

1 The changing landscape of research use in education

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This chapter provides an overview of the evolution of evidence-informed policy and practice discourse. It starts with a brief discussion of the key concepts: research, evidence and knowledge. The chapter then presents the conceptual evolution of the field, developments in efforts to reinforce research use in policy and practice as well as some questions and challenges related to research production. Building on contemporary conceptualisations, some conceptual considerations and a number of questions are raised regarding current barriers to increasing research dynamics. To address some of these questions the OECD conducted a policy survey in 2021. The chapter describes this survey and presents the purpose and structure of the volume.

Introduction

We may be getting tired of every book starting with “The pandemic has shown us...” but when we talk about using science in decision making, this is an almost inevitable reference. In the context of the pandemic, we have been able to witness both the power of science (e.g. the extremely rapid development of vaccines) and the difficulty in balancing evidence on epidemiology and risks affecting the economy, and knowledge of people’s behaviours and attitudes. With limited evidence available, governments have had to make difficult decisions on education with huge, potentially unpredictable impacts on children and society. The challenge of using evidence in decision making is, however, not new. (OECD, 2007^[1])

Using research more systematically to improve public services has become a policy imperative in the past two decades (Powell, Davies and Nutley, 2017^[2]). The Centre for Educational Research and Innovation (CERI) has contributed to advancing this agenda in education. In 2000, CERI work on knowledge management highlighted that the rate and quality of knowledge creation, mediation and use in the education sector was low compared with other sectors (OECD, 2000^[3]). In the early 2000s, country reviews on educational research and development (R&D) showed generally low levels of investment in educational research as well as in research capacity, especially in quantitative research. They also confirmed weak links between research, policy and innovation in many OECD systems (OECD, 2003^[4]).

However, the landscape has started to change as the evidence-informed movement spread in education. First, many countries have invested in strengthening research itself. Although public spending on educational research and development is still limited compared to other sectors (Education.org, 2021^[5]), significant funding has gone into experiments, systematic reviews and other forms of primary and secondary education research (OECD, 2007^[1]). Second, there has been growing investment in initiatives intended to facilitate the use of research. These include establishing dedicated brokerage institutions designed to mediate research for policy and practice (OECD, 2007^[1]), and making research more accessible to users through funding research syntheses and toolkits. In the 2007 OECD volume *Evidence in Education*, experts and politicians formulated a number of challenges to stronger evidence use in decision making (OECD, 2007^[1]). They highlighted the lack of relevant and accessible research for policy and the conflicting timeframes of political cycles and research production. In addition, challenges included the lack of appropriate processes to facilitate the interpretation and implementation of evidence by decision makers and the difficulty of ensuring sustainability and stability of funding (OECD, 2007^[1]). Despite widespread investment since then, OECD countries still face many of the same challenges today.

Third, research on evidence-informed policy and practice has also been expanding. Early conceptualisations of knowledge transfer as a linear process (OECD, 2000^[3]) have evolved into an understanding of research ecosystems that recognise complexity (Burns and Köster, 2016^[6]; Boaz and Nutley, 2019^[7]; Best and Holmes, 2010^[8]). Increasingly, more studies are also looking at various brokerage initiatives. However, very few of such initiatives have been rigorously evaluated. Research has only recently started to explore how they work and can be improved (Gough, Maidment and Sharples, 2018^[9]). To date, there is no strong evidence about how we can effectively strengthen the use of research in decision making.

The CERI project *Strengthening the Impact of Education Research* was launched in 2021 to address the knowledge gap on what and how initiatives to increase research use work. The project thus aims to support countries in understanding how to use education research in policy and practice systematically and at scale.

This first volume of the project presents an initial mapping of countries’ strategies to facilitate the use of education research in policy and practice. To frame the discussion for the volume, this chapter starts with an overview of how evidence-informed policy and practice discourse has evolved. It also discusses developments in knowledge mobilisation and research production. The chapter then outlines some conceptual considerations and key questions that build on contemporary conceptualisations of knowledge

mobilisation. Next, the chapter describes the policy survey, which was developed by the project, to answer a first set of these questions. Finally, the purpose and structure of this volume is presented.

Cornerstones: Research, evidence and knowledge

The nature and source of research evidence as well as its quality and relevance for policy and practice have long been debated (e.g. Nutley, Walter and Davies (2007^[10]), OECD (2007^[11]), Nutley et al. (2010^[11])). “What counts as evidence?” has been a core question ever since the evidence-informed movement started.

