want to - if we make it a simple two-pager is that actually really dangerous or not? But I think there is some thinking to be done there about what are the ways that it can become more accessible. Again, if it is a culture of laziness that we need to do that, then the answer may be yes, but maybe it exists, so how do you create that bridge for people to actually draw and access. Maybe there is something about more, not training exactly, maybe there are ways of giving people – maybe it is not about reducing it to a two pager, but there are ways of creating the capability for people to actually access it more. (Interview 10)

Finding a way to produce 'digestible messages' or quick access to relevant sections of BES reports is genuine problem experienced by some Ministry staff,

...for people who are working 10 or 12 hours a day just dealing with crisis management and stuff that is front page news, you have a time and space problem in accessing knowledge. I know that is an excuse, but it is a reality also. (Participant 3)

The value of highly digestible case studies was also alluded to on three other occasions in interviews, particularly in connecting with the education sector. One respondent reported that scenarios produced for one BES and presented orally have been useful in engaging audience attention and publicising good practice and two others suggested more of these, or two page summaries of research could be produced. Participant 3 illustrated the way that more general use of evidence in presentations connects with audiences:

I gave a speech, a key note speech at a conference on assessment and my bit was really about planning and reporting, but when I referred to some of the best evidence on diverse students in that at that time, and that would be about 18 months or 2 years ago, a lot of people hadn't heard of it and afterwards came up and asked for the references. They asked where to get it. I think it was probably only coming out then. When you do refer to it, people want to go and have a look. (Participant 3)

Other supporting resources would be appreciated, too. For example, the Schooling Strategy Poster was held up as a visual model by one person and another agreed that making it possible to access the text behind key messages and having material that made links between messages from different BESs would be of value to some readers.

Testing the notion of novel organisational features with two other participants, there appeared to be support for the concept of an index or contents table that was framed in terms of frequently asked questions. One person responded thus,

That would be great. My BESs are all highlighted and stickered, so I would go, oh yes I remember seeing this somewhere, so I can go there directly. That would be really helpful. (Participant 7)

Such an aid could provide quick access to pertinent material to build research awareness, as a check on understanding, a catalyst for deeper engagement with BES as a whole, and a starting point for further investigation beyond BES, but the risk would be that it could raise expectations that a particular BES holds *the* answer in the exact form sought by the reader.

Perhaps a strategy to counter this expectation lies in a suggestion from Participant 10, emphasising the perception that BES reports “collate and condense research findings” and “that sometimes there is no substitute for actually going back to the original material and understanding that and understanding its relevance.” The suggestion was that the most influential readings included in BES be specifically identified,

I think that we are even attempting to do something like that for principals through LeadSpace. We are starting to sieve through the material and saying these are some of the things we think would be really worth your time. I think that would be a very significant BES step anyway. (Participant 2)

A contract with NZCER to develop a database of hyperlinks and full text access to key articles is already in place, however, the speaker made it clear that identification of those papers is not sufficient of itself,

Then I think you do need opportunities to talk and have dialogue around – you can't read everything – some key points that are raised by those pieces of work and getting some interactive dialogue going. (Participant 2)

This leads to the area of greatest agreement among participants, that oral presentations and discussion of BES content are useful as a first step to engagement and have a role in increasing utilisation of BES in policy development.

Opportunities to talk

The suggested contexts for debate included ‘workshopping or unpacking’ each BES (two participants), an unspecified form of face to face engagement, and discussion or professional development (three people).

I think that once you get people together and they have decided to come to something they usually are very, very interested in talking. I think that goes for the Ministry staff and the sector people. Give them a framework to work within and people really love the opportunity to have those kinds of conversations. They have been, generally speaking, probably starved of them. (Participant 2)

Another speaker who looked beyond BES utilisation to wider organisational practice echoed this perception:

I am not sure we have used that face-to-face vehicle enough internally [for BES]. Perhaps I am wrong. I probably could be wrong about that. There

may well have been, but generally we don't do that enough in the place anyway. Could we have had BES, the movie? I don't know. (Participant 10)

Commenting broadly on the culture of the Ministry, two participants similarly raised questions concerning discussion and what might be called a 'culture of inquiry' around resources such as BES. One observed that,

I was in the Ministry in the mid 1990s and policy and implementation - it was almost a directive not to talk with each other. Policy was purist implementation - you got handed the docs and we got on and did it. We again do that topographical rhetorical matrix stuff about policy informing implementation and implementation informing policy. So how do we make that happen? Because we have a set of practices that belong in a certain way of being that doesn't deliver that. (Participant 8)

Other participants had however previously indicated that there is a level of casual and formal discussion. One can only conclude that it does not exist in all workgroups.

Exploring that a little, the interviewer commented that the strategies used for developing BES and getting that first uptake may not be appropriate to the next iteration and the continued use of it. A different range of strategies may be needed for those situations, because of the changes that are occurring. The participant replied,

I think yes, so, maybe there is something in that. Whereas I think if you look around, obviously some people have picked [BES] up, either in the sector or the organisation, and said I am happy with that, let's run with that. But not everybody is in that boat, I suspect. (Participant 10)

Collaboration, timing and relevance

While oral transmission of information is an important factor, Participant 9 highlighted the importance of collaborative tasks in applying learning.

It is working together that actually makes the difference.

A key feature of working together is however having purposes that converge, as might be found in cross-Ministry interest groups. Support for collaboration came from another speaker in comments amplifying discussion of BES as a change agent:

You cannot underestimate relationships and networks. Like champions – there is probably a whole range of ways you can do it. ... I think we have to get systematic about it. I think we have to look at ways of embedding [BES] so it becomes a critical change tool. We are just struggling with it [BES] ourselves, so how do you make something a critical change tool. ... People have to connect two things: the relevance [of BES] to getting what they want done and the benefits. If they don't have those two things then we are not going to get traction. It is trying to connect to the relevance and then seeing the benefits, the way to do that. People always latch onto something that will progress their outcomes or progress their work. (Participant 4)

With regard to the reference groups that could be considered as types of network, this participant alluded to a limitation and a strategy for focusing on learning together:

Instead of having those reference groups meetings where you have everybody from every department and the first thing you do is spend an hour telling everybody about it - you waste a lot of time - so instead of doing that, we

identified key people we needed to learn from. That is where we spotted the BES. So key people in key areas of work we needed to learn from establish a relationship, and with some of them it has become a two-way process.
(Participant 9)

However, learning together or working on tasks that reach mutual goals makes demands on organisational conditions. The timeliness of introduction of a BES may be a factor in this. As indicated earlier, relevance of specific BES content to a person's current work is critical to intellectual engagement. As one respondent said,

It is like anything, if they are exposed to it [at the right time] therefore they are getting more out of it and therefore they are more likely to see the benefits and the relevance and therefore they are more likely to engage in it.
(Participant 4)

No suggestions for solving timing and relevance issues were forthcoming at this point, however an innovative suggestion addressing the time constraints that are a barrier to the uptake of BES came from an example provided by one speaker. In this team, an information/research implementation officer has been employed (with similar intent as in the Liabo, 2004, study).

The barriers would be time, the load in which we have in terms of our jobs and the complexity of what we deal with both in our team across the Ministry and outside with our sector contacts. I have one team member who I have kept on with extra funding this year primarily to look at analysis of information that is available and ways we can embed research and analysis into our work. ... [A] good portion of her time is taken up backfilling the kind of request, can you comment on this, can you comment on that, but the intent is that she would look at what research is available, how as a team we are using research and how we could change what we do. How do we get a meta-analysis of different levels of research or access to it so it is easier for our team members to access it? [The focus is] on implementation of policy. (Participant 8)

Asked whether having other roles of this kind across the Ministry would assist the use of outcomes-linked evidence, the participant replied, "Undoubtedly."

Across different work contexts and times, the relevance of BES may not be self-evident but implementation officers as described could play a role in translating BES content for contexts of current tasks. One speaker commented that:

I know that when I work with other people, I actually have to work on that translation [of research to the context in which others work]. (Participant 3)

The role of translators was found to be critical by Cranefield (2005) and is emphasised by other researchers such as Walter et al. (2005). In this case the speaker was referring to working with people outside the Ministry, but another participant had indicated that relevance of BES waxes and wanes with the focus of particular projects. There may be a long-term challenge in keeping the relevance of BES in perspective as policy contexts change and research fields continue to develop.

Organisational conditions

There were four comments with implications for organisational conditions related to time management, commitment and human resources.

