



EMERALD HANDBOOKS

THE EMERALD HANDBOOK OF EVIDENCE-INFORMED PRACTICE IN EDUCATION

LEARNING FROM INTERNATIONAL CONTEXTS

EDITED BY

CHRIS **BROWN**

JOEL R. **MALIN**



The Emerald Handbook of Evidence-Informed Practice in Education

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The Emerald Handbook of Evidence-Informed Practice in Education: Learning from International Contexts

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We would like to thank our amazing contributors for taking on the challenge and delivering your fantastic chapters. We have learnt a lot, and we know readers of this book will too. What this compilation shows is that evidence-informed practice is possible regardless of context. All that is required is knowing how to facilitate it effectively. And now, thanks to you all, we have exactly the type of illumination that was previously missing.

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Introduction: What Can Be Learned from International Contexts about How to Foster Evidence-Informed Practice?

Joel R. Malin and Chris Brown

Abstract

This introductory chapter to “The Emerald Handbook of Evidence-Informed Practice in Education: Learning from International Contexts” describes the volume’s purpose/intended contribution, analytic framework, and organization. Accordingly, first it provides a definition of evidence-informed practice while also outlining challenges and benefits of broadly bringing it about. This chapter explains how comparative analyses using systems approaches – which have, to date, been scarce and limited – can hold great potential for achieving context-specific insights regarding how to foster EIP. The present volume, as noted in the chapter, aims to do just this: It houses a massive, international comparative study of educators’ patterns of evidence use across a range of global contexts. Volume contributors each followed a particular, dual analytic framework, which is detailed in this chapter. The chapter concludes with a description of how the volume is organized and provides a brief thematic analysis to showcase the volume’s intended contribution.

Keywords: Education; evidence use; research use; data use; comparative study; systems analysis

Introduction/Setting the Stage

Across the globe, many national, federal, and district level governments are seeking to bring about *school improvement*, increasingly by seeking to foster so-called “*bottom-up*” change (Brown, 2020; Brown, Schildkamp, & Hubers, 2017; Malin et al., 2020).¹ In other words, a widely sought aim has been to bring about, and facilitate the horizontal and vertical spread of, teacher-generated improvements to teaching and learning. Particularly, “self-improvement” is, in many

contexts, a preferred means of enhancing school- and systems-level educational provision (Greany, 2014).

To support self-improvement, a frequently employed approach is that of *evidence-informed practice (EIP)*. EIP involves fostering situations in which teaching practice is deliberately informed by knowledge such as: (1) formal research; (2) evidence produced by practitioners' inquiries; and/or (3) evidence derived from school- or system-level data (e.g., student assessment data). The aim of such practice is to improve teaching and learning activity across the board (more on what we mean by this is detailed below).

We, this volume's editors, are encouraged by these efforts to promote/foster EIP – in fact, we've both been actively engaged with colleagues for quite some time now, seeking through various means to foster more/better EIP in and across schools. And, though we have seen some successes, we've also needed to face up to the fact that *it is truly complex and challenging to broadly foster EIP in education*.

What to do, facing such a challenge? For us, the answer has been to keep going but find ways to adapt, evolve: As we see it, the stakes are too high to “throw in the towel.” The promise of improved teaching and learning (and, by extension, improved individual and social outcomes) still propels us forward in a variety of ways.

Indeed, this volume – which arose from a stew of hopes, successes, questions, tensions, and challenges – engages directly with one multilayered question: *How can we [teachers, leaders, policymakers, boundary spanners, engaged citizens] bring about increased instances of EIP in education?*

We attempt to address this question in a unique manner – and from local, systemic, and global perspectives – in the hopes of casting a different light upon this familiar, widely felt problem. Namely, this volume comprises a *massive, international comparative study of educators' patterns of evidence use across a range of global contexts*. To accomplish this, a wide array of excellent authors, leaders, and colleagues (representing 23 education systems across five continents) accepted the challenge of applying a common analytic framework to describe evidence-use patterns within their contexts. These authors, furthermore, have been challenged to draw out insights and key lessons for policy and practice, on the basis of their examination.

Context: Evidence-Informed Practice

As noted earlier, many systems are focusing on enhancing EIP as a core part of their educational improvement efforts. From existing research, too, we can see that a focus on EIP is not without merit: an emergent evidence base suggests that when teachers engage with evidence, improved teacher and student outcomes can follow. For example, research use as part of high-quality preservice teacher education and in-service professional development is associated with higher school and system performance (Mincu, 2014). As well, increased levels of collaborative research use by primary teachers has been shown – via a

randomized control trial – to positively impact primary grade students’ exam results (Rose et al., 2017). Further, numerous favorable teacher outcomes appear to flow from collaborative research-informed practice, including, relative to: pedagogic knowledge and skills, teacher confidence, and job satisfaction (Bell, Cordingley, Isham, & Davis, 2010; Godfrey, 2016; Malin et al., 2020). Similarly, teachers’ educational data use can, under certain conditions, facilitate improved teaching and student outcomes (e.g., Lai, Wilson, McNaughton, & Hsiao, 2014; Van Geel, Keuning, Visscher, & Fox, 2016).