The evidence-based (or evidence-informed) practice and policy agenda is built on the premise that education research can and should establish “what works”, similar to many other sectors including health and agriculture and to other social sciences. In the hierarchy of evidence established in the health sector, systematic reviews and evidence syntheses represent the highest level, followed by randomised control trials (RCT), cohort studies, case studies and expert opinion at the lowest level (Glover et al., 2006^[12]). Some in education have also promoted rigorous syntheses and RCTs as the gold standard (Goldacre, 2013^[13]).

The “what works” movement in education has led to the reformulation of research agendas in some (mostly Anglo-Saxon) countries (Cochran-Smith and Lytle, 2006^[14]). This has focused attention on intervention and effectiveness research. Examples include the Best Evidence Synthesis (BES) in New Zealand (New Zealand Ministry of Education, 2019^[15]) and the Teaching and Learning Toolkit developed by the Education Endowment Foundation in England (EEF, n.d.^[16]). Continuously updated, the latter puts great emphasis on high standards of evidence and has gained huge traction around the world in the past years.

However, the narrow interpretation of evidence associated with the “what works” movement has opened up a strong debate between methodological schools and has provoked reflections about its implications for practitioners’ professionalism. As a result, understandings of the evidence itself and what it means to be “evidence-informed” have evolved considerably. First, numerous scholars have suggested more inclusive conceptualisations of evidence (OECD, 2007^[11]). Nutley, Powell and Davies (2013^[17]) argue that the type and quality of evidence depends on the question, which is not necessarily an instrumentalist view of “what works”. For example, practitioners and decision makers could be interested in why, when and for whom something works, how much it costs, and what the risks are. They may also wish to understand the nature of social problems, why they occur, and which groups and individuals are most at risk. The authors suggest that mapping what kind of evidence can answer what kind of question is more useful than defining a hierarchy of evidence types that does not take the question into account. For example, questions such as “how does it work” and “does it matter” are ones that qualitative research can answer but RCT evidence cannot (Petticrew and Roberts, 2003^[18]).

Second, scholars have contributed to understanding what we mean by “evidence-informed” in more subtle ways. Research and other sources of evidence are often not used directly but they shape attitudes and ways of thinking in indirect and subtle ways (Nutley, Powell and Davies, 2013^[17]). In relation to teacher professionalism, scholars have emphasised that research is an important contribution to teachers’ “technical knowledge”, which provides support for decision making (Kvernbekk, 2015^[19]; Winch, Oancea and Orchard, 2015^[20]). It is often used indirectly to “back up” a decision (Kvernbekk, 2015^[19]). In this sense, evidence does not replace professional judgement or prevent a value-based decision. Teachers’ engagement with and in research enriches their reflection on practice and vice versa: Teachers’ reflection on their practice helps them interpret research and enhances research itself (Winch, Oancea and Orchard, 2015^[20]).

Recent definitions explicitly distinguish between research knowledge and practical knowledge (expertise), and emphasise the connection between them. For example, Sharples defines evidence-informed practice

as “integrating professional expertise with the best external evidence from research to improve the quality of practice” (Sharples, 2013, p. 7^[21]). In a similar vein, Langer, Tripney and Gough define evidence-informed decision making as “a process whereby multiple sources of information, including the best available research evidence, are consulted before making a decision to plan, implement, and (where relevant) alter policies, programmes and other services” (2016, p. 6^[22]).

These definitions also recognise a distinction between evidence and research. This is particularly important in today’s world, which is characterised by an abundance of information and data that is often cited or taken as “evidence”. Indeed, the concept of evidence can range from a narrow understanding of “gold standards” (RCTs, systematic reviews) to a broader one that incorporates data and information, including in raw and unanalysed forms. See Box 1.1 for the use of “research” in this volume.

Box 1.1. Meaning of “research” in the Strengthening the Impact of Education Research project

In the *Strengthening the Impact of Education Research* project, the focus is on the production and use of *education research*, understood as a form of systematic investigation of educational and learning processes with a view to increasing or revising current knowledge. This is consistent with most definitions of research (e.g. Langer, Tripney and Gough (2016^[22])). It is a broader conceptualisation that recognises that research need not necessarily be conducted within academia or by researchers only. However, this definition does not consider (raw) information and data as “research” as such - only when these are analysed and investigated for a purpose.

Conceptual evolution of knowledge mobilisation

The evidence-informed practice movement gave rise to a rich field of study looking into the dynamics of knowledge. Terms such as knowledge management, knowledge-to-action, knowledge translation, transfer, mobilisation, brokerage and mediation consider the dynamics of knowledge from different angles (Levin, 2008^[23]). There have been two major and interrelated developments in conceptualising the interplay of research production and use.

