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What can evidence-use in practice learn from evidence-use in policy?

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\textbf{ABSTRACT}

\textbf{Background:} This paper approaches evidence-informed practice from the perspective of evidence-informed policy-making. Using the findings of a recent study of evidence-use by educational policy-makers to raise questions about evidence-use by educational practitioners, it seeks to explore what such a study might tell us about how to understand and improve evidence-use by educational practitioners.

\textbf{Purpose:} The paper aims, therefore, to identify potential connections, shared insights and common issues between evidence-use in policy and evidence-use in practice. It does this by focusing on two specific areas: the nature of the evidence (i.e. what evidence is used) and the nature of the use (i.e. how evidence is used). The paper outlines what was found about each of these aspects of evidence-use in policy, and then considers what questions and issues these findings might raise for evidence-use in educational practice.

\textbf{Sample:} The empirical study on which this paper is based was an in-depth study of the use of evidence within educational policy development in Australia. It focused on the development of three specific education policies within one Australian state education department and involved interviews with 25 policy-makers who were actively involved in the development of these policies.

\textbf{Design and methods:} The policy-based study involved the following data collection processes: (i) in-depth semi-structured interviews with 25 policy-makers who were involved in the development of the selected policies; (ii) documentary analysis of policy documents, background research reports and other relevant papers relating to the selected policies; (iii) unstructured observation (where possible) of meetings and events connected with the development of the selected policies; and (iv) feedback from 40 wider policy staff who took part in a verification workshop to discuss the project’s emerging findings.

\textbf{Findings:} Drawing on the findings from the original policy study, two areas of potential connection to evidence-use in practice are explored. First, in relation to ‘varieties of evidence and uses’, the negotiation of diverse evidence types and the potential for using evidence in multiple and varied ways appear to be features of evidence-use that are common to educational policy-makers as well as educational practitioners. Secondly, in relation to ‘narrowness of evidence sources’, there is potential for both policy-makers and practitioners to use a...
narrow (rather than broad) selection of evidence, due to a tendency to work with certain evidence types as a starting point (e.g. performance data) and a tendency to draw on certain evidence sources more frequently (e.g. well-known, familiar research sources).

**Conclusions:** This paper emphasises: (i) the need for more integrated (or joined-up) understandings of evidence-use across contexts of practice and contexts of policy; (ii) the importance of continued efforts to understand and represent evidence-use more effectively within educational practices; and (iii) the value of paying careful attention to the quality and qualities of evidence-use within and across the different settings of educational practice and policy.

**Introduction**

In this paper, we approach evidence-informed practice from the perspective of evidence-informed policy-making. We use the findings of a recent study of evidence-use by educational policy-makers (Rickinson et al. 2016) to raise questions about evidence-use by educational practitioners. We seek to explore, therefore, what a study of evidence-use by educational policy-makers might tell us about how to understand and improve evidence-use by educational practitioners. The paper identifies potential connections, shared insights and common issues between evidence-use in policy and evidence-use in practice.

More specifically, we explore potential links and learning between evidence-informed policy and evidence-informed practice in two areas: the nature of the evidence (i.e. what evidence is used) and the nature of the use (i.e. how evidence is used). For each area, we will outline what we discovered about this particular aspect of evidence-use in policy. We then consider what questions and issues these findings might raise for evidence-use in practice. This is done by considering and making connections to the findings of previous studies of evidence-use by educational practitioners (e.g. DETYA 2000; Bartholomew et al. 2003; St. Clair, Chen, and Taylor 2003; Rickinson et al. 2004; Asen et al. 2013; Cooper and Levin 2013; Finnigan et al. 2015; Penuel et al. 2016) and reviews/syntheses of work in the area (Rickinson 2005; Bell et al. 2010; Tseng 2012; Earl 2015). The work of Earl and Timperley, who argued that *productive* evidence-informed conversations amongst educators require: ‘relevant evidence’, ‘an inquiry habit of mind’, and ‘relationships of respect and challenge’ (2009, 3) is also drawn upon. We use the first two of these qualities to help make sense of our findings about ‘what evidence is used’ (‘relevant evidence’) and ‘how evidence is used’ (‘an inquiry habit of mind’).

Our focus on exploring connections between evidence-informed policy and evidence-informed practice is motivated by two lines of thinking. First, it builds on a concern in our original empirical work to understand policy-making as a practice. Conventionally, there is a tendency to draw a tight distinction between the world of policy and the world of practice. As Freeman, Griggs, and Boaz (2011) argued in the Editorial for a journal special issue on *The Practice of Policy Making*:

[It is common to …] distinguish between policy and practice, between policy makers and practitioners, as though policy makers themselves were not also practitioners of a special kind. The world of policy making, we contend here, is itself a realm of practice […] And […] we know surprisingly little of what those we call ‘policy makers’ actually do when they are doing their job.
We know about policy as an abstraction [...] we think of the policy process in terms of patterns and models rather than simply as work. (28)