Throughout the interviews, time management was a recurring theme. In the context of engaging with BES reports personally and then sharing applications of the knowledge gained, one participant said,

It is just getting the commitment to put aside the time initially. One of the things that has disturbed me a bit about my trying to get some conversations going [around a particular application of BES] is that usually I have been slotted in to an existing meeting and given maybe half an hour if I am lucky. That really isn't enough time for any kind of interactive engagement. ... It is that thing about just underestimating the amount of time it takes people to get down into the nitty-gritty and really talk it through in some depth. As an organisation ... everyone has totally underestimated the time and the investment required to make changes in people's behaviour, and understanding in the first instance their learned behaviour. (Participant 2)

The time management factor was identified by two other speakers, one relating it to professional development aspects of BES (Participant 3) and the other to the time needed for working together (Participant 9). As illustrated in respect of getting one's own head around BES, in one work group time has been set aside for reading BES, however that demands a level of commitment evident among the participants but not necessarily widespread throughout the organisation. Indeed, Participant 2 commented that,

Certainly when we have put so much organisational resource into the best evidence synthesis programme it seems ridiculous that we are not making it very clear to staff that if they read nothing else over the next couple of months they should read these. (Participant 2)

Another speaker (Participant 6) took a complementary stance that has implications for recruitment and induction,

I just think policy people, it is part of their role to be aware and to be accessing the kind of evidence that we have got. There is an expectation on them. If it is dense and thick and difficult to read, that is their job. ...At the end of the day it comes down to personal responsibility. The people who are accepting the role, where they need to access that kind of information they should do that. ... If you are a policy person in the Ministry of Education and you are working on leadership and you haven't got into the leadership BES, say, then I don't think you are doing your job. (Participant 6)

More broadly, one participant made the link between gaining familiarity with BES, professional development, and creating change.

If you look at the characteristics of professional development and what brings about change and apply that and how you engage people [with BES], so it is about getting people to look at their work and their practice and providing the discordant data that provides incentive to engage. That is one of the most powerful things. Because people will engage with a sense of – kind of it's imperative rather than need and agency; that they are active agents in this themselves rather than someone is saying this is a good idea. (Participant 8)

Perhaps thinking about cultural change that would provide incentives strategically Participant 10 asked,

To what extent do we use the BES to actually develop people's thinking processes and analytical processes as opposed to this is the packaged answer

that people either accept or reject. It is almost like a zero one as opposed to a continuum there. Recognising that policy processes are a blend of a lot of things, how do you encourage people to have the right sort of debate that asks the right questions and then accesses the information, helps them to internalise it?

The question seems pertinent in the context of the Ministry becoming a learning organisation as well as developing greater capacity to provide evidence-based policy advice.

Further comments and reflections

At the conclusion of each interview, participants were invited to make further comments. Most simply reiterated points made previously but the following two additions from Participant 1 are insightful.

One participant (Participant 1) saw an implication of BES developments for other Ministry commissioned research:

I think that somehow we are going to have to look carefully at our other high profile research initiatives and see how they stack up under the BES guidelines. Otherwise, what is the point of there being guidelines if they are only for the BES programme and we're not consistently applying those.

Reminded that the *Guidelines* are specific to methodologies for syntheses, the participant continued,

That is true. But some of the principles [are relevant], is probably what I am saying, particularly outcomes focused. It would be good to have those kinds of discussions. ... Otherwise possibly people might think we are being inconsistent. We are contracting research projects that are about teaching and learning, but don't look at what happened to student learning as a result then however we still expect everyone to measure their success on what happened to student learning.

Conclusion

The Learning Conversations conducted within the Ministry were intended to focus on strengths. Much in the manner of appreciative inquiry (Thatchenkery, 1999), the aim was to identify what is going well in utilisation of BES reports and to inform actions that would enable more people to capitalise on those strengths. However, in line with other pilot projects, the conversations raise as many questions as they answer.

The role of research and outcomes-linked evidence in Ministry of Education policy development

It is apparent that participants meeting the selection criteria for this project are all more than simply aware of research. On a personal level they read in depth, consider the evidence and develop some aspects of policy accordingly. In Walter et al.'s (2005) terms, they embody awareness, conceptual engagement through which knowledge changes and 'use' research instrumentally or directly to inform policy. However, several of them go further. They also report modelling reference to BES reports in presentations and interactions within their workgroups, encouraging

reflection on practice and a few raise awareness of BES findings in the wider education sector by assisting to translate findings to the work context of the audience. This connects with the social influence aspects of Walter et al.'s (2005) five mechanisms for enhancing the relationship between research and policy and is in accord with the translator role recognised by Cranefield (2005) in her New Zealand research examining knowledge transfer in the public sector.

Several participants voiced recognition that research information, whether it is outcomes-linked evidence from BES or other projects, is one of several sources that need to be considered. Further, in some instances particular reports are more relevant than others, e.g. BESs addressing framework issues have been more pertinent to some work than those looking at areas of the curriculum. The current BES reports are silent on a number of issues and even if they were not, these participants seem to be in agreement that BES should not be seen as the only complete authority. This is entirely appropriate in that *The Guidelines* specifically require writers to identify gaps in the outcomes-linked evidence.

While the engagement with and use of research by this group is encouraging, throughout their conversations there are indications that others may not be so willing to read research or reflect on practice. Pressures of time and lack of recognition that reading is a valid use of time are implicated but further investigation is needed to determine the basis of the perceived problems.

The influence of BES development processes on thinking

Anecdotal evidence indicates that knowledge of the BES development and quality assurance processes have an impact on the credibility of reports and the confidence with which participants can then draw on their content. A few participants also reported that even peripheral involvement in BES development processes has changed their responses to other research. Knowledge of the *Guidelines* has prompted a few participants to try applying the underlying principles to evaluation of research from other sources. They claim to have become more critical, seek outcomes-linked evidence and to ask colleagues for evidence relating to outcomes of work and the basis of decision making. However, it is apparent that this is a fairly recent phenomenon and at least one participant was aware that they do not critique research on this level as often as they could.

The implication is that the interaction between BES writers, policy advisers and the education sector that occurs through think tanks and quality assurance meetings is providing a forum in which learning takes place. This goes beyond the passive knowledge transfer described by Cranefield (2005) and that BES reports have been a catalyst for further information seeking in some areas suggests a more constructive approach to problem solution. However, such meetings reach only a small proportion of Ministry staff and an even smaller part of the wider community. This raises dissemination management issues concerning those away from the hub of BES development who may have few opportunities to exchange knowledge or to develop a community of understanding that can support them in their work.

The influence of BES as a change agent within the Ministry

While events described by participants indicate that change is occurring on a personal level, a few participants reported having also noted changes across the Ministry.

These are apparent in the language used in general discussions with colleagues and within official documents such as the Statement of Intent. However, one participant in particular articulated issues that have implications for the utilisation of BES and speed and sustainability of related change. For example, it is unclear how the purpose of the BES programme and its intended use is understood within the Ministry. Perhaps as a result of that lack of clarity, this participant reported equivocality across the Ministry concerning the status of BES. As an internationally unique and novel development, people may be unsure how to approach it as a tool in their work. This uncertainty is perhaps a symptom of a wider lack of knowledge concerning how research in general is integrated with policy in practice. Recall Fiona Reid's (2003) finding that there is no significant international or national body of academic research on the actual process of research integration with policy as seen from the policy advisers' viewpoint. Participants in this study, like those in Reid's, found it difficult to articulate how policies came about and where research fitted in. Discussion concerning the nature of BES as a policy tool and efforts to gain an understanding of the mental models people have of the research to policy process may assist in enhancing the relationship between research and policy.

The Ministry's organisational development plan (ODP) emphasises systemic change towards learning and inquiry in a direction similar to that espoused by Alan Reid (2004). Two Learning Conversation participants did raise issues with implications for this. For example, although BES is reported to feature in some informal as well as formal discussions, it is unclear how widespread this phenomenon is and indeed, there was some agreement between participants that there were not enough opportunities to talk on a range of issues. One participant also wondered to what extent BES is being used to develop people's thinking and analytical processes. Other speakers alluded to this professional development issue as well. Further, take up of BES was seen as variable within the National Office, with little comment made concerning the Regional Offices. These Learning Conversations provide indications that the BES programme is contributing to capability building for those that it touches fairly directly, but to capitalise on this and to contribute to the ODP goals, a strategy for use of BES will be needed that incorporates interaction, facilitation and social influence mechanisms and pays greater attention to what is known about effective dissemination management.

Conditions under which BES reports are particularly useful

The basic condition indicating utility of BES was the high and obvious relevance of content to *current* tasks (mentioned by five participants). The contexts in which people turn to BES for information vary from broad direction-setting for policy and framing ideology to provision of research evidence central to designing specific interventions. However half of the participants had difficulty giving specific examples of the contribution of BES to policy. It does seem that at this point in its development, BES provides a general background noise that informs rather than explicitly guides policy. On the other hand, this may be another reflection of the challenges of articulating the policy process. This makes verification of BES's impact and value for money difficult to track. While specific BES reports are cited and acknowledged in key Ministry documents, they are likely to be less visible in working documents as suggested by the SSC (1999) finding that cabinet papers usually lack references to authoritative information.

