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## Research evidence use by rural central office administrators leading educational improvement

Patricia Moore Shaffer  
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RESEARCH EVIDENCE USE BY RURAL CENTRAL OFFICE ADMINISTRATORS  
LEADING EDUCATIONAL IMPROVEMENT

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A Dissertation

Presented to

The Faculty of the School of Education

The College of William and Mary in Virginia

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In partial fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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By

Patricia Moore Shaffer

May 15, 2011

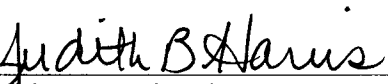
**RESEARCH EVIDENCE USE  
BY RURAL CENTRAL OFFICE ADMINISTRATORS  
LEADING EDUCATIONAL IMPROVEMENT**

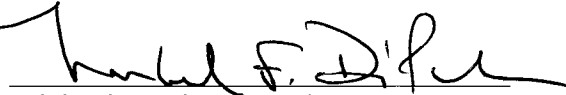
by


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## Dedication

This study is dedicated to the many rural central office administrators I have known throughout my career, whose commitment to their communities and to improving education for all children is nothing short of inspiring.

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I can no other answer make, but thanks, and thanks. ~William Shakespeare

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# RESEARCH EVIDENCE USE BY RURAL CENTRAL OFFICE ADMINISTRATORS LEADING EDUCATIONAL IMPROVEMENT

## Abstract

This study examined the phenomenon of research evidence use by rural school district administrators leading educational improvement. While recent studies have examined research evidence use by urban district administrators (e.g., Coburn, Toure, & Yamashita, 2009), no prior studies have exclusively examined research utilization by rural district administrators.

The study used interviews and document analysis to generate data on why and how administrators used research evidence. Repeated interviews were conducted with nine administrators from across the U.S. who had recently been engaged in educational improvement. Documentation provided by participants offered additional data. Interview transcripts and documentation were analyzed using a grounded theory approach.

This interpretivist study found that research evidence was utilized for diverse purposes by district office administrators, though all participants used research evidence for advocacy purposes. Most participants in this study identified research evidence to consult in multiple ways, most often via professional interpersonal networking and by reviewing published summaries of research evidence. Participants' experience-based professional wisdom was the primary determiner of whether and how research evidence was used in practice. While study participants incorporated research evidence in several ways, there was a clear predilection for using social processes to understand and apply research results. While these findings are fairly consistent with those of earlier studies on research evidence use by urban district administrators (e.g., Coburn, Toure, & Yamashita, 2009), there was less evidence in the participating rural districts of use of local evaluation data and intermediaries, and more evidence of strong social processes operating both within the participating districts and their extended communities.

For policymakers, this study may inform thinking about differentiating policy strategies for the unique rural context for educational improvement or research evidence use. For researchers, an area for further investigation is the social processes used to incorporate research evidence in small rural districts.

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RESEARCH EVIDENCE USE BY RURAL CENTRAL OFFICE ADMINISTRATORS  
LEADING EDUCATIONAL IMPROVEMENT

## Chapter 1

### *Introduction*

Federal policies advocating for evidence-based practice (EBP) increasingly demand that school districts use research-based evidence to ground their educational improvement efforts. The first push in U.S. educational policy to use evidence or findings collected through rigorous research, evaluation, or assessment to inform educational practices emerged during the debates over Federal reading instruction policy in the 1990s (Manna & Petrilli, 2009). The No Child Left Behind Act of 2001 (H.R. Res 1, 2002), with its emphasis on the use of scientifically-based research to inform practice, furthered this push by requiring school districts to use research evidence in educational policy and practice (Datnow, Park, & Wohlstetter, 2007). Scientifically-based evidence is produced through research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs (H.R. Res 1, 2002).

During the administration of President George W. Bush, which extended from 2001 through 2009, the U.S. Department of Education had employed an EBP model to promote the use of scientifically-based research to inform practice (e.g., Whitehurst, 2004). EBP is defined briefly as professional practice guided by evidence derived from research and mediated by professional expertise or wisdom, assessment of clients' needs, and responsiveness to local context (Nutley, Walter, & Davies, 2007). The Department further clarified that the use of research evidence in EBP should include findings from scientific research, but also could be supplemented by findings from local evaluations and databases (REL-Southeast, 2007).

The Department's particular form of EBP, supported by an evidence-based decision-making model, appeared to be similar to the idiographic EBP model used in the medical field.

This model assumes the rational use of scientifically-based evidence in decision-making. That is, the model assumes that educational practitioners will use evidence directly to make decisions related to policy or practice while recognizing that decisions will be mediated by administrators' professional wisdom (Marsh, Pane, & Hamilton, 2006; REL-Southeast, 2007). This EBP model is consistent with satisficing models of decision-making in that it recognizes that real-world decision-making must meet criteria for adequacy, taking into account contextual constraints (Hoy & Tarter, 2008).

However, the Department's EBP model fails to align with real-world decision-making in school districts in two ways. First, Federal policy does not acknowledge the expansive body of implementation research that suggests that research evidence is seldom used in practice to directly inform decision-making. Instead, evidence is believed to be used for conceptual and symbolic purposes to shape the individual and collective working knowledge of district administrators and strategically support predetermined policy or practice decisions (Kennedy, 1982), respectively.

Secondly, there is an underlying assumption that research-based evidence is neutral and that its meaning and implications are self-evident to all organizational actors, or participants in decision- or policy- making processes, within an organization. There is existing qualitative research that shows that evidence does not independently inform decision-making because it is always mediated by interpretation (Coburn, Toure, & Yamashita, 2009). It is the working knowledge of administrators that is central to the interpretation of evidence and ultimately the incorporation of evidence into practice. In the socially complex setting of a school district office, there can be multiple legitimate interpretations of the meaning and implications of a given piece of evidence (Coburn et al., 2009).