Like Freeman, Griggs, and Boaz (2011), we wanted to disrupt this hierarchical distinction between an abstract world of policy and a practical world of work, and, instead, approach policy-making as a kind of practice, policy-makers as a type of practitioner and policy research as a form of practice-based inquiry. It is important to stress, though, that this perspective is not about overlooking the potential for significant differences to exist between the work of policy-makers and the work of practitioners – for example, resulting from factors, such as ‘differing incentives, goals, language, demands and time frames’ (Tseng and Nutley 2014, 171). Rather, it is about emphasising that it is just as important to understand the role of evidence within, for example, the process of developing education policy as it is to understand the role of evidence within the process of classroom teaching. Seen from this perspective, the idea of trying to explore connections between how educational policy-makers use evidence in their work and how educational practitioners use evidence in their work becomes more compelling.

Secondly, a similar motivation for seeking to connect our work on evidence in policy with debates about evidence in practice comes from calls for social scientists to think and work across traditional categorisations of research participants. Brewer (2013), for example, describes a tendency for social scientists to work with either ‘local, community-based and non-market groups, without much access to formal power’ or ‘people in these very systems of formal power, such as governments and policy-makers’ (Brewer 2013, 161). His argument is that this kind of either/or approach needs to be replaced by an openness to both/and because: ‘The obligation to address “wicked problems” within late modern political economy implicates engagement upwards as well as downwards, with the formally powerful as well as the formally powerless’ (Brewer 2013, 161). In the context of our research into evidence-use within education, Brewer’s arguments suggest a need to move beyond studies focusing on contexts of practice or contexts of policy as separate entities, and shift towards more integrated (or joined-up) investigations of evidence-use within and across different groups and contexts within education systems. While our original study was very much an example of the former, this paper is an attempt to explore some potential links to debates within a different context as a first step towards a future follow-up study of evidence-use across varied contexts of practice and policy.

Following this brief introduction, the rest of the paper is organised into four main sections. We begin by outlining the aims and methods of the original policy study that provides the empirical basis for this paper. This is followed by a discussion of what this study found in relation to what and how evidence is used in the policy process. We then move to consideration of how these findings might have connections to evidence-use in practice. Three issues are explored: the varieties of evidence and uses; the narrowness of evidence sources; and evidence-use within educational practices. We conclude by returning to the question of what (if anything) evidence-use in practice can learn from evidence-use in policy. A key argument is that our study’s approach to understanding policy-makers’ use of evidence could be a helpful strategy to employ in future attempts to understand and improve evidence-use within schools and other contexts of practice. In particular, we argue that the idea of the ‘policy narrative’, which emerged from policy-makers’ own accounts of how they use evidence, may have parallels that are worth exploring in contexts of practice.
Research aims and methods

The aim of our study was to explore the practical realities of how policy-makers engage with evidence. Despite an increasing emphasis on the importance of using evidence in the formation of education policy both in Australia (Edwards and Evans 2011) and also internationally (OECD 2007), from a research perspective, there have been relatively few in-depth studies of how, when and under what conditions policy-makers use evidence. For example, European researchers have pointed out the dearth of evidence about how to enhance research use in policy work (Nutley, Walter, and Davies 2007, 231), while North American researchers report that there is a lack of clarity about how evidence is used across all levels of education (Finnigan and Daly 2014). A recent systematic review of evidence-based policy studies internationally argues that such work has been constrained by ‘focusing primarily on the uptake of research evidence as opposed to evidence defined more broadly’ (Oliver, Lorenc, and Innvaer 2014, 1).

Against this backdrop, a small group of researchers from Monash University Faculty of Education initiated a one-year pilot study with the Victorian State Government’s Department of Education and Training (DET) on their use of evidence in policy development. The project was conceived as a co-funded, collaborative venture between Monash and the Department, and was planned as a first step towards a future larger study on the use of evidence in educational policy and practice in Australia, as noted above.

Aims

The overall aim of this study was to understand more clearly the challenges and complexities surrounding the use of evidence within the Department of Education and Training (DET)’s policy development. More specifically, the objectives were:

1. to explore in detail the nature (what, who, how, when, where) and dynamics (why) of evidence-use and non-use within DET policy processes;
2. to contribute to and inform future capacity-building efforts around evidence-based policy-making in the state of Victoria and beyond; and
3. to trial methods, clarify concepts and build trust for further Monash-DET collaborative work in this area in the future.

In response to a general lack of ‘empirical data analysing the processes or impact of evidence-use in policy’ (Oliver, Lorenc, and Innvaer 2014, 1), this study was about probing into the issues, challenges and complexities surrounding evidence-use within the Department of Education and Training (DET). It was guided by the following questions:

- What types of evidence are used?
- Who are the key players in the process?
- How, when and where does evidence-use happen and not happen?
- Why does it happen or not happen (drivers, barriers, influencing factors)?
- So what could be done to improve the use of evidence in the future (capacity building)?