With regard to situations in which BES reports may be overlooked or eclipsed by other events, it was apparent that some speakers had concerns about the way in which the relevance of outcomes-linked evidence to a policy task might be evaluated. There were at least two issues underlying this. Firstly, people approach BES for a particular purpose and, as one participant indicated, the sophistication of the questions in mind changes not only how one seeks information, but also the answers one is prepared to construct. Another participant voiced concern that without understanding of the complexity of principles underlying BES, engagement was likely to be superficial. Secondly, other speakers noted that after several readings of the material, they thought they recalled content accurately but checking revealed distortions and changes in emphasis placed on particular messages. These experiences recall Goldstein and Woodhouse's (2000) comments on how taking research findings out of context can undermine a research effort as well as resulting in shaping initiatives inappropriately. The challenge is that the complex messages around BES require audiences themselves to do some complex thinking. The challenge is to present the information in ways that support and extend that thinking, to provide speedy but not necessarily easy intellectual access to the material.

Challenges individuals experienced in engaging with BES reports

Setting aside time for multiple readings of each BES was difficult but important to nearly all of the participants. Concern was expressed by some that there seemed to be little recognition within the Ministry that reading in general is an important part of the policy role, but within one group, BES reports are seen as essential reading for new comers and specific time is allocated to the task. Structuring ways of working to increase reading time appeared to be an almost insoluble problem for others, perhaps because they had never had an incentive to reflect on that aspect of their work. There were a few comments that indicated that the incentive could come from organisational commitment to the importance of reading BES. This has undertones of the compliance behaviour that are implicated in Walter et al.'s (2005) reinforcement mechanism for enhancing the relationship between research and policy. This mechanism was to be less effective than other approaches, but as part of a multifaceted strategy emphasising interaction, facilitation and social influence, such undertones should be minimised.

The social influence aspect of participants' experiences was marked. Participation in oral presentations and quality assurance meetings had been a catalyst for changing thinking and deeper engagement with BES for several participants. While several people reported continuing conversations with Adrienne Alton-Lee to check understanding and access further reading, there was awareness that this reliance on one person is not sustainable, particularly as further reports are developed. As in the literature reviewed (Walter et al., 2005; Cranefield, 2005) oral presentation of BES information was important and some participants are themselves providing similar access to the sector. Providing support for them in those roles is an important factor in sustaining the programme and promoting ownership of its findings as well as releasing the BES leader to focus on the iterations of the programme. However, it is not clear what form a strategy should take to co-ordinate the activities of 'BES champions'. In light of the advocacy approach taken in this project, any strategy should presumably focus on BES as a tool to achieve BES champions' goals, with increasing uptake of BES as a secondary outcome.

While nine of the participants had engaged deeply with BES reports, they reported that the BES reports themselves add to the challenges above in that they are very complex and sophisticated. They are also densely written and participants reported comments from the sector concerning the language used, as well as some reluctance in the sector to read anything more than a page long. Participants were wary of taking BES findings out of context, but wanted to extract short case studies and summaries of research to serve particular purposes in dissemination and translation of research to the context of practitioners.

Although not explored explicitly in the Learning Conversations, an implication of this tension is that some people have a willingness to engage with a small part of BES (because it is manageable) but as a result lose sight of the power of the synthesis and the theory that it generates. Given that the theory has the predictive power to aid translation of the findings to local contexts, there is an important challenge here. Further, Learning Conversation participants identified added value from combining evidence from more than one BES, yet the power that comes from that type of transformational triangulation is not available to those who dip into a single report. As one participant said, people need some sort of conceptual overview of BES report contents and another suggested a visual resource that shows links between them. These sorts of resources are appropriate to the facilitation mechanism described by Walter et al. (2005) but need to be selected and designed in light of what is known about dissemination management.

Little evidence concerning effective dissemination management came to light in the brief literature review that follows, but linkages to New Zealand studies and the evidence from the Learning Conversations are made where possible. The review is presented at this point as it frames the last purpose of the EBPP: to identify resources and activities facilitating the use of BES reports as part of a toolkit or set of guidelines. However, the work in progress (oral report by Aitken and Sinnema) on presentation of case study material suggests that each of the resources should be trialled with people in the Ministry and sector to ensure it achieves its intended aims.

Chapter Four: Dissemination management factors

The initial literature review explored a rift that appears to have deepened between research and policy in the 1980s and the subsequent concern to increase consideration of evidence in policy development and advice. The Learning Conversations conducted within the Ministry of Education with a small sample of policy advisers who have been peripherally involved in the development of the Best Evidence Syntheses iterations focuses attention on four of the mechanisms that can enhance the relationship between research and policy. Participants' experiences as individuals grappling with complex information when time is limited, and in raising awareness of BES findings in workgroups and the wider education sector, have implications for developing effective approaches to dissemination, facilitation, interaction and social influence mechanisms (Walter et al., 2005). One aim of this EBPP Project is to take an evidence based approach to dissemination of outcomes-linked research information.

While Walter et al. (2005) see typical forms of dissemination (e.g. journal publication) as the most passive approach to integrating research evidence into policy; Kirst (2000) takes an alternative stance. He notes a discrepancy between the pervasive view that policy research either does not reach or is not used by educational policy advisers and the frequent citation or acknowledgement of policy research in the US. He seeks resolution of this contradiction through an examination of the effectiveness of education research dissemination and, like Levin (2005), tracks the problems to differences between the worlds inhabited by researchers and policy advisers (not to mention the wider influential groups). Kirst comments that in general utilisation or non-utilisation of information depends partly on organisational processes and pressures that encourage or discourage the use of social science knowledge. This view is supported by Court and Young's (2003) evidence-based framework centred on political context, the links between policy and research communities and the credibility of the evidence, including how it is communicated. The limited opportunities to talk and the pressures of finding sufficient time to read and reflect on research identified by Learning Conversation participants are symptomatic of organisational processes and pressures. Further, while the credibility of BES reports is seen as a significant strength, intellectual access to the evidence could be improved by greater attention to dissemination management and consideration of expectations for 'research use'.

Kirst (2000) does not make the connection explicitly but implies that attention to communication factors may need to be accompanied, as Walter et al. (2005) indicate, by efforts enabling cultural change. As Learning Conversation participants hinted, fragments of a culture of inquiry, one in which practice is reflected upon and discussed constructively, are apparent in the Ministry, but do not pervade all workgroups. Alan Reid (2004) believes that "educators need to be inquirers into professional practice who question their routine practices and assumptions" (p1) and that the education system as a whole needs to support educators as inquirers. However, cultural change takes a long time and while the ODP has that change as a central aim, facilitation and dissemination strategies around BES may contribute to achievement of its goals.

Focusing on intermediaries, Kirst (2000) asserts that ‘policy brokers’ can bridge the gap between policy and research communities and that those who are successful have shared characteristics. These people are for example, skilled at translating technical reports into plain English, are accessible (only a phone call away) to answer specific questions about research relevance to a particular policy, they can synthesise several research reports into policy-oriented commentary, and actively maintain linkages to policy networks and communities. Some policy brokers have worked in both research and policy arenas and are able to move beyond a general academic description of an issue to pull together specific policy recommendations. The ‘schizophrenic impulses’ described by Ellwood (2000) are an indication of the challenges of bridging the research and policy realities in this way. However, these characteristics do not necessarily have to reside in a single individual. The participants of the Learning Conversations, the writers of BES reports and the leaders of the Iterative BES Programme share many of those characteristics and the various BES forums have potential to promote collaboration on this level.

The information officer employed by one of the Learning Conversation participants and the ‘research implementation officer’ appointed as part of the “What works for Children” research-policy project in UK (Liabo, 2004) translate research into plain English and current task contexts, similarly bridging research and policy. In addition, they are very accessible as, in both cases, they share workspaces with those who will use research. Given the SSC’s (1999a) finding that there is a shortage of people able to bridge research and policy, this positioning of those with research expertise alongside policy advisers may be an effective use of resources.

In the US the policy brokerage role is often taken by think tanks and lobby groups that are less a feature of the New Zealand scene but Kirst (2000) considers a range of research-based policy analysis centres that reveal characteristics of relevance. He stresses common features such as they all de-emphasise philosophical analyses and focus on empirical data collection, at times collaborating on complex studies. However, he notes that one consequence of the proliferation of policy brokers and the variety of philosophically focused think tanks in the US, is that policy advisers are presented with conflicting policy studies all claiming to be data and research based. “These contending studies tend to undermine the legitimacy of all education policy research.” (Kirst, 2000, p389). The trends noted by Claudia Scott (2003) suggest that the same problem could emerge here but the information literacy challenge of evaluating information that is presented as educational research is partially reduced by the existence of BES which in effect acts as a policy-broker within the Ministry. Moreover, Learning Conversation participants appreciate the sifting and evaluation that occurs in generating a BES and claim to have used BES evaluation principles as a tool in judging other information. A resource specifically designed to assist others in using BES this way may be helpful since some participants indicated lack of confidence in their research evaluation skills.