Honig and Coburn (2008), in their review of the literature on evidence use in central offices of urban school districts, found that district administrators' processes of using research evidence are complex, spanning the activities of search and incorporation. Administrators appear to search for research evidence both within and outside their school systems and to rely on internal and external sources for different types of information. Incorporation, or the process of interpreting and using evidence in decision-making, is often a social process in which new knowledge is fit into pre-existing understandings or cognitive frameworks by individuals or groups within district central offices. Honig and Coburn reported that the incorporation of evidence into day-to-day district central office decisions was profoundly shaped by a host of conditions, including the nature of the evidence itself. Also affecting the incorporation of evidence into central office decisions was organizational context, which included the opportunities for district staff to engage in collective sense making and the availability of professional role models that demonstrate what evidence use involves (Honig & Coburn, 2008).

While organizational context is an influencing factor in evidence use in district central offices, there is little published research on the use of research evidence by rural district central office administrators leading educational improvement efforts. This paucity of research is not surprising, given that rural educational settings are under-researched compared to their urban counterparts. Rural educational issues rarely attract the attention of prestigious colleges of education and their professorates (DeYoung, 1991). The conservative nature of rural communities, including a resistance to innovation (Stephens, 1998), coupled with a common rural perspective that standards should originate within the community in which the students live (Harmon, 2003), does not often make these districts hotbeds of reform efforts. Rural districts, therefore, are not as attractive to educational researchers as urban districts (DeYoung, 1991).



While rural districts share similar concerns with improving student achievement with their urban counterparts, the nature of educational improvement efforts is presumed to be different due to the unique context and conditions in rural schools (Harmon, Gordanier, Henry, & George, 2007; Harmon, 2003; Stephens, 1998). First and foremost, rural school districts are small-scale organizations (Stephens, 1998). Because of this characteristic, rural districts, as compared to their urban peers, tend to be less bureaucratic (Harmon, et al., 2007; Stephens, 1998). Common weaknesses in the institutional capacity of rural districts limit their ability to mount and maintain educational improvement efforts. These include low fiscal capacity, fewer management support services, less availability of planning support services, and fewer evaluation support services (Stephens, 1998). Overall, rural governments, including rural school districts, suffer from a lack of expertise and human resources, related in part to inadequate fiscal resources and a dearth of training opportunities to develop personnel (Harmon, 2003; Stephens, 1998). All of these factors potentially challenge a rural school district's capability to gain access to, understand, and utilize research evidence to support educational improvement efforts.

Rural school districts are not immune to the Federal press for school systems to use evidence-based practice (EBP) and ground educational improvement efforts in research-based evidence. However, the unique characteristics of rural districts may offer unique challenges and opportunities to administrators accessing, understanding, and using research evidence to support educational improvement efforts. It was surmised that rural district characteristics such as a relatively flat organizational structure, lack of management, planning, and evaluation support services, and paucity of internal expertise are influential factors in evidence use. The existing research on the use of evidence in the larger context of evidence-based practice, while adequately describing how and why urban central office administrators have searched for and

used research evidence to inform educational improvement efforts, does not provide an understanding of how these processes are undertaken in rural districts.

### *Theoretical Perspective*

The theoretical perspective for this study is grounded in two theoretical models that have been utilized to study the use of research evidence to inform educational improvement: an older model that relies on a tripartite scheme of instrumental, conceptual, and symbolic uses of research (Beyer & Trice, 1982; Kennedy, 1982; Rich, 1975, 1977; Weiss, 1979) and sensemaking (Weick, 1995) as it is applied to research utilization, which updates the older model by emphasizing that individuals and groups construct their own meanings and interpretations of research evidence by placing new information into their pre-existing cognitive frameworks, also called working knowledge (Kennedy, 1982). These models assume a cognitive approach to research use, drawing upon the rich cognitive processing theoretical tradition in psychology.

### *Research Utilization Model*

Research utilization, which is defined as the process of transferring research-based evidence into practice (Goode, Butcher, Cipperley, Ekstom, Gosch, Hayes, Lovett, & Wallendorf, 1991; Hunt, 1996; Rodgers, 1994), represents a process whereby research results are translated into useable forms and then implemented (Goode, et al., 1991). Research utilization is considered a key process within contemporary perspectives about EBP. Since research utilization emerged as the focus of several studies of public policy in the late 1970s and early 1980s, discussion in the field has remained centered on instrumental, conceptual, and symbolic uses of research (Amara, Ouimet, & Landry, 2004). Rich (1975, 1977) and Weiss (1979) discussed instrumental and conceptual use as two distinct and different forms of research utilization. In the instrumental model of research evidence utilization, "use" consists of making a decision, and

social science evidence is assumed to be instructive during decision-making (Kennedy, 1982). In the conceptual model, research evidence influences the user's working knowledge of the issues at hand, but it does not account directly for decisions (Weiss, 1979). Pelz (1978) and Beyer and Trice (1982) added symbolic utilization as another form of research use. The symbolic model describes policymakers and practitioners using evidence to support a predetermined position related to a policy or practice decision (Ginsburg & Gorostiaga, 2003).

Instrumental, conceptual, and symbolic uses are considered complementary, rather than contradictory, dimensions of research utilization. Policymakers use research instrumentally, conceptually, and/or symbolically depending on the nature of the organization and its orientation toward decision-making. Research may be used instrumentally to solve predefined problems in an organization in which a rational decision-making process is in place. The conceptual use of research—more common to government agencies than to the private sector—may be identified in settings employing less rational approaches to decision-making. Symbolic uses of research, confirm what decision-makers wish to promote, may be found in settings in which the bargaining-conflict model of decision-making exists (Amara et al., 2004). A growing body of research findings points to organizational context as a significant determining factor in the type of research utilization (e.g., Coburn et al., 2009).

