Survey of Evidence in Education for Schools (SEE-S) Descriptive Report

Executive Summary

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CENTER FOR RESEARCH Use In Education

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About the Center

The Center for Research Use in Education is an Institute for Education Sciences-funded knowledge utilization center focused on rethinking research for schools (R4S). Our mission is to expand the study of research use and produce a more holistic picture of what drives it, from the production of knowledge by researchers to the application of research in schools. We also seek to identify strategies that can make research more meaningful to classroom practice.

At our center, we believe that education research is an important part of the educational process. We further believe that rigorous evidence, whether qualitative or quantitative, can foster better opportunities and outcomes for children by empowering educators, families, and communities with additional knowledge to inform better decision-making. For this reason, we seek to support strong ties between research and practice.

To learn more about our center, visit <u>https://crue.cehd.udel.edu/</u> or follow us on Twitter at <u>@UDCRUE</u>

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Survey of Evidence in Education for Schools (SEE-S) Descriptive Report Executive Summary

Expectations for the use of research in educational decision-making have grown exponentially across the globe. In the United States, increased pressure through accountability policy (e.g., No Child Left Behind, Every Student Succeeds Act) and through the production and dissemination of scientifically based research (e.g., Education Sciences Reform Act, What Works Clearinghouse) are intended to create conditions for improving research use. Concurrently, researchers, education agencies, and funders have mounted efforts to strengthen relationships between research and educational practice to improve decisions about and outcomes for children. And perhaps now, more than ever, research may be critically important to addressing the growing inequities in our education system.

Current studies of research use in the United States have tended to focus on various stakeholders' research use, case studies of schools or districts, or case studies of specific education policy practices. The purpose of this report is to broadly portray research use in U.S. schools *at scale* to better understand where we are as an educational system in the more than forty-year journey to improve the role of research in education policy and practice. This report answers five key questions relevant to the various actors in the larger education ecosystem: (1) What are the nature and depth of schools' use of research to inform policy and practice?; (2) What are practitioner perspectives on the gap between research and practice?; (3) Are practitioners well prepared to use research?; (4) Where do practitioners turn for research-based information; and (5) To what degree do practitioners engage in research broker activities?.

We answer these questions using survey data from administration of the *Survey of Evidence in Education for Schools (SEE–S)*, including responses from more than 4,000 practitioners, which includes teachers, coaches, other specialists, and administrators in over 150 schools across the country. The research presented here was conducted by the Center for Research Use in Education (CRUE; "the Center"), a knowledge utilization center funded by the Institute of Education Sciences. The Center seeks to expand understanding of how to improve the relationship between research and practice in the K–12 educational space.

Framework and Methods

The work of the Center is guided by a conceptual framework that links the practices and perspectives of both researcher and practitioner communities to more holistically understand and improve the relationship between research and practice. The framework describes interrelated

processes associated with a) use of research in decision-making and b) research production. Each process features a parallel set of dimensions, and we describe variability in those processes in terms of depth, a concept we explore elsewhere (Farley-Ripple et al., 2018). The framework also includes five key assumptions and perspectives of the research and practice communities that contribute to the size and scope of potential gaps in those assumptions and perspectives between the research and practice communities. Nested between the research and practice communities are relational components to the relationship between research and practice, including networks that support access to resources and knowledge brokerage within and between communities. We hypothesize that both perspectives and assumptions as well as relational dimensions influence research use and production.

The conceptual framework is operationalized through the *SEE-S* and *SEE-R*—a pair of instruments to capture both researcher and practitioner perspectives on research use. The focus of this report is on the *SEE-S*, which was developed using a multi-phase approach, utilizing both qualitative and quantitative methods to produce reliable and valid survey measures.

The *SEE–S* was administered online to schools' instructional staff, including teachers, coaches, other specialists, administrators, and paraprofessionals, and to a member of the district office—which are referred to collectively as practitioners or educators throughout this report, during the 2018–2019 and 2019–2020 school years. A total of 134 traditional public schools from 21 districts, as well as 20 schools from 10 charters (5 rural, 13 suburban, and 13 urban), were successfully recruited into the sample for the *SEE-S* field trial administration. Analyses of the *SEE–S* field trial data comprised several stages and various techniques for item analysis, scaling, and calculation of derived variables.

The following sections of this executive summary are organized in terms of our overarching research questions and the sub-questions that pertain to the dimensions of our conceptual framework. Each section will include the key takeaways, including implications. Finally, this summary will conclude with overarching conclusions that integrate findings from across the full study.