The first is a change of perspective *from linear to system* models. Best and Holmes (2010^[8]) describe the three models of knowledge mobilisation in a nested perspective:

- Linear model – Making research available for users, focusing on “getting the right information to the right people in the right format at the right time” as defined in the health sector (Levin, 2008^[23]). This model focuses on disseminating research evidence to users such as teachers and policy makers, who are seen as passive recipients of knowledge.
- Relationship model – Incorporating linear models but focusing on strengthening the relationship among stakeholders through partnerships and networks to facilitate the link between research and practice/policy. Here, knowledge can come from multiple sources (research, theory, policy, practice).
- Systems model – Building on linear and relationship models but recognising that agents are embedded in complex systems and the whole system needs to be activated to establish connections among its various parts (Best and Holmes, 2010^[8]).

In both the linear and relationship models, a strong emphasis is placed on mediation, i.e. intermediary actors and processes that bridge the gap between communities of research producers and users. Intermediary actors include organisations (e.g. brokerage agencies) and individuals (e.g. translators, brokers, gatekeepers, boundary spanners and champions). While each actor is important in a systems view, this view implies that all actors together shape the research ecosystem through their interactions, feedback loops and co-creation (Campbell et al., 2017^[24]).

The second development is a shift from a *research push to a user-pull* approach. Early efforts focused primarily on disseminating research evidence towards practice and policy. The push approach corresponds to the linear model of knowledge dissemination and a transfer issue focused on making research findings more accessible to practitioners and policy makers. It has since become clear that dissemination alone does not increase research use in decision making (Langer, Tripney and Gough, 2016^[22]), building on users' needs in producing research and synthesising available evidence has gained attention. Pull mechanisms require researchers (and research funding schemes) to map and understand users' needs, and respond to them accordingly. They also require practitioners and policy makers to formulate their knowledge needs as part of their work and problem solving process. The most recent research ecosystem models put greater emphasis on pull mechanisms (Gough, Maidment and Sharples, 2018^[9]).

Neither of these developments can be equated to a simple shift from one model or strategy to another. Push and pull mechanisms can – and perhaps should – co-exist. Linear processes of knowledge transfer are not outdated; rather, they are embedded in more complex dynamics and remain key building blocks of research use. Relationships are fundamental elements of a systems view but it is not sufficient to only consider and foster partnerships. Strengthening the dynamics of research production and use is not simply about transferring and translating a narrow set of “codes” from one community to the other.

This idea is captured by Van de Ven and Johnson's (2006^[25]) three ways of framing the “theory-practice” gap. The first framing sees this gap as an issue of *knowledge transfer*. Users (e.g. teachers and policy makers) do not adopt and implement findings from research because it is frequently unavailable in a suitable format. This interpretation corresponds to the linear model and a push approach. The second framing sees theory and practice as distinct *forms of knowledge*. Practitioners' knowledge and research knowledge are ontologically and epistemologically different from that of researchers. Because these two forms of knowledge are in themselves partial, the issue relates to ensuring that they are effectively combined. This leads to the third framing, which views the gap as a *knowledge production* issue. Where, how and by whom knowledge is produced determines the distance between theory and practice. Collaborative forms of enquiry in which researchers and practitioners work together on a complex problem (called “engaged scholarship” by the authors) reduce this distance in a natural way (Van De Ven and Johnson, 2006^[25]). The latter two framings recognise that relationships as such are not enough: The ways in which different communities engage with each other is what makes the difference.

However, more is needed to activate the entire system. Best and Holmes (2010^[8]) identify four components of systems thinking:

- Evidence and knowledge: Research evidence is only one form of knowledge and the interplay between different forms (e.g. tacit and explicit) needs to be considered.
- Leadership: Rather than merely command and control, leadership in a complex system involves “facilitation and empowerment, self-organising structures, participatory action and continuous evaluation” (p. 151^[8]).
- Networks: Organisational networks can strengthen relationships between actors if coupled with collaborative (system) leadership to help work towards shared goals (see also literature on network effectiveness in e.g. Rincón-Gallardo and Fullan (2016^[26])).
- Communications: Rather than simple information packaging, strategic communication identifies interdependencies and trade-offs, and negotiates interests in a process leading to mutual understanding (Best and Holmes, 2010^[8]).

The next two sections discuss the evolution of knowledge mobilisation policies and practices.

Developments in knowledge mobilisation in policy and practice

In the context of teaching practice, evidence use is strongly rooted in discourses on teacher professionalism. The core idea is that the teaching profession lacks a systematic and robust knowledge base that can consistently constitute the scientific basis of teaching practice. More than 20 years ago, Hargreaves' seminal lecture (1996^[27]) laid the groundwork for the research-based profession paradigm. This exerted a large influence on policy. With growing pressure for greater accountability and effectiveness in education in the late 1990s and 2000s, the call for educational policy decisions to be based on the best evidence also became stronger in OECD countries (OECD, 2007^[11]).