### *Sensemaking Model*

Sensemaking, which Honig and Coburn (2008) argue is the dominant process governing district administrators' use of research evidence, builds on this understanding of the importance of organizational context in influencing the use of research evidence. Sensemaking is a theoretical construct that explains how individuals and groups use cognitive and social mechanisms to deal with ambiguity and uncertainty and construct their own understanding and

interpretations (Weick, 1995). Sensemaking theory is rooted in the insight that the meaning of information or events is not given; new information must always be interpreted through the lens of what is already understood (Brewer & Nakamura, 1984). Individuals and groups interpret evidence by placing new information drawn from research evidence into pre-existing cognitive frameworks, also called working knowledge (Kennedy, 1982; Weick, 1995). An individual's prior working knowledge, which includes the full array of their beliefs, assumptions, and experiences, influences what the individual attends to in their environment, how what they observe is interpreted, and ultimately how it is used (Kennedy, 1982; Spillane, Reiser & Gomez, 2006).

Contemporary research on sensemaking builds on Weick's (1995) seminal work on the sensemaking process in organizations. Weick described seven properties of sensemaking that have direct applicability to how district administrators search for, interpret, and use research evidence. First, sensemaking is understood as a process that is grounded in identity construction. As Weick (1995) explains, an individual makes sense of what they observe (or read) by inquiring about its implications for his/her current and future identity. Secondly, a retrospective focus asserts that individuals make sense of research evidence by reflecting upon its relationship to past events within their organization. Weick notes, for instance, that strategic planning often involves conceptualizing the plan to fit recent history more than the attainment of plans' goals. Sensemaking also enacts sensible environments. Weick explains that individuals create their own sensible environments by reacting to cues and sensory input as data and making information from it that fits with one's concept of the situation. How individuals then respond to the cues further shapes the environments for future action.

Weick also asserts that the nature of sensemaking in organizations is social. While at some levels sensemaking is an individual process, individuals make sense of things in organizations while in dialogue with others, through reading and conversation. Sensemaking is also ongoing. It is constantly negotiated within organizations and therefore the work of sensemaking is never completed. Sensemaking is also based on extracted cues. Individuals within organizations attend to, bracket, and extract certain elements, which become the targets of the sensemaking process. Lastly, sensemaking is based in plausibility rather than accuracy in information. Weick (1995) noted that while sensemaking should offer plausibility, coherence, and reasonableness, it does not need to offer complete accuracy and full information about a situation.

The use of research evidence has been examined through the lens of sensemaking by several prominent researchers in this area, including Coburn, Honig, and Spillane. Applied to the use of research evidence, sensemaking theory enables the researcher to understand the cognitive and social processes that inform the search for, interpretation and use of research evidence by school district central office administrators. On an ongoing basis, district administrators attend to research evidence—either internally generated or from external sources—that is aligned with their working knowledge. Individually, they make sense of research evidence by constructing new understandings and interpretations through the lens of their pre-existing cognitive frameworks and/or working knowledge. As administrators interact with peers in their subunits or across the district, collective working knowledge is reconstructed along the way (Coburn, et al., 2009). Aligned with the understanding that the conceptual use of research evidence is more common than instrumental use, the process of sensemaking does not necessarily result in an

action or decision. Instead, it may result in central office administrators having more and different information about an issue (Weick, 1995).

### *Use of an Integrated Model for this Study*

The conceptual models of research utilization and sensemaking offer complementary lenses to inform understanding of why and how rural district central office administrators search for and use research evidence to ground their educational improvement efforts. Theories of research utilization, which have informed understanding of why administrators seek and use research, inform this study by offering a conceptual understanding of why central office administrators seek and then use research evidence in rural district settings. Organizational context is a key determinant in the purposes of research use; rural district characteristics, including flatter bureaucratic structures, are anticipated to influence administrators' underlying motivations for using research evidence. The theory of sensemaking further informs this study by offering a lens through which to examine the processes by which administrators seek and use evidence. The slimmer staffs of rural central offices and the lack of internal management, planning, and evaluation support services are anticipated to distinguish the collective sensemaking process in rural central offices from their urban peers. Taken together, these two models of research utilization and sensemaking frame this investigation of research use by rural central office administrators and provide rich insight into EBP in rural districts.

### *Significance of the Problem & Problem Statement*

Federal and state policies direct that school district central offices use evidence to ground their educational improvement efforts within an EBP framework. Yet the extant research on EBP within school districts raises questions about the viability of the EBP model promoted by the Federal government (Coburn, et al., 2009; Honig & Coburn, 2008). As Honig and Coburn (2008)

point out in their review of the research literature on evidence-based practices in district central offices, the Federal ideal of EBP does not address the intricacies of how evidence is actually interpreted and used by central office administrators across all types and sizes of school districts. Only by understanding the patterns by which personnel responsible for educational improvement in school district central offices actually use evidence, and the factors that affect this use, can we begin to understand the promise and possibilities of evidence use to support educational improvement efforts.

The results of the current study contribute to an emerging body of research on research utilization in school district central offices by investigating why and how operational knowledge is constructed from research and incorporated into practice by central office administrators responsible for leading educational improvement in rural school districts. Research to date on research evidence use has been conducted primarily in urban districts. However, given the importance of organizational context as a variable in research utilization (David, 1981; Honig & Coburn, 2008; Spillane, 1998), we cannot assume that the motivations and processes for research evidence use are similar across all school district central office settings. The intent of this study was to develop a rich understanding of why and how rural central office administrators use research evidence.

### *Research Questions*

Four focal questions about the complex relationships among research evidence, rural central office administrators, and mediating influences guided this study:

1. Why do rural district central office administrators leading educational improvement search for and use research evidence?