More generally, Kirst (2000) notes that decades of research point to five dimensions that influence the outcome and effectiveness of policy research dissemination efforts: the *source* of the communication, the dissemination *channel*, the *communication format*, the dissemination *message* and *characteristics of the recipient*.

Source of information

The SSC report (1999) states that

Information is the raw ingredient which, after being put through an analytical process, becomes the foundation for policy advice. The quality of policy advice depends on high quality information, which in turn depends on the substance and integrity of the sources from which it is drawn (p2).

The Learning Conversation participants are in strong agreement that the evidence presented in the various BES reports is of high quality, but from the sector viewpoint, these reports may be subject to additional evaluation factors associated with information coming from outside an organisation that is independent of the recipients. Kirst (2000) observes that external agents as sources of information may identify users or user needs incorrectly, and may also lack credibility. Thinking in terms of oral communication and writing on the basis of personal experience with the policy broker organisation PACE, Kirst (2000) suggests that the most critical determinants of an external agent's effectiveness are

- whether or not they are a single source delivering a particular message
- whether they are seen as credible colleagues who possess acknowledged expertise
- whether they are familiar with the users' institutional and practical problems
- whether they are close enough to provide consultation on an as needed basis (e.g. whether they be called to answer questions), and
- what kind of organisation they represent (technical assistance, new research, research synthesis, a mixture of these or other interests)

In addition to the reports themselves, Learning Conversation participants have drawn on first hand experience of the forums in which BES evidence features. In accord with Cranefield's (2005) finding, they are now becoming sources for contextual and language translation themselves, although some clearly would not recognise themselves as reliable experts just yet. Although Learning Conversation participants tended to refer only to Adrienne Alton-Lee as their key informant, in recent months there has been an increase in conference presentations and articles by BES writers and commentators, thus increasing the range of sources delivering BES messages, but it is not clear how widely accessible these are. However, as one participant noted, while this increases ownership by the learning community, 'purity' of the messages may be reduced. In this context it seems appropriate to consider creating resources that build confidence of people in roles such as those of the Learning Conversation participants and other facilitators who are closer to the users' institutional and practical problems. Moreover, while those in regional offices and national office can be contacted easily by those in the sector (which is another enabling factor) one Learning Conversation participant did note that operational crises leave little room for considering longer term initiatives of a very different order. This has human resources implications for organising ways of working and recognising responsibilities around BES research dissemination. Commitment across the Ministry to BES dissemination and integration of outcomes-linked evidence into policy and practice is not the responsibility of the BES team alone; responsibility is shared across several groups.

An additional consideration with quite different implications comes from considering the UK literature on independence of researchers versus capture by government (e.g. Goldstein and Woodhouse 2000). Although other sources of commentary and critique

of BES are emerging, the main source of BES information and evidence is still the Ministry, yet none of the Learning Conversation participants offered comment on how Ministry communications in general are perceived in the sector. The BES programme reports are a unique and innovative source of outcomes-linked evidence material. Their purpose is distinct from other Ministry publications in that they are intended as catalyst for learning, reflection and change management. However, the current pilot project has produced no insights into whether that distinction is recognised across national and regional offices, let alone within the sector.

Dissemination channel

This factor relates to the means by which information is transmitted to potential audiences. Kirst (2000) suggests that single channels, like single sources of information, prove ineffective – thus the ideal dissemination strategy involves distinctive messages and multiple channels. Furthermore, the most effective formal and informal dissemination channels are the natural networks comprised of leaders and practitioners with an interest in a particular issue. Kirst describes natural networks as specific configurations of individuals including a range of researchers, academic intermediaries, research brokers and policy advisers, and claims that,

The use of issue networks is important ... information is acquired and used only at a cost. Consuming information takes time and uncertainty about its value stands as an obstacle to its use. This is a major reason why policy advisers do not search for relevant information. Issue networks can reduce the costs of difficult access and uncertain value because the common mission of network members reinforces potential relevance. ... issue networks are a boon to dissemination because they reduce the real or apparent threat of information. Information is not a neutral resource in a policy setting, its use is enhanced when it can be presented in such a way that users are least threatened and purveyors are seen as trusted colleagues. (Kirst, 2000, p384)

As noted earlier, Walter et al. (2005) cite a range of studies that indicate that in the course of day-to-day work, practitioners and policy advisers turn to colleagues as a key source of knowledge. It therefore seems important to think not only about the various audiences for evidence concerning teaching, learning and student outcomes, but to utilise the natural networks within those audiences as key channels for communication. The Effective Teaching Team within the Ministry is one such network and Learning Conversation participants identified others, formal and informal. Given the effectiveness of research implementation officers demonstrated by Liabo (2005) and the precedent set by within the Ministry for such a role, it would appear that augmenting issues networks with a research adviser would be useful for promoting evidence-based decision-making using BES and other research. Continuing with the advocacy principles underlying this project, it is suggested that when an issues group is formed, a research adviser/implementation officer joins the group with the expressed goal of assisting the group in achieving its goals. The potential of collaboration between researchers and policy advisers is recognised by Pfeffer and Sutton (2006) and is a defining feature of the enabling climate described Walter et al. (2005) as enhancing the relationship between policy and research.

Although the focus of this pilot project is the Ministry of Education itself, many of its implications are applicable to the sector at large. It is therefore worth noting that other ‘natural networks’ include the unions, principals’ and subject associations and Boards of Trustees. Indeed, the organisational commitment of teacher unions to the BES programme was discussed highlighted by one of the Learning Conversation participants. Moreover, since it is not unknown for research to be taken up by practitioners more quickly than by policy advisers, these organisations have the potential to influence use of BES research within the Ministry.

Kirst (2000) focuses discussion of dissemination channels on sources of oral information and personal contact. However, BES reports are available in print and electronic form and it is in this form that the information may be encountered most frequently in the sector. As the Learning Conversation participants revealed, there are some issues with the format of the information.

Format

Kirst (2000) makes the obvious statement that inaccessibility of information, both physical and intellectual, hinders dissemination. He suggests that the chief cause of physical and intellectual inaccessibility is inappropriate format. Citing Cohen and Lindblom (1979), Kirst writes that,

Most policy advisers and practitioners have insufficient time, patience or expertise to wade through lengthy, abstract, technical reports which are the products most often issued by the academic research community. Costs of [information] consumption rise unacceptably as potential users face the task of extracting information relevant to their setting, presenting it succinctly and interpolating the significance for their institutional needs. Research findings on effective dissemination of written materials are consistent: effective dissemination requires that these materials be jargon-free, brief and provide concrete illustration” (p385).

The following recommendation from UNESCO’s cross sector, High Level Colloquium on Information Literacy and Lifelong learning reinforces this view, recommending that one should:

Present evidence in ways that meet the information and problem-solving needs of policy makers and practitioners. (Researchers, educational institutions, agencies using research, governmental institutions using research, community agencies using research) Garner (2006, p12)

Written materials meeting these criteria are highly valued by policy advisers. Evidence from the Learning Conversation participants indicates that the current BES format is insufficient to the extremely varied needs of its audience, with one participant questioning whether a single document *should* be expected meet them all. As a result of these considerations, specifications for a range of short documents will later be suggested that keep the context and intent of the original reports in view. These are seen in the light of dissemination and facilitation as described by Walter et al. (2005).

As demonstrated above, Kirst also notes that decision-makers in social policy settings (education, medicine and criminal justice for example) rely heavily on oral

presentation of information. He suggests that briefings can be targeted directly to user concerns and needs and provide the most effective means for two-way communication. The evidence provided by Learning Conversation participants, together with the intent of the BES programme and the ODP in terms of capability building and change management demands more than briefings however. Since the BES programme is iterative and each report contributes to a growing knowledge and evidence base, on-going professional development, perhaps using BES as a tool promoting analytical thinking as suggested by one Learning Conversation participant, together activities suited to different roles within the Ministry may be more appropriate.

Finally, Kirst (2000) also echoes Fiona Reid (2003) in noting that policy advisers read newspapers to form some of their views about particular policies. Media-related issues are discussed later since they cross several of Kirst's dimensions of dissemination.