Early knowledge brokerage efforts in practice and policy adopted primarily linear and push approaches and many still bear the signs of a research transfer model to date. For example, *What Works Clearinghouse* (WWC) provides teachers “with the information they need to make evidence-based decisions” (Institute of Education Sciences, n.d.^[28]). Other agencies, such as the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) in the United Kingdom and the Best Evidence Synthesis (BES) programme in New Zealand, also provide robust evidence syntheses. Products of such agencies are based on the idea of “translation”, i.e. transforming researchers' knowledge products into products accessible for users. These include user-friendly evidence snapshots, practice guides and sometimes more sophisticated toolkits.

Recognising that linear transmission is not enough, efforts have increasingly gone towards building relationships between researcher and practitioner/policy communities. The EPPI-Centre, for example, provided capacity-building opportunities and worked with a range of partners to foster evidence-informed policy. The BES programme in New Zealand also emphasised collaborative approaches to foster dialogue and engagement (OECD, 2007^[11]).

An early example of bringing together researchers and practitioners is the *Teaching and Learning Research Programme* (TLRP) in England between 2000 and 2011 (OECD, 2007^[11]). Its strategic commitments include user engagement; partnerships for sustainability; knowledge generation by project teams; and capacity building for professional development (OECD, 2007^[11]).

The new generation of the United Kingdom's brokerage effort, the *Education Endowment Foundation/Sutton Trust* (EEF), applies an “evidence ecosystem” model, drawing heavily on the systems view described above. In this model, evaluation, synthesis, translation, use of research, and innovation are explicitly linked (Gough, Maidment and Sharples, 2018^[9]). Activities include synthesising evidence, generating new evidence and supporting schools in using this evidence (EEF, 2019^[29]). The latter is realised through the “Research Schools Network”. Member schools benefit from regular communication and events, and professional development for senior leaders and teachers on how to improve classroom practice based on evidence. They also receive support for developing innovative ways of improving teaching and learning. Some Research Learning Networks have developed close partnerships between universities and schools in which researchers and teachers co-create knowledge through learning conversations (Brown, 2018^[30]). University-school partnerships are becoming popular forms of facilitating interactions between researchers and teachers in many OECD countries.

Practice and policy share many challenges in using evidence. The relevance and timeliness of research, and difficulty of reconciling different sources of knowledge, attitudes and values are subjects of discussion in both contexts. In addition, evidence and research in policy must be reconciled with politics and the agendas of different stakeholder groups. Scholars complain that policy makers often cherry-pick research to underpin their predetermined agendas while policy makers struggle to find answers from research when they need them. These tensions have been demonstrated and discussed widely (OECD, 2007^[11]).

Box 1.2. CERI work on knowledge for policy and practice

Since its work on knowledge management and educational R&D in the early 2000s, and the publication of *Evidence in Education* in 2007, CERI has continued to contribute to the agenda of increasing the impact of education research on multiple fronts.

Teacher knowledge and innovation

Work on innovative teaching and learning has promoted and supported the use of research in practice for over a decade. *The Nature of Learning* volume brought together research on learning with the objective of “help[ing] build the bridges, ‘using research to inspire practice’” (Dumont, Istance and Benavides, 2010, p. 14^[31]). The contribution of *Science of learning* to building teachers’ professional knowledge has been further explored (Kuhl et al., 2019^[32]). The OECD’s Teacher Knowledge Survey¹ set out to assess teachers’ pedagogical knowledge (Sonmark et al., 2017^[33]; Ulferts, 2019^[34]; 2021^[35]) to obtain an objective picture of the current knowledge base across systems. As part of the conceptual basis for this work, CERI explored teachers’ knowledge dynamics, arguing for an appropriate governance of teachers’ professional knowledge in a complexity perspective (Révai and Guerriero, 2017^[36]). Recent work looking at the role of networks in scaling innovation and evidence in education demonstrated the complexity of knowledge dynamics underlying these questions (Révai, 2020^[37]).

Knowledge governance

Work on governance helped better understand complexity in education systems and for policy making, and rethink the range of actors involved in shaping systems (Burns and Köster, 2016^[6]; Burns, Köster and Fuster, 2016^[38]). This work also conceptualised the relationship between knowledge and governance. The governance frameworks were then used to support countries in strengthening evidence-informed policies and map systems’ capacity for effective knowledge production and use (Shewbridge and Köster, 2021^[39]; Köster, Shewbridge and Krämer, 2020^[40]).