2. How do rural district central office administrators leading educational improvement search for research evidence?
3. How do rural district central office administrators leading educational improvement use or incorporate evidence?
4. What influences how rural district central office administrators leading educational improvement use evidence?



## Chapter 2

### *Introduction*

Federal policies have increasingly demanded that local educational agencies (LEA) use research evidence to ground their educational improvement efforts. The first push in U.S. educational policy to use research-based evidence to inform educational practices emerged during the debates over Federal reading policy in the 1990s (Manna & Petrilli, 2009). No Child Left Behind Act of 2001 (NCLB) (H.R. Res 1, 2002) furthered the push by requiring LEAs to use research evidence in educational decision-making. In fact, NCLB requires that all programs funded through this legislation stem from scientifically-based research (Datnow, et al., 2007).

Despite these Federal policy directives, studies on the use of research evidence in school district central offices confirm earlier public policy findings that say that research evidence is not likely to directly inform decision-making (Weiss, 1979). Instead, it is more likely that district administrators will interpret research evidence through the lenses of their individually constructed working knowledge, thereby augmenting it. Through discussions about research evidence with peers in a process akin to the social construction of knowledge, leaders' interpretations of research evidence and its ramifications continue to evolve over time. As evidence informs individual and collective working knowledge, it indirectly influences administrators' thinking about educational issues and strategies.

In practice, the use of research evidence in educational settings bears greater resemblance to models of evidence-based practice used across the healthcare professions, in which research evidence is acknowledged to inform clinical expertise rather than to directly influence decision-making (Haynes, Devereaux, & Guyatt, 2002). This perspective is markedly different from the

normative EBP model proscribed by the Department of Education, in which research evidence is used instrumentally to inform decision-making (e.g., Whitehurst, 2004).

### *Evidence-Based Practice in Context*

The use of research-based evidence is at the foundation of evidence-based practice (EBP) (Nutley, Walter, & Davies, 2007). EBP, in which professional practice is guided by evidence derived from research, can be found internationally not only in education but also in other public-serving professions, especially medicine and criminal justice, where the pressure for evidence-based decision-making (EBDM) and evidence-based or evidence-informed policy and practice have become primary concerns (Nutley et al., 2007). Increased interest in the use of evidence in practice may be attributed to a number of factors, including the growth in the availability of research findings, the growth in size and capabilities of the research community, and an increased public interest in productivity, international competitiveness, and accountability for public services (Davies, Nutley, & Smith, 2000).

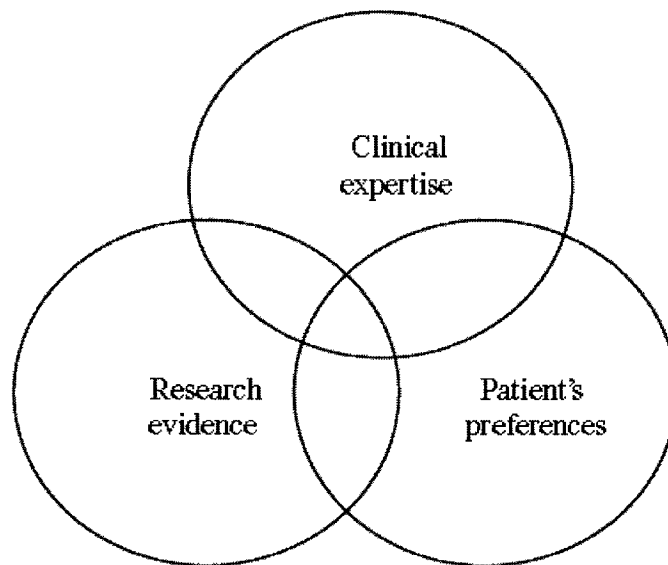
### *Evidence-Based Practice in the Healthcare Professions*

EBP first emerged in the early 1970s within the medical field to reduce the gap between practices shown by research to be effective and what was typically done in clinical practice (Spring, 2007). EBP involves the use of current best evidence in making decisions about the care of individual patients (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). Within the United States, EBP emerged during the last thirty years amidst calls for increased quality and accountability in medical care (Wennberg & Gittelsohn, 1973; Wennberg, Fisher, & Skinner, 2004).

*Idiographic model of evidence-based clinical decisions.* While there are variations of EBP practiced across the health professions, the idiographic approach that relies upon decision-

making for the care of individual patients as advocated by Sackett et al. (1996) has been most commonly adopted. Idiographic evidence-based practice within the health professions as it emerged in the late 1990s was characterized by the use of (a) the best available research evidence; (b) clinical expertise; and consideration of (c) patient values, preferences, characteristics, and circumstances in the clinical decision-making (Spring, 2007). Considered a tripartite decision-making model, each informational component of the model must be considered and integrated to provide the optimal care of the patient (Spring, 2007). This classic model of idiographic evidence-based practice in the medical field is illustrated below in Figure 3.

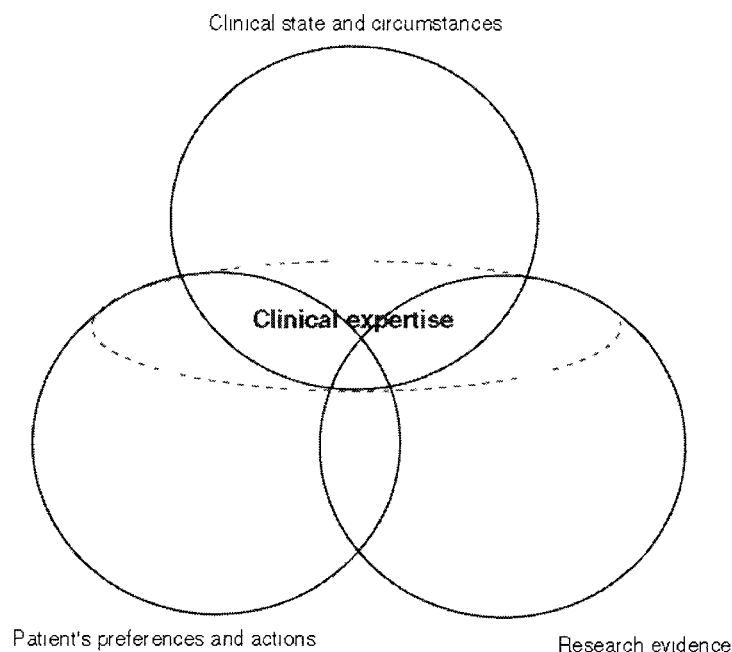
**Figure 3. Idiographic Model of Evidence-Based Clinical Decisions (Satterfield, Spring, Brownson, Mullen, Newhouse, Walker, & Whitlock, 2009)**