Messages

Policymaking moves through substantively different stages, so even though the need for research on fundamental issues underlying policy problems is continuing, specific information needs change over time as policy solutions emerge and phases are completed. As a result, Kirst (2000) comments information is more likely to be used when it is timely and meets needs associated with the current phase of the policy cycle and the policy problem. Evidence from the Learning Conversation participants endorses this view as relevance to current policy tasks was found to be a critical determinant of BES use. However, Kirst offers no insight into effective management of matching communications to phases in policy development or how documents might be formatted to enhance repeated searching for different purposes. One assumes indexes and hyper-links within documents might be of assistance, but strategies may be required to guard against de-contextualisation and subsequent misinterpretation of information.

Supplementing Kirst's reflections, Pfeffer and Sutton (2006) consider the place of stories and cases in effective communication. They claim these to be powerful tools for building knowledge with a place in an evidence-based world in suggesting hypotheses, augmenting other (often quantitative) research, and rallying people who will be affected by a change. The Learning Conversation participants certainly placed emphasis on accessing case studies in communicating with the sector and translating research to their contexts, pointing to increased requests for original source material as evidence of their effectiveness. Case studies and what were referred to as 'research nuggets' were found to be influential in Liabo's (2004) study where programme planners changed the focus of interventions as a direct result. The challenge for BES however is to extract appropriate case studies but simultaneously to encourage readers to relate these to the larger context of the entire programme. It is possible that such case studies could be used as a key to enter the growing set of reports. A caution is raised however in that novel approaches to formatting and presenting case studies affect audience motivation and comprehension, as discovered by Aitken and Sinnema's work in progress on case study presentation from Tikanga-a-iwi.

Another challenge of BES compared with the situations drawn on by Kirst and others is that BES is a coherent and consistent programme that is continuing to grow and evolve over time. New reports do not necessarily supersede earlier ones rather they expand them and are replete with internal references. The complexity of the messages and the relations between them suggests that the whole will continue to be more than the sum of the parts. Not only is the underlying research method unique, it demands innovative approaches to dissemination formats.

The current review has not compared or explored the role of various communication modes (narratives, technical reports, digital formats etc) but a separate survey may be informative in planning to meet the information needs of multiple audiences. Think aloud website evaluation methodologies would be revealing intellectual rather than technical accessibility of BES related information and evidence.

Recipient characteristics

The need for tailored communications has been alluded to frequently in this review from the perspectives of policy, research and information literacy. From the perspective of dissemination managers, Kirst (2000), citing Van Horn and Hetrick (1987) and Mazzoni (1995), notes that personal characteristics of policy advisers influencing receptivity to and use of information pose difficulties. They include:

- The motivation to seek and use information
- Resistance to outside sources or innovative suggestions
- Sense of ownership of or commitment to use particular information
- Existing and incompatible policies
- Insufficient resources
- Fragmented authority to act
- Competing or conflicting demands on institutional resources

As outlined in the foregoing, the Ministry of Education BES programme results in thick, rich descriptions of what goes on in the blackbox of teacher-student interactions to make a bigger difference in learning outcomes. Yet, it is apparent that such reports make high demands on the audience in terms of information literacy and assessing potential for generalisation to their personal practice. If that potential appears low at first encounter, personal engagement with the outcomes-linked evidence may be limited and that has consequences for systems change. For example, in her study of interagency knowledge transfer in the New Zealand state sector, Cranefield (2005) found some evidence that information may be ‘filtered out’ if it is perceived to be less significant than competing workplace issues, as it will ‘waste time’ for busy colleagues. Gatekeeping of this nature is quite a different function to that by those who “performed filtering activities, but more often with the purpose of reducing information and tailoring it to fit the audience, rather than to screen them from it” (p53). It also suggests a different motivation to that of the poker players described by Fiona Reid (2003) who share information when it serves personal purposes.

The Learning Conversations implied that there is a greater degree of sharing and freedom of information within participants’ workgroups than is suggested by Cranefield’s finding. Several participants saw BES reports as essential to their roles and encouraged others to read rather than limiting access and one had taken managerial action to ensure new employees were familiar with BES contents.

Recipient characteristics that are only alluded to in the literature, relate to the *purposes* for which people approach reports such as BES. As a Learning Conversations participant pointed out, over time, knowledge and the context of policy change, suggesting different sophistication of inquiry and differing interpretations of the evidence. In addition, thinking of organisational change, one cannot ignore the differences in purpose that are associated with various Ministry roles and careers points. The Learning Conversation participants had ‘immersion experiences’ of BES reports but saw a need for quick and easy entry to them for others. The implication is that all readers are learners and the ‘BES experience’ needs to begin with their motivations, capabilities and purposes, particularly if it is to achieve its goals as a change agent and capability building project.

Kirst (2000) concludes that the salience of recipient characteristics underscores the importance of a two-way dissemination strategy in which information providers acquire information about user needs, preferences and problems and in which, where possible, users participate in framing research objectives. Simultaneously there is a need to create dissemination strategies that “recognise the inevitable and desirable diversity in policy settings”. Kirst states that knowledge and strategies to overcome barriers must be implemented on a decentralised basis (in very large and diverse policy settings) through collaborators and intermediaries who know the audiences well. This EBPP has begun to acquire information about user needs, but being based in the national office means that regional office challenges are not well understood at all. Originally, in-depth case studies of the relationship between policy and research were to complement the literature review and Learning Conversations. However, in light of the findings, it seems that case studies of research use in regional offices would add more value and better inform development of resources and activities suited to the Ministry and sector.

Given that Kirst (2000) is reflecting on experience with PACE as an external agent endeavouring to influence policy through provision of research information, it is not surprising that his approach to dissemination is incomplete in terms of the context of the current study. Other than stating that effective dissemination is also a function of the extent to which information recommends action that is compatible with the institution’s values, structure, capacity and resources addressing contextual issues he largely overlooks alternative or complementary approaches. The tenets of BES are aligned with the Ministry’s Statement of Intent and other key documents thus the evidence should be compatible with policy directions. Indeed, one Learning Conversation participant attributed shaping of organisational priorities to the Iterative BES Programme. However, parallel work on the conditions that support evidence-based policy initiatives, as described by Walter et al. (2005), would seem to provide a rather more dynamic and systemic context in which dissemination factors could be improved.

The practitioners’ perspective

The foregoing has focused mostly on differing policy and research realities, but the Iterative BES Programme seeks to influence policy *and* practice in the sector. By far the largest proportion of actors in the education sector are teachers, whose characteristics as recipients of research documents from the Ministry need to be considered, at least briefly.

Desforges (2003) states that, “Teaching has always been a process informed by evidence... That evidence is interpreted in terms of the teacher’s experience, style, values and implicit beliefs of theories about teaching and learning” (p3). There are however, questions concerning the nature of the evidence that has informed teaching in the past, as now, and the type of evidence that is needed to make a bigger difference to student learning outcomes. Both Desforges (2003) and Luke and Hogan (2005) are in agreement that despite commitment to broad educational goals that enhance opportunities of students to participate in the community and workforce and that result in psychologically balanced, healthy individuals with particular arrays of intellectual habits, “school systems and researchers have done precious little to establish what ‘value adding’ they contribute to these outcomes” (Luke and Hogan, 2005, p15).

The kind of systematic research discussed in this document, particularly the Ministry of Education Iterative BES Programme, endeavours to address that shortcoming and results in ‘thick’ descriptions of what works under what circumstances for which children, but Ellwood (2003) is concerned that ‘rich and important nuances of research are lost in the translation to policy’ partly because of the short attention spans and emphasis on simplicity that characterises the political world.

Echoing Ellwood’s (2003) concern about loss of rich nuances, Edwards (2000) identifies a problem for teachers in that while pressures towards simplicity may make bullet point presentation attractive,

...teachers are likely to find the notion of fuzziness more realistic than prescriptions of effective practice which depend on artificially tidied up versions of what they know to be complex, fast-moving, considerably unpredictable learning environments. (Edwards, 2000; p302).

In addition, Edwards comments that “generalising beyond the settings investigated depends on identifying necessary or favourable conditions for something to work elsewhere”. He later notes that the kinds of student learning to be achieved in the research setting are crucial elements in any generalisation as far as teachers are concerned. Edwards (2000) concludes that too much fuzziness is unlikely to tempt teachers to try out something new, but they need sufficient detail to assess the fit between their own situation and the research setting from which potentially useful findings have come and findings need to be replicated in several settings. The implication from both Ellwood and Edwards is that communications aimed at providing easy access to research need to be supplemented with access to in-depth methodological discussion on which they can base their decisions to adopt or adapt teaching techniques.

The role of media

Finally, although this project is internally focused, it seems appropriate to note dissemination management issues regarding the media. This is partially because the Ministry provides research information to the media and, since most policy advisers watch or read media coverage, they are likely to be influenced by media reports if they are not familiar with the original material. In addition, as discussed in the initial literature review, events that get adverse media coverage can further soften the voice of research evidence.