Due to space constraints, the discussion of findings within this paper focuses on what evidence is used and how evidence is used, leaving other issues, such as influencing factors and capacity building, for future publications.
The above questions were investigated in the context of three DET policy initiatives, using a combination of documentary analysis, interviews and (where possible) observation with DET staff (Table 1). This work was undertaken between January 2015 and March 2016; the main data collection took place between January–August 2015 (Phase 1 data) and September 2015–March 2016 (Phase 2 data).

The sequencing of the work into two phases was to allow for an initial period of data collection (focused on the past and recent policy initiatives) to be followed by a period of interim analysis and verification workshop (with 40 DET staff as part of the Department’s Policy Community of Practice, PCOP²), all before a final period of data collection (focused on the current policy initiative) and overall analysis and final report writing.

The selection of policy initiatives was made through in-depth discussion with DET staff in order to cover different timescales (i.e. a past initiative, a recent initiative, a current initiative); encompass different aspects of DET’s work (i.e. involve different policy teams); and focus on significant initiatives that were researchable (i.e. involve staff who are open to taking part as interviewees). The selection of interviewees was fairly straightforward in the sense that the research team sought to interview all current or former DET staff who had played an active role in the development of the selected policies. Active role was taken to mean staff who had been, were or would be directly involved in drafting the final policy document and/or key documents connected to the final policy. Having gained ethics approval from both Monash University Human Research Ethics Committee and the Department of Education and Training, participation by interviewees was voluntary. Relevant DET staff were invited to participate in the study by email and almost all of those who were contacted were able to accept the invitation to be involved. In total, 25 policy-maker interviews were undertaken across the three selected policies, and these involved a mixture of lead policy writers, support policy writers, strategic advisors, and background researchers. All of the interview data and the selected policies were anonymised in order to ensure that no interview comments could be attributable to individual interviewees. Observation of relevant meetings was also confidential and only used for the purpose of enabling more specific questions to be asked in the interviews with DET staff.

The research methods used were designed to pilot different ways of generating in-depth accounts of evidence-use in specific policy contexts. The methods (documentary analysis,
interview, observation and workshop) are broadly indicated in Table 1. More specifically, they involved the following procedures and processes:

- documentary analysis of final policy documents, background research reports, briefing papers and other relevant documents connected with the three selected policies;
- retrospective interviews with current and former DET staff who were involved with a past policy initiative (i.e. Policy A on Table 1);
- backtracking-type interviews (cf. Figgis et al. 2000) with current DET staff who were involved with a recent policy initiative (i.e. Policy B on Table 1);
- informal unstructured observation of meetings and events connected with the development of a current policy initiative (i.e. Policy C on Table 1); and
- stimulated reflection-type interviews (cf. Cooper and McIntyre 1993, 1996) with current DET staff who were involved with the current DET policy initiative (Policy C).

The documentary analysis involved close reading of key documents relating to the selected policies prior to the undertaking of the interviews. Through this process, we aimed both to build up a general understanding of the policies in terms of their background, scope, content, development, aims and so on; and also to identify specific examples where there was a reference to evidence of some kind within the final policy document. As explained below, these examples were used within the interviews to stimulate focused, but also open conversation, about the use of evidence within the development of the selected policies.

Interviews were undertaken mainly face-to-face (in two cases, by telephone), individually (in two cases, in pairs) and were conducted by one or two members of the research team. Interviews typically lasted around 60 minutes. They were semi-structured and focused on building up an in-depth understanding of the interviewee’s current role and professional background, their experiences of the development of the selected policy and the role (if any) that evidence and other factors played within this process. Their views on evidence-use within DET generally, both now and in the future, were also sought. In all cases and across both phases, the emphasis was on exploratory interviewing through open questioning, follow-up probing of responses and (where possible) use of document extracts or observed events as stimuli for discussion. In this sense, the main purpose of the documentary analysis and observation was a stimulus to help ground the interviews in specific, concrete examples rather than general, abstract conversation.

All interviews were audio recorded and transcribed in full. Then, using the qualitative analysis software MAXQDA (VERBI Software 2015), the interview transcripts were coded thematically by the research team using a coding frame structured around the main foci of the research. The top-level codes were fourfold (about the interviewee, about the policy, about current evidence-use and about future capacity building) and within each of these categories further codes and sub-codes were developed inductively through careful reading and rereading of each of the transcripts. The coding was undertaken by two members of the research team. Consistency was ensured by the researchers jointly developing an initial coding frame and then working together to code all of the interview transcripts. This enabled decisions over the allocation of interview extracts to particular existing codes and/or the creation of new codes and sub-codes to be discussed and recorded as part of the process. This analysis process was helped by three other factors. These comprised: discussing interim findings with the Project Advisory Group (comprising senior policy-makers from DET,
researchers from Monash and other independent experts); sharing early findings at the end of Phase 1 with 40 DET staff as part of a 2-hour Interim Verification Workshop through the Department’s Policy Community of Practice (PCOP); and presenting key ideas emerging from the project at a range of policy and academic conferences, both within Australia and internationally.