Regarding why evidence-informed practice *should* lead to improved teaching and student outcomes, several theories of change have been put forth (e.g., see Brown et al. 2017, Cain, 2015; Cain, Brindley, Brown, Jones, & Riga, 2019). Although there are some nuances, these broadly argue that teachers can use a full gamut of evidence in relation to the decision-making that occurs as part of their work – provided, of course, that they have both access and capacity to do so. As examples:

- (1) school leaders and partners can use evidence – especially including certain forms of data – to pinpoint areas of strength and need, both in terms of a given class or group of students, or in relation to a necessary school-level (or across-school) innovation;
- (2) teachers can use evidence to support/inform the design of new bespoke teaching and learning strategies, aimed at solving particular problems;
- (3) teachers can use evidence by drawing on approaches that research shows as effective, generating research-informed ideas about how to improve aspects of their daily practice.
- (4) teachers can apply ideas from research to expand, clarify, and deepen their own concepts, including those they use to understand students, curriculum, and teaching practice; and
- (5) school leaders and teachers can also learn from program evaluations specific programs or guidelines, shown by research to be effective, which set out how to engage in various aspects of teaching or specific approaches to improve learning.
- (6) school leaders, teachers, and partners can collect and use data to assess the impact of embarking on any of the above (Malin et al., 2020).

Therefore,

...if educators are able to engage with evidence (both research and data) in a way that enables them to undertake any of these actions, their teaching quality should be improved. Correspondingly, improved teaching quality should then lead to improved student outcomes.

(Malin et al., 2020, p. 2)

Although there is now appreciation that evidence use can/should be used to enhance practice, evidence regarding *how* this might be supported at the school level is quite limited (Graves & Moore, 2018). Moreover, a systemic gap that exists between research and practitioners still persists, with little indication of lessening (Coldwell et al., 2017; Graves & Moore, 2018; Whitty & Wisby, 2017). What this means is that, all too often, what we see are sporadic instances of EIP within and across schools, with other factors (e.g., intuition, experience) instead driving much of teachers' professional decision-making (Vanlommel, Van Gasse, Vanhoof, & Van Petegem, 2017). A danger is that misconception, biases, and fallible "fast" decisions (Kahneman, 2011; Mintrop & Zumpe, 2019) are as likely to influence key decisions as is high-quality evidence that might facilitate problem identification and/or point to effective solutions.

Again, then, the key question is: *what can we do to achieve EIP?* In other words, how we can get school principals and teachers within education systems, globally, to systematically use high-quality academic research and other forms of evidence to improve how they lead and teach? With this book, we attempt to shed light on this issue by examining EIP from a range of school systems stretching across five continents. What we have found is that addressing this problem and question requires simultaneous attention to multiple levels of education systems and the contexts they sit within. In this way, comparative analyses using systems approaches hold potential for achieving context-specific insights regarding how to foster EIP. However, such analyses have been scarce, and what research does exist has generally been limited relative to methods and theory.

More commonly in comparative studies, patterns of evidence use or research engagement have not been a major initial focus, though they sometimes emerge – as when Darling-Hammond and colleagues (2017, p. 5), identifying high-performing systems, ultimately reported that these systems tended to view and support teaching as a “research-informed and research-engaged profession.” Also, even when more direct comparative examinations have been undertaken, these too have been limited in some key respects. For instance, an edited volume, *Evidence in Education: Linking Research and Policy* (Burns & Schuller, 2007), was published by the Organization for Economic Co-operation and Development (OECD). This valuable volume, which brought together “experts on evidence-informed policy in education from a wide range of OECD countries” (OECD, n.d.), yielded numerous insights as it detailed a variety of cases (e.g., organizations, knowledge brokers, programs). However, its focus on evidence use within *systems* was limited, its focus was tilted more so toward policy than practice, and its contributors did not engage in analyses by drawing on a common framework which might have aided cross-case comparisons.

We, by contrast, are keen to adopt a systems approach to understanding patterns of evidence use (in line with Best & Holmes, 2010, and Gough, Tripney, Kenny, & Buk-Berge, 2011, as applied to education). Given this, and expanding on our earlier scholarship (see Malin et al., 2020), in this volume we and all chapter authors adopt/employ a dual analytical frame (as detailed next: a cohesion/regulation matrix and institutional theory). This serves as a

methodological lens for understanding EIP within and across these systems. Together, our dual approach simultaneously enables an accounting of macrolevel differences between contexts, and a comparison of meso- and micro-level factors (via institutional theory) that are similar and different across systems.