Stronger collaboration between policy makers and researchers may ease such tensions. Interestingly, policy-research partnerships are much less discussed in the literature than research-practice partnerships. Nevertheless, policy networks, in which policy makers and various interest groups including researchers interact (Cairney, 2019^[41]), are examples of spaces where research can shape policy makers’ thinking. Governments also have mechanisms for commissioning research to address specific policy interests. In some cases, this is done in collaboration with research councils or advisory groups. While partnerships and networks are popular ways of scaling evidence use in education (and have in some cases, become policy tools), few have been studied over time and in depth, let alone systematically evaluated (Révai, 2020^[37]; Coburn and Penuel, 2016^[42]).

Overall, the inability of linear knowledge transfer mechanisms to address the complexity of evidence use in policy and practice is today widely accepted. With recent developments over the past decade, it is time to ask what efforts have been successful in developing necessary relationships and “activating” the whole system to increase research use. In a systems perspective, facilitating the production of research in novel ways is part of the answer.

Research production

From the perspective of knowledge production (Van De Ven and Johnson, 2006^[25]), the focus of research-policy and research-practice links is on co-producing knowledge. The collaboration of teachers and researchers in knowledge production is central to relational and systems approaches to knowledge

mobilisation. It is argued that teachers will find research relevant and applicable for their practice if they have ownership of the research – if they are involved in the production process from the start. While some positive outcomes have been reported on teachers' engagement in research for pupils and teachers, difficulties have also been highlighted such as lack of time and inadequate external support for practitioners (Cooper, Klinger and McAdie, 2017^[43]; Bell et al., 2010^[44]).

In addition, researchers are often not prepared for co-production either. Co-producing research requires research institutions and researchers to understand the contexts of policy and practice while actively seeking to address needs. Despite the increasing requirement in some countries to demonstrate research impact (e.g. through research excellence frameworks in the United Kingdom and Australia), academic incentives are still not aligned to these needs (Cherney et al., 2012^[45]). Publishing in high-impact journals is favoured over grey literature or user-friendly formats. Academics also lack support and training in how to work together with practitioners and policy makers. In sum, a number of educationalists still criticise the culture of research production (Burkhardt and Schoenfeld, 2021^[46]).

Another issue with research production relates to its overall coordination, or rather, the lack of it. Education research has been accused of not producing evidence in a cumulative way (e.g. Burkhardt and Schoenfeld (2003^[47])). This implies that education research does not directly lead to improved practice. Research insights and outcomes are often scattered and disconnected from practice and policy. In addition, publishers tend to prioritise certain methodologies and results (notably positive ones that confirm hypotheses). This inhibits building a comprehensive knowledge base for teaching and schooling.

The fact that multiple actors are involved in research production and use means that the traditional gatekeepers of research quality are no longer necessarily used. For many decision makers, it is difficult to know what information they can trust to guide policy and practice. The co-creation of knowledge by researchers and practitioners / policy makers also raises questions about the quality and rigour of research. While true co-production automatically ensures the relevance of research for practice/policy, it also necessitates consolidating such locally created knowledge. This implies iterations within the same context and replications in other contexts. While such processes are necessary for local knowledge to become explicit, robust and suitable for wider diffusion and use, they happen to a very limited extent (Enthoven and de Bruijn, 2010^[48]).

Finally, funding sources and mechanisms raise a number of questions with respect to research production. In some countries, national education acts set out a strongly directed agenda for education research. A widely criticised example for this was the No Child Left Behind Act in the United States that regulated production in ways that restricted funding to certain types of methodologies and ways of production (e.g. Fazekas and Burns (2012^[49])). Actors funding education research have diversified in the past decades. In addition to public funding, education research is increasingly funded by private organisations and foundations. Given that the particular interests, aims and criteria of funders influence the aim, scope and sometimes even the methods of research, the funding source becomes an important consideration for the relevance and quality of research (Rasmussen, 2021^[50]).

Research dynamics in systems thinking: Key questions remain

Most knowledge mobilisation initiatives have so far been unsuccessful in realising the promise of a systems model and in enabling well-functioning dynamics in research production and use (Cooper, 2014^[51]; Boaz et al., 2019^[52]). To drive research dynamics in a true systems approach, we need to depart from some long-used terminology and frames of reference. We also need to identify and understand the factors that facilitate and hinder the systematic and high-quality production and use of research in a holistic way. This section raises two important conceptual considerations and highlights key questions that still need to be answered.

Conceptual considerations

Recognising complexity in the way we talk about “knowledge mobilisation”

The literature talks about knowledge transfer, transmission, mediation, knowledge-to-action, knowledge mobilisation and brokerage. Though the definitions of some of these terms have evolved towards a more complex understanding, the words themselves have a linear association; that is, of passing on explicit forms of knowledge in direct and straightforward ways. However, modern theories describe education systems as complex: With multiple actors interacting at multiple levels, characterised by non-linear feedback loops and emerging patterns (Burns, Köster and Fuster, 2016^[36]). None of these terms reflects this complexity. Yet, systems thinking will only be truly taken on board when it is reflected in the vocabulary used.