Finally, it is important to add that all of the above research processes were developed within a collaborative spirit of co-research between Monash and the Department of Education (DET). The nature and scope of the work was determined through a series of joint exploratory meetings, and the work was co-funded by DET and Monash as a first step towards further work on the use of evidence in educational policy and practice in the Australian state of Victoria, and beyond.

Findings: evidence and policy – what evidence? How is it used?

We now turn to a discussion of some of the findings from the study. As noted earlier, these represent a selective summary, rather than a comprehensive discussion, of the original study’s findings.

What evidence is used?

Our findings about what evidence was used in the policy process can be summarised by three main points. First, there was a wide range of types of evidence that had been used in the development of the policies that we investigated. Across the three policies within our study, then, there were examples of at least twelve different types of evidence that had been used in some way (these are shown in Figure 1, along with illustrative participant quotations). They included sources that were internal to the organisation (e.g. ‘DET internal working papers’) and ones that were external (e.g. ‘Research reports from varied organisations’); evidence in the form of data (e.g. ‘DET analyses of state assessment data’), in the form of research (e.g. ‘Academic research publications’) and in the form of testimony (e.g. ‘External stakeholder consultation’); evidence that had been commissioned by DET for a specific policy purpose (e.g. ‘DET commissioned research and consultancy’) and evidence that was publicly available from other organisations (e.g. ‘Academic research publications’).

Second, amongst this variety of evidence types, it was clear that some forms of evidence played a more significant role than did others, particularly early on in the policy process. For example, with all three policies, ‘analyses of state assessment data’ was very clearly the main focus early in the process. As one interviewee explained:

I think the data we have on performance is really important and often that’s our starting point. So understanding the problem, what’s our performance and from that, can we make any conclusions about areas that need to be the focus for improvement.

It was only after this analysis of performance data had been undertaken that other evidence sources come into the frame in order to define a problem and identify possible strategies/interventions to address it (‘Academic research publications’, ‘Analysis of national and international jurisdictions’, and ‘DET programme evaluations’); fill gaps in the assessment data and identify latest trends (‘DET commissioned research and consultancy’ and ‘Research reports from
The third finding in relation to ‘what evidence is used’ was the fact that the breadth of types of evidence was not necessarily matched by a breadth of evidence sources within individual categories. This issue was touched on by a number of interviewees in relation to the kinds of research sources that were drawn upon during policy development and cited within policy documents. They expressed concern about a tendency to:

- repeatedly use similar sources – ‘We probably go back to the same old sources sometimes in terms of our policy development’;
- focus on well-known sources – ‘I remember that effectively it starts as a desktop environmental scan kind of exercise of key pieces of research associated with that theme, drawing on I guess well-known sources of educational expertise’;
- draw on sources that are familiar and comfortable – ‘The interesting thing is that a lot of [the sources cited in this policy are] heavily weighted towards who you know, and what you’re familiar with and feel comfortable with’; and
- start with what is easy to locate – ‘It seems to me that we use a lot that’s in the public domain that’s easily accessible through kind of a Google search’.

Overall, the findings suggested that there was definite concern expressed by some interviewees about a narrowness of academic research sources, as a result of the tendencies alluded to above.

<table>
<thead>
<tr>
<th>DET analyses of state assessment data</th>
<th>Analyses of national and/or international assessment data</th>
<th>DET commissioned research and consultancy</th>
</tr>
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<tbody>
<tr>
<td>‘so things like the NAPLAN1 data, and our analysis of that’</td>
<td>‘the data from international assessment programmes […] like PISA2, PIRLS3 and TIMSS4’</td>
<td>‘we commissioned a large project with [name of consultancy] to dig into a whole lot of workforce data’</td>
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<tr>
<th>DET internal working papers</th>
<th>DET programme evaluations</th>
<th>Internal stakeholder consultation</th>
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<tbody>
<tr>
<td>‘well this internal evidence compendium is one of the inputs for [our current work on Policy C]’</td>
<td>‘evaluations of existing programmes that have been done’</td>
<td>‘so [name of colleague] is the Department’s technology guru so being able to tap into people like that’</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Analysis of national and international jurisdictions</th>
<th>Research reports from varied organisations</th>
<th>Academic research publications</th>
</tr>
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<tbody>
<tr>
<td>‘a collection of what was going on in other jurisdictions in Australia and internationally’</td>
<td>‘annual data that’s put out by key bodies […] for example around forecasting future jobs and skill needs’</td>
<td>‘so that’s where we went and had a look at some other research by academics, so peer reviewed papers’</td>
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<tr>
<th>External stakeholder consultation</th>
<th>Consultants and advisors</th>
<th>Research partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘consultation with stakeholders […] is critical evidence that’s brought to play’</td>
<td>‘There was a consultancy that worked both with the team in here and with the senior advisers’</td>
<td>‘so we drew on the research partners […] researchers that we have partnerships with’</td>
</tr>
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</table>

**Figure 1. Different types of evidence used within DET policy development.**

1 The ‘National Assessment Programme – Literacy and Numeracy’ (NAPLAN) is an annual assessment for students in Years 3, 5, 7 and 9 in Australian schools.