With regard to the characteristics of media reporters, Levin (2004) observes that the accuracy of messages reported depends to some extent on policy advisers' ability to couch explanations for decisions in terms that minimise the possibility of misinterpretation. This is partly because it is unrealistic to expect reporters to have in-depth expertise on any particular issue. Given the complexity and interactivity of messages from the BES programme, the caution underlying Levin's observation is apt.

He uses the case of literacy in UK as an example of the cumulative effects of media coverage on public perceptions of educational research. He notes that there have been 20 years of heated debate, often fuelled by acrimonious disagreements between researchers, which have led to public confusion and perhaps a wariness of research pronouncements. (New Zealand has experienced similar polarising debate in regard to literacy.) Further Levin comments that while not everyone is a doctor or an engineer, they have all been to school and this tends to detract from the professional status of the knowledge emanating from education research. This fact may contribute to his later observation that for politicians, "what people believe to be true is much more important than what may actually be true" (p621).

The overall consequence for evidence-based outcomes-linked research is that the potential for the development of overly negative perceptions needs to be addressed constructively as a matter of course, as an integral part of a strategy for research use. Kirst (2000) sees a role in dissemination management for periodic briefings for newspaper and television journalists on specific topical issues. However, Levin (2004) notes that opinions are divided concerning the importance of media in shaping political views and attitudes since media messages are filtered through the ideas, knowledge and interests of the audience. He does however temper this caveat since in the case of education, the connection between media and public policy is particularly strong,

because of a tendency to believe that all social problems can be corrected through the schools. If children are not physically fit, if crime rates are too high, if pollution is a problem, if driving practices are irresponsible, it is commonplace to hear suggestions that the schools should do something to fix the problem (Levin, 2004, p275).

Based on his experience in government, Levin discusses three of the main complaints about media coverage that revisit the notion of inhabiting different realities – its tendency to simplify, to assign blame and to be focused primarily on the short term. He states that "the media are both vital purveyors of opinions and information and, at the same time, a potential source of disaster and destruction" (p271). In this context some policy advisers may see media people "as biased, ignorant, lazy or sometimes all three" while some media staff see government as an important source of stories in which re-election may be put ahead of public interests (p272). Levin notes that these stances (hopefully characterising only a small proportion of people on both sides of the divide) reinforce each other. Citing research tracing complaints about the media back to 1870, Levin (2004) notes that "It is ironic as well as problematic that the constant suspicion between governments and the media may itself be an important contributor to the declining credibility of both parties" (p272).

While policy advisers are operating under multiple and often contradictory pressures of a wide range of both long and short term issues, for the mass media, short-term viewer interest is a first requirement. Levin cites Kiesler and Sproull's (1982) conclusion that the audience for mass media is more interested in 'stories' than in analyses, statistics or theoretical discourses. Time and attention are scarce resources in the media world as well as in the policy advisers' reality and the goal becomes one of capturing the audience's attention at least fleetingly. The use of sound bites achieves that aim, but with reference to Gerstl-Pepin (2002), Levin observes that,

at the same time for anyone with a deeper understanding, the portrayal of an issue in a couple of sentences inevitably does violence to what people need to know (p276).

However, sound bites aside, reporting is constrained by the impossibility of reporting in great depth on every issue that may be of public interest, with the overall result being a force towards simplification and brevity of coverage. Indeed, Levin suggests that the public's desire for novelty sometimes means more coverage of an issue results in less public interest. While that can be seen as problematic, it can also be seen as an advantage – Levin (2004) counsels that “with experience, you learn that responding is not always a good tactic” (p276).

The implication for the Iterative BES Programme is that an innovative communication strategy needs development which includes media considerations as well as to encompass the entire programme as well as its individual parts.

This chapter has taken a brief look at dissemination management, mainly as seen through the relationship between Kirst's (2000) case study examining communications from policy broker organisations and the evidence from Learning Conversations within the Ministry. The final section of this report aims to present recommendations for activities and specifications for suggested resources that address issues raised by Learning Conversation participants in terms of meeting information needs and enhancing the relationship between research and policy.

Resource Framework and Specifications

The Ministry of Education's Iterative BES Programme takes a *...health-of-the-system perspective in which there is a broad concern with how infrastructure, wider policy settings, and interactions amongst the multiple communities within an education system contribute to a system that is functioning effectively for all its learners* (Alton-Lee, 2005).

The Iterative BES programme is a multi-level, collaborative knowledge and capability building project that has implications across the entire sector, involving participation by a wide range of stakeholders. It is designed to engage and give ownership to those who have direct and indirect influence on student learning outcomes through:

- developing capability in the research community (including academics and teachers as researchers across a wide range of institutions),
- participation in discussions concerning the nature of evidence
- agreement concerning the selection criteria for research inclusion
- agreement concerning the processes of generating a BES
- participation in monitoring and guiding development of a BES
- participation in national and international quality assurance
- facilitation of access to dispersed and unpublished research information

The processes involved are transparent and well-documented, yet, no matter how high the quality of the research, one cannot assume that it will automatically have consistent or coherent influence on future research, policy or practice across the multiple audiences for whom it is intended. Indeed, this rigorous pluralist approach to research synthesis results in conclusions heavily qualified by conditional constraints often seen by policy advisers to be irrelevant to their concerns (Levin 2005).

The initial literature review explored the boundaries of the nexus between research, policy and practice in order to facilitate development of a more generative approach to learning that would support a greater degree of evidence-based policy and practice within the Ministry. A later briefer literature review explored communication and dissemination management issues, relating these to the evidence provided by Learning Conversation participants.

While factors influencing the impact of research on policy have been identified and various models of the policy process have been discussed, the actual process by which research is integrated into policy remains rather vague. Evidence from Learning Conversations suggests 'evidence-informed' policy is a more accurate descriptor than 'evidence-based' policy, but whichever descriptor is used, it seems that lines of research impact are difficult to track, other than where specific BES reports are cited in high level documents. This conclusion echoes that reached by Pawson (2002c) reflecting on "many, many studies of research utilisation" that "policy architects tend to use evidence only in an indirect and highly diffuse fashion" (p227).

The Learning Conversations affirmed factors identified in the literature as influencing research-policy relationships but also drew attention to unique facets of BES that

distinguish it from other less cohesive research efforts. The following recommendations try to address these.

Using BES in policy decision making

There is no evidence offered in the literature reviewed that researchers, policy advisers or education practitioners share any sense of how research in general will be used. There is no indication that any of the parties have a mental model or theory in action of where and how research evidence fits with other kinds of information. Whitty (2005) alone awards joint responsibility to researchers and policy makers for ensuring research is used constructively.

Consequently, the notion of ‘using research’ needs to be clarified with respect to the Iterative BES Programme, not only to inform the focus and format of attempts to bridge research and policy, but also to facilitate monitoring and evaluation of the programme within the framework provided by the Evaluation Strategy (Ministry of Education 2005). A critical step is to use Learning Conversations across the Ministry, not only to discover the information needs of policy advisers, but to invite their input to development of understanding of the research-policy-practice nexus from their experiences and knowledge of literature that resides in other silos. Adhering to the strengths and advocacy principles underlying BES, a key question is “What do you want to be able to do with BES?” and another focuses on expectations concerning intellectual access, “How do you expect to use BES as a tool?” From the answers, a strategy for the use of BES may be developed. That strategy should include interventions drawing on social influence, interaction, facilitation and dissemination mechanisms as described in the literature (Walter et al. 2005).

Social Influence and interaction

While familiarity with BES reports is not consistent across the Ministry, those closely or peripherally involved in the development of the programme (like the Learning Conversation participants) may be in a position of social influence. At present a number of ‘BES champions’ have been identified, but there is no co-ordinated effort to take advantage of their potential as opinion leaders and contributors to an enabling climate (Walter et al. 2005). Feedback on this report from one Learning Participant suggested that workshop opportunities for BES champions would assist them in deepening their understanding of BES. It would also contribute to development of consistent ways of embedding outcomes-linked research evidence in their work.

Further, providing BES champions with resources that meet the needs of *their* audiences would build their confidence in conveying the complex messages of BES reports in formal oral presentations and discussions. Comments from Learning Conversations regarding the brevity of time allocations at meetings and reluctance on the part of some of those audiences to read at length demand succinct summaries to reinforce the social processing that is central to both policy and teaching contexts.