By understanding which words should be used to capture complex research (or more broadly, knowledge) dynamics (Révai and Guerriero, 2017^[36]), we can reframe the problem in a way that helps us move forward.

Connecting policy and practice

Despite recurring efforts to bridge the worlds of policy and practice, discussions on the use of research in education tend to focus on the context of policy or practice (evidence-informed policy/practice). These two fields have developed in parallel and – as this volume will demonstrate – developments have not been systematically translated from one context to the other.

However, separating policy from practice is artificial and problematic: Not recognising the intimate link between the two prevents a true systems perspective. In reality, the boundary between education policy and practice is blurred. In decentralised systems, school leaders have substantial autonomy to shape school-level policies (e.g. on teachers’ professional learning). Some actors, such as system leaders (e.g. leader of a school cluster), directly shape both practice and policy. In addition, the subject of policy and practice substantially overlaps. For example, both are directly concerned with pedagogical approaches, and monitoring and assessing student learning. At the same time, they also have their distinct areas of focus: For example, teachers’ status and salary are policy areas whereas interacting with students and parents are matters of practice.

The complex and increasingly fluid relationship between policy and practice requires rethinking the use of research as well. Further consideration must be given to whether evidence-informed policy can truly be seen as distinct from evidence-informed practice. Exploring how using research in policy making influences and interacts with its use in practice, and what this means for the production of research can help us better understand how to drive these processes.

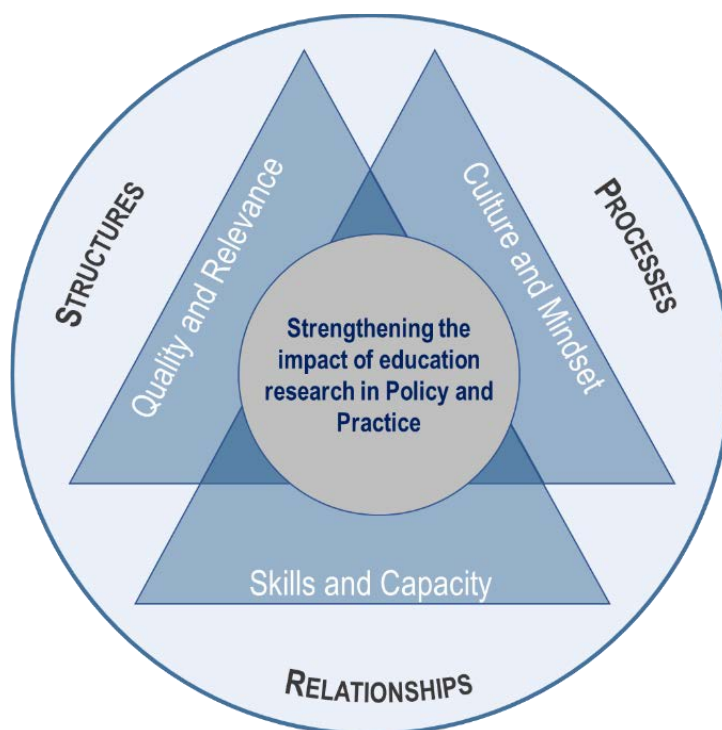
Key questions

If the policy, practice and research environments are complex, non-linear, “messy” processes (Best and Holmes, 2010^[8]; Cairney, 2019^[41]; Burns and Köster, 2016^[6]), how can we enable a more systematic and high-quality production and use of research in both policy and practice?

Unlocking the potential of systems approaches requires understanding all dimensions of the education research “ecosystem”. These include the *quality and relevance* of education research; the *quality* use of evidence in different contexts; the *culture and mindset* required for high-quality, systematic research use; and the *skills and capacity* of actors at individual and organisational levels (Figure 1.1).

Key questions that still remain along these dimensions are summarised in Table 1.1.

Figure 1.1. Dimensions of strengthening the impact of education research



Source: Inspired by the QURE framework in Rickinson, M. et al. (2020^[53]), *Quality Use of Research Evidence Framework*, Monash University, Melbourne.