2 The ‘Programme for International Student Assessment’ (PISA) is a triennial international survey aiming to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students.

3 The ‘Progress in International Reading Literacy Study’ (PIRLS) is a regular international comparative assessment of student achievement in reading.

4 The ‘Trends in International Mathematics and Science Study’ (TIMSS) is a regular international comparative assessment of student achievement in mathematics and science.

*varied organisations’); and/or fill gaps in the assessment data and test proposed interventions (‘Internal and External stakeholder consultation’).
How is evidence used?

Our findings about how evidence was being used in the policy process can be summarised in terms of two main points. First, it was clear that across the three policies that were examined, there were examples of evidence being used in a whole range of different ways. Therefore, as the study progressed, it quickly became apparent that interviewees were not talking repeatedly about a small number of specific uses of evidence. Rather, as shown in Figure 2, their descriptions and reflections on the development of the three selected policies contained many examples of where evidence was being used in a range of distinct ways.

Second, though, when these various types of evidence-use were organised in relation to the development of the policy narrative, it was clear that they tended to cluster around particular parts of the process. Initially, it was not easy to understand how the various examples of evidence in Figure 2 fitted together within the policy process. To begin with, there did not seem to be either a conceptual framework from the literature, or an organising structure articulated by interviewees, that easily helped in making sense of how the many different uses in Figure 2 mapped onto the policy process. However, we then recognised the frequency with which the term ‘policy narrative’ arose in the interviews. The concept of ‘policy narrative’ was a recurring theme and a repeated reference point within and across the interviews in our study. It became a means of understanding the different ways in which evidence was being used in the policy processes that we were studying. While ‘policy narrative’ emerged as a theme from our interview data, we are also aware that it is a concept that has been identified in several other policy studies (e.g. Boswell, Geddes, and Scholten 2011; Shanahan, Jones, and McBeth 2011; Stevens 2011).

Figure 3 provides a diagrammatic representation of the different uses of evidence outlined in Figure 2 in relation to the development of the policy narrative. As we developed this diagram, it became clear to us that there were more varied uses of evidence in the earlier

<table>
<thead>
<tr>
<th>To define the problem</th>
<th>To make a case for change</th>
<th>To keep things on the agenda</th>
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<tr>
<td>You also look at research where, you know, the context is quite different but there might be just a nugget that sort of says, “Well, actually that issue is worth having a look at in terms of how that might work here.”</td>
<td>So the PISA piece, this is about building a case for change. Wake up. The system believes it’s doing well and it’s not. And why PISA? Well, because it’s probably the best thing we’ve got that can say “Here’s a comparative number that you should pay attention to.”</td>
<td>We spent quite a bit of time developing a research paper that was giving an outline of the key drivers that we saw in the research.</td>
</tr>
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<tr>
<th>To clarify international practice</th>
<th>To clarify state/national trends</th>
<th>To identify key drivers/levers</th>
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<tr>
<td>You also look at research where, you know, the context is quite different but there might be just a nugget that sort of says, “Well, actually that issue is worth having a look at in terms of how that might work here.”</td>
<td>So there was a bit of looking at Victorian system performance and putting together Victoria’s performance story, and then say “Well actually, we can see that there are issues here and here.”</td>
<td>“We spent quite a bit of time developing a research paper that was giving an outline of the key drivers that we saw in the research.”</td>
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<tr>
<th>To challenge proposals</th>
<th>To challenge assumptions</th>
<th>To get buy-in from key audiences</th>
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<td>We came back to them with a set of evidence which explained why you wouldn’t do that […] So there were situations like that where a specific piece of evidence helped to bring people around to something that was more sensible.</td>
<td>And that’s where again the evidence did come in to say that teachers and all professionals really need to be intentionally supported to build the skills and capabilities to do that work rather than just a broad assumption that there’s an inherent skill set there.</td>
<td>“This is really interesting – why is [this specific researcher named] in there? […] Because [that person] carries weight with teachers in Victoria. […] That name means that teachers will buy in this.”</td>
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<tr>
<th>To design interventions</th>
<th>To identify possible interventions</th>
<th>To select interventions</th>
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<td>So […] the broad parameters were fairly well set by the government. So it then became a question of: Well how do you do that in a way that’s going to maximise the likelihood of success? […] So the evidence was probably the thing that put in place a training programme for principals and school reviewers for example.</td>
<td>So to come up with something to do, you’ve got to look at what the data is actually saying about those specific areas and then think “Okay, well what does the research and evidence say actually works and makes a difference in teaching and learning which can impact on the data and improve our performance?”</td>
<td>“Certainly the evidence has been a consideration in the deliberations about which strategies we’d prioritise or not […] So, which ones in terms of being able to be implemented and having an evidence base and being effective, should we keep on the list.”</td>
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Figure 2. Examples of different uses of evidence within the policy process.
stages of constructing the policy narrative (defining the problem and identifying interventions) and less varied uses of evidence in the later stages of testing and communicating the policy narrative. This pattern was supported by specific comments from interviewees that highlighted both (i) and (ii) below:

