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Evidence-Based Decision Making in School District Central Offices

Toward a Policy and Research Agenda

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District central office administrators increasingly face policy demands to use “evidence” in their decision making. These demands up the ante on education policy researchers and policy makers to better understand what evidence use in district central offices entails and the conditions that may support it. To that end, the authors conducted a comprehensive review of research literature on evidence use in district central offices, finding that the process of evidence use is complex, spanning multiple subactivities and requiring administrators to make sense of evidence and its implications for central office operations. These activities have significant political dimensions and involve the use of “local knowledge” as a key evidence source. Evidence use is shaped by features of the evidence itself and various organizational and institutional factors. Policy shapes evidence use, but other factors mediate its impact. The authors conclude with implications for future policy and research on central office evidence-based decision making.

Keywords: *policy implementation; school district; central office; evidence-based decision making*

Contemporary federal and state policies increasingly demand that school district central offices use “evidence”—variously defined—to ground their educational improvement efforts. In the 1980s and 1990s, for example, the standards-based reform movement initiated a call for school district central offices to assess student performance against federal, state, and local standards and use findings to guide their decisions about how to expand students’ opportunities to learn. Currently, No Child Left Behind (NCLB) requires that all programs funded under this initiative stem from “evidence” and “scientifically based research” and that they otherwise be “data-driven” (NCLB Act, 2002). These requirements affect a wide range of federal, state, and district

programs including Title I, the largest single source of federal funding for schoolwide and targeted assistance activities at low-performing, low-income schools, as well as programs related to information management, principal training, and the use of technology, among others. District central offices also must evaluate programs and collect, analyze, and use data on student performance (also called Adequate Yearly Progress) to ground a variety of decisions (U.S. Department of Education, 2002b). Although the use of various forms of evidence at the school-level has become a well-established arena of policy research, the use of evidence by school district central office administrators has received far less attention. The sheer scope of contemporary policy demands on central office administrators to use evidence begs urgent questions about what evidence use in central office involves and the policy and other conditions that might enable these practices.

This article begins to address these questions by bringing together, synthesizing, and reviewing almost thirty years of research related to school district central office administrators' use of evidence including studies of central office decision making and central office participation in policy implementation. We begin by briefly elaborating the policy demands on school district central offices to use various forms of evidence. These demands stretch across multiple central office decisions and relate to the use of social science research findings and student and school performance data among other sources of information. We find that district central office administrators have long used these forms of evidence in their decision making. However, they also have relied on practitioner or local knowledge and such forms of information—generally not acknowledged in federal policy designs—seem essential to central office administrators' use of the evidence typically named in policy designs. The process of evidence use is markedly social, complex, and political. The process involves discrete subactivities that may be obscured by the singular term "evidence use." These subactivities and the evidence use process overall are shaped by a range of factors both inside and outside the district. We suggest that federal and state policies that do not acknowledge these complexities and political dimensions may provide inadequate signals and supports for district central office evidence use. We conclude by drawing on our review

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to frame an agenda for future policy making and policy research related to district central office evidence use.

Policy Context

Federal policies currently place unprecedented demands on school district central offices to use a range of sources of “evidence,” “data,” and “research” to ground a host of decisions related to how central offices operate and how they work with schools. Policy texts tend not to elaborate the process by which evidence should be used but rather emphasize broad forms of evidence that should be used related to specific types of decisions about school improvement. The forms of evidence are generally formal or those that take written form and that are available as part of report documents or data bases.

For one, policies require that school district central offices use *social science research findings* such as new insights into cognitive development and language acquisition to guide their choices of curriculum and various supports for classroom instruction. The Reading First and Early Reading First programs (Title I, Part B, Subparts 1 and 2 of NCLB), for example, require that school districts use funds for “selecting and implementing a learning system or program of reading instruction based on scientifically based research” (NCLB, Title I, Part B, Subpart 1, SEC 1202, d, 4, A). These programs call on district central offices to provide professional development that includes “information on instructional materials, programs, strategies, and approaches based on scientifically based reading research” (NCLB, Title I, Part B, Subpart 1, SEC 1202, d, 3, A, ii, D). Likewise, the Even Start Literacy Program, a long-standing source of federal support for children and adults with reading difficulties, now calls for the use of instructional programs based on “scientifically based reading research” (U.S. Department of Education, 2002a). In these and other examples, the social science research to be used may be found in studies themselves or embedded in specific “research-based” programs. As an example of the latter, NCLB’s Comprehensive School Reform program asks district central offices to choose programs that research links to students’ improved academic achievement (NCLB, Title I, Part F, SEC 1606, a, II, A).

Similarly, federal policy instructs school district central offices to “rigorously monitor the implementation and effectiveness of all the schools’ improvement activities and make changes as needed.” For example, for the “Local-Flex” demonstration (NCLB, Title VI, Part A, Subpart 3(b)), districts “initiate how they will monitor implementation of their Local-Flex plans in order to ensure effectiveness” (U.S. Department of Education, 2002a, p. 153). These and

related provisions suggest that central offices also should use *formative and summative program evaluation data* in their decision making (U.S. Department of Education, 2006, p. 37).

District central offices also must generate and use *student and school performance data* to drive their decisions. For example, federal provisions under Title I of NCLB require schools and districts to track student performance and penalize schools for failure to help all students improve. Such data must now typically “be disaggregated by race and ethnicity for schools receiving program funds” (U.S. Department of Education, 2002a, p. 33). School districts must also draw on such data to “analyze the causes of why individual students are not learning, identify barriers to learning that affect students, and seek solutions to correct the problem” (U.S. Department of Education, 2006, p. 30). In particular, district central offices “should use AYP [Adequate Yearly Progress] to target the unique needs of a school’s students to improve its ability to teach all children and achieve annual academic performance targets” (p. 30).

Some funding streams also require school district central offices to collect and use *school improvement plans* as data to ground their decisions about professional development, textbooks, and other district matters. For example, the U.S. Department of Education’s nonregulatory Title I guidance clarifies that school districts should build their school assistance plans based on schools’ individual improvement plans: “It is crucial that the LEA [local educational agency or school district] align its assistance with the school improvement plan being developed by the school” (U.S. Department of Education, 2006, p. 15). This guidance specifies that although “LEAs may be tempted to consider formulating a single assistance plan for all its schools To the extent feasible, the LEA should avoid taking this approach” and use each school plan to fashion an individual site assistance plan (U.S. Department of Education, 2006, p. 15). Likewise, the Safe and Drug Free Schools and Communities program (Title IV, Part A of NCLB) requires schools to design school safety plans and after-school programs based on a “community assessment” and for district central offices to direct resources to schools for the implementation of those evidence-based plans.

The U.S. Department of Education (including some of its contractors) and other policy makers have offered various arguments in support of this class of policies. They argue that student achievement will not increase unless district central office administrators and other educational actors ground their decisions in evidence—be it data, research, or other forms of information—that particular approaches have a proven track record of raising students’ achievement. In fact, the prevalence of the term *evidence-based decision making* as an umbrella term covering data-driven and research-based decision

making suggests that whatever information is used to ground decisions should be evidence, meaning, literally, something that is “conspicuous,” “apparent,” or “obvious.”²¹ These connotations of the term *evidence* suggest that the information shines a clear unambiguous light on how to strengthen school performance or at least where districts should direct their efforts. Arguments in favor of what we will simply call evidence-based decision making also posit that grounding educational decisions in evidence can help remove politics and ideology from those decisions and other influences that may threaten efforts to focus central office decision making on teaching and learning (e.g., Coalition for Evidence-Based Policy, 2003; Slavin, 1989; U.S. Department of Education, 2002a).

These demands up the ante on policy makers to understand the extent to which district central office administrators can meet them. Specifically, they raise questions about which forms of evidence, if any, central office administrators currently use in their decision making, the purposes for which they use evidence, the processes by which they use it, and, ultimately, the conditions that may help or hinder evidence use. Answers to these questions can help policy makers and others gauge the extent to which district central offices may be receiving the supports necessary to use evidence in their decision making.