*Updated idiographic model of evidence-based clinical decisions.* Concern that this model lacked specific guidance in how the three informational components were to be integrated in the decision-making process led to a refinement of the medical EBP model. This updated model features the same core elements of (a) the best available research evidence; and consideration of (b) patient values, preferences, characteristics, and circumstances in the clinical decision-making

(Spring, 2007). However, the updated model changed the clinical expertise component to “clinical state and circumstances” and moved clinical expertise to the intersection points of the three informational components. This change acknowledges the central role of clinical expertise in eliciting, appropriately appraising, and integrating these sources of information (Haynes, et al., 2002). The central placement of clinical expertise also highlights the value of clinical experience in guiding the EBM decision-making process, acknowledging the important contribution of the practitioner (Satterfield, et al., 2009). This updated model is presented below as Figure 4.

**Figure 4. Updated Idiographic Model of Evidence-Based Clinical Decisions (Satterfield, et al., 2009)**



*Research evidence in medical EBP.* In medical EBP, what constitutes best research evidence is dependent upon the question needing to be addressed (Sackett & Wennberg, 1997). For instance, questions about etiology or prognosis are ideally addressed by examining evidence from a longitudinal cohort study, while evidence from a randomized clinical trial (RCT) is

considered to provide the best available research evidence concerning the efficacy of treatments (Spring, 2007). Systematic reviews, which synthesize the findings from many treatment trials, and single-case experimental design studies that test the treatment of interest with the target patient, typically top the medical field's hierarchy of evidence (Spring, 2007).

While there is relatively strong agreement within medicine as to what constitutes research evidence, there is not similar agreement across the other health professions. Because of the dearth of RCT evidence, evidence-based practice in nursing relies more on evidence from non-randomized designs; sources for nursing evidence include quality improvement data, patient satisfaction data, and cost-effectiveness analyses. Evidence-based practice in social work also uses a fairly inclusive definition of evidence and includes findings from both qualitative and quantitative designs (Satterfield, et al., 2009).

*Clinical expertise in medical EBP.* Of the three elements within EBP, clinical expertise is considered the most controversial (Spring, Pagoto, Whitlock, Kaufmann, Glasgow, Smith, Trudeau, & Davidson, 2005). To counter criticisms directed at this element that argue that clinical expertise can be misconstrued as unquestioned intuition, there has been a movement to identify the required competencies of the health professional and to embed these competencies in preparation programs (Spring, 2007). For example, the American Psychological Association (APA) Presidential Task Force on Evidence-Based Practice (2006) defined psychologists' clinical expertise as containing eight competencies (e.g., assessment, diagnostic judgment, systematic case formulation, and treatment planning), described how those competencies could be acquired, and the role of expertise in the clinical decision-making process. The task force also recognized the limitations of expertise and cognitive biases influencing clinicians' judgment. The concept of clinical expertise has also been enlarged in some behavioral health fields—such as

social work—to professional expertise, acknowledging that professionals have additional roles, such as management and policy, in addition to their clinical practice (Satterfield, et al., 2009).

*Context in medical EBP.* Patient preferences, characteristics, and circumstances are viewed as the most under-developed element of EBP, although the inclusion of this element is considered critical to the movement towards shared health decision-making. Shared decision-making requires two preconditions. The first is a departure from a paternalistic care model in which the provider makes decisions on the patient’s behalf. The second is progress towards a more culturally informed shared model of care, in which medical care providers respect and help patients clarify their own values and treatment preferences (Spring, 2007). The APA Presidential Task Force on Evidence-Based Practice, in its articulation of variables to be considered in the patients’ informational component, evolved the EBP model. The task force identified variables such as identity and sociocultural factors (e.g., age, gender, ethnicity, social class, religion, income), functional status (e.g., ability to work), readiness to change, level of social support, and developmental history as important to the clinical decision-making process (Satterfield, et al., 2009). Other factors considered across the medical field include the availability of insurance coverage and logistical considerations such as geographic access to trained clinicians, scheduling, transportation, and child care (Spring, 2007).

Calls for improved accountability in education have led U.S. policymakers to demand increased use of research evidence. Given the leadership of the medical field in evidence-based practice (EBP), it is not surprising that the U.S. Department of Education borrowed heavily from EBP practices in medicine in the formulation of policy directives (e.g., Whitehurst, 2002). The next section describes how the Department adapted medical EBP for use in educational contexts.

### *Evidence-Based Practice in U.S. Educational Policy*

The push in U.S. educational policy to use evidence from scientifically-based research to inform educational practice first emerged during the debates over Federal reading policy in the 1990s. These debates, coupled with the work of the National Reading Panel, produced the Reading Excellence Act of 1998 (H. Res. 2614, 1998), which included 29 references to scientifically-based reading research (Manna & Petrilli, 2009). With the authorization of NCLB (H. Res 1, 2002), the U.S. Department of Education began to emphasize evidence-based approaches to other areas of education beyond reading. In NCLB, research evidence supporting the identification and implementation of educational interventions is referred to as scientifically based research. This term, which appears over 60 times in NCLB (H. Res 1, 2002), is defined in the Act as research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs.