(i) the importance of evidence in the early stages of narrative development – ‘At the outset when you’ve got the time and the space and you’ve got the blank page and then you’ve got the opportunity to actually think about: What’s the problem? What’s the evidence about that problem? What could be some ways that I could deal with that problem? I think that’s when the use of evidence is really critical’;

(ii) a shift in focus away from evidence in the later stages of narrative communication – ‘I think [evidence] is less of a focus right now. Like our focus now is writing this paper [. . . ] So we’ve had to shift our focus much more to how are we going to write this story in a way that works for the public and that sort of thing’.

Connections to evidence-use in practice

Taking the above findings about what and how evidence is used in policy development, it is possible to draw out a number of potential connections to evidence-use in practice. These concern three main issues: (i) the varieties of evidence and uses; (ii) the narrowness of evidence sources; and (iii) evidence-use within educational practices. The first two of these points relate to situations where there seem to be similarities between what we found in a policy context and what other studies have found in a practice context. The third point is slightly different: the findings from our policy study suggest ideas that we feel would be useful to develop further in relation to evidence-informed practice.
Varieties of evidence and uses

Variety was a definite theme within the findings of our policy study – there were reports of diverse evidence types and there were examples of multiple kinds of use. Looked at from the perspective of evidence-use in educational practice, it would seem that this diversity of evidence and varieties of use are not unique to educational policy settings: indeed, there are echoes and resonances discernible in practice.

Studies of evidence-use in schools, for example, highlight how dealing with a wide variety of types of evidence is very much an issue for educational practitioners. In a chapter reflecting on the challenges involved in using research and evidence in schools, Earl (2015, 148) emphasises precisely this point:

When people think of data, it conjures up an image of statistics and test scores. […] But there are many other forms of evidence available to schools. Opinions, anecdotes, images, vignettes, and observations are all acceptable as data. Using evidence can involve attending to published research, gathering local data, referring to experts, considering personal experiences, social network analysis, and big data analytics, just to mention a few.

The same is true for professionals who are working with schools. In a US study of evidence-use within local school boards, Asen et al. (2013, 40) investigated six different types of evidence: research, experience, testimony, data, example and law/policy. Evidence in use, then, comes in varied types and multiple forms in practice and policy.

There are also parallels in terms of the diverse ways in which evidence can be used. Penuel et al.’s (2016) recent national survey of school and district leaders in the US, for example, reported widespread research use spanning instrumental (e.g. to design professional development), conceptual (e.g. to expand one’s understanding of an issue) and symbolic (e.g. to get others to agree with a point of view) uses. Furthermore, over 10 years ago now, a review of research into education practitioners’ use of research concluded that: ‘The purposes for which research is used by practitioners are wide-ranging [and] can be about validating practice, challenging practice, prompting reflection about practice, stimulating research about practice or improving/changing practice’ (Rickinson 2005, 23). This conclusion was based on various prior studies, including work on adult literacy teachers in the US that identified three different uses of research (for validation, for curriculum design, for improvement) (St Clair et al. 2003). In another study, environmental education practitioners in the UK were found to be using research in six different ways (to support/justify, to challenge, to reflect, to investigate, to challenge, to inform) (Rickinson et al. 2003). Similarly, an investigation of research-active teachers cited five categories of research use (i.e. for general information, to follow-up specific areas of interest, to recommend items to colleagues, to contribute to further study, to inform their own research, to validate or celebrate practice, to change practice) (Sanders et al. 2005).

The general point here is that when researchers take the time to ask education practitioners about whether and how they use evidence, the picture that emerges tends to be complex and varied. Additionally, based on the policy-based findings described above, this complexity of evidence and evidence-use appears to be a feature that is shared across educational policy and educational practice settings. This is a helpful reminder of the need for efforts to enhance evidence-use in education to be informed by wide-ranging conceptions of both ‘evidence’ and ‘use’. For, as others have argued:
Researchers often employ the terms evidence and research interchangeably, defining them as empirical findings derived from scientific methods. Studies of research use in education suggest that policymakers and practitioners have broader definitions. (Tseng 2012, 6)

Much attention in the literature, and indeed in the words of policy and practice themselves, has been focused on instrumental uses of research [...]. Yet research can be used in many diverse ways, which reach well beyond the direct use of findings in making decisions. (Nutley, Walter, and Davies 2007, 301)

**Narrowness of evidence sources**

A second area of connection with evidence-informed practice involves an issue that is the opposite of variety: namely, narrowness. Within our policy study, there were two ways in which the evidence used could be seen as narrow rather than broad: (i) the prevalence of performance data at the start of the policy process; and (ii) the repeated use of certain, well-known research resources at various stages in the process. Both of these findings echo studies carried out in educational practitioner contexts.