The policy demands also raise questions about the extent to which evidence-based decision making matters to strengthening teaching and learning. Such outcome-based studies will stand on shaky ground unless they stem from a solid conception of what evidence-based decision making central office entails. Without such a conception, researchers will have trouble discerning whether any study outcomes stem from evidence-based decision making or its incomplete or unsupported implementation. However, the research base on district central offices does not yet provide such a conceptualization. Much of the literature on evidence-based decision making focuses on school actors (Coburn & Talbert, 2006; Lachat & Smith, 2005). District central office administrators very occasionally appear in the background of these studies as influences on school-level decision making rather than as the key decision makers themselves. Research on central office decision making stretches across a number of interrelated but distinct bodies of literature that have yet to be synthesized including: (a) studies of decision making, knowledge utilization, and policy making in districts that address central office administrators’ decision making as one substrand of the analysis; (b) research on the superintendency; and (c) a handful of studies specifically about decision making by midlevel and frontline central office administrators. What does this research teach about evidence use by district central office administrators and conditions that shape it?

Starting Assumptions, Method, and Limitations of the Research Base

Based on our initial observations regarding which research is relevant to central office evidence use noted immediately above, we searched the ERIC database using multiple terms to refer to district central offices including “central office,” “district,” and “superintendent.” Given our focus, we limited our search to publications related to district central office staff (e.g., superintendents and midlevel and frontline administrators); thus, we deliberately did not include elected officials such as school board members in this review.

We combined these terms with those related to evidence-based decision making. Selecting terms related to evidence use was not a straightforward process. Policy literature has long been riddled with debates about what counts as evidence and these debates arguably have heightened recently with formal federal policy calls for “research-based” decisions, “data-driven” decision making, and a focus on “what works.” Some researchers use the terms evidence, data, information, and knowledge interchangeably, whereas others argue that the terms have distinct meanings. For example, some define knowledge as data and information that have been infused with meaning (Brown & Duguid, 1991). Others define evidence in a more limited way as forms of information produced by specific types of research designs (e.g., Coalition for Evidence-Based Policy, 2003; Slavin & Fashola, 1998). Still others address central office decision making without reference to any of those terms. Given the nascent stage of research on school district central office administrators and inconsistency in the use of these terms in the research, we chose not to weigh in on these debates about what counts as evidence. Instead, we cast a broad net for studies by searching under all of the following terms: *decision making*, *data based*, *data driven*, *data management*, *knowledge utilization*, *policy making*, *research*, *research based*, *evidence*, *evidence based*, and *working knowledge*. We refer to the form of decision making of interest here as evidence-based for the sake of consistency and in light of the use of this term in some policy circles as an umbrella term; accordingly, we include under this heading decision making that some might distinguish as data-driven or research-based among other terms.

These initial searches, combined with searches for the names of specific researchers known for addressing central office decision making, surfaced 3,689 documents. We reviewed abstracts for all these documents and selected 120 articles and books that seemed related to evidence use in district central offices. From the references lists of these pieces, we identified an additional 22 articles, books, and dissertations. We then searched the program of the

American Educational Research Association conference for 2004 and 2005 for recent empirical research. This search netted 9 additional works and brought the grand total of pieces to review to 151.

On closer examination, we found that a large percentage of these documents were either advocacy pieces (arguing why districts *should* use particular forms of evidence) or how-to pieces (providing instructions for using evidence). Although important, these pieces did not promise to help us understand the empirical base on how district central offices may actually use evidence. After excluding those pieces, we ended up with 52 books, peer-reviewed articles, and academic conference papers that were empirical studies, literature reviews, or relatively rich descriptions of evidence use. These pieces formed the basis for our analysis. Members of the research team read through each article, wrote summaries, and coded the articles to identify the type of evidence considered in the piece, which district central office administrators appeared as the evidence users, the evidence use process, and the factors that seemed to help or hinder use.

Throughout the review process, we scrutinized the quality of the research and uncovered several limitations of the research base. We addressed these limitations in several ways. First, districts research suggests that central offices include various individuals and subunits that face particular challenges and often manage their workplace demands differently (Coburn & Talbert, 2006; Honig, 2003, 2006; Robinson, 1988; Spillane, 1998). However, most studies of central office evidence use that we reviewed did not examine variation in evidence use within central offices. Instead these studies typically referred to the evidence user as “the district” in general, making it difficult to distinguish which central office administrators were using the evidence and whether “district” referred only to the central office or also included schools. We dealt with this limitation by mining study documents—including method sections, footnotes, and appendices—for more precise information on the individual evidence users. In our report of findings, we favored studies that provided this information and we highlighted information about evidence users when possible to help readers evaluate the strength of our claims.

Second, as we note above, the pieces we reviewed did not always differentiate among evidence types or identify which forms of evidence were being used. Arguably using student performance data collected by district central office staff, for example, raises a different set of challenges than choosing a set of school reform designs based on social science research. In our report of findings below, when possible, we note the type of evidence addressed in each study. However, given limitations of the research base we often found it necessary to use the term *evidence use* broadly. The research literature

provided some support for this approach. For example, various studies suggest that “in common usage, practitioners may use terms such as research, evaluation, assessment, or measurement with a great deal of semantic overlap” (Robinson, 1988, p. 54; also see Bickel & Cooley, 1985). Accordingly, referring to evidence generally may be consistent with usage in practice. However, use of this one term still threatens to obscure what may be meaningful distinctions in terms of how different types of evidence are and are not used. We address this limitation in our concluding section when we point to directions for future research.

In sum, we found that the research base on district central offices’ use of evidence is limited but includes a sizeable number of studies on which we could draw empirically substantiated findings. This literature provides important grounding for future research on district central office evidence use as we elaborate in the concluding sections.

The Use of Evidence in District Central Offices: A Research Review

Existing research paints a portrait of central office evidence use as complex and multifaceted, involving multiple forms of data that serve various purposes. In the sections below, we first investigate the forms of evidence that central office administrators use in their decision making. We show that central office administrators long have used a variety of forms of evidence and that these forms of evidence stretch much beyond those typically acknowledged by policy makers. We then explore the purposes for which central office administrators draw on evidence. In this section, we argue that central office administrators may already use evidence in the instrumental ways that some policy makers advocate but also for some political purposes that too seem to serve instructional improvement agendas. Finally, we draw on the research to reveal what actually happens when central office administrators use evidence in their ongoing work. We suggest that evidence use involves multiple sub-process, frequently unfolds in social interaction, and, fundamentally involves interpretation—opportunities for individuals and groups to make meaning of evidence in ways that are profoundly shaped by their preexisting beliefs and practices and day-to-day limits on how they direct their attention.

The Types of Evidence in Use

Most of the research we reviewed that addressed the types of evidence that district central offices use stemmed from single or comparative casestudy

research designs which limited our ability to draw definitive conclusions about how typical or prevalent these patterns may be across the country. However, we view the sizeable number of case studies as suggestive of what may be a broader pattern. Namely, superintendents and other district central office administrators featured in these studies have long used multiple forms of evidence to ground any one decision and they tend to use forms of evidence not specifically mentioned in policy designs—especially what is sometimes referred to as practitioner knowledge or local knowledge such as feedback or other input from teachers and information from parents and students. These forms of evidence seem important to central office support for school improvement efforts.

To elaborate, the research chronicles numerous instances of district central office administrators using multiple forms of evidence, including those identified in contemporary policy designs, as the basis for any one decision. For example, Corcoran and Associates conducted a mixed-methods study of the use of research in instructional improvement in three large urban districts. Their data included nearly 75 interviews with district central office staff over three to five years that were analyzed for patterns in decision making. They found that district central office administrators used social science research and student data, testimony of experts, and evaluation information to make decisions about curricular approaches and to develop lists of district-approved comprehensive school reform approaches (Corcoran, 2003; Corcoran, Fuhrman, & Belcher, 2001). Likewise, Massell and Goertz conducted a major study of evidence-based decision making in the context of standards-based reform implementation involving an examination of 23 school districts in eight states over 3 years (1996 to 1999). They too found that it was not uncommon for district central office administrators to ground their decisions about school takeovers in multiple forms of evidence named in the policy designs including student performance data. District central office leaders also used data on student performance on standardized tests and social science research to guide decisions about selection of school-based programs (Massell, 2001; Massell & Goertz, 2002; also see Robinson, 1988).

However, most research suggests that district central office administrators use a broader range of evidence than that currently promoted in federal policy, including information generated by practitioners or laypeople through their experience sometimes called practitioner or local knowledge (e.g., Moll, Amanti, & Gonzalez, 2005). First, information gained from the experience of educators—school principals, teachers, and central office administrators, themselves—informs a range of central office decisions including their choice of curriculum and whole school reform designs (Datnow, Hubbard, & Mehan,

2002). For example, RAND researchers examined three district central offices working to integrate research on learning into their leadership practice. They highlight how (with significant help from the Institute for Learning, a reform-support organization) district central office administrators used “Learning Walks”—a protocol for on-site observations of school practice developed in part based on research on how people learn—to assess the quality of instruction and implementation of curricula and to develop plans for targeting specialized support to individual schools. The central office administrators, along with Institute for Learning coaches, school principals, and teachers, used the Learning Walk to observe and document teachers’ classroom practice, the nature and quality of student dialogue, and the clarity of instructional expectations. These central office and school-based practitioners met over a series of weeks to reflect on the evidence they collected and strategies for improvement (Marsh et al., 2005). Also, for example, Honig (2001, 2003) found that information about promising school- and community-level supports for student learning can be essential evidence for grounding central office decisions about how to expand such learning opportunities.

Second, a small handful of studies suggests that feedback and input from parents and other community members may be a distinct type of evidence in use in some district central offices (Marsh, 2001, 2006; Massell, 2001). For example, Massell (2001) found that in one Kentucky district, central office administrators administered and used student surveys and parent questionnaires to inform their consolidated (improvement) planning processes. Also, for example, Marsh (2003, 2006) conducted a mixed methods study (involving document reviews and district central office and school surveys and interviews) of two midsized California school districts. These district central offices convened community-wide planning groups to examine and interpret student performance data and to share their own evidence about the need for districtwide improvement and strategies for achieving it. In these dialogues, district central office administrators drew on student performance data, parent and community input, and their own experiences to inform decisions. Marsh found that such dialogues helped build community and school support essential to sustaining several ambitious school improvement efforts launched during the study period.

Interestingly, in these examples, information practitioners have amassed from their experience is integral to helping district central office administrators use more formal forms of evidence (e.g., research and student data) encouraged and mandated in federal policy. As documented by Marsh and her colleagues, engaging in the IFL’s Learning Walk process required that central office administrators draw on lessons from their own and other practitioners’ observations and experiences to make sense of school performance

data and potential strategies for improvement. In the accountability dialogues, parent, community, and teacher expertise helped central office administrators to interpret student performance data and to build political support among community members for the school improvement strategies they decided to pursue based in part on their analyses of student data.

In sum, district central office administrators may have some experience using the kinds of formal evidence promoted in policy designs. However, district central office administrators also draw on a far broader set of evidence—information about their own students and staff that they gather locally themselves and in partnership with teachers, principals, parents, and community members. These other sources of evidence may tap local expertise and support important to strengthening the information available to district central office administrators.

The Multiple Purposes of Evidence Use

As noted above, some policy arguments for evidence-based decision making suggest that evidence use can help focus district central office decisions on strengthening students' school performance and remove politics and ideology from central office decisions. We found that although district central office administrators do use evidence for purposes related to school performance, they also seem to use evidence for political purposes not always obviously tied to such instrumental ends. These other purposes may be essential to basic district central office operations and may in fact enable central office administrators to use evidence in ways that promise to strengthen school performance.

To elaborate, the research literature suggests that district central office administrators do use evidence for purposes that they tie directly to strengthening students' school performance. Across studies, superintendents and other district central office administrators reported in interviews and surveys that evidence guided their decisions regarding whether to retrain or to replace programs and how to allocate staff to improve student achievement outcomes (Corcoran et al., 2001; Kean, 1983; Newman, Brown, & Rivers, 1983; Robinson, 1988; Weiss, Murphy-Graham, & Birkeland, 2005).

However, the research also recounts frequent instances in which district central office administrators used evidence to address political concerns not directly tied to academic achievement. For example, some district central office administrators used evidence to build political support within district central offices and the broader community for particular improvement efforts (Corcoran et al., 2001; Marsh, 2006). One superintendent reflected a common

research finding when he recounted using research to “stabilize the environment” within his central office. He elaborated, “When confronted with research, our teachers and administrators began to ‘buy in’ to the program” he was trying to implement (Boeckx, 1994, p. 24). Likewise, in a detailed documentation of her district central office’s approach to evidence use, Robinson described how central office administrators used social science research in schoolboard presentations to influence school board opinions, even when they did not originally use the research to develop, select, or implement those programs (Robinson, 1988).

Similarly, other district central office administrators at times use evidence to confirm, justify, and elaborate opinions or choices that they already formulated in an effort to strengthen political support for their ideas (Fillos & Bailey, 1978; Kennedy, 1982b). For example, one superintendent chronicled how he engaged his district central office staff in establishing their beliefs and then in marshalling evidence in support of those beliefs—a process heralded by the journal *School Administrator* as a model of district central office evidence use (Manheimer, 1995). Likewise, Corcoran and colleagues (2001) found that the “champions of specific reforms typically examined literature selectively and found theories and ‘evidence’ to justify their approaches, or they recruited ‘experts’ who were advocates of the preferred strategy” (p. 80). The importance of using evidence to build political support is so pronounced that some conclude that evidence has no direct, independent effect on decision making but rather is mediated by public opinion: Evidence influences public opinion and public opinion directly impacts decision making (Englert, Kean, & Scribner, 1977; Kennedy, 1982a).

Individual district central office administrators also may use evidence for the political purposes of advancing their own political gain rather than reform agendas. For example, Hannaway (1989) studied more than 70 district central office administrators in one district using beepers to sample daily activities and surveys and observations to elaborate those activities. She found that school district central office administrators encountered strong pressure to justify their work but that the available evidence tended not to point unambiguously to the value of specific activities. In such contexts, district central office administrators were likely to use evidence to help them gain political advantage with their peers and superiors and to avoid using evidence when using it did not promise to help them display their competence. Likewise, in her seminal study of district central office knowledge utilization, Kennedy (1982b) examined critical instances of decision making by district central office administrators in 16 school districts. She found that district central office administrators, like decision makers in various other arenas, did not always

or even mostly search for evidence to find “answers to particular questions or to solve pressing problems” (p. 15); rather they looked for and incorporated evidence into their decision making when that evidence promised to address their interests.

The existing research did not allow us to interrogate whether central office evidence-based decision making improves student achievement because the research generally has not addressed this question. However, the research does suggest that political purposes of evidence use may be unavoidable and important to marshaling support for reforms that, down the road, could contribute to school improvement. In this view, calls in policy designs to depoliticize educational decisions through the use of evidence seem to reflect a misunderstanding of how individuals make decisions and unavoidable political realities in school districts.

Evidence Use as a Nonrational, Multidimensional Process

The research we reviewed rarely discussed the processes by which district central office administrators use evidence. This gap may reflect that researchers in this arena have primarily relied on self-report data rather than on the extended in-depth interviewing and on-site observations that uncovering decision making processes may require. However, we found a few key studies that provided an initial elaboration of district central office decision making processes (Hannaway, 1989; Honig, 2003; Kennedy, 1982a, 1982b; Spillane, 1998; Spillane & Jennings 1997). According to these studies, evidence use involves multiple activities barely suggested by the singular term *evidence use*, including (a) searching for or accessing evidence from a variety of sources (i.e., search) and (b) incorporating or deliberately deciding not to incorporate evidence into organizational decisions through sometimes complex intensive process of interpretation (i.e., incorporation) (Honig, 2003; Kennedy, 1982a, 1982b, 1984).

Search. The terms *evidence use*, *data-driven decision making*, and *research-based decision making* focus on what central office administrators might do with evidence once they have acquired it. However, research on school district central offices confirms decades of research on decision making in other sectors: Searching for evidence is an integral part of the process of evidence use.

Overall, these studies suggest that the search process may proceed somewhat haphazardly. For example, in Kennedy’s (1982b) multidistrict study, central office administrators “tended to look at everything that came their way and . . . they could not describe exactly what it was they were looking at”

(p. 13; also see Kennedy, 1982a). However, the degree of haphazardness and the overall intensiveness of the search process may vary depending on the extent to which individual central office administrators are formally designated to engage in search. For example, in Honig's study, the focal school district central office designated specific central office administrators to specialize in search. These individuals, at least early in implementation, reported spending a majority of their work day with their evidence sources—school and community leaders—to gather information about implementation progress. Observations confirmed that their day-to-day activities were organized around various formal and informal meetings with school and community leaders, school site visits, and other specific search activities in ways that increased the sheer amount of evidence available to central office decision makers (Honig, 2003, 2004a, 2004b).

District central office administrators seem to search for evidence within and outside their school systems and to rely on internal and external sources for different types of information. First, not surprisingly, district central office administrators search sources internal to public school systems for evidence about their progress. For example, Massell and Goertz (2002; also see Fillos & Bailey, 1978) found that district central offices heavily relied on state governmental agencies for student performance data. Offices of Research and Evaluation within some school district central offices conduct evaluations—a trend that may have increased in recent years especially in large and mid-sized school districts (Robinson, 1988).

District central office administrators also look outside their public school systems to research and development organizations (Corcoran & Rouk, 1985), researchers (Bickel & Cooley, 1985), and intermediary organizations (Honig, 2004a) among others for evidence not typically available from internal searches. For example, one superintendent recounted how he invited nationally known researchers from outside the district to help district central office staff understand a particular educational improvement strategy (in this case, outcomes-based education) (Boeckx, 1994; also see Nafziger, Griffith, & Goren, 1985). These external searches seem to focus on evidence that promises to increase the legitimacy of central office decisions (Corcoran et al., 2001). As one set of authors reflected, "Policy recommendations with a research cooperative's endorsement will carry much more strength in front of a board of education than that of the independent research project" (Nafziger et al., 1985, p. 6).

Incorporation. Only a handful of studies elaborates what district central office administrators do once they gain access to evidence (e.g., Coburn, Toure,

& Yamashita, in press; Hannaway, 1989; Honig, 2003; Kennedy, 1982a, 1982b; Spillane, 1998). These studies, like examinations of decision making in other institutions, highlight that when any form of evidence enters a district central office, administrators engage in a process of deciding whether and how to use the information. Spillane and others, drawing on Weick's work, have referred to this process as "sensemaking" or "interpretation" (Spillane, Reiser, & Reimer, 2002). Some decision making models rest on assumptions that the value of particular evidence is known or can be known and used to weigh the potential productivity of particular actions. By contrast, sense making theorists argue that decision-making processes are more often characterized by ambiguity regarding what a piece of evidence means and what actions it suggests should be taken. Information becomes meaningful and prompts action when decision makers socially construct it—when they grapple with the meaning of the evidence and its implications for action.

As part of the meaning-making process, individuals and groups fit new information into their preexisting understandings or cognitive and cultural frameworks. Kennedy (1982b) called these frameworks *working knowledge*,

the organized body of knowledge that administrators and policy makers spontaneously and routinely use in the context of their work. It includes the entire array of beliefs, assumptions, and experiences that influence the behavior of individuals at work. It also includes social science knowledge. (pp. 1-2)

Evidence never directly informs decisions directly but influences working knowledge which may shape decision making.

Individuals may incorporate evidence into working knowledge in its original form. For example, a district central office administrator might use statistics on the number of enrolled students as the basis for distributing textbooks. However, it may be more common for district central office administrators to reshape evidence and for the reconstituted form—rather than the original evidence itself—to become part of their working knowledge. For example, district central office administrators in one district in Kennedy's (1982b) study interpreted low rates of college attendance as pointing to a need for increased vocational education options. The administrators then used the interpretation—the need for vocational education—rather than the statistics themselves as the basis for subsequent policy decisions. In the 14 "highly diverse" decision making instances that Kennedy analyzed, she did not find a single occasion where evidence influenced decision making independent of such interpretation.

Reconstituting evidence at times involves district central office administrators breaking multiple complex pieces of evidence into discrete parts or

otherwise simpler forms that they believe they understand and think they can respond to well (Hannaway, 1989; Honig, 2003, 2006). As part of this focusing process, some important aspects of the evidence may be lost; on the flipside, the process may result in evidence in a form that district central office administrators are able to use in their decision making. For example, Spillane and colleagues (Spillane, 1998, 2000; Spillane & Callahan, 2000; Spillane & Thompson, 1997) have conducted a series of mixed-method, multiyear studies that elaborate these focusing processes in the context of district central office administrators' implementation of research-based standards in math, reading, and science. Drawing on extensive interview data and document analysis, they argue that district central office administrators tended to view those standards through the lens of their preexisting conceptions of curriculum and instruction. In so doing, they gravitated toward approaches that were congruent with their prior practice and therefore relatively easy to understand (Spillane, 2000; Spillane & Callahan, 2000; Spillane & Zeuli, 1999). In one study, 65 out of 82 district central office administrators interviewed viewed the standards (in this case, those based on research on students' mathematics learning) in terms of surface manifestations such as teachers' adoption of specific materials or classroom activities rather than their engagement in more complex instructional approaches the standards were meant to signal (e.g., shifting from an emphasis on procedural knowledge to fostering mathematical reasoning; Spillane, 2000).

The studies that address incorporation suggest that incorporation is a profoundly social process—often highly interactive and involving many people in and across a series of meetings (e.g., committees, teams) and informal conversations over time (Hannaway, 1989; Kennedy, 1982a, 1982b; Spillane et al., 2002). Kennedy (1982a, 1982b) found that these participatory processes created shared beliefs and understandings across groups of people, common ways of framing problems, consensus on the nature of different demands, and shared images of particular programs. These beliefs and understandings can become part of the working knowledge that shapes decision making. For example, Spillane et al. (2002), Hannaway (1989), and others revealed how subunits within district central offices provided opportunities for district central office administrators to regularly consult with colleagues and to construct shared interpretations of policy demands in ways that shape their decision making.

In sum, our review suggests that district central office administrators use evidence for a variety of purposes directly tied to school improvement but also for other largely political reasons. Although research on the outcomes of evidence use is limited, district central office administrators' own accounts and researchers' reports suggest that evidence use for political purposes

may help district central office administrators to sustain reforms in ways that may contribute to improvement. We show that evidence use is a complex process involving at least two broad arenas of specific action: searching for and incorporating evidence. Individual and social processes of interpretation appear central to the endeavor in part because evidence may be ambiguous regarding what evidence means and whether and how it should be used.

Factors That Influence Evidence Use

We found a number of factors that seem to shape central office use of evidence: features of the evidence itself; individual and collective working knowledge; social capital within and beyond the central office; district central office organization; institutional norms within district central offices; and political dynamics such as superintendent turnover. We found that education policy including recent federal and state mandates on school district central offices to use evidence may affect evidence use but its influence appears to be mediated by these other factors. We organized each of the following subsections by the individual factors that shape evidence use rather than by whether the factors uniformly help or hinder evidence use. We made this choice because most factors appear as both helps or hindrances depending on local conditions and how district central office administrators marshal particular resources. We view this research-based catalogue of factors as an important first step in grounding future research concerning influences on evidence use, as we elaborate in the concluding section.

Features of the evidence. How district central office administrators use evidence is shaped, in part, by the nature of the evidence itself—namely, its availability, accessibility, ambiguity, and credibility. Regarding *availability*, district central office administrators in one multisite study reported that they had trouble finding social science research or evaluation data related to pressing issues within their district because the evidence had not been produced (Corcoran et al., 2001). In some districts, research syntheses are not available (Corcoran et al., 2001) and up-to-date studies are not public or available in mainstream databases (Corcoran et al., 2001; Roberts & Smith, 1982; West & Rhoton, 1994).

Even when evidence is available, it might not be *accessible* in a form that can be used for decision making. For example, many of the smaller school districts in Reichardt's (2000) Wyoming study lacked the technological infrastructure to sort through student performance data themselves, thereby rendering those data essentially inaccessible. The timely production and

release of evidence also shapes accessibility. We found multiple accounts of a mismatch between the rapid pace of central office decision making and the relatively slow release of research and evaluation findings (Bickel & Cooley, 1985; Corcoran et al., 2001; Englert et al., 1977; Kean, 1981, 1983; Massell & Goertz, 2002). For example, district central office administrators in the 2001 Corcoran et al. study reported that they could not wait for evaluation or study results before acting given intense pressure to appear decisive.

Conversely, some district central office administrators reported that evidence may be excessively available to degrees that exceed their ability to make sense of and incorporate it. In Honig's (2003) case study of Oakland, for example, district central office administrators reported and observations confirmed that they grappled daily with multiple forms of information including phone calls and other oral reports from parents and school principals regarding school performance and written reports about school improvement in their own district and elsewhere. In this context, several administrators reported using limited evidence in their decision making, suggesting that excessive availability may hinder use.

The *ambiguity* of evidence also shapes its use. Ambiguous evidence, by definition, may be interpreted in multiple legitimate ways and such interpretations generally are not reconciled by additional information (March, 1994). On one hand, the greater the ambiguity of the evidence, then the greater the likelihood that district central office administrators may interpret it differently and frustrate reform goals (Kennedy, 1982a, 1982b). Some district central office administrators report that such ambiguity delays or impedes their decision making because it means the evidence does not provide clear guides for action (Corcoran et al., 2001; Fullan, 1980; Kean, 1980, 1983; Massell & Goertz, 2002; West & Rhoton, 1994). On the flipside, studies also suggest that the ambiguity of evidence can enable its use. For example, Kennedy (1982a, p. 82) analyzed district central office administrators' responses to the evaluation of a pilot program in which the evaluator constructed findings in a way that allowed readers to "freely infer what they wanted" about the degree to which the findings supported their position. She revealed that ambiguity about program success *enabled* incorporation by allowing various people to see their position in the findings and to move ahead with the program.

Evidence use also may depend on how central office administrators view the *credibility* of the evidence. Credibility sometimes stems from methodological concerns such as whether or not the evidence was produced using a particular research design or type of study site. For example, Coburn and Talbert (2006) conducted a longitudinal case study of decision making in one midsize urban school district. Drawing on interviews with district central

office administrators and observations of district meetings, they found that some central office administrators' use of evidence depended on their beliefs about the relative credibility of double-blind studies and quasi-experimental designs. Others rejected evidence from studies, regardless of design, if the research sites did not closely resemble their own (Coburn & Talbert, 2006).

District central office administrators also may judge credibility based on the source of the evidence. For example, some studies—particularly those that draw on self-report data from the 1980s—find that district central office administrators view certain forms of externally generated evidence as less credible and more easily ignored than internally generated evidence (Fillos & Bailey, 1978; Kean, 1980, 1981; Roberts & Smith, 1982). However, Corcoran et al.'s (2001) more recent, cross-case, mixed-methods analysis suggested that external sources may sometimes be viewed as more credible than internal sources.

Individuals' working knowledge. An individual's working knowledge strongly mediates evidence use. First, consistent with institutional theories of decision making (e.g., March, 1994), studies show that central office administrators will search for and pay greater attention to evidence that they can fit into their conceptions of what they already know and expect to find (Birkeland, Murphy-Graham, & Weiss, 2005; Hannaway, 1989; Kennedy, 1982a, 1982b; Spillane, 2000); search may be influenced by individual preferences for certain kinds of evidence and individual orientations toward research and evaluation generally (Bickel & Cooley, 1985; Coburn & Talbert, 2006; David, 1981; West & Rhoton, 1994). Such beliefs, expectations, and preferences are all part of working knowledge.

Working knowledge also influences incorporation as individuals interpret even the most straightforward and seemingly unambiguous evidence through the lens of their preexisting beliefs and experiences (Bickel & Cooley, 1985; Corcoran et al., 2001; Kennedy, 1982b; Spillane et al., 2002; West & Rhoton, 1994). For example, Kennedy (1982b) documented how a curriculum director who had just completed a masters degree in deaf education interpreted test score data for all students districtwide as signaling the need for a new program in deaf education. As already noted above, other studies further elaborate that central office administrators may use evidence that they can translate into simpler forms that match what they believe they know and can do well (Hannaway, 1989; Honig, 2003).

Social capital: Internal and external ties. Studies show that the nature of individual district central office administrators' social capital—their formal

and informal ties with others and the degree of trust, shared norms, and expertise that characterize those ties—influences evidence use. First, internal social capital—ties within a collective such as a school district central office system—helps with search by fostering access to various forms of evidence. For example, in a study of implementation of research-based mathematics and science reform in nine school districts, Spillane and Thompson (1997) argued that higher levels of collaboration in districts resulted in greater access to evidence. Honig (2003) found that district central office administrators seemed better able to collect evidence about student performance from schools when school-level leaders trusted that the information would be used to support rather than penalize them. Marsh's (2002) California study revealed that high levels of trust between district central office administrators and community residents helped to increase the availability of various forms of evidence, including community feedback. A few studies suggest that internal social capital also shapes incorporation. As discussed earlier, participatory processes such as meetings and consulting with colleagues fostered the development of common frames of reference or ways of viewing issues that guide how groups interpret evidence and incorporate it (or deliberately decide not to incorporate it) into their decisions (Honig, 2004b, 2004c; Kennedy, 1982a, 1982b).

District central office administrators' external social capital—the ties that span organizational boundaries—also shape evidence use. Connections with external organizations such as professional associations and reform support providers have provided access to social science research and research-based practice (Corcoran & Rouk, 1985; Kerr, Marsh, Ikemoto, Darilek, & Barney, 2005; Spillane & Thompson, 1997). These studies suggest that some external organizations can be particularly effective at providing such access when they have credibility with school and district personnel that helps focus attention on particular forms of evidence. These organizations may be able to help link research with local needs and conditions—also essential to attention and use (Corcoran & Rouk, 1985; Spillane & Thompson, 1997). For example, Bickel and Cooley (1985) argue that ongoing conversations between external researchers and central office administrators helped the administrators connect new evidence to their working knowledge (also see Kean, 1980, 1981; Roberts & Smith, 1982). Some external organizations also bring models of professional practice that can help central office administrators to generate and incorporate evidence into their decision making. For example, as discussed earlier, Marsh and her colleagues describe how the Institute for Learning as an external district partner helped district central office administrators (and others) to use Learning Walks to collect evidence about teaching practice and school

leadership and to incorporate that evidence into dialogues with district central office and school staff regarding resource allocation and other decisions (Kerr et al., 2005; Marsh et al., 2005).

District central office organization. The organization of district central offices can hinder or help evidence use. First, the organization of administrators' work—in particular, the sheer volume of their responsibilities combined with limited time for accomplishing them—seems to significantly curb evidence use. Multiple demands may divide central office administrators' attention and leave them little time for the intensive interpretation processes involved in evidence use (Hannaway, 1989; Holley, 1980; Peterson, 1998). Many school district central offices have multiple departments that are not always well connected to one another and these limited connections impede evidence use (Coburn et al., in press; Hannaway, 1989; Meyer & Scott, 1983; Rowan, 1986; Spillane, 1998). For example, in her study of 15 school districts, David (1981) reported that the lack of connection between district central office research and programmatic units meant that internal evaluation did not always address programmatic needs and contributed to programmatic unit members' views that they could discount or ignore evaluation findings.

However, the impact of these formal district central office organizational structures may be mediated by social capital. For example, Honig (2003, 2004c) revealed that some district central office administrators were more skilled than others at searching for information and that a division of labor seemed to enable search. When communication channels and social ties were strong between those searching and those with the authority to incorporate it into central office decision making, this division of labor also seemed to help incorporation.

Normative influences. District central office administrators seem more likely to use data or research in their ongoing work when district culture, norms, and models of professional practice encourage it (Corcoran et al., 2001; Honig, 2003; Massell, 2001; Roberts & Smith, 1982). For example, in their study of three district central offices, Corcoran and colleagues (2001) found that evidence use was greater in district central office subunits where norms, expectations, and routines supported ongoing engagement with empirical research; conversely, subunits without such norms and expectations tended to make decisions with little regard for evidence.

Evidence-based decision making may be nontraditional practice for many district central office administrators and accordingly engaging in it may require new models of professional practice appropriate to those demands (Honig,

2006). For example, Burch and Thiem conducted a study of three large urban districts from 1999 to 2001. Of the three districts, two embarked on ambitious efforts to encourage data-driven decision making districtwide and required district central office administrators to break from their traditional roles (i.e., as warehouses that store rather than use data) and toward supporting schools' and their own data use. The absence of these new models of professional practice seemed to curb evidence-based decision making (Burch & Thiem, 2004; also see Reichardt, 2000). In a positive case, the Learning Walks discussed by Marsh and colleagues (2005) enabled evidence use by providing professional models for integrating evidence-based decision making into central office administrators' daily practice.

Political dynamics. As suggested earlier, district central office decision making unfolds in highly politicized environments—those rife with contests for power and influence over educational agendas and resources. Such political dynamics appear both to hinder and support evidence use (David, 1981; Englert et al., 1977; Hannaway, 1989; Kennedy, 1982a, 1982b). On one hand, evidence sometimes fuels political debates that can frustrate evidence use (Corcoran et al., 2001; Englert et al., 1977; Weiss et al., 2005). For example, Englert and colleagues (1977) argued that the design and execution of program evaluations catalyzed political debates about the merits of particular evaluation designs and significantly delayed search (actually conducting the evaluations); once evaluation results were in, district central office decisions about the program seemed influenced more by the political coalitions marshaled around the program and its evaluation than the evaluation findings themselves.

However, other studies clarify that political debates and coalitions-building can be part and parcel of evidence use in productive ways. For example, Kennedy (1982b) recounted how political controversy about personnel matters prompted district central office administrators to notice and attend to a previously “dormant” mix of evidence related to the effectiveness of a particular program; that evidence led them to scale back their commitment to the program which in turn alleviated their personnel conflicts. In this case, a political controversy directed district central office administrators' attention to evidence they might have otherwise avoided. Other studies confirm that political turbulences such as superintendent or school board turnover or a change in union policies can raise new issues and otherwise increase district central office administrators' access and attention to particular forms of evidence.

State and federal policies. A handful of relatively recent studies have examined district central office evidence use in the context of high-stakes

accountability policies. These studies show that such policies may influence evidence use directly, by prompting central office administrators to set up various systems that increase their access to and use of information. However, studies also suggest that the effects of policy may be mediated by a host of other factors—many of which we already noted above—including institutional norms, working knowledge, and social capital. In this view, federal and state policies appear as indirect influences on evidence use.

To elaborate, federal and state high-stakes accountability policies are associated with increased district central office evidence use (Burch & Thiem, 2004; Reichardt, 2000). For example, Massell (2001) reported that since passage of some state accountability policies, the majority of the 23 school districts in her study had begun to use student performance data regularly in their decision making at least to some degree. Similarly, Kerr and colleagues found greater district central office infrastructure and capacity for evidence use in districts in states with long histories of high-stakes accountability (Kerr et al., 2005). However, such effects are mediated by institutional norms. For example, Massell (2001) found that the incorporation of evidence was influenced not only by high-stakes accountability policies, but by cultural factors, including the extent to which district central office administrators viewed outcomes and performance goals as important, relevant, and attainable and believed that the consequences of accountability would impact the district.

Working knowledge, social capital, and formal central office organization also appear to mediate policy. For example, Coburn and Talbert (2006) found that district central office administrators' conceptions of evidence shaped how they interpreted federal calls for evidence use. These conceptions themselves were informed in part by district central office administrators' social ties with one another and the particular central office divisions with which they were associated: Federal mandates and evidence use were welcomed by individuals and departments with strong ties to others who promoted approaches to evidence use consistent with federal mandates, but discounted by individuals and departments with ties to reform movements that offered alternative views of appropriate evidence use. Other studies suggest that district central offices administrators tend not to follow federal mandates to use evidence without the human capital and technological infrastructure to do so (Burch & Thiem, 2004; Reichardt, 2000).

In sum, the research we reviewed suggests numerous factors that operate as key levers of evidence use and that mediate how policy shapes those activities. Namely, the influence of high-stakes state accountability policies seems to hinge on the extent to which policy enters contexts where normative pressures and other resources support evidence use.

Summary and Implications

This article started from the premise that recent federal policy emphasizes on and investments in district central offices as evidence users heighten the urgency to interrogate the evidence on district central offices' use of evidence. Given limited data tying evidence use to improved school performance, we aimed to better understand evidence use processes: which evidence administrators use, how they use it, and the conditions that may help or hinder its use.

We found district central office administrators use a variety of forms of evidence in their decision making. These forms include but extend beyond those formal sources typically mentioned in policy designs to include what some researchers call practitioner knowledge or local knowledge. Critics might argue that these other forms of evidence are inappropriate or less valuable than social science research evidence and that reliance on these other forms is precisely the pattern that federal policy makers should aim to break. However, the studies we reviewed here suggest that these other forms of evidence may be essential to growing and sustaining school improvement efforts. Furthermore, practitioner knowledge may help district central office administrators use the more formal types of evidence that federal policies favor by giving meaning to information and suggesting viable courses of action.

The literature also suggests that evidence use is not a single activity, but rather involves both searching for and incorporating (or deliberately not incorporating) evidence into decision making. Search involves directing attention to or averting attention from various evidence sources and incorporation entails extensive interpretation. Interpretation seems essential because evidence may be ambiguous regarding what it means and what actions it suggests may help strengthen school performance. These processes also seem to have fundamental political dimensions. Critics may argue that evidence use is supposed to help take politics out of central office decision making and focus central-office decisions on school improvement. However, we draw on research to suggest that the political uses of evidence may help central office administrators rally coalitions and otherwise create conditions that promise to grow and sustain school improvement agendas. Our review highlights that the actual incorporation of evidence into day-to-day district central office decisions is profoundly shaped by a host of conditions including the nature of the evidence itself, opportunities for individuals to engage in collective sense making, and the availability of professional role models that demonstrate what evidence use involves. Public policies influence evidence use but other factors mediate its effects.

Overall, the portrait of district central office evidence use that emerges in the research literature is decidedly more complex, political, and nuanced than that suggested by some policy requirements that call for central office administrators to use particular types of evidence. This portrait and limitations of the research base discussed in our methods section help us frame implications for future policy, practice, and research.

Implications for Policy and Practice

Our review has several implications for policy makers who aim to support evidence use in school district central offices. First, policy makers might advance evidence use if they acknowledged and provided specific supports for the subactivities fundamental to evidence use. For example, district central office policy could call for and fund individual central office administrators to specialize in searching for evidence. Federal, state, and local policy makers could allocate time and resources for the collaborative sense-making processes that incorporating evidence seems to require. Because external partners seem to provide essential supports for sense making, policy could promote and fund partnerships among those organizations and district central offices to assist with the central office evidence use process.

Second, given that administrators central office-wide face demands to use evidence, professional development policy could aim to prepare professionals across entire central offices—not just those in research and evaluation units traditionally charged with managing evidence—to use evidence in their decision making. Based on our review, such professional development policies should focus central office administrators on the search and incorporation processes at the heart of evidence use. As noted above, central offices can deliberately organize to promote search and incorporation. Basic awareness that the use of evidence involves these subactivities alone may go a long way in orientating central offices around evidence use.

In addition, the availability of professional role models to demonstrate evidence use in daily practice may help build the institutional supports that our review suggests are consequential to evidence use. In addition, professional development and other supports for evidence use could encourage central office administrators to value their own local understandings of the conditions that do and do not contribute to educational improvement and to interrogate those understandings. As our review shows, local knowledge is in and of itself important evidence and arguably essential to central office administrators' use of other forms of evidence including social science research. Furthermore,

central office administrators, like other decision makers, may not notice and attend to this evidence unless they understand it and perceive it as important. Accordingly, administrators throughout central offices might benefit from professional development opportunities that encourage them to assume the high levels of agency that evidence use requires, especially in cases in which such individuals run the risk of viewing social science research as inherently more valuable than other forms of evidence.

In the process, such policies might do well to reinforce that it may be undesirable if not downright impossible to separate politics from evidence use. Policies might advance evidence use by not demonizing the use of evidence for political purposes but by reinforcing the importance of political means to school improvement ends.

Implications for Education Policy Research

Our review suggests that future research on district central office administrators as evidence users should focus on building a stronger evidence base about the day-to-day processes involved in their evidence-based decision making. Extant research studies generally agree that search and incorporation are central activities involved in evidence use but such studies are few and far between. Questions our review raised that could guide future research include: To what extent do the search and incorporation processes identified in our review bear out across a broader set of cases? Do search processes vary by the type of information at hand—for instance, is searching for evaluation evidence a substantially different activity than searching for research-based programs? Does incorporating research-based reform models raise a different set of challenges than incorporating social science research evidence? Do particular forms of incorporation—for example, the development of policies that cut across entire central offices versus those that address specific central office subunits—involve qualitatively different work?

Our review provides a menu of factors that shape search and incorporation, but how do these factors influence evidence use under different conditions? For example, assigning certain individual district central office administrators to specialize in search can bolster evidence use by increasing search activities or, conversely, it can curb evidence use absent other supports for incorporating the evidence into central office decision making. Future studies should probe the conditions under which the specific factors chronicled here may help or hinder evidence use. In the process of uncovering these contingencies, future researchers might explore: Given the political realities of decision making in district central offices, what political conditions seem more or less conducive

to evidence use? How do politics and public policies interact with the other influences on evidence use to shape how the process unfolds?

Importantly, evidence use happens, but does it matter? As noted at the start of this article, some policy demands on district central offices to use evidence seem to stem in part from assumptions that evidence-based decision making leads to better decisions and ultimately to improved student outcomes. To what extent does evidence use have such impacts? Do certain forms of evidence lead to better decisions? Do particular evidence-use processes strengthen such outcomes? Do certain conditions for evidence use contribute to improved results? Evidence-based decision making may be worth promoting even if such empirical ties are not substantiated. However, explorations into these connections can help district central office leaders and others better understand the outcomes to which they should hold themselves and their evidence-use processes accountable and otherwise be more realistic about what evidence-based decision making may be able to accomplish.

Delving deeply into such questions may require both intensive observational studies and large-scale surveys rooted in well-elaborated theoretical frameworks. In particular, tapping the processes of evidence use seems to demand sustained, on-site observations of district central office administrators' participation in evidence-based decision making to better understand how these processes play out under various conditions. At the same time, surveys on a larger scale can help probe the scope of the trends we suggest here and situate in-depth case studies in a broader sample. Throughout our review we noted where the process of evidence use in district central offices seemed consistent with established decision-making theories including sensemaking and neo-institutional theories of decision making. Although the value of these frameworks emerged as a finding from this review, future research might advance knowledge and practice by beginning with these theoretical traditions as the starting frame for data collection and analysis.

Ultimately, this review suggests that policy researchers may bear some responsibility for creating conditions for effective evidence use in district central offices. Policy researchers might consider how to better align their work with contemporary challenges in school district central offices including crafting research questions and presentations of findings that speak directly to district central office audiences. Close partnerships between researchers and central office administrators may help to increase the perceived credibility of findings in local districts and also help to ensure that research and evaluation are focused on district needs and concern. More broadly, we hope this review serves as an opportunity for policy researchers to reflect on how the evidence they produce may or may not contribute to its use.

Note

1. See the method section for further discussion of terminology.

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.
- Birkeland, S., Murphy-Graham, E., & Weiss, C. H. (2005). Good reasons for ignoring good evaluation: The case of the Drug Abuse Resistance Education (D.A.R.E.) program. *Evaluation and Program Planning*, 28, 247-256.
- Boeckx, J. K. (1994). Developing community support for outcome-based education. *School Administrator*, 51(8), 24-25.
- Brown, J. S., & Duguid, P. (1991). Organizational learning and communities of practice: Toward a unified view of working, learning, and innovation. *Organization Science*, 2(1), 40-57.
- Burch, P. E., & Thiem, C. H. (2004). *Private organizations, school districts, and the enterprise of high stakes accountability*. Unpublished manuscript.
- Coalition for Evidence-Based Policy. (2003). *Identifying and implementing educational practices supported by rigorous evidence: A user friendly guide*. Retrieved September 24, 2004, from http://www.excelgov.org/usermedia/images/uploads/PDFs/User-Friendly_Guide_12.2.03.pdf
- 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.
- Coburn, C. E., Toure, J., & Yamashita, M. (in press). *Evidence, interpretation, and argumentation: An analysis of instructional decision making in the district central office*.
- Corcoran, T. (2003). *The use of research evidence in instructional improvement* (CPRE Policy Brief RB-40). Philadelphia: Consortium for Policy Research in Education.
- Corcoran, T., Fuhrman, S. H., & Belcher, C. L. (2001). The district role in instructional improvement. *Phi Delta Kappan*, 83(1), 78-84.
- Corcoran, T. B., & Rouk, U. (1985). *Using natural channels for school improvement: A report on four years of urban development program*. Philadelphia: Research for Better Schools.
- Datnow, A., Hubbard, L., & Mehan, H. (2002). *Extending educational reform: From one school to many*. London: Routledge Falmer.
- David, J. L. (1981). Local uses of Title I evaluations. *Educational Evaluation and Policy Analysis*, 3(1), 27-39.
- Englert, R. M., Kean, M. H., & Scribner, J. D. (1977). Politics of program evaluation in large city school districts. *Education and Urban Society*, 9(4), 429-450.
- Fillos, R. M., & Bailey, W. J. (1978). *Survey of Delaware superintendents' KPU*. Newark: University of Delaware.
- Fullan, M. (1980). *The role of human agents internal to school districts in knowledge utilization*. Toronto, Ontario, Canada: Ontario Institute for Studies in Education.
- Hannaway, J. (1989). *Managers managing: The workings of an administrative system*. New York: Oxford University Press.
- Holley, F. (1980, April). *Evaluation utilization: Is it easier to move a mountain than a molehill?* Paper presented at the annual meeting of the American Educational Research Association, Boston.
- Honig, M. I. (2001). *Managing ambiguity: The implementation of complex education policy*. Unpublished doctoral dissertation, Stanford University, Stanford, CA.

- Honig, M. I. (2003). Building policy from practice: Central office administrators' roles and capacity in collaborative policy implementation. *Educational Administration Quarterly*, 39(3), 292-338.
- Honig, M. I. (2004a). District central office-community partnerships: From contracts to collaboration to control. In W. Hoy & C. Miskel (Eds.), *Theory and research in educational administration* (Vol. 3, pp. 59-90). Greenwich, CT: Information Age.
- Honig, M. I. (2004b). The new middle management: The role of intermediary organizations in complex education policy implementation. *Educational Evaluation and Policy Analysis*, 26, 65-87.
- Honig, M. I. (2004c). Where's the "up" in bottom-up reform? *Educational Policy*, 18(4), 527-561.
- Honig, M. I. (2006). Street-level bureaucracy revisited: District central office administrators as boundary spanners in complex policy implementation. *Educational Evaluation and Policy Analysis*, 28, 357-383.
- Kean, M. (1980). *Research and evaluation in urban educational policy*. (ERIC Document Reproduction Service No. ED190735)
- Kean, M. H. (1981, April). *Institutionalizing educational productivity*. Paper presented at the annual meeting of the American Educational Research Association, Los Angeles.
- Kean, M. H. (1983). Translating research and evaluation into educational policy. *Urban Review*, 15(3), 187-200.
- Kennedy, M. M. (1982a). Evidence and decision. In M. M. Kennedy (Ed.), *Working knowledge and other essays* (pp. 59-103). Cambridge, MA: Huron Institute.
- Kennedy, M. M. (1982b). Working knowledge. In M. M. Kennedy (Ed.), *Working knowledge and other essays* (pp. 1-28). Cambridge, MA: Huron Institute.
- Kennedy, M. M. (1984). How evidence alters understanding and decisions. *Educational Evaluation and Policy Analysis*, 6(3), 207-226.
- Kerr, K. A., Marsh, J. A., Ikemoto, G. S., Darilek, H., & Barney, H. (2005, April). *Districtwide strategies to promote data use for instructional improvement*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec, Canada.
- Lachat, M. A., & Smith, S. (2005). Practices that support data use in urban high schools. *Journal of Education for Students Placed at Risk*, 10, 333-350.
- Manheimer, R. (1995). System leaders apply research in their decision making. *School Administrator*, 52(6), 17.
- March, J. G. (1994). *A primer on decision making*. New York: Free Press.
- Marsh, J. (2003, April). *Understanding joint work: District-community partnerships for educational improvement*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Marsh, J. A. (2006). *Democratic dilemmas*. Albany: State University of New York Press.
- Marsh, J. A., Kerr, K. A., Ikemoto, G. S., Darilek, H., Suttrop, M. J., Zimmer, R., et al. (2005). *The role of districts in fostering instructional improvement: Lessons from three urban school districts partnered with the Institute for Learning*. Santa Monica, CA: RAND.
- Massell, D. (2001). The theory and practice of using data to build capacity: State and local strategies and their effects. In S. H. Fuhrman (Ed.), *From the capitol to the classroom: Standards-based reform in the states. One hundredth yearbook of the national society for the study of education* (pp. 148-169). Chicago: National Society for the Study of Education.
- Massell, D., & Goertz, M. E. (2002). District strategies for building instructional capacity. In A. M. Hightower, M. S. Knapp, J. A. Marsh, & M. W. McLaughlin (Eds.), *School districts and instructional renewal* (pp. 43-60). New York: Teachers College Press.

- Meyer, J., & Scott, W. R. (1983). *Organizational environments: Ritual and rationality*. Beverly Hills, CA: Sage.
- Moll, L., Amanti, C., & Gonzalez, N. (Ed.). (2005). *Funds of knowledge: Theorizing practices in households and communities*. Mahwah, NJ: Lawrence Erlbaum.
- Nafziger, D., Griffith, J., & Goren, P. (1985, April). *San Diego city schools' research cooperative: A marriage of practitioners, researchers, and community members*. Paper presented at the annual meeting of the National Council on Measurement in Education, Chicago.
- Newman, D. L., Brown, R. D., & Rivers, L. S. (1983). Locus of control and evaluation use: Does sense of control affect information needs and decision making? *Studies in Educational Evaluation*, 9, 77-88.
- No Child Left Behind Act of 2001, Stat. 1425 (2002).
- Peterson, G. J. (1998, April). *Demonstrated actions of instructional leaders: A case study of five superintendents*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Reichardt, R. E. (2000). *The state's role in supporting data-driven decision-making: A view of Wyoming*. Aurora: Mid-Continent Research for Education and Learning.
- Roberts, J. M. E., & Smith, S. C. (1982). *Instructional improvement: A system-wide approach*. Philadelphia: Research for Better Schools.
- Robinson, C. M. (1988). Improving education through the application of measurement and research: A practitioner's perspective. *Applied Measurement in Education*, 1(1), 53-65.
- Rowan, B. (1986). *Rationality and reality in instructional management: Results from a survey of districts in the far west*. San Francisco: Far West Laboratory for Educational Research and Development.
- Slavin, R. E. (1989). PET and the pendulum: Faddism in education and how to stop it. *Phi Delta Kappan*, 70(10), 752-758.
- Slavin, R. E., & Fashola, O. S. (1998). *Show me the evidence!* Thousand Oaks, CA: Corwin Press.
- Spillane, J. P. (1998). State policy and the non-monolithic nature of the local school district: Organizational and professional considerations. *American Educational Research Journal*, 35(1), 33-63.
- Spillane, J. P. (2000). Cognition and policy implementation: District policymakers and the reform of mathematics education. *Cognition and Instruction*, 18(2), 141-179.
- Spillane, J. P., & Callahan, K. A. (2000). Implementing state standards for science education: What district policy makers make of the hoopla. *Journal of Research in Science Teaching*, 37(5), 401-425.
- Spillane, J. P., & Jennings, N. E. (1997). Aligned instructional policy and ambitious pedagogy: Exploring instructional reform from the classroom perspective. *Teachers College Record*, 98(3), 439-481.
- Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research*, 72(3), 387-431.
- Spillane, J. P., & Thompson, C. L. (1997). Reconstructing conceptions of local capacity: The local education agency's capacity for ambitious instructional reform. *Educational Evaluation and Policy Analysis*, 19(2), 185-203.
- Spillane, J. P., & Zeuli, J. S. (1999). Reform and teaching: Exploring patterns of practice in the context of national and state mathematics reforms. *Educational Evaluation and Policy Analysis*, 21(1), 1-27.
- U.S. Department of Education. (2002a). *No Child Left Behind: A desktop reference*. Retrieved June 15, 2004, from <http://www.ed.gov/admins/lead/account/nclbreference/reference/pdf>

- U.S. Department of Education. (2002b, March 7). *U.S. Department of Education Strategic Plan 2002-2007*. Retrieved June 14, 2004, from <http://www.ed.gov/about/reports/strat/plan2002-07/index.html>
- U.S. Department of Education (2006, July 21). *LEA and school improvement: Non-regulatory guidance*. Retrieved August 1, 2006, from <http://www.ed.gov/policy/elsec/guid/schoolimprovementguid.pdf>
- Weiss, C. H., Murphy-Graham, E., & Birkeland, S. (2005). An alternate route to policy influence: How evaluations affect D.A.R.E. *American Journal of Evaluation*, 26(1), 12-30.
- West, R. F., & Rhoton, C. (1994). School district administrators' perceptions of educational research and barriers to research utilization. *ERS Spectrum*, 12(1), 23-30.

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