To take further advantage of social influence opportunities, a mechanism is also required that capitalises on evidence that influence shifts from opinion leaders to peers at different stages of research uptake. Cranefield’s (2005) finding that in New Zealand’s state sector, the knowledge sharing activities of those at the interface

between organisations change as a project develops is pertinent here. To reiterate, the social influence roles change from advocate to flag-bearer, to translator and interpreter then to facilitator, storyteller and finally to provider of expert advice. The point at which peers take over influence from external opinion leaders is unclear, but promoting ownership and translation of BES evidence to local contexts is a goal of the Iterative BES programme that serves this dissemination purpose. Promotion of ownership could be achieved through opportunities for varying combinations of researchers, policy advisers and other sector representatives working collaboratively on tasks associated with BES, but not necessarily part of the BES development process. Such opportunities could also provide outcomes-linked evidence to feedback into the BES programme in terms of management of collaborations, research dissemination and of course, students' learning outcomes.

Within the Ministry, more opportunities need to be created for social engagement with BES information. Requesting that BES champions have opportunities to share with other policy advisers their perspectives and ways of working with BES increases the number of channels for communication of reliable BES information as well as increasing opportunities to talk about making a difference to students' learning outcomes through application of outcomes-linked evidence.

Formal and informal networks have been found to be important elsewhere in promoting research uptake and working collaboratively across the research-policy divide achieves this by contributing to shared experiences of reality. It is suggested therefore, that when issues groups are set up for a specific policy purpose, a research implementation/adviser role is included in the manner described by Liabo (2004) and by Learning Conversation participant 8. People in such a role would use their research expertise to draw attention to relevant aspects of BES reports, including work in progress, and contribute to meeting the evidential needs of the group by seeking and evaluating other literature. This sort of role would also contribute to capability building as issues group members would have support in the task of evaluating information and the research implementation/adviser would build better awareness of how research is used. If such roles were established, involvement in a series of group projects would enable the incumbents to make connections between projects across the Ministry, thereby contributing to breaking down knowledge silos.

Facilitation

Facilitation as defined by Walter et al. (2005) includes organisational support for the use of research yet throughout the Learning Conversations a recurring theme was lack of time and lack of recognition of the centrality of reading to the policy advice role. Changes in ways of working that encourage reading, interaction and reflection may assist, but are beyond the boundaries of the BES programme to implement. While one Learning Conversation participant was strongly of the opinion that making time for reading is a personal responsibility for policy advisers, there are implications here for sufficiency of human resources and ensuring that job expectations are realistic. In addition, there are some identified pressures from outside the Ministry (e.g. the pressure on Regional offices to respond to BES inquiries) that need investigation and development of appropriate strategies. Again, it is a matter of listening to those who 'use' BES, either for Ministry directed work or in responding to sector requests.

Social interaction is particularly effective as a dissemination tool and the BES programme appears to be highly unusual in the degree of technical and financial support offered to enable participants from outside the Ministry to attend e.g. quality assurance and development meetings. Whether similar levels of opportunity and support are available to all Ministry employees is less clear. Policy priorities for which BES is not immediately relevant may limit motivation to attend such meetings, particularly for those travelling from Regional offices. Regional “roadshows” (implying forums for interactive dialogue) were planned as a strategy for partially addressing this need for differential facilitation, the conduct of which could be shared between BES team members and “BES champions” so that effects of multiple sources of information are capitalised upon. However, mere presentation of information is insufficient to ensure active engagement with BES. A better approach would be to hold collaborative dialogues with those in regional offices centred on issues *they* wish to address. Such sessions would present the most pertinent aspects of BES but the challenge would be in responding to requests in a timely manner.

Dissemination

The mechanism of dissemination provides a range of additional opportunities for bridging research and policy that both facilitate social influence and interaction and can be used in a stand alone manner. It is here that Whitty’s (2005) challenge can be adopted, i.e. that researchers and policy advisers should take responsibility for ensuring that research is used constructively. For example, given that BES writers report that writing for multiple audiences is particularly challenging, it may be that reading *this* analysis of audience needs may promote discussion of innovative ways in which writers themselves can contribute to a range of resources. Indeed, Court and Young (2004) indicate that research that has been successful in influencing policy included communication strategies in the initial design phase.

A key message from the literature has been that one needs to listen to the intended audiences for research to understand their information requirements. The Learning Conversations conducted within the Ministry provide evidence concerning four basic categories of information need. For policy advice, Ministry Staff need to:

- be continuously aware of BES reports so that relevance to current policy tasks is apparent,
- have easy physical access to existing reports,
- have speedy intellectual access to report contents in part and as a whole for a variety of purposes, and
- be alerted to highly significant or influential evidence as it emerges from BES reports under development

To achieve this, dissemination materials and activities should all, on the basis of the capability building principles underlying BES, the literature reviewed and the evidence from Learning Conversations:

- respond to specific purposes of various audiences in and beyond the Ministry
- use the language of those audiences
- support translation of evidence and construction of understanding for local and wider issues
- be catalysts for further learning and exploration of BES reports

- provide *speedy*, not necessarily *easy* intellectual access to concepts and evidence
- provide succinct coverage of specific research evidence, yet make connections to the theories emerging from syntheses and across the various BES reports.

To assist in thinking about the information needs of various audiences within the Ministry, Table 1 adopts an interim categorisation of roles in relation to BES that will need verification against actual information needs across Ministry roles and sites. One idea underlying the array of suggested resources is the facilitation of movement from ‘research awareness’ to ‘conceptual engagement and knowledge building’ so that later policy decisions are evidence-informed (after Walter et al., 2005). In addition, in recognition of the diverse purposes of BES audiences, the aim is to provide many points of entry to the evidence – a corridor of doorways rather than one door, several return trip tickets rather than a single. The mode of information delivery (e.g. print and digital) is discussed later.

Table 1: Roles, information needs and appropriate resources

Role	Description	Information need, indicative questions	Types of resource
Inductees	New to the Ministry of Education, may be new to educational research and/or the sector at large. Relevance of BES to normal work content unknown Level of ‘use’: awareness only	What is BES? What makes it significant to MoE priorities and Statement of intent? What can BES do to help me in my work? How do I access BES reports? To whom do I speak to learn more?	2 page summary of BES programme key features and purposes. Poster of conceptual contents and relationships Glossary of Ministry and BES research terms
BES independent	BES reports likely to be irrelevant to normal work content Level of ‘use’ – awareness but at level of building confidence in quality and credibility of evidence	As above plus – What is the development process behind BES and who is involved? What is the status of BES reports nationally and internationally? Where can background papers be accessed?	As above plus - 2 page summary of development processes, including quality assurance and sector involvement. Reference list and location of background papers and independent critique of BES.
BES occasional	Specific BES reports highly relevant for short periods	How can I use BES reports to achieve my goals? Are they relevant to my current work? What evidence do they provide?	2 page summary of ways in which others have achieved their goals by using BES (reflections on research/policy/practice) Quick reference visual concept maps of content and theories. Full report, with normal table of contents plus FAQ-style Executive

		<p>What's in BES? What's happening in iterations?</p> <p>Can BES help me evaluate research evidence from other sources?</p> <p>How is BES different from other research syntheses?</p>	<p>Summaries with page references. Rolling series of 'Gems' – 2 page summaries of case studies (individual student outcomes vignettes, indications for group learning outcomes, school level changes) 2 page checklist of evaluation questions, with BES principles highlighted as a benchmark. 2 page description of synthesis types emphasising BES distinguishing characteristics and purposes.</p>
BES dependent		<p>As above – plus What are the emerging theories of action?</p> <p>How can I access the original research items?</p> <p>What's happening across BES reports?</p>	<p>As above – plus 'Nuggets' – 2 page summaries of individual or groups of studies that writers consider highly significant to theory building.</p> <p>Database of NZ theses and full text articles being created by NZCER. Graphic or text updates on new relationships and triangulations of evidence. Could be part of Nugget or Gem series</p>
Co-ordinators of projects and senior managers	<p>BES reports highly relevant to much work content but overview of directions rather than detail required. Level of 'use' - Conceptual engagement and instrumental use in policy</p>	<p>Are BES reports relevant to my current work?</p> <p>What are the emerging theories of action?</p> <p>What is the supporting evidence from BES?</p> <p>What is the evidence that BES is making a difference?</p>	<p>Quick reference visual concept maps of content and theories. 2 page synopses of theories of action and Nuggets Full report, structured and presented in ways that allow just in time access to specific information.</p> <p>2 page case studies of use of BES</p>

“BES champions”	Those at the interface between national and regional offices, Ministry and sector. (Assumed to be part of the ‘BES dependent’ group)	What BES resources can I use with different audiences?	Range of 2 page summaries from above including Gems, Nuggets, and what distinguishes BES from other syntheses. Poster of conceptual contents and relationships.
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The user categories suggested in Table 1 may be applicable beyond the Ministry. For example, BES champions may be Ministry employees or members of the naturally occurring networks in which principals, teacher educators, teachers and others participate. Networks or issues groups might centre on schools, early childhood centres, tertiary consultative groups and others. Similarly, there are those in the sector who need to be aware of BES, while others are likely to be occasional users or highly familiar with content.