For instance, in terms of the primacy of performance data, there are studies in practice settings that describe sequences of evidence-use that are very similar to what we found in our policy study. In the context of one mid-sized US school district, for example, Finnigan et al. (2015, 140–141) reported that: ‘educators in schools were most likely to consult student performance data, followed by internal evaluations and district administrators, suggesting a more “local”, context-specific approach to evidence for decision making’. This pattern of student performance data being consulted first, before any other types of data, has strong parallels with what we saw in our policy study, where state performance data was the starting point before other types of evidence came into play.

Similarly, there are also parallels with regard to the limited selections of research resources. In our policy study, this was perceived in terms of a lack of breadth of research resources with a tendency to use, repeatedly, well-known sources that are familiar and easy to locate. In studies within practice settings, it is notable that the idiosyncratic and selective way in which teachers engage with research is a recurring theme. Studies of teachers have described research use as ‘a very individual process’ (DETYA 2000, 8) involving ‘the subjective selection and rejection of research according to personal reading’ (Bevan 2004, 329) such that ‘claims must resonate with prior beliefs and experience’ (Bartholomew et al. 2003, 1). These descriptions, coupled with the fact that practitioners are likely to access research through indirect, informal channels such as professional conferences and professional associations (e.g. Penuel et al. 2016), suggest that we should not be surprised if the range of research sources being used in practice is fairly narrow rather than wide-ranging.

What we are starting to see here, then, is a situation where issues concerning the types of evidence that are used in the development of educational policy have some connections and parallels with issues concerning the types of evidence that are used in the development of educational practice. So, returning to Earl and Timperley’s notion of ‘a broad range of relevant evidence’ (2009, 3), this discussion is showing that, while a variety of evidence types is a feature of evidence-use in policy and practice, so too is a tendency to use certain evidence types as a starting point (e.g. performance data) and certain evidence sources more frequently (e.g. well-known familiar research sources). Earl and Timperley make clear that ‘all too often educational decisions are made using data that are available, rather than data that
are appropriate’ (2009, 8). The findings discussed in this paper suggest that this distinction between what is ‘available’ and what is ‘appropriate’ is an issue that cuts across practice and policy in education.

**Evidence-use within educational practices**

The final area of connection comes through taking a less divided view of policy and practice. If we go back to the idea that we introduced at the outset – of policy-making as a type of practice (cf. Freeman, Griggs, and Boaz 2011) – then there are two findings from our policy study that, we suggest, can generate ideas and questions relevant and helpful to evidence-informed practice.

The first of these concerns the notion of ‘the policy narrative’ as a frame with which to make sense of evidence-use in the practice of developing policy. If we think instead about the practice of school leadership or classroom teaching, then what are equivalent frames that could help us to make sense of how different uses of evidence fit into a ‘bigger picture’ process? This is not an abstract research-type question. Rather, it is about the extent to which evidence-informed education as an area of work has been able to uncover and articulate frameworks that do justice to both the complexity of evidence-use and the complexity of educational practice. It is the combination of the two that is important – frameworks that represent and integrate the fine-grained realities of using evidence with the real-life processes of educational practices.

We can view Figure 3 as a preliminary attempt to do this in an educational policy context by visually connecting the varied uses of evidence with the real-life process of developing a policy narrative. While extremely preliminary as a research output, we argue that the idea of trying to understand and represent evidence-use in ways that encompass the complexities of both evidence-use and educational practice is a helpful one to develop further. It is helpful, for example, to think about how insights into schools’ use of evidence could be integrated with the dynamics of schools’ improvement trajectories over time (see, for example, the diagrammatic representations of phases and layering of leadership strategies in schools over time in Day et al. 2010, 13, 16). The underlying argument here is as follows. Our study’s approach to understanding policy-makers’ use of evidence in terms of a construct (the policy narrative), that emerged out of policy-makers’ own accounts of what they do and how they use evidence, could be a helpful strategy to employ in future attempts to understand and improve evidence-use within schools and other contexts of practice.

The second possibility for connection concerns the fact that there were more varied uses of evidence in certain stages of the policy narrative. To open this finding up in ways that could draw lessons for evidence-use in practice, it is helpful to revisit Earl and Timperley’s concept of ‘inquiry mindedness’ (2009, 3). Inquiry-mindedness is about a tolerance for uncertainty and a willingness to live in the dissonance long enough to investigate and explore ideas through the lenses of evidence until there is some clarity about what it might mean (Earl and Timperley 2009, 6). The notion of holding on to uncertainty and dissonance for ‘long enough’ is an interesting one, not least because our analysis in a policy context suggests that inquiry-mindedness is more possible and likely early on in the policy process, but less possible and likely later on in the process.

We suggest that this issue is worth further discussion and investigation in contexts of policy and practice, particularly with regard to the circumstances that help and/or hinder
education professionals (of all kinds) to adopt and hold onto an inquiry mindset. In what circumstances and for what kinds of tasks is it easier for education professionals to adopt an inquiry mindset? How long can professionals hold onto an inquiry mindset? Is there a point when it becomes impossible and/or unhelpful to hold onto an inquiry mindset? Deeper discussion about these kinds of questions would seem helpful to efforts to better understand and improve the dynamics of evidence-use in educational practice and educational policy.