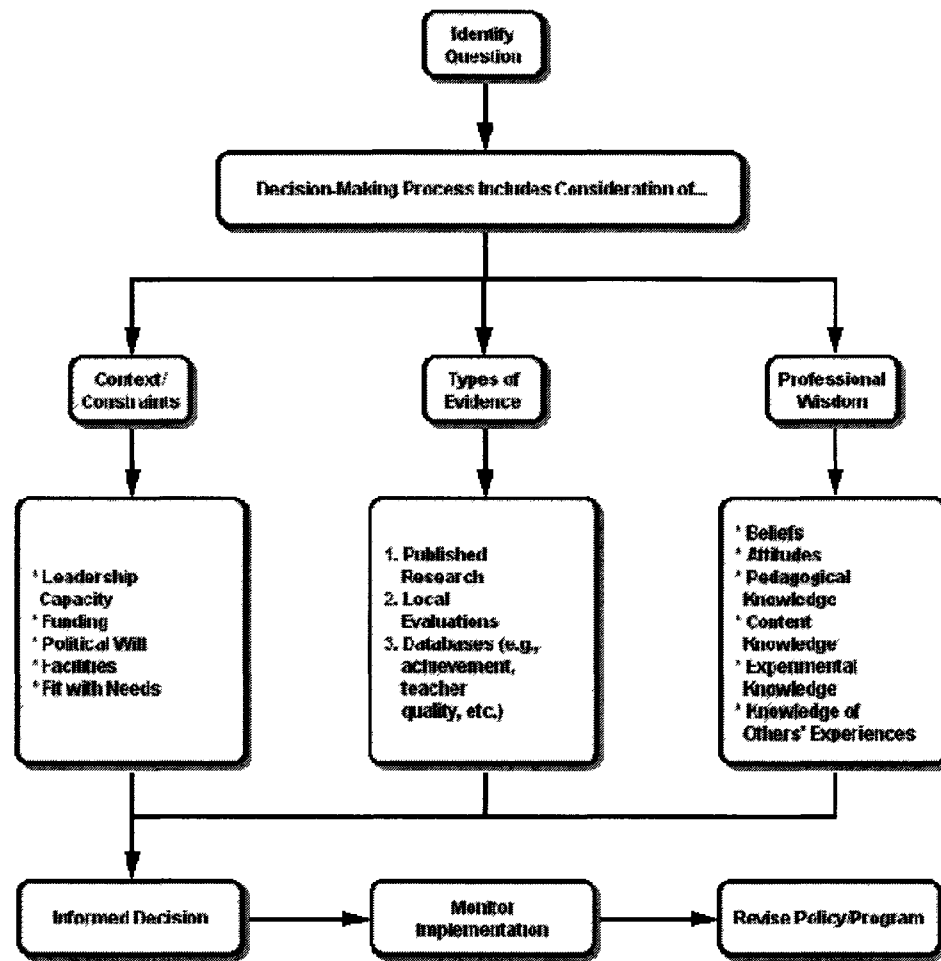
The legislation described above did not prescribe evidence-based practice but promoted the use of research evidence to directly inform decision-making in educational settings. However, since the passing of NCLB, the U.S. Department of Education has promoted a form of EBP, supported by an evidence-based decision-making model, which appears to be modeled after the classic idiographic EBP model used in the medical field. In a 2007 publication by the Regional Educational Laboratory (REL)-Southeast, a laboratory funded by the U.S. Department of Education to serve the educational needs of a designated region, the three informational components of evidence-based decision-making are identified as a) evidence, defined as findings from scientifically-based research but also supplemented by findings from local evaluations and databases consistent to definitions of evidence found in the behavioral sciences; b) professional wisdom, or the judgment that professionals acquire through experience and that includes beliefs,

attitudes, pedagogical knowledge, and content knowledge; and c) context/constraints, including leadership capacity, resources, politics, client needs, and similar variables in the local setting.

The parallels between the Department model and the classic tripartite medical EBP may be observed by comparing Figure 1 (p. 15) and Figure 3, below. In the U.S. Department of Education model, professional wisdom has been substituted for clinical expertise and context/constraints for patient's preferences. Further discussion of the informational components of the Department's EBP model follows.



**Figure 3. Evidence-Based Practice Model, U.S. Department of Education (REL-Southeast, 2007)**



*Evidence.* Similar to EBP in the medical field, which has developed a fairly rigid hierarchy of evidence (Sackett & Wennberg, 1997; Satterfield, et al., 2009), the Department of Education has been strongly prescriptive in stating that evidence must be drawn from scientifically-based research. While NCLB (H. Res 1, 2002) states that scientifically-based research includes both experimental and quasi-experimental designs, there is a stated preference for random-assignment experiments. The U.S. Department of Education also sponsored the Committee on Scientific Principles for Education Research. This committee’s 2002 report endorsed NCLB’s definition of scientifically-based research. A 2003 user guide published by the Coalition for Evidence-Based Policy and supported by the U.S. Department of Education,

however, further clarified the nature of the scientifically-based research that provides acceptable evidence of an intervention's effectiveness. The guide stated that only randomized controlled trials could be used as strong evidence, provided that the trials are well designed and implemented, and show effectiveness in two or more typical school settings, including a setting similar to that of the practitioner's own school or classroom (Coalition for Evidence-Based Policy, 2003). A notice published in 2005 in the Federal Register added other quasi-experimental research designs to the approved list of scientifically based evaluation methods, including regression discontinuity and single-subject designs, but only under certain conditions (Scientifically Based Evaluation Methods, 2005).