Table 1.1. Key questions around strengthening the impact of education research

Dimensions	Questions
1. Structures and processes	How can we evaluate the impact of education research, and the structures and processes that support research use?
	What structures (e.g. institutions, networks) and processes facilitate the use of research in policy and practice?
	What system-level strategies and coordination can strengthen the impact of education research at scale?
2. Relationships	What relationships are necessary to strengthen the impact of education research in policy and practice?
	How can relationships and interactions reinforce research use?
3. Quality and relevance	How can we describe the quality use of research in policy and practice?
	How can we improve the quality of education research and how can we make it more relevant?
4. Culture and mindset	How can we raise awareness of and build positive attitudes towards using research systematically in policy and practice?
	How can (organisational and system-level) leadership contribute to strengthening the impact of education research?
	How can we redesign systemic incentives to increase the impact of research for policy and practice?
5. Skills and capacity	What skills and support do policy makers, practitioners, researchers and other actors need for using and (co-)producing research?
	What organisational and systemic capacity is needed to support the (co-)production and use of research in policy and practice?

Mapping the landscape: Policy survey

Although understanding of the evidence system has evolved greatly and major efforts have been made across the OECD to strengthen the impact of education research, how to effectively ensure its systematic use in policy and practice remains a challenge. The first step in addressing that challenge is to map existing mechanisms, actors and challenges across systems.

The *OECD Strengthening the Impact of Education Research* policy survey – conducted from June to September 2021 – is one of the first international efforts to collect data on the mechanisms used to facilitate research use in countries/systems. Overall, 37 education systems from 29 countries² have responded to the survey. Responses represent the perspective of ministries of education at the national or sub-national (state, province, canton, etc.) level. As such, they are subject to the bias of personnel within these ministries, their perceptions and personal realities (see Box 1.3 for who policy makers are in this survey).

Box 1.3. Who are policy makers?

There are policy makers at national, regional and local levels in every system. However, the nature of the education system (e.g. centralised, decentralised, federal) implies different structures, which involve differences in the locus of control for decision making (OECD, 2007^[1]). The *Strengthening the Impact of Education Research* policy survey targeted the highest level of decision making in education (ministry/department of education). In federal systems, this corresponds to the state (province, canton, autonomous community, etc.) department. Ministries were asked to coordinate the response across departments.

The follow-up interviews revealed that ministries of education had various definitions of policy makers. Interviewees most commonly associated the term with high-level ministry officials such as Directors, Deputy Directors and Director Generals. There was overall a high degree of recognition that policy makers are those with influence over the policy process, rather than those tasked with implementation of policies. Some systems however took a broader view, considering all those working at the ministry of education, as well as individuals in the executive and legislative branches of government. As a result of the different understandings, comparisons between systems in policy survey data should be made with caution.

The survey has three parts, which cover the various elements and dimensions represented in Figure 1.1

- The first part maps the actors, mechanisms and relationships that facilitate the *use of research in policy making*. It also asks how policy makers use research and their levels of satisfaction with research use.
- The second part pertains to *using education research in practice* and maps actors and mechanisms that foster this. In line with the key dimensions described above, the survey asks about drivers of and barriers to research use in policy and practice, covering issues of mindset and culture, resources, skills and capacity as well as learning opportunities.
- Finally, the third part relates to the *production of education research*: The accessibility and relevance of research; the various mechanisms in place; the involvement of actors and their incentives; and funding for research.

As a follow-up to the survey, six countries³ were selected for further data collection through semi-structured interviews. The criteria for selection included: Ensuring that diverse geographical and educational contexts are represented, including countries/systems that provide substantial qualitative information through the open-ended answers in the survey.

The purpose of these interviews is to:

- Ensure that survey data is correctly interpreted.
- Further understand good practices and challenges with regard to using research in policy and practice systematically and at scale.
- Understand what ministries/governments hope to gain from the analysis of survey data; highlight any specific areas of interest; and answer any questions.

In this volume, two chapters (6 and 7) provide a first set of analysis of survey data.

Purpose and structure of this report

This volume aims to provide a modern account of research use in education policy and practice. It does so in two main ways. First, by inviting a number of leading experts in knowledge mobilisation (evidence-informed policy/practice) to present their cutting-edge research. Second, by reporting on the first results of the *OECD Strengthening the Impact of Education Research* policy survey. While chapters across the volume touch upon most questions set out in Table 1.1, the main focus at this stage is to provide an initial mapping of structures, processes and relationships and the main barriers to improving research use. Rather than offering clear solutions, the report illustrates some promising practices and directions for future work. The report is structured as follows.

Part I. Conceptual landscape and the evolution of the field

The first part sets the scene for the report with three introductory chapters.

The current **Chapter 1** presents the background and rationale for this work.

In **Chapter 2**, *José Manuel Torres* provides an overview of some dominant models of knowledge mobilisation. The author compares and contrasts these models, and analyses the evolution of perceptions and priorities of this field over time. The chapter highlights some additional, more recent models that focus on a specific aspect of research dynamics. The author concludes with questions and recommendations for developing a new vision that captures research dynamics in the complex interactions of education research, policy and practice.

In **Chapter 3**, authored by *Tracey Burns* and *Tom Schuller*, revisits the discussion of evidence-informed policy with a specific focus on brokerage and brokerage agencies. The chapter presents some advances in the field and argues that, despite these, the same challenges remain with additional emerging ones. To conclude, the chapter proposes an ambitious agenda for moving forward towards building a collective knowledge base on research brokering.

Part II. Actors and mechanisms facilitating research use in policy and practice

The second part of the volume focuses on the various actors and mechanisms that aim to facilitate the use of research in policy and practice.

In **Chapter 4**, *Jordan Hill* analyses the OECD Strengthening the Impact of Education Research policy survey results with respect to the actors involved in producing research and facilitating its use. The chapter starts with an overview of the various factors to be considered when mapping actors and their relationships. It presents actors active in facilitating the use of research evidence at organisational and individual levels in the 37 participating education systems. The chapter describes actors' engagement in the production of research and how co-production is incentivised and realised. Finally, it discusses the quality of policy makers' relationships and interactions with various actors.

Chapter 5 provides an analysis of the OECD survey regarding the mechanisms of and barriers to facilitating research use. *José Manuel Torres* presents a framework for classifying the various mechanisms and describes their use in the policy and practice contexts across respondent systems. It then discusses the various barriers countries face in making research use systematic. The chapter concludes noting the importance of system-level coordination of the various mechanisms and the current lack of such coordination.

In **Chapter 6**, *Annette Boaz, Kathryn Oliver and Anna Numa Hopkins* present results from a cross-sectoral mapping exercise that mapped and reviewed 513 organisations promoting research-policy engagement. The chapter catalogues a large number of examples of linear, relational and systems approaches from a wide range of sectors, including health, agriculture and environment. Drawing on evaluations, the authors highlight key findings with respect to the effectiveness of the various approaches. The chapter ends with a number of cross-cutting themes and implications for the education sector, presented through five key questions.

In **Chapter 7**, *David Gough, Jonathan Sharples and Chris Maidment* discuss how initiatives that aim to facilitate the link between research, policy and practice can themselves be evidence-informed. Drawing on examples of “knowledge brokerage initiatives”, the chapter addresses five areas of evidence-informed brokerage. These are: Needs analysis; integrating evidence use in wider systems and contexts; methods and theories of change; evidence standards and evaluation and monitoring. The chapter ends with a set of recommendations for brokerage initiatives, policy makers and funders.

Part III. New approaches to understanding research use

The third part offers fresh perspectives on the production and use of education research.

Chapter 8 argues that research use and research impact in education should be discussed from the perspective of co-construction. *Gábor Halász* tells stories of co-construction through a range of personal experiences. The chapter presents various forms of cooperative knowledge production in which researchers and practitioners learn from each other. It argues that using innovation and knowledge-management approaches could add a positive dimension to thinking about research use and impact.

In **Chapter 9**, *Mark Rickinson and colleagues* focus on using research well in practice. The chapter draws on findings from a five-year study of research use in Australian schools. It explores how quality use of research can be conceptualised, what it involves in practice, and how it can be supported. The chapter concludes with four implications for individuals and organisations interested in strengthening the role of research in school and system improvement.

Chapter 10 presents different perspectives on education research. The chapter starts with a short overview of key questions that have emerged from decades of debate about the relevance of education research for teaching practice and policy. What is its purpose? What types of research are relevant for policy and practice? How should research be produced? This is followed by seven short opinion pieces by: *Mark Schneider, Dirk Van Damme, Vivian Tseng, Makito Yurita, Tine Prøitz, Emese K. Nagy, Martin Henry and John Bangs*. The viewpoints come from academia, policy, consultancy, funders, teacher training, and unions, and from different countries. The chapter concludes with a set of convergences, divergences and open questions.

Chapter 11 draws together the lessons learnt from the previous chapters and the OECD policy survey. *Nóra Révai* highlights six overall messages that emerged from the research presented in the volume, taking stock of the remaining challenges for improving research-policy-practice engagement. The chapter ends with describing how the Strengthening the Impact of Education Research project will advance this agenda in the coming years.

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Notes

¹ The Teacher Knowledge Survey has been integrated as an optional module in the 2024 Teaching and Learning International Survey (TALIS).

² OECD member countries: Austria, Belgium (Flemish and French Communities), Canada (Quebec, Saskatchewan), Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, Hungary, Iceland, Japan, Korea, Latvia, Lithuania, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland (Appenzell Ausserrhoden, Lucerne, Nidwalden, Obwalden, St. Gallen, Uri, Zurich), Turkey, United Kingdom (England), United States (Illinois). Non-member countries: Russian Federation, South Africa.

³ Japan, New Zealand, Norway, Portugal, Slovenia, South Africa.



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