Reflections and implications

This paper has sought to explore what a study of evidence-use by educational policy-makers might tell us about how to understand and improve evidence-use by educational practitioners. Overall, its discussions have highlighted three key ideas as important to retain in future debates and developments around evidence-informed practice in education.

First, this paper emphasises the potential for more integrated (or joined-up) understandings of evidence-use across contexts of practice and contexts of policy. As one of the aims of this special issue is ‘to add to the existing knowledge base about evidence-informed practice in education’, one of the arguments of this paper is that this knowledge base needs to include ideas concerning evidence-use in policy as well as in practice. It is all too easy to focus on the differences between educational policy and educational practice and to develop evidence-use research agendas, capacity-building programmes, conceptual frameworks and practical resources that treat policy-makers and practitioners as quite separate types of evidence users. Now it is, of course, clear that in many respects these two groups do ‘work in separate spheres with differing incentives, goals, language, demands and time frames’ (Tseng and Nutley 2014, 171). However, from the perspective of evidence-use, what we have seen in our work is that despite such differences, these two groups do have some important similarities. They both have to negotiate a wide range of evidence types, they can both struggle with a focus on what is available as opposed to what is appropriate, and they both have the potential to use evidence in many varied ways. So, what if using evidence was an aspect of the work of educational practitioners and educational policy-makers where there are more similarities than there are differences? What if evidence-use is an area where school leaders, teachers and education policy-makers could work together to share approaches, explore dilemmas and develop ways forward? Is it possible that an approach like ‘joint practice development’ (Fielding et al. 2005; NCSL 2012) could be applied to the improvement of evidence-use amongst different kinds of education professionals?

Second, this paper highlights the importance of continued efforts to understand and represent the use of evidence more clearly within educational practices. In the late 1970s, Weiss (1978, 78) talked about how social scientists tend to ask ‘How can we increase the use of research in decision-making?’, rather than ‘How can we make wiser decisions, and to what extent, in what ways, and under what conditions, can social research help?’ The first of these is a research impact-type question, while the second is an evidence-use-type question. It appears that there remains a tendency for researchers to be drawn to the former at the expense of the latter (see, for example, Oliver, Lorenc, and Innvaer’s 2014 criticisms of recent research on evidence and policy). In relation to the discussions in this paper, this tendency is problematic because it prevents the development of grounded understandings of the fine-grained realities of evidence-use within the real-life processes of educational practices.
We feel strongly that trying to understand and represent evidence-use in ways that encompass the complexities of both evidence-use and educational practice need to be part of future efforts to improve evidence-informed practice in education. While there are many typologies and categorisations of research and evidence-use within the literature (see, for example, Nutley, Walter, and Davies 2007), we see a need for more fine-grained, closer-to-practice models that will help education professionals make sense of and reflect critically on the roles that evidence is (and is not) playing within their work.

Finally, this paper underlines the importance of paying careful attention to the quality and qualities of evidence-use. Debates about what counts as quality evidence are wide-ranging and long-standing (e.g. Tooley and Darby 1998; Spencer et al. 2003; Oancea 2005; Cook and Gorrard 2007; Freeman et al. 2007; Nutley et al. 2013), but less attention seems to have been given to what counts as quality evidence-use. There are some encouraging signs, though, of developing interest in this area. For example, UK policy-makers and researchers have begun discussing and investigating not just whether, but how well, government departments and civil servants are using evidence (Rutter and Gold 2015). Similarly, within the field of education, researchers such as Earl and Timperley have argued strongly that ‘productive use of evidence requires more than just adding data to the conversation,’ and so demands not only ‘relevant evidence’ but also ‘an inquiry habit of mind’ and ‘relationships of respect and challenge’ (2009, 3). Further, there are US researchers who are starting to develop frameworks to investigate ‘depth’ of evidence-use (Farley-Ripple 2015). Drawing on these developments, in connection with the issues explored within this paper, we see real potential in coming years for more sustained exploration of the quality and qualities of evidence-use within and across the different settings of educational practice and policy.

Notes

1. Monash University is located in Melbourne, the capital city of the Australian state of Victoria. The Victorian Department of Education and Training (DET), also in Melbourne, is responsible for implementing Victorian Government policy on early childhood services, school education and training and higher education services.

2. The Department’s Policy Community of Practice (PCOP) is ‘an informal network that aims to lift the quality of our policy by strengthening collaboration across DET’. It describes itself as ‘a community that shares information, advice and best practice to strengthen policy development’.

3. A verification workshop is one way for research projects to achieve what Edwards and Stamou (2016, 277) describe as ‘strong iteration between the research team and participants in the field of study’. This interactive workshop provided an opportunity for DET policy-makers to engage with and provide feedback on the project’s emerging findings and to suggest new examples, ideas and interpretations.

Disclosure statement

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