The wide range of suggested two-page communications would facilitate introducing BES to potential users in manageable chunks but result in fragmentation of the evidence. This is a challenge in that the unifying theories resulting from the syntheses could disappear from view. In fact there seems to be some evidence from the Learning Conversations that underlying theories are less attractive than student vignettes, yet theories are stronger predictors of future learning outcomes than are stories of individual students. To counter that, it is suggested that a graphic device be developed that illustrates the key concepts of the particular BES, highlighting the concept of the Gem or Nugget in question. Each two-page document would of course have references to the whole report, the original research items and to related two-pagers, especially the one on emerging theories. The addition of one or two questions aiding reflection on applicability to the readers’ context may enhance ‘use’ in terms of professional development sessions.

A question then arises concerning the most appropriate distribution channel and format for communications of this kind (Kirst, 2000). For use as an adjunct to oral presentation, the suggested resources would need to be in print form to physically put the information in the hands of potential users at the most appropriate time. Attention to the visual format (text, graphics, overall visual complexity) is needed and departures from traditional presentations need to be piloted with readers as there are indications that innovation does not always enhance conceptual engagement (Aitken and Sinnema, oral report June 2006).

Within the Ministry, the Library could play an important part in bolstering confidence in evaluating research materials and ensuring policy advisers are aware of BES as they begin seeking information on a new issue. A two-page guide to assessing evidence that prompts comparison with the outcomes linked evidence from BES could be included with the first batch of papers/references sent from the library in response to search requests. Library staff might include the most relevant Gems or Nuggets at the same time. However, the literature suggests that not all policy advisers do seek information in a logical way, so serendipity may also have a role. In print form, the two–page documents would also be appropriate for distribution through the

network of tea and coffee areas of the Ministry, thus capitalising on opportunities to bring BES to attention.

Making all BES related materials available on the Ministry website would have some advantages, but would need to be accompanied by regular reminders of the URL. (In the course of this pilot project, it was discovered that many colleagues were unaware of the secure intranet shared by Ministries, let alone that it contains pertinent information for policy advisers and others. Putting information on a site does not equate with its use. Statistics suggest that BES information on the Ministry's bulletin board has been accessed more frequently in recent months, but it is not possible to assess the number of people involved, what has caused the upsurge, or what they do with the information found.)

A check of the BES reports currently available on the Ministry website found that those in .pdf format make no use of 'bookmarks' that can be on-screen as aids to navigation in long documents. Preparation of appropriate bookmarks would be relatively speedy, however, if used it may be necessary to provide some training for Ministry staff and others who are currently unaware of the potential support they provide to readers. The BES Champions would be a good first group to participate in such training.

Similarly, Learning Conversation participants requested what amount to conceptual maps for each BES but these too are already available through use of the Document Map function within Word. Again, a quick check with colleagues discovered that few were aware of how these can be used strategically to speed navigation and location of specific information in electronic environments.

While provision of printer-friendly formats is common as a bridge between print and digital formats, it is suggested that the BES website is subjected to a think-aloud evaluation with users to ensure that people's search strategies are accommodated in an intuitive manner and to examine whether their information needs are met. (A think-aloud check of use of the Executive Summary of this report quickly revealed unexpected issues that needed to be addressed.)

The value added by digital availability is widely assumed to include:

- easy physical access and ability to print as needed, thus reducing print stocks and costs,
- provision of hyperlinks between and within documents allowing dynamic searching for information specific to particular issues across reports,
- provision of glossary items via drop down boxes or rollovers so that reading is not disrupted but sense-making is enhanced,
- provision of links to relevant issues groups or learning communities,
- links to professional development opportunities,
- access to the research behind BES through the database being constructed by NZCER, and
- options to provide feedback.

Looking beyond the Ministry, there would also be the potential to link practitioners with others beginning empirical investigation of particular issues in their schools. Research collaborations could be supported and their findings reported through the

same channel. This has the potential to contribute strongly to a culture of inquiry and to support the implementation of a research and development strategy.

Table 1 outlines resources that could be based on the four existing BES reports, perhaps using the skills of a technical editor. Contributing to identification of items for two-page documents maybe outside the contractual requirements and current capacities of the writers of those BES reports in progress. However, revision of the *Guidelines for Generating a Best Evidence Synthesis* could include points from *this* report to assist in writing for multiple purposes and audiences and in identifying information required for the resources that are to be produced.

In terms of the Ministry itself, the most pressing issue is that of discussing expectations around BES – what are expectations for its use and how is that use to be demonstrated? The answers would inform selection of the set and detailed format of the suggested resources most effective in supporting generative learning among policy advisers.

It was proposed that this pilot study should include case studies of how BES has been used in policy development. However, from the Learning Conversations, it appears that memories of the process are non-specific and may not extend understanding a great deal. In addition, the scarcity of references in some Ministry documents does not permit substantiation of ‘use’ beyond what one participant called “co-option of language.” However, a review of the full array of internal documents as well as those for the Minister would be needed to verify the extent to which an audit trail of research to policy could be detected.

Alternatively, comparative case studies of expectations for research use across the Ministry and information needs specific to BES in regional offices of the Ministry would inform a strategy for use that crosses the interface between the Ministry and the sector. This would require Learning Conversations with people in a variety of regional and national roles and additional data collection techniques that access the kinds of inquiries concerning BES and the situations to which they respond. The implications of such case studies would inform future dissemination of the BES outcomes-linked evidence reports and have implications for Ministry sponsored research in general.

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Appendices

Appendix 1

Best Evidence Synthesis Evidence-based Policy Project: Information sheet

The BES Evidence-based Policy Project aims to strengthen the use of outcomes-linked evidence in Ministry work. The Iterative BES Programme is innovative and has been established relatively recently, so this pilot project is taking an approach that is as evidence-based as possible in these circumstances. The central concern of the Policy Project is to assist Ministry of Education staff in utilizing BES reports, and other outcomes-linked evidence, to achieve the objectives of their own work. To this end, a series of interviews is being conducted to increase understanding of the realities of policy decision-making and ways in which people are already engaging with the evidence presented in BES reports. This knowledge will assist the BES team in developing resources that can be used by managers across the Ministry in utilising outcomes-linked evidence about student learning in policy decisions.

I am seeking interviews with approximately ten individuals, some whose work directly reflects reference to BES and others for whom BES has a lower profile. These differences are important in building understanding of the role of outcomes-linked evidence in policy decisions. The key questions that will guide the interviews are attached for your consideration.

Interviews will be no longer than one hour and will, with your permission, be recorded and transcribed as have other BES activities. You will have the opportunity to correct or revise the transcript as soon as it is available. Recordings and transcripts will be confidential to the BES team and you will not be identifiable in any quotations used in the project report. You are under no obligation to accept this invitation. If you do decide to participate, you have the right to:

- decline to answer any particular question and request that the audio tape is turned off at any time during the interview
- withdraw from the study before the scheduled interview
- ask any questions about the study at any time during participation,
- correct or revise the transcript for your interview within a period of two weeks from receiving it, and
- be given access to a summary of the project findings when it is concluded.

While transcripts will be retained in secure storage with other BES documents, the audio tapes will be destroyed at the conclusion of the project.

Please delete the appropriate words in the attached consent form and return the document to by email as soon as possible. I will contact those agreeing to participate to arrange a convenient interview time.

Thank you for considering participation in the BES evidence-based Policy Project.

Penny Moore
Senior Policy Analyst
BES Programme

Appendix 2

BES Evidence-based Policy Project Participant Consent form

I have read the outline of the purpose of the interviews conducted as part of the BES Evidence-based Policy Project and understand their purpose.

I understand that the information I provide will be confidential and my identity will not be evident from any quotations used in the report for the project.

I am **willing/not willing** to participate and **give/do not give** permission for the interview to be recorded.

Signed: _____ Date: _____

Full Name Printed: _____

Appendix 3

Best Evidence Synthesis Evidence-based Policy Project Learning Conversation questions

1. In general:
 - in what aspects of your work do you consider published research?
 - outcomes-linked evidence?
 - BES?
2. If BES is significant to your work, what makes it so?
3. What influence, if any, has participation in or knowledge of the BES development process had on your thinking and your actions?
4. What are the conditions or contexts in which BES is particularly useful to you?
When is BES an essential resource?
Are there any situations in which information from BES is out-weighted or eclipsed by other considerations?
What could the BES team do to reduce barriers to use of outcomes-linked evidence in those situations?
5. What are some specific examples of how you have used BES? (Anecdote through to references in written work and discussion within and beyond the Ministry)
6. What influence, if any, do you think BES is having as a change agent within the Ministry and in the sector? What makes you think that?
7. How did you get into the BES information?
What would make that task easier for you, personally?
What activities or resources would make that task easier for managers and their staff?