The Cohesion/Regulation Matrix

School systems globally differ, both contextually and structurally, on a range of elements. To help categorize these systems, we employ a cohesion/regulation matrix, shown in Fig. 1, as a way to segment school systems vis-à-vis the main macro- or system-level factors defining them. This matrix draws on the work of Hood (1998) and was recently used by Chapman (2019) as they set out to explore how educational policy reforms of different types were likely to fare in different contexts. The x-axis of the matrix, social cohesion, can be understood as follows:

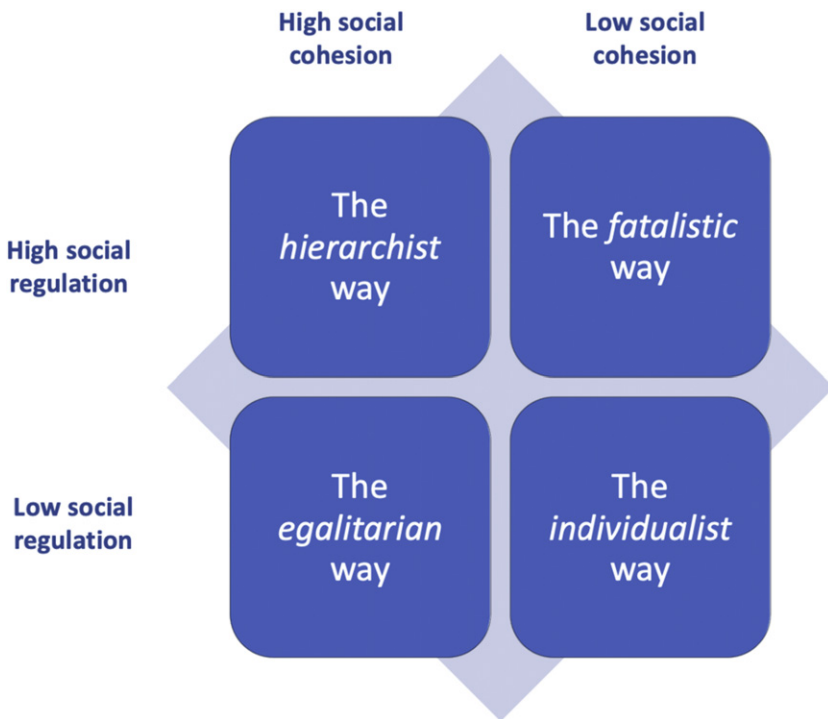


Fig. 1. The Social Cohesion/Regulation Matrix. *Source:* From Malin et al. (2020), used with permission.

- *Social cohesion* refers to the institutions, norms, and networks that bind societies together. Systems with high social cohesion have a higher propensity and readiness to engage in collaboration. Threats to social cohesion – which tend to result in low socially cohesive systems – are particularly likely to emerge when such structures and systems (e.g., governmental layers, labor unions, the church, universal services such as health) are dismantled and replaced with policies of deregulation and privatization. These are the types of approaches that generally place greater onus on individual agency than toward collective approaches (Bauman, 2013).

The second axis, regulation, can be understood in this way:

- *Regulation* refers to the institutions that determine control and establish how accountability functions in a system. In a high regulation system, typically there is a dominant, hierarchical culture and associated bureaucratic controls. High regulation systems often also involve establishing “high stakes” accountability systems associated with “failure”; i.e., systems in which not meeting particular standards can mean major penalties. By contrast, systems displaying low social regulation typically evidence much flatter, nonhierarchical cultures, with improvement achieved through partnership rather than through, for example, top-down accountability.

As shown in Fig. 1, combinations of high/low social cohesion and high/low social regulation result in four system types (Hood, 1998, p. 9):

- (1) The *fatalist* way (top right quadrant): characterized by rule-bound approaches to organization, with little cooperation related to achieving sought-after outcomes.
- (2) The *hierarchist* way (top left quadrant): displays social cohesion and cooperation in order to meet rule-bound approaches to organization; is often characterized by bureaucracy.
- (3) The *individualist* way (bottom right quadrant): atomized approaches to organization, involving bargaining/negotiation between actors.
- (4) The *egalitarian* way (bottom left quadrant): high participation structures, with all decisions being “up for grabs,” combined with an egalitarian culture and peer-to-peer support.

Institutional Theory

Within each school system there are, of course, further factors that affect school leaders’ and teachers’ behaviors, and drawing upon institutional theory enables their accounting. Institutional theory (Powell & DiMaggio, 1991) offers a useful and underutilized lens for understanding the complicated relations between evidence and practice (Martin & Williams, 2019). It is aimed at clarifying facilitators and constraints, within a given social field, to organizations’ behavior. As such, it

can reveal how the activities of organizations (i.e., schools/districts) are governed by a set of formal and informal rules and norms (Martin & Williams, 2019). These rules and norms tend to be durable, and within a field we typically see a good deal of continuity – because, for instance, different organizations within the same field are typically subject to similar pressures and have often reached similar understandings regarding what behaviors are appropriate and inappropriate (Powell & DiMaggio, 1991).

Especially when considering public service provision (e.g., public schools), the “state” is an important actor; for one, such institutions are usually at least partially dependent on the state for funding and other resources. Accordingly, state-level expectations are influential, and indeed some of these are codified in policies that direct attention and work effort in certain ways. As such, certain forms of evidence and certain concerns will likely be privileged, whereas while others might be side-lined or given lesser focus. As an example, in systems with “high-stakes” annual assessments, evidence in the form of student data from these exams will likely be in high demand, whereas evidence of nontested learning outcomes receives considerably less attention. Frequently, professionals also are significant – though this varies by field and context – in terms of enabling/constraining and regulating members’ behaviors. As well, within organizations some individuals possess more power/authority than others, which can hold considerable implications in terms of evidence use. For example, Brown and Malin (2017) have noted how school principals are pivotal in terms of bringing about EIP in their workplaces. Such individuals and groups, for one, are key to knowledge brokerage (e.g., via setting meetings, via their communications, and so forth; Farley-Ripple & Grajeda, 2020; Malin & Brown, 2020).

A key insight that can be gleaned from institutional theory – in relation to the study of evidence use – is as follows:

...the strength of the evidence is not the sole, or even the major, determinant of its influence on practice; rather, more powerful actors hold considerable sway in determining what (and indeed whether) evidence is used.

(Martin & Williams, 2019, p. 55)

However, “this does not also mean that there is no deviation from institutionally prescribed behaviours” (Martin & Williams, 2019, p. 56). To the contrary, we and others have seen how practitioners can be endlessly creative, even when facing substantial constraining institutional forces. Accordingly, researchers who are using institutional theory are challenged to carefully examine contextualized norms, rules, and structures, while also looking closely at what behaviors occurring in efforts to meet the focal organization’s/organizations’ primary tasks.

Organization of Chapters

With the above framework in mind, each of the chapters within this volume provides a detailed, systems-level analysis of patterns of EIP within a particular

and assiduously described context. Standing alone, these chapters accordingly yield contextually grounded insights and recommendations. At the same time, it is also useful to consider what can be learnt by comparing across contexts that share similarities. As such we have clustered our chapters based on their position within the Cohesion/Regulation Matrix (Fig. 2).² Presenting chapters in this way allows readers and interested stakeholders to engage in wider forms of meaning-making. In other words, to examine evidence-use patterns across similar systems, so enabling the identification of commonalities: correspondingly this can help in the search for potentially transferable lessons that might be applied to “home” contexts. We have also, ourselves, set out what we think some of the main lessons from each of the quadrants are: both in terms of how EIP can be enabled and what factors can often prevent its occurrence. Our thoughts here are set out in Table 1, below.

What our findings show is that a range of different policy levers and factors are required, depending on the levels of cohesion and regulation a system possesses. These factors tackle EIP from a range of angles: from top-down compulsion to bottom-up professionalization; and from capacity-building to accreditation. Such individual factors can also apply to more than one quadrant, and there is likely to be benefit in drawing up a suite of policy levers that address the issue from a myriad of perspectives. But what is also encouraging (and should quickly become clear from reading through this volume) is that EIP of some form or other is able to materialize in all systems, regardless of context. What prevents it from doing so is thus a mixture of lack of political will and/or understanding. This volume attends to the latter: it provides, for the first time ever, a comprehensive, internationally grounded, understanding of the factors that need to be considered to make EIP a reality. All that is left now is for policymakers to seize the initiative...

<i>Hierarchist systems:</i> • California (whole state) • California (a focused case study) • Catalonia • England • Ireland • Ontario • Sweden • United Arab Emirates	<i>Fatalist systems:</i> • Australia • Chile (a literature review) • Chile • Denmark • Germany • Massachusetts • New South Wales • South Africa
<i>Egalitarian systems:</i> • Austria • Cyprus • Japan • New Zealand • Sierra Leone	<i>Individualist systems:</i> • Belgium • Hong Kong • Italy • Switzerland

Fig. 2. The Organization of Our Chapters.