Local evaluation findings and data are also considered by the Department as appropriate evidence of an intervention's effectiveness (REL-Southeast, 2007). Grover Whitehurst, former director of the Institute of Education Sciences, stated during a 2004 interview that it was entirely appropriate and highly desirable for school districts to collect performance data on interventions they select, whether their effectiveness is validated by strong evidence or not (T.H.E. Journal, 2004). Local evaluations allow district leaders to collect information on outcomes when a new intervention is implemented with their target population. Datasets on student performance, teacher quality, and other indicators drawn from local, state, and national databases provide another useful sources of evidence to inform decision-making (REL-Southeast, 2007).

Despite the Department's efforts to advocate for a rigid hierarchy of evidence, current educational literature is hardly in agreement with what constitutes evidence (Berliner, 2002; Kowalski, 2009). Many commentators have criticized the scope of scientifically based evidence as defined by the U.S. Department of Education as too narrowly defined. The American Evaluation Association (AEA) and the American Educational Research Association (AERA)

have made statements arguing against the Department's scope of scientifically based research. At the time the Department released its notice of proposed priority for evaluating educational programs using scientifically based methods, the AEA issued a statement arguing that the proposed priority exhibited significant misunderstandings about (1) the types of studies capable of determining causality, and (2) the methods capable of achieving scientific rigor. With regard to the types of studies capable of determining causality, the AEA argued that RCTs are not the only studies capable of generating understandings of causality. They are sometimes not the best design for determining causality, and occasionally have to be ruled out because of ethical concerns. The AEA also suggested that there is a repertoire of scientifically rigorous methods that extend beyond the experimental and quasi-experimental methods included in the notice of proposed priority (AEA, 2003). The AERA made similar arguments, asserting that the choice of a scientific method or methods must be selected in light of the problem and questions driving the research and that selected methods must be used rigorously (Levine, 2003).

*Professional wisdom.* The medical EBP element of clinical expertise, while not addressed explicitly in NCLB (H. Res 1, 2002), was incorporated into the U.S. Department of Education's approach to using evidence in education. In an October 2002 presentation, Whitehurst defined evidence-based education as the integration of professional wisdom with empirical evidence in making decisions about delivering instruction (Whitehurst, 2002). In the same presentation, he defined professional wisdom as the judgment that educators acquire through experience. In 2007, an IES-supported publication further clarified that professional wisdom encompasses educators' beliefs, attitudes, pedagogical knowledge, content knowledge, experimental knowledge, and knowledge of others' experiences (REL-Southeast, 2007).

While Whitehurst's statement implied that professional wisdom should be "integrated" with research evidence in decision-making, the Department's model for evidence-based decision-making (EBDM) that appears in IES-supported publications clearly indicates that research evidence should be the primary basis for decisions. The role of professional wisdom is secondary; it is used to inform practitioners' interpretation and use of the research evidence (Lewis, McColskey, Anderson, Bowling, Dufford-Melendez, & Wynn, 2007; REL-Southeast, 2007). In this manner, the Department assumes a more radical stance than most of the healthcare professions, which recognize the primacy of clinical expertise even while emphasizing its integration with research evidence and patients' preferences (Haynes, et al., 2002; Spring, 2007). In a 2004 speech made at Northwestern University, Whitehurst further clarified the Department's perspective about professional wisdom in a statement in which he criticized researchers and educators who rely on professional wisdom rather than empirical research:

The technologies of systematic empiricism, including the randomized trial, statistical modeling, psychometric assessment, and quantified observations are a threat to the way of life of researchers who are not trained in these technologies, and to education professionals whose practices are grounded in pre-empirical professional wisdom, intuition, and self-directed creative expression (Whitehurst, 2004, pp. 10-11).

The Department of Education has been criticized harshly for its less-than-favorable perspective on the value of professional wisdom. Some scholars have argued that Department policy and initiatives devalue local, contextual knowledge and understanding by emphasizing the primacy of research evidence (e.g., Bridges, 2008; Pring, 2004). This interpretation appears to be shared by many educators who believe that NCLB (H. Res 1, 2002) diminishes their professional standing (e.g., Kowalski, Lasley, & Mahoney, 2008). Significantly, criticisms that professional

wisdom is neglected in favor of research evidence are not dissimilar from those that have been used to criticize earlier versions of EBP in the health professions (e.g., Satterfield, et al., 2009).

*Context / constraints.* Consideration of the target population's characteristics and circumstances is an essential part of the U.S. Department of Education's approach to EBP, which is parallel in intent to the medical field's interest in incorporating the patient's preferences and circumstances into the decision-making process. Department-supported publications, for instance, have urged the consideration of the local context for implementation, including available resources and political constraints (REL-Southeast, 2007). Whitehurst (2002) emphasized that research evidence must be considered in light of local contexts and constraints. He noted that participants reviewing scientifically based research must consider if the studies under examination involved participants and settings representative of those of the target population. Even though research on an intervention might indicate that it improved achievement significantly when compared to a control group, implementation of that intervention in a different school setting might not achieve the same impact. For this reason, he argued, it is appropriate to balance the available scientifically based research and professional wisdom with an understanding of the unique characteristics of the local population.

While the Department has made statements about the need to balance findings with an understanding of the local context, there have been concerns expressed within the educational research community that the Department does not emphasize a stronger consideration of the appropriateness of transferring findings from scientifically based research, especially RCTs, to local settings. That is, the Department should emphasize the importance of considering the effects of local contexts on the outcomes of tested educational interventions, including where interventions have worked, for whom, and why (e.g., Bransford, Vye, Stipek, Gomez, & Lam,

2009). Stronger consideration of local variations in contextual variables, such as the socio-cultural characteristics of the local population, teacher quality, the stability of local district leadership, the nature of assessments, local and state funding levels, and opportunities for professional development, is strongly recommended in both the design of experimental studies and the interpretation and transfer of their findings (Bransford, et al., 2009).

The class size study in Tennessee, which utilized randomized trial methodologies, provides a powerful example of the danger of transferring findings from scientifically based research to other settings without a strong consideration of local context and constraints. In the 1980s, the Tennessee legislature funded an experimental study, Project STAR (Student/Teacher Achievement Ratio) to test the effectiveness of smaller class sizes. The study found several positive outcomes associated with smaller class sizes, including improved teaching conditions, improved student performance during and after the experimental years, improved student learning behaviors and reduction in disruptive classroom behaviors, and fewer student retentions (Finn & Achilles, 1999). California's Class Size Reduction (CSR) initiative was supported in part because of the positive findings from the Project STAR study (Illig, 1996). The CSR initiative reduced K-3 class sizes throughout the state by roughly ten students per class. During the early years of CSR implementation, however, the outcomes of class size reduction realized in Tennessee's Project STAR study did not transfer when implemented in California. Scholars now believe that a major contextual difference between the Tennessee and California studies—the supply of qualified teachers—contributed to the difference in outcomes between the two studies (Jepsen & Rivkin, 2009). Tennessee had a large supply of well-trained teachers readily available to fill the extra slots to reduce classroom sizes. Several areas of California did not have this advantage during the initial years of implementation, which resulted in a number of the newly

created small classes being taught by untrained teachers (Bransford et al., 2009; Jepsen & Rivkin, 2009). In this example, California's neglect of the requisite local conditions for successful implementation of this policy strategy contributed to its failure to produce significant outcomes during CSR's early years.

The Department of Education's current approach to EBP, with its emphasis on evidence from a rigidly defined hierarchy of scientifically based research, its denigration of professional wisdom, and somewhat muted calls for consideration of local context and constraints, is not consistent with contemporary EBP models across the healthcare professions that recognize clinical expertise as the primary informant of decision-making and research evidence as informing clinical expertise (Haynes, et al., 2002). The research literature on use of research evidence also has questioned if how EBP is practiced is consistent with EBP models and policies. The research literature on research utilization in school district central offices, which is discussed in the next section, has found consistently that research evidence does not directly inform decision-making but does influence administrators' individual and collective working knowledge.

#### *Use of Research Evidence in U.S. School Districts*

The use of research evidence is an integral component of EBP and, as described earlier, is embedded in Federal policies and in the U.S. Department of Education's evidence-based decision-making model. Also known as research utilization, which is defined as the process of transferring research-based evidence into practice (Hunt, 1996; Rodgers, 1994), the use of research evidence represents a process whereby research information is translated into a useable form and then implemented (Goode, et al., 1991). While evidence use had been the focus of several studies in public policy in the late 1970s and early 1980s, recent Federal policy

promoting evidence-based practice has reinvigorated scholarly interest in the use of research evidence in educational practice.

The literature was reviewed for studies on the use of research evidence in education. The review sought to answer the current study's research questions about research utilization by rural district central office administrators:

1. Why do district central office administrators involved in educational improvement search for and use research evidence?
2. How do district central office administrators involved in educational improvement search for research evidence?
3. How do district central office administrators involved in educational improvement use or incorporate evidence?
4. What influences how district central office administrators involved in educational improvement use evidence?

#### *Purposes for Research Evidence Use*

Research evidence is utilized in a variety of ways and for diverse purposes by district office administrators. Several key studies (Corcoran, Fuhrman, & Belcher, 2001; Kennedy, 1982, 1984; Newman, Brown, Rivers, & Glock, 1983; Robinson, 1988) that examined the purposes of research evidence use interpreted the findings using existing models for research utilization that date to the late 1970s and early 1980s. Instrumental, conceptual, and strategic purposes for research evidence use are common models employed by researchers to understand why research evidence is used (Ginsburg & Gorostiaga, 2003).



*Instrumental model.* In the instrumental model of research evidence utilization, "use" consists of making a decision, and social science evidence is assumed to be instructive to the decision. Decisions are deemed to be rational and sound if based on evidence (Kennedy, 1982). Several types of instrumental use have been articulated into versions of the basic model. In the problem-solving version of the instrumental model, use of research evidence follows the identification of a problem. The research evidence, which may be pre-existing or research may be commissioned to fill a knowledge gap, is used to determine a solution to the identified problem (Ginsburg & Gorostiaga, 2003; Kennedy, 1984; Nutley et al., 2003). The knowledge-driven version of this model is not tied directly to a problem-solving process. Instead, it presumes that basic social science research may produce findings with practical application; applied research is then conducted to define and test the basic research findings for practical action; and technologies or methods are developed in order to apply the findings (Weiss, 1979). On the basis of research conducted to date, Weiss (1998) argued that the instrumental use of research evidence is quite rare.

Confirming these arguments that research evidence is rarely used to directly inform decision-making, an early study on school board members' (N=229) and superintendents' (N=54) use of evaluation information (Newman et al., 1983) identified district administrators' tendency to rely primarily upon opinions of key stakeholders rather than research evidence during the decision-making process. In this study, the researchers provided evaluation vignettes about social and curricular decisions to participants. Each vignette featured a description of a school program and evaluation decision that was based on an actual case drawn from the media, interviews with school administrators, or surveys of educators. Provided with two vignettes (one social, one curricular), participants were asked to respond to a combination of ten closed- and

open-ended questions that assessed how they would respond as decision-makers to the vignettes. Among the findings, the researchers reported that administrators typically desired information in the form of opinions from key stakeholders, especially superintendents, teachers, students, and parents. Research evidence in the form of program achievement data (outcome data) was considered desirable to inform the decision-making process, but was of secondary importance (Newman, et al., 1983).

*Conceptual model.* The conceptual model of research evidence use focuses on the “human information processor” rather than the decision (Kennedy, 1984, p. 207). In this model, individuals are assumed to already possess a considