

# Towards quality use of evidence in education

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There is no doubt that the use of evidence is a high-priority issue for leaders in many education jurisdictions internationally (Brown, 2015; Nelson & Campbell, 2019; Penuel et al., 2016). Within Australia, there have been growing calls for the development of an “evidence-based approach” (Productivity Commission, 2016), a “research-rich profession” (White et al., 2018), and a “national evidence institute” (Department of Education and Training, 2018).

This article focusses on a specific question that will be integral to these developments – *What does it mean to use research evidence well in education?* Using evidence well is about moving from a focus on the quality of *evidence* towards a focus on the quality of *use*. This is important because improved evidence use in education requires clarity about not only what counts as quality evidence, but also what counts as quality use. To date, there has been wide-ranging debate about the former (see Nutley, Powell, & Davies, 2013), but very little dialogue about the latter.

Consequently, this article shares early ideas from the Q Project (Quality Use of Evidence Driving Quality Education), a five-year study focussed specifically on the quality use of research evidence within Australian schools. We start by providing some background on the Q Project, before outlining an early definition and framework of quality use. The different components of this framework are then unpacked, and their implications for educational leadership are discussed. We argue that the ideas presented here can help leaders to reflect on how they are approaching and supporting the use of research evidence, both personally and within their organisations and systems. Finally, we extend an invitation for you to become involved with the Q Project and the process of working towards quality use of research evidence in Australian education.

## Monash Q Project

The Q Project is a partnership between Monash University and the Paul Ramsay Foundation. It involves close collaboration with school leaders, teachers, policymakers, evidence brokers, researchers, and other key stakeholders across Australia. The Project’s overarching goal is “to understand and improve high-quality use of research evidence in Australian schools” (Rickinson, Walsh, & Smith, n. d.). This involves four main strands:

- Strand 1: Conceptualisation of quality use (2019-2020) – synthesising what is known globally about high-quality evidence use in health, social care, policy and education in order to develop a “quality evidence use” framework for Australian educators.
- Strand 2: School-based investigation of quality use (2020-2021) – examining the evidence use practices in 100 schools across four states (New South Wales, Queensland, South Australia and Victoria) in order to generate practical examples of high-quality evidence use in varied settings.
- Strand 3: Development of professional learning (2022-2023) – co-designing and trialling, with 100 educators across four states (New South Wales, Queensland, South Australia and Victoria), a professional learning process to support high-quality evidence use in practice.
- Strand 4: Engagement and communication campaign (2019-2023) – bringing together key players within Australian education to spark strategic dialogue and drive system-level change around evidence use in education.

This article presents the early ideas coming out of the first year of Strand 1.

## A framework for quality evidence use

A systematic analysis of relevant literature in health, social care, policy and education revealed no well-established, existing definitions of quality evidence use. Drawing on emerging ideas from all of these fields, however, we developed an initial framing of high-quality use of research evidence. This framing is based on characterising quality evidence use as:

Thoughtful engagement with and implementation of appropriate research evidence, supported by a blend of

individual and organisational enabling components within a complex system. (Rickinson, Sharples, & Lovell, 2020)

As shown in Figure 1, this definition sees quality evidence use as:

- comprising two core components (i.e. appropriate research evidence and thoughtful engagement and implementation)
- being supported by three individual enabling components (i.e. skill sets, mindsets, relationships) and three organisational enabling components (i.e. culture, leadership, infrastructure)
- being shaped by the wider complex system.

**Quality evidence use in education is defined as...** the thoughtful engagement with and implementation of appropriate research evidence, supported by a blend of individual and organisational enabling components within a complex system.

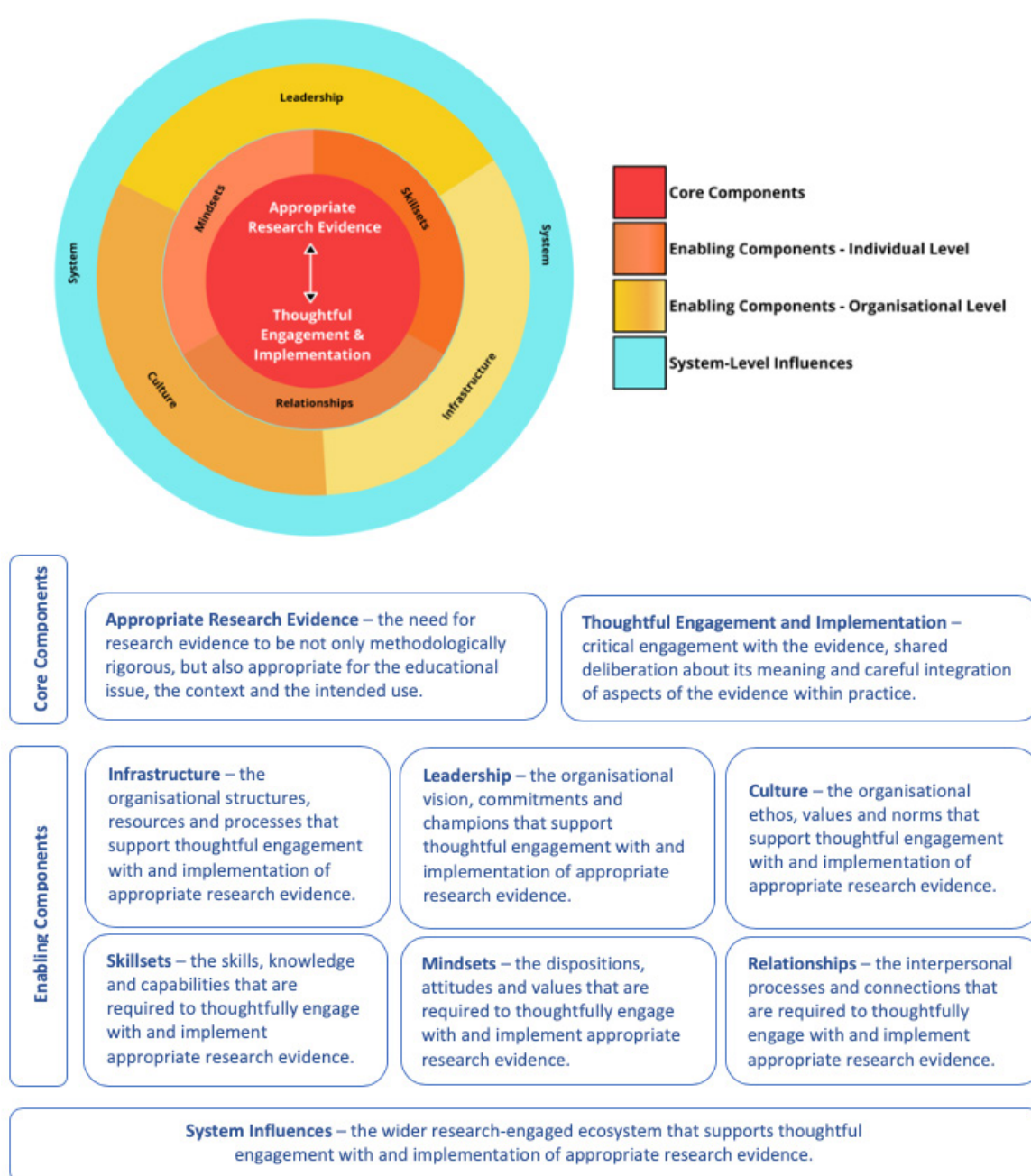


Figure 1: Components of high-quality use of research evidence

## Appropriate research evidence and thoughtful engagement and implementation

At the centre of the circular visual representation of the relationship between the components of high-quality use of research evidence are two aspirations – for the research evidence to be appropriate and for the engagement and implementation to be thoughtful. It is important to stress that these two core components are highly inter-connected in that establishing what is appropriate research evidence will depend on thoughtful engagement, and engaging and implementing thoughtfully will depend on the research evidence being appropriate.

The first core component, appropriate research evidence, is about emphasising the context-specific nature of quality evidence. From a research perspective, evidence quality is about methodological rigour. But from a research use perspective, evidence quality needs to be about appropriateness as well as rigour. As such, research evidence needs to be: appropriate for the *issue* under consideration; appropriate for the *context* in which it will be used; and appropriate for the *use* to which it is going to be put. As Nutley and colleagues (2013) argued, “evidence quality depends on what we want to know, why we want to know it and how we envisage that evidence being used” (p. 6).

The second core component, thoughtful engagement and implementation, reflects how “using evidence is a thinking process” (Earl, 2015, p. 149), which demands a depth of engagement between the user, the evidence, and the way it is used. It is about viewing evidence use as an active process of professional learning, rather than “merely bringing new information about what works to bear on professional practice” (Cordingley, 2004, p. 80). High-quality evidence use, then, involves critical engagement with evidence; skilful deliberation about its meaning, relevance and applicability; careful integration of aspects of the evidence into particular parts of the practice; and critical reflection upon the impacts of its use.

## Skill sets, mindsets, and relationships

The previous discussion about the core components indicates that high-quality evidence use is a complex undertaking. It, therefore, requires educators with particular skill sets, mindsets and relationships.

The relevance of *skill sets* to evidence use has long been recognised (see Davies, 1999). There are significant skills, knowledge and understandings involved in being able to translate, apply and sustainably implement evidence-informed decisions and approaches in specific contexts. For example, it requires skills and capabilities such as “generating ideas, challenging assumptions, testing hypotheses, formulating plans and routinely monitoring progress and making adjustments” (Earl, 2015, pp. 149-150).

Alongside skill sets, though, it is also important to recognise the role of *mindsets* in evidence use. This enabling component refers to the kinds of motivations, values and dispositions that are required for more thoughtful engagement and implementation of evidence. Earl and Timperley (2009), for example, stress that “the disposition to be open to a range of interpretations” (p. 5) is probably more important than skills in evidence interpretation. Therefore, critical reflection is required when engaging with, and using, evidence.

In addition to skill sets and mindsets, another individual enabling component that contributes to quality evidence use is that of *relationships*. Using research evidence well is not an isolated, individual activity. It requires effective input from, and ongoing interactions with, a range of people, both from within and beyond the school. These interactions need to involve “the development of particular interpersonal dynamics” that makes it possible to move

“beyond superficial talk to exploring deeper meanings” (Timperley & Earl, 2009, p. 124).

## Leadership, culture and infrastructure

As well as educators with particular skill sets, mindsets and relationships, quality evidence use in schools also requires organisational contexts with supportive leadership, culture and infrastructure.

*Leadership* is central to effective evidence use at all levels of organisations and systems. In highly research-engaged schools in the United Kingdom, for example, senior leaders were found to “play a key role, acting as intermediaries and facilitators of access to, engagement with and use of research evidence for staff in their schools” (Coldwell et al., 2017, p. 7). Importantly, this influence is not limited to the way leaders can support others to use evidence, it is also about how they model research engagement through their own outlooks and actions (Godfrey & Handscomb, 2019).

Closely entwined with leadership is organisational *culture*. As reported some years ago, “the main barriers to knowledge use in the public sector are not at the level of individual resistance but originated in an institutional culture that does not foster learning” (Hemsley-Brown & Sharp, 2003, p. 460). There is a need, therefore, for evidence use to be a cultural norm that is embedded within an organisation’s “outlook, systems and activity” (Handscomb & MacBeath, 2003, p. 10). Further, it is critically important that there is an ethos that encourages staff to regularly reflect on their practice, take risks and try different approaches based on evidence (Coldwell et al. 2017).

Evidence use also depends on *infrastructure*, that is, organisational structures, resources and processes that support thoughtful engagement with, and implementation of, appropriate research evidence. There is a need for measures such as: the allocation of time, space, facilities and budget; the creation of school-based research coordinators or champions; the establishment of links with external research partners and networks; and the development of formal and informal processes to support staff learning and deliberation about research and practice (Cain, 2019).

## Implications for educational leaders

Given the challenges with quality evidence use, what do the above ideas have to do with educational leadership and leaders; and more specifically, what implications might there be for leaders and leadership at all levels of Australian education? At this stage in the Monash Q Project, we see potential implications for leaders in two main areas: as a stimulus for reflection on current approaches to using evidence, and as a frame with which to review current efforts to support evidence use.

## Reflecting on how we currently approach the use of evidence

The ideas presented here can be seen as an invitation to Australian educational leaders to reflect honestly on current approaches to using evidence. In the first instance leaders are encouraged to think carefully about:

- how much we are willing to move from talking about “whether we use evidence” to talking about “how well we use evidence”
- how much we are interested in improving not just our “quality of evidence” but also our “quality of use”.

In a school setting, these kinds of issues and distinctions can be easy to raise but hard to address. However, they are not meant as either/or



binaries, but rather as both/and continua that can help us to become more reflective about our current approaches to evidence and its use. If schools are serious about moving from “whether” to “how well” and from “quality evidence” to “quality use”, then the Monash Q Project’s framework suggests that educators and researchers need to be thinking carefully about: how serious we are about the *appropriateness of our evidence*; and how concerned we are about the *thoughtfulness of our engagement and implementation* of that evidence. This means bringing our attention to issues such as:

- how we model and encourage an active making sense of research evidence in collaboration with others
- how we adapt research evidence to our local contexts, in connection with our professional judgement and expertise
- how we draw on and ask questions about research evidence during formal and informal conversations about teaching and learning.

### Reflecting on how we currently support the use of evidence

The ideas in this article also make clear that high-quality use of research evidence does not happen in a vacuum. It is sophisticated work that requires professional educators and supportive organisations and systems.

For Australian educational leaders, the quality-use framework outlined in Figure 1 can encourage careful thinking about how well we are modelling and fostering the development of:

- *education professionals* with not only the knowledge and skills to understand research evidence, but also the values and dispositions to be open to its meaning and the relational sensitivity and capacity to work with others to figure out how to use it in context
- *education organisations* with not only the structures and processes to enable staff to engage with evidence, but also the ethos and values to make this a cultural norm and the leadership and commitment to demonstrate and promote its significance
- *education systems* that support quality evidence use not only within specific individuals, institutions or contexts, but through coordinated interventions across multiple levels and with varied key stakeholders.

This is about looking carefully at the breadth and depth of our current efforts to develop and sustain quality use of evidence in education.

### Next steps – working together towards quality use

In conclusion, it is important to stress that the ideas in this paper represent the early stages of a much longer process. Over the next four years, the Q Project’s work will evolve in important ways:

- Moving from the conceptual to the practical – while the work so far has been mainly conceptual (i.e. what does quality evidence use mean?), the next phase is going to be more practical (i.e. what does quality evidence use look like in practice?). In 2020 and 2021, we will be working with 100 schools in New South Wales, Queensland, South Australia and Victoria to better understand what using research evidence well looks like and involves in different school contexts. It will also enable further development and refinement of the quality use framework.
- Moving from understanding to improving – the Q Project is committed to not only understanding, but also improving, the use of research evidence in Australian schools. In 2022 and 2023, we will be co-designing and trialling professional learning to

build teachers’ and school leaders’ capacity to use evidence well, and bringing educators, leaders, policymakers, researchers and intermediaries together for strategic dialogue and system-level change around evidence use in Australian education.

As a result of these future plans, there are opportunities for ACEL members to become involved in and with this work either as individuals, schools, organisations or jurisdictions/systems. Working towards high-quality use of research evidence in Australian education is a system-level opportunity and a system-level challenge. Insightful leadership and informed leaders will therefore be absolutely essential to this process. We look forward to the prospect of working with each and every one of you over the coming years.

### References

- Brown, C. D. (2015). Conclusion: Leading the use of research in schools. In C. D. Brown (Ed.), *Leading the use of research and evidence in schools* (pp. 153-160). London, UK: Institute of Education Press.
- Cain, T. (2019). *Becoming a research-informed school: Why? What? How?* London, UK: Routledge.
- Coldwell, M., Greaney, T., Higgins, S., Brown, C., Maxwell, B., Stiell, B., Stoll, L., Willis, B. & Burns, H. (2017). *Evidence-informed teaching: An evaluation of progress in England*. Retrieved from the Department for Education UK website: <https://www.gov.uk/government/publications/evidence-informed-teaching-evaluation-of-progress-in-england>
- Cordingley, P. (2004). Teachers using evidence: Using what we know about teaching and learning to reconceptualize evidence-based practice. In G. Thomas & R. Pring (Eds.), *Evidence-based practice in education* (pp. 77-87). Berkshire, England: Open University Press.
- Davies, P. (1999). What is evidence-based education? *British Journal of Educational Studies*, 47(2), 108-121.
- Department of Education and Training (2018). *National school reform agreement*. Canberra, Australia.
- Earl, L. M. (2015). Reflections on the challenges of leading research and evidence use in schools. In C. D. Brown (Ed.), *Leading the use of research and evidence in schools* (pp. 146-152). London, UK: Institute of Education Press.
- Earl, L. M. & Timperley, T. (2009). Understanding how evidence and learning conversations work. In L. M. Earl & H. Timperley (Eds.), *Professional learning conversations* (pp. 1-12). Dordrecht, Netherlands: Springer.
- Godfrey, D. & Handscomb, G. (2019). Evidence use, research-engaged schools and the concept of an ecosystem. In D. Godfrey & C. Brown (Eds.), *An ecosystem for research-engaged schools* (pp. 4-21). London, UK: Routledge.
- Handscomb, G. & MacBeath, J. (2003). *The research-engaged school*. Essex, UK: Essex County Council, FLARE.
- Hemsley-Brown, J. & Sharp, C. (2003). The use of research to improve professional practice: a systematic review of the literature. *Oxford Review of Education*, 29(4), 449-470.
- Nelson, J. & Campbell, C. (2019). Using evidence in education. In A. Boaz, H. Davies, A. Fraser & S. Nutley (Eds.), *What works now? Evidence-informed policy and practice revisited* (pp. 131-149). Bristol, UK: Policy Press.
- Nutley, S., Powell, A. & Davies, H. (2013). *What counts as good evidence?* London, UK: Alliance for Useful Evidence.
- Penuel, W. R., Briggs, D. C., Davidson, K. L., Herlihy, C., Sherer, D., Hill, H. C., Farrell, C. C. & Allen, A. (2016). *Findings from a national survey of research use among school and district leaders*. Retrieved from [http://ncrpp.org/assets/documents/NCRPP\\_Technical-Report-1\\_National-Survey-of-Research-Use.pdf](http://ncrpp.org/assets/documents/NCRPP_Technical-Report-1_National-Survey-of-Research-Use.pdf)

## AEL Articles

Productivity Commission (2016). *National education evidence base, Report no. 80*. Canberra: Productivity Commission.

Rickinson, M., Sharples, J. & Lovell, O. (2020). Towards a better understanding of quality of evidence use. In S. Gorard (Ed.), *Getting evidence into education: Evaluating the routes to policy and practice*. London: Routledge.

Rickinson, M., Walsh, L. & Smith, L. (n. d.). *The Q project: Quality use of evidence driving quality education*. Retrieved from the Monash University website: <https://research.monash.edu/en/projects/the-q-project-quality-use-of-evidence-driving-quality-education>

Timperley, H. & Earl, L. (2009). Using conversations to make sense of evidence: possibilities and pitfalls. In L. M. Earl & H. Timperley (Eds.), *Professional learning conversations* (pp. 1-12). Dordrecht, Netherlands: Springer.

White, S., Nuttall, J., Down, B., Shore, S., Woods, A., Mills, M. & Bussey, K. (2018). *Strengthening a research-rich teaching profession for Australia*. Retrieved from Melbourne: Australian Council for Deans of Education.



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