Findings

1. What are the Nature and Depth of Schools' Use of Research to Inform Policy and Practice?

This report answers this research question by exploring data related to depth of use, which includes six subdimensions: (1) evidence, (2) search, (3) interpretation, (4) participation, (5) frequency, and (6) the decision-making stage where evidence is relied upon. As a larger construct, depth of use describes the degree to which research meaningfully and systematically informs decisions about education practice.

This work recognizes that research-use practices and decision processes are likely to be different between the classroom and school levels, and that not all respondents would be involved in or familiar with organizational decisions. Therefore, data was collected on two types of decisions, (1) organizational decisions and (2) personal-practice or individual decisions. We define organizational decisions as decisions about policy and practice made at the school or district level that affect a significant number of teachers and/or students. We define individual or decisions for individual respondents as a decision made about the respondent's own practice or within one's own classroom. For example, using a new instructional strategy, changing classroom organization, or implementing something learned from professional development training.

To capture these distinct processes, we began this section of the survey by asking participants to describe an organizational decision made by their school in the last year and then to rate their familiarity with the decision-making process. If participants could not name an organizational decision or if they had little to no familiarity with the decision, they were redirected to a parallel set of items in the survey asking them to describe a decision that they had made themselves in their personal practice. Both paths led to a nearly identical set of questions about the dimensions of depth that are anchored in either the organizational or personal-practice decision.

Evidence. Responses to items related to evidence reveal the influence of research in decisionmaking. In both organizational and individual decisions, a wide range of evidence is reported to be used, with particular emphasis on local and experiential knowledge. Respondents across decision types indicated the heavy influence of informal data collected by school and district staff, personal professional experience, and other practitioners' experiences/advice. Formal research, both external and district research, were reported among the least influential types of evidence for organizational and individual decisions and were almost always used alongside local data. When external research was used, practitioners reported using impact evaluations in decision-making, but rarely cited criteria for quality, such as random assignment of participants or the What Works Clearinghouse criteria, hallmarks of the "what works" agenda that underlies evidence use policies. Further, educators are more concerned with evidence that comes from a context that resembles their own.

Findings highlight the integrative nature of evidence use in educational decision-making and the importance of local evidence. Policy regarding evidence use emphasizes particular forms of research—external research and evaluation as well as local data—but the reality is that educators rely on a diverse body of evidence when making decisions. Furthermore, the value of local data, coupled with educators' use of studies that are conducted in contexts similar to their own, implies that local relevance is a key characteristic of evidence use in schools. Findings therefore suggest that evidence that is useful for practice cannot be reduced to debates about the relative importance of internal and external validity. "Evidence" can be construed to have different meanings in different contexts, and what educational researchers perceive to be high-quality

evidence may not be what practitioners believe to be most applicable. Rather, our findings echo calls for more nuanced conceptualizations about relevance (e.g., Gutiérrez & Penuel, 2014).

Search: Responses about search strategies in schools help us to understand school investment in evidence use in the context of relatively short decision-making processes. Decisions—both organizational and individual ones—are made relatively quickly so information that can be most easily searched and found may be more likely to be influential. Not surprisingly, in both organizational and individual decisions, information searches focus on what is available through school- or district-based colleagues or from professional development materials. Decision makers more likely select from trusted information sources and sources familiar with what is and is not likely to be adopted in a local context. Additionally, practitioners reported using search engines or social media to find evidence (especially for individual decisions); both are quick and easy to access under time or financial constraints. Accessing research directly may be a time-intensive process, and educators do not typically spend a prolonged period gathering information to inform a decision. These findings underscore the importance of identifying influential sources and understanding how they mediate practitioners' access to research evidence. Furthermore, it may be useful to leverage these individuals in planning to mobilize research knowledge.

Interpretation: Across individual and organizational decisions, practitioners make sense of evidence in multiple ways. These findings for both types of decisions highlight a focus on relevance. Respondents engaged most frequently in two interpretive activities that helped to determine the applicability of the evidence being considered: they assessed (a) whether the evidence is appropriate for the local context and (b) whether the evidence has clear connections to current practice. Practitioners' focus on relevance in this study is consistent with findings from earlier research suggesting that being perceived as not relevant or applicable may be a barrier to educators' use research (Coburn & Talbert, 2006; Farley-Ripple et al., 2020; Maynard, 2006) and that developing skills for applying research to the local context may be important (Yoshizawa, 2020).

Participation: Findings provide some important insights into how individuals and groups are involved in school-level decision-making processes and highlight differential engagement in gathering and using evidence among key stakeholders. As Tseng et al. (2017) wrote, a more democratic evidence system would engage a broader set of stakeholders in the production of research and in deliberations over the findings and their implications for educational improvement. A second implication is the need to better understand the role of external expertise (e.g., outside the school or the district) in improvement decisions. In the case of research and evaluation staff, organizational structures and roles may create barriers to participating in the type of work for which they may be most suited (Shewchuk & Farley-Ripple, 2021). Further, results suggest that other sources of expertise have limited roles as well, perhaps limiting the ability for practitioners to

apply ideas that might be adopted from other educational settings—what others refer to as absorptive capacity (e.g., Farrell & Coburn, 2017).

Stages of Decision-Making: Most often practitioners reported that evidence informs all stages of decision-making. Findings also show that evidence is often used in both finding and selecting strategies to address a problem, reflecting that when evidence is used in decision-making processes, educators are looking for what works and what can be implemented. These findings are linked to broader conceptualizations of evidence use. For example, policy expectations for instrumental use of research—use of research to inform specific decisions—are reflected in practitioners' reports of use for selecting strategies. Similarly, conceptual use of research—shaping understanding of an educational issue—may be reflected in the identifying a problem. Thus, these data suggest the value of evidence beyond the normative expectation for use in, for example, adoption decisions. However, these data capture use of multiple forms of evidence, which include local data and external research, but do not distinguish among their influence at different stages of decision-making, which is an important direction for future research.

Characterizing Schools Depth of Use: Analysis of key items capturing the dimensions of our Depth of Use (DOU) framework productively helps to describe schools' overarching practices related to research use. Schools vary widely across most dimensions but score lowest on the influence of external research use and search metrics. Integrating these scores helps to differentiate schools across dimensions and provides insight into the distribution of research use practice across schools. Therefore, the *SEE-S* DOU survey and scales may hold promise as a tool used by researchers, district leaders, and state agencies for measuring schools' engagement with research, and for monitoring improvement in use of research as efforts to build this capacity are undertaken. However, the results presented here are merely descriptive, and the observed variation in DOU scores and subscale scores at the school level begs for additional analyses in order to explore in what contexts and under what conditions schools are more likely to engage in deeper use of research.

Other Uses of Research: Responses to items about conceptual, strategic, and imposed uses of research demonstrate that an emphasis on instrumental uses of research—which we have described earlier in exploring depth of use and which are emphasized in evidence use policy—paints only a partial picture of the influence of research on education. These findings highlight the relative importance of conceptual uses of research, which can inform professional growth and collective understanding of improvement work—and the somewhat limited uses associated with external accountability mechanisms.

2. What Are Practitioner Perspectives on the Gap Between Research and Practice?

Our conceptual framework focuses on five hypothesized dimensions of the gap between research and practice: differences in research products; the qualities of research; the extent to which research addresses problems of practice; structures, processes, and incentives that guide decisionmaking; and the nature of the relationship between researchers and practitioners (here, educators). This section explores educators' perspectives on these dimensions. We note that whereas analyses addressing our first research question about research-use practices included analyses about individual decisions and organizational decisions, analyses in response to this set of research questions are conducted at the individual rather than school level because we found that variation in responses to items in this section was not attributable to school context.

Products Practitioners Use: These data, along with other findings presented in this report, establish a disconnect between the ways in which research is often packaged and communicated and the products with which practitioners engage as part of their practice. The fact that educators prefer products that fall in the professional category is not surprising—these are often resources created specifically for educators and are designed to meet their needs. The nearly unanimous preference for resources that are easy to access and understand and that are both concise and actionable highlights differences between professional and research resources. Further, the emphasis on easy and free access to products highlights that products behind paywalls may see barriers to use.

At the same time, we also note that educators do engage with traditional research products. Yet the features that are sometimes advocated for when communicating research—such as modeling strategies, graphic representations of findings, or verbal communication through presentations or conferences—are not universally important. Rather, our data suggest that educators likely fall into multiple profiles, reflecting different preferences and needs for how research information is packaged and shared, consistent with Neal et al.'s (2018) typology of educator perceptions of research. Overall, our findings about educators' use of products and their characteristics echo existing studies that have called for systematic attention to the translation of research and development of research-informed resources, and improving their accessibility, as a lever for strengthening uptake of research in practice (Cordingley, 2008; Penuel et al., 2018).

Research Quality: Responses regarding the trustworthiness and credibility of research indicate that educators recognize the value of various aspects of research design, and that they view them as signals of quality—for example, peer-review. At the same time, this recognition is not entirely consistent with reported behavior about evidence use in other sections of this report, perhaps signaling a knowing–doing gap. Furthermore, given that tools such as the What Works Clearinghouse were created with the intention of increasing educators' research use by providing a



source of rigorous, vetted research evidence, the low importance given to meeting clearinghouse standards raises questions of awareness and understanding of this resource.

Notably, findings indicate educators assess a study's trustworthiness by whether they or their colleagues know the researcher or research firm that conducted the study. This is consistent with other studies that emphasize the role of relationships in supporting research use. Coupled with the relatively flat distribution of responses regarding trustworthiness, these data may indicate that the most important criteria for evaluating research trustworthiness were not captured in our survey.

Research Addressing Problems of Practice: Practitioners are generally positive about the actionability and relevance of research, a finding which is promising. These data counter the narrative that research is frequently irrelevant (Dagenais et al., 2012; Farley-Ripple et al., 2020; Maynard, 2006) but also direct attention to specific issues that can be the foci of systematic improvement. For example, data suggest that perceptions of research could be improved if issues related to timeliness and feasibility of implementation were addressed. These suggestions, of course, are not simple ones to take up systematically in the research enterprise but could be targeted through mechanisms such as funding or publishing/reporting requirements.

Structures, Processes, and Incentives: Specialized research-use supports, such as research offices and subscriptions to research journals, are not often available to educators. While specialized supports have been proposed to support school/district research use (Bickel & Cooley, 1985; Coburn, 2010; Farley-Ripple, 2012; Honig, 2003; Hubbard, 2010), they may represent additional requirements and costs for schools and districts. In contrast, findings suggest that commonly reported structures (i.e., PLCs, instructional support teams, and instructional coaches) play an important supporting role in research use, at least for some schools. We note that these structures are not specific to research use; that is, these structures exist in schools to achieve many purposes, including supporting professional learning, decision-making, and implementation of new policies or practices; they therefore may or may not be leveraged to support research use. Some schools in our sample clearly leverage these structures for research use, whereas others do not. However, their widespread presence in schools—and the space and time they afford—is a potential opportunity for strengthening research use. That is, their presence provides an opportunity for schools/districts to adapt pre-existing structures so that the use of research is embedded into everyday routines. Therefore, these common structures may hold untapped potential to support engagement with research in ways that impact student learning.

Interaction Between Communities: Practitioners reported limited prior experiences engaging in research-related activities, though this varies by role and education in expected ways; educators with formal leadership roles or specialized training are more likely to have had those experiences. Research has found that prior participation in research projects is associated with educators' self-reported use of research-based information (e.g., Cousins & Walker, 2000; Lysenko et al., 2015).

Role- and degree-related differences may point to levers for building school capacity for research. Those with specific roles or educational backgrounds can be tapped for leadership teams, coaching roles, professional learning, or informal supports that can help their colleagues to access and interpret research, leveraging their greater levels of knowledge about research. Additionally, this finding suggests that professional educational programs can be spaces where research and practice come together, an opportunity often called for in policy and research. Furthermore, data on the (lack of) interaction between researchers and practitioners suggest missed opportunities as well as the challenge of scaling relationships between research and practice. Prior research emphasizes the importance of relationships in supporting research use, which means that initiatives that bring researchers and practitioners into conversation with one another can strengthen the role of research in practice.

3. Are Practitioners Well Prepared to Use Research?

Covered in this section are the *SEE–S* survey items that measure individual educators' confidence in critically interpreting research and their research-related training and experiences. As suggested in our conceptual framework (Farley-Ripple et al., 2018), the results presented here suggest that educators' training, experiences, and ability to critique research may play a crucial role in enhancing or limiting depth of research use by schools and individual educators.

Confidence Critically Interpreting Research: Broadly speaking, practitioners are not confident in critically interpreting research, and it may be unrealistic to expect practitioners to distinguish well-designed research studies from others that are less likely to produce results that practitioners can have confidence in. This, compounded by the difficulty of deciding how to implement the results of a research study, can be a severe impediment to using educational research in one's practice. However, findings reveal that individuals who indicate high levels of confidence are present in nearly all schools and can serve as important school-wide resources by serving as brokers or capacity builders, scaffolding colleagues' use of research.

Research-Related Training: Practitioners are not typically engaging in experiences that expose them to research or prepare them to use research effectively, and most have minimal training on research methods or statistics (e.g., only about half have ever taken a statistics or research methods course). Importantly, a substantial portion of practitioners indicated that they had not had any experience or any coursework related to research. These findings explain educators' lack of confidence in critically interpreting research and suggest that more intentional, formal efforts to prepare educators for research use need to be implemented systemwide in order to meet policy expectation for increased use of evidence in decision-making.

4. Where Do Educators Turn for Research-Based Information? In our conceptual framework, practitioners' networks are an important mechanism for linking to research and to the research community. To capture networks in our survey, educators were asked about the individuals, organizations, and media sources to which they turn when accessing research-based information; they were also asked to indicate what category best describes that resource. Educators generated more than 21,000 nominations, with more than 4,000 unique organizations and media sources. We aggregated the various categories to help us understand the extent to which educators 1) access research directly through members and institutions in the research community (i.e., university and independent research centers, peer-reviewed journals, research databases, professors); 2) access research through external intermediaries positioned outside the formal education system but also outside the research system; or 3) access research through members of the local school or district community.

Our findings suggest that educators rely on thousands of intermediaries to obtain research-based information. The volume of individuals and organizations serving as brokers poses a significant challenge for mobilizing research and creating systemic change. Furthermore, individuals and schools vary in their networks, creating inequities in capacity at both levels of practice. However, these data confirm the critical importance of intermediary organizations in linking research and practice. Despite the challenges that such a large and informal system poses, there is an enormous sector of individuals and organizations that are positioned to help address persistent gaps between communities.

Networks data also highlight the importance of school-based brokers and influential external brokers. Educator networks reflect school-based roles and responsibilities. For example, those with leadership roles, decision-making responsibilities, and serving as supports for teachers and students are more likely to access research directly but are also more likely to serve as research resources to colleagues. This means that strategically intervening to support individuals in these roles may enhance school capacity. Further, professional associations and districts are influential organizations, and that they may be important partners for researchers seeking to mobilize their work and reliable resources to which to direct educators.

5. To What Degree Do Educators Engage in Research Brokerage Activities?

In our conceptual framework, we link networks to the idea of brokerage—that is, networks help us identify who educators turn to when finding information and brokerage helps us identify how that information is shared. In the prior section, we learned that other school and district staff are key resources that educators turn to. Therefore, a natural extension of our inquiry into the connections between research and practice is a need to better understand the brokerage activities that educators engage in. To better understand the activities undertaken by those serving as sources of research for others, we asked survey respondents about their responsibilities for sharing research,

the kinds of information they share, and the activities they engage in as brokers within their school or district.

We find that educators frequently serve as brokers within their schools and play important internal roles sharing and translating research into more useful and usable forms of information. Few have significant, explicit responsibilities to share research—creating an informal system for mobilizing research in practice. While building leaders most often acknowledged this responsibility, not all felt that was their role, despite their colleagues' reliance on them. This presents an opportunity to support and develop leaders in new ways. However, many different educators are engaged in this work, which helps maximize those external ties we noted earlier and suggests that it is not *only* education leaders who are influential in school networks. Based on this finding we echo earlier calls we have made to formalize supports for school-based brokers through recognition, training, and staffing decisions (Farley-Ripple & Grajeda, 2019).

School-based brokers also engage in what we might describe as local work—technical assistance and support, evaluating local needs, and delivering formal learning. These are often the most challenging for researcher or intermediary brokers to enact because of resources and scale, which suggests that there is some natural distribution of the work of brokerage happening. An implication of this finding is that other knowledge mobilization activities—translating, developing programs or products, disseminating, developing, and publishing—may need to be taken up by other actors in the system. Brokerage in schools is therefore an important dimension of research use capacity, yet we found that such capacity is not evenly distributed across schools, pointing again to inequities across our education for research-informed improvement.

Lessons Learned about Research Use in Schools

This report summarizes the results of a large-scale survey study that investigated the extent to which U.S.-based schools use research evidence to inform their practice. The final section below details the overarching conclusions that integrate findings from across the full study.

External research, local research, and data use are linked.

One valuable finding pertains to the importance of local research and local data analyses to organizational decisions. When practitioners do use external research, it is often in conjunction with some form of local research or local data analysis. Further, formal and informal data analysis were among the most influential sources of evidence in both organizational and individual decisions. This signals that educators value empirical evidence in making decisions, leading us to ask, *how might we build better connections between using external research and state, district, and school priorities and routines for using internal data?* The existing relationships between research and data—which are borne out in our mixed methods case studies as well (Farley-Ripple et al., 2022)— seem like a promising foundation upon which we can build increased capacity and demand for educational research.

Research must be relevant to practice.

The notion of relevance to the local context emerges throughout our findings. We see local data and other forms of local knowledge as highly influential forms of evidence. We also find educators making sense of research in the context of local practice as part of interpretation. Further, search strategies and networks for accessing research are dominated by local sources. Together, these results suggest that "relevance to practice" (Gutiérrez & Penuel, 2014) is, indeed, a critically important consideration in the use of evidence at the school level. Accordingly, we echo Gutiérrez and Penuel (2014) in their call to apply this criterion to the research enterprise, including through funding research and how research is conducted and communicated. But our findings also suggest that relevance to practice cannot necessarily be generalized; rather, relevance is understood in terms of meeting *local* needs, whether meeting the needs of student populations or fitting with local goals and resources. Approaches that support the generation of local evidence (e.g., research–practice partnerships) or that help educators more easily evaluate the match between findings and local context may be promising directions for future work.

Research-use practices and conditions vary widely.

One of our key findings is that research-use practices and overall depth of use vary across schools. Because one of the most important factors in the uptake of research in policy and practice is organizational conditions (Coburn & Talbert, 2006; Cousins & Leithwood, 1993; Penuel et al., 2017), the widely varying conditions related to structures, processes, incentives, capacity to use research, and networks for and brokerage of research likely contribute to differences in research use. While this report does not explore the sources of that variability, this line of inquiry is likely a productive next step in developing and targeting supports to create more equitable capacity. Further, this finding is perhaps not surprising, as schools vary widely in nearly all aspects of the educational process. However, this does suggest that evidence-use policy has not resulted in systematic changes, nor does it appear to have resulted in systematic implementation. Because evidence-use policy is enacted in diverse ways, additional information and guidance about different models or approaches may be needed to achieve system-wide evidence-use goals. Further, it may be important to expand evidence-use policies to more effectively promote conditions for research use, including mechanisms for getting research into the hands of educators, generating local evidence, and building knowledge and buy-in for the use of research.

Leadership plays a critical role in research use.

School leaders—principals in particular—have a significant role in the implementation of evidenceuse policy. School leaders are mediators of policy in schools (e.g., Coburn, 2005; Ganon-Shilon & Chen, 2019; Shaked & Schechter, 2017; Spillane et al., 2002): they must make sense of the policy for their context and support sensemaking and implementation among their staff. Further, leadership frameworks include roles for setting the vision for improvement, directly building staff capacity, and shaping organizational culture. Our survey data do not address leadership directly yet suggest specific opportunities for leadership to strengthen research use. Data demonstrate that administrators play a major role in making organizational decisions, by sharing research evidence and because of their prior experience with research. In this way, leaders are positioned to model research use in their own practice. Further, they are often responsible for the availability and use of organizational structures, processes, and incentives and for whether and how others participate in decision-making (e.g., distributed leadership)—areas where we found significant variability across schools. For these reasons, efforts to clarify effective leadership for research use and to prepare leaders for these roles may be an important lever in improving schools' capacity for and engagement in research use.

The knowing-doing gap is complex.

Findings from our study suggest a potential disconnect between what practitioners report (or know) to be important for establishing the credibility or trustworthiness of a piece of evidence, on the one hand, and the evidence and sources of evidence that they actually use, on the other. For example, responses indicate that practitioners value peer-reviewed status as the most important factor influencing trustworthiness; yet peer-reviewed journal articles are among the least used types of evidence according to the survey item inquiring about the influence of different forms of evidence on decision-making. Similarly, most practitioners reported valuing dimensions of credibility that were not reflected in the evidence that influenced their decision-making.

These findings highlight two issues. First, they work against common narratives that educators are unaware of or indifferent to common indicators of research quality—a narrative that sustains a deficit view of educator capacity. Second, they raise important questions about the conditions to which the knowing–doing gap is attributable. Findings about practitioners' capacity to critically interpret research as well as relatively limited training experiences may provide a partial explanation and suggest professional learning may help to close the gap. However, there are also likely barriers that prevent engagement with high quality sources of evidence, such as constraints on time and effort or availability of timely and relevant research—both of which are evidenced in this study. Further, there are also simply other, even more important considerations, in decision-making that influence whether and what evidence is used. Our data suggest all of these may be at play, but a much more nuanced examination is needed.

Knowledge brokers and intermediaries are underutilized resources.

Findings from our survey suggest that school and district staff may act as knowledge brokers who facilitate links between evidence and practice. Importantly, knowledge brokers exist in all schools and are an important entry point for external research. They play important internal roles sharing and transforming research into more usable forms of knowledge and building their colleagues' and schools' capacity to use research. However, this work tends to be informal and unrecognized. To better leverage these individuals in improving schools' use of research, we echo our prior call to

more formally and explicitly recognize the work of knowledge brokers, as well as develop and support individuals to take on these roles.

Furthermore, we note that the sparse interaction between research and practice documented here also points to the potential for intermediaries to address the problem of scale: there are more than 130,000 schools in the United States, and the feasibility of developing direct relationships with researchers is limited. In contrast, intermediary organizations have great reach and influence (as noted in our network data) and therefore have strong potential to serve as boundary spanners between research and practice.

While a growing number of studies are focusing on the role and activities of these organizations (e.g., Cooper, 2014; Malin, 2021), our study is one of the first to examine the kinds of intermediary organizations educators rely on to obtain research-based information. Our findings suggest that educators rely on thousands of intermediaries to obtain research-based information, and this system of intermediaries appears largely informal and uncoordinated. However, as we have noted in other aspects of our work (Shewchuk & Farley-Ripple, 2022), there is a need to better understand the work of intermediaries as knowledge brokers and to formalize and leverage their work in linking research and practice. There is also a need for more immediately pragmatic information that can help educators understand what organizations exist, what their evidence-use commitments are, and how to navigate the plethora of resources. Similarly, researchers need more information about how to engage the intermediaries themselves would benefit from tools that would foster strategic decision-making about their role and work, allow for coordination and collaboration, and result in more effective use of limited resources.

Relationships matter.

Relationships are most directly emphasized in networks, where most resources educators turn to were other individuals—especially those in their school. Relationships are also important in the context of brokerage—whether relying on or serving as a support for colleagues. Both play out in responses to search, where the evidence taken up in decisions comes from school and district leaders. In contrast, the *absence* of relationships between researchers and practitioners may perpetuate barriers to research use. Still other findings suggest the importance of relationships in less direct ways. Further, participation in decision-making varies across schools, with some key stakeholders rarely engaging with evidence or in decision processes. A more democratic or distributed approach to decision-making relies again on positive relationships among stakeholders. These dimensions of research use highlight the social and relational processes underlying research-use practices in schools and pushes against notions of evidence use as a technical or administrative task that is simply implemented. As a result, it is important that the evidence-use policies and initiatives that seek to improve the role of research attend to building relational capacity within and across the research and practice communities.



Our findings are unique in that they shed light on the complexity of the practice and conditions surrounding research use in schools *at scale*. The findings offer a system-wide view that challenges narratives suggesting research does not influence practice and calls into question deficit perspectives of educators' engagement with research. They demonstrate widespread use of evidence privileged by accountability policy—research and data—and the presence in many schools and among many practitioners of supportive conditions, including beliefs about the value of research, structures that may enable engagement with research, and the presence of knowledge brokers and educators with research knowledge across schools. They also highlight variability in practices and conditions, as well as unequal distribution of capacity for research use, which, unchecked, will perpetuate the gap between research and practice and serve as a barrier to system-wide improvement. Our findings point to potential levers as well as opportunities for improvement, among them improving search activities, democratizing evidence use in decision-making, preparing educators to lead research use, and building stronger connections among members of the research and practice communities.

References

- Bickel, W. E., & Cooley, W. W. (1985). Decision-oriented educational research in school districts: The role of dissemination processes. *Studies in Educational Evaluation*, *11*(2), 183–203.
- Coburn, C. E. (2005). Shaping teacher sensemaking: school leaders and the enactment of reading policy. *Educational Policy*, *19*(3), 476–509.
- Coburn, C. E. (2010). Partnership for district reform: The challenges of evidence use in a major urban district. In C. E. Coburn & M. K. Stein (Eds.), *Research and practice in education: Building alliances, bridging the divide* (pp. 167–182). Rowman & Littlefield.
- Coburn, C. E., & Talbert, J. E. (2006). Conceptions of evidence use in school districts: Mapping the terrain. *American Journal of Education*, *112*(4), 469–495. <u>https://doi.org/10.1086/505056</u>
- Cooper, A. (2014). Knowledge mobilisation in education across Canada: A cross-case analysis of 44 research brokering organisations. *Evidence & Policy: A Journal of Research, Debate and Practice*, *10*(1), 29–59.
- Cordingley, P. (2008). Research and evidence-informed practice: Focusing on practice and practitioners. *Cambridge Journal of Education*, *38*(1), 37–52.
- Cousins, J. B., & Leithwood, K. A. (1993). Enhancing knowledge utilization as a strategy for school improvement. *Knowledge*, *14*(3), 305–333. <u>https://doi.org/10.1177/107554709301400303</u>
- Cousins, J. B., & Walker, C. (2000). Predictors of educators' valuing of systematic inquiry in schools. *The Canadian Journal of Program Evaluation*, Special Edition, 25–52.
- Dagenais, C., Lysenko, L., Abrami, P. C., Bernard, R. M., Ramde, J., & Janosz, M. (2012). Use of research-based information by school practitioners and determinants of use: A review of empirical research. *Evidence & Policy: A Journal of Research, Debate and Practice, 8*(3), 285– 309.
- Farley-Ripple, E. N. (2012). Research use in school district central office decision making: A case study. Educational Management Administration & Leadership, 40(6), 786–806. <u>https://doi.org/10.1177/1741143212456912</u>
- Farley-Ripple, E. N., & Grajeda, S. (2019). Avenues of influence: An exploration of school-based practitioners as knowledge brokers and mobilizers. In J. Malin & C. Brown (Eds.). *The role of knowledge brokers in education: Connecting the dots between research and practice* (pp. 65– 90). Routledge.

- Farley-Ripple, E., May, H., Karpyn, A., Tilley, K., & McDonough, K. (2018). Rethinking connections between research and practice in education: A conceptual framework. *Educational Researcher*, 47(4), 235-245.
- Farley-Ripple, E. N., Tilley, K., Mead, H., Van Horne, S., & Agboh, D. (2022). *How is evidence use enacted in schools? A mixed methods multiple case study of "deep use" schools?* Center for Research Use in Education, University of Delaware.
- Farley-Ripple, E., Tilley, K., Shewchuk, S., & Sheridan, S. (2020). Commentary—Reframing relevance: Strategies for closing the gap. In A. M. Urick, D. E. DeMatthews, & T. G. Ford (Eds.), *Maximizing the policy-relevance of research for school improvement* (pp. 387–402). Information Age Publishing.
- Farrell, C. C., & Coburn, C. E. (2017). Absorptive capacity: A conceptual framework for understanding district central office learning. *Journal of Educational Change*, 18(2), 135–159. <u>https://doi.org/10.1007/s10833-016-9291-7</u>
- Ganon-Shilon, S., & Chen, S. (2019). No school principal is an island: from individual to school sense-making processes in reform implementation. *Management in Education*, *33*(2), 77–85.
- Gutiérrez, K. D., & Penuel, W. R. (2014). Relevance to practice as a criterion for rigor. *Educational researcher*, *43*(1), 19–23.
- Honig, M. I. (2003). Building policy from practice: District central office administrators' roles and capacity for implementing collaborative education policy. *Educational Administration Quarterly*, 39(3), 292–338. <u>https://doi.org/10.1177/0013161X03253414</u>
- Hubbard, L. (2010). Research to practice: The case of Boston Public Schools, Education Matters and the Boston Plan for Excellence. In C. E. Coburn & M. K. Stein (Eds.), *Research and practice in education: Building alliances, bridging the divide* (pp. 55–72). Rowman & Littlefield.
- Lysenko, L. V., Abrami, P. C., Bernard, R. M., & Dagenais, C. (2015). Research use in education: An online survey of school practitioners. *Brock Education: A Journal of Educational Research and Practice*, *25*(1), 35–54.
- Malin, J. R. (2021). How educational intermediaries connect research and practice. *Phi Delta Kappan*, *103*(4), 37–43.
- Maynard, R. A. (2006). Presidential address: Evidence-based decision making: What will it take for the decision makers to care? *Journal of Policy Analysis and Management*, *25*(2), 249–265.

- Neal, J. W., Neal, Z. P., Lawlor, J. A., Mills, K. J., & McAlindon, K. (2018). What makes research useful for public school educators? *Administration and Policy in Mental Health and Mental Health Services Research*, 45(3), 432–446. <u>https://link.springer.com/article/10.1007/s10488-017-0834-x</u>
- Penuel, W. R., Briggs, D. C., Davidson, K. L., Herlihy, C., Sherer, D., Hill, H. C., Farrell, C., & Allen, A.-R. (2017). How school and district leaders access, perceive, and use research. *AERA Open*, *3*(2). https://doi.org/10.1177/2332858417705370
- Penuel, W. R., Farrell, C. C., Allen, A. R., Toyama, Y., & Coburn, C. E. (2018). What research district leaders find useful. *Educational Policy*, *32*(4), 540–568. <u>https://doi.org/10.1177/0895904816673580</u>
- Shaked, H., & Schechter, C. (2017). *Systems thinking for school leaders: holistic leadership for excellence in education*. Springer. https://doi.org/10.1007/978-3-319-53571-5
- Shewchuk, S., & Farley-Ripple, E.N. (2021). *Findings from the District Research Leader Knowledge Mobilization Survey* (RB21-002.1). Newark, DE: Center for Research in Education and Social Policy.
- Shewchuk, S., & Farley-Ripple, E. N. (2022). Understanding Brokerage in Education: Backward Tracking from Practice to Research. Center for Research Use in Education, University of Delaware.<u>http://www.research4schools.org/understanding-brokerage-in-educationbackward-tracking-from-practice-to-research/</u>
- Spillane, J., Reiser, B., & Reimer, T. (2002). Policy Implementation and Cognition: Reframing and Refocusing Implementation Research. *Review of Educational Research*. 72. 387-431. 10.3102/00346543072003387.
- Tseng, V., Fleischman, S., & Quintero, E. (2017). Democratizing evidence in education. In *Connecting* research and practice for educational improvement (pp. 3-16). Routledge.
- Yoshizawa, L. (2020). *Research use under pressure: State and district implementation of the ESSA evidence requirements* (Publication No. 28220526) [Doctoral dissertation, Harvard University]. ProQuest. <u>https://www.proquest.com/docview/2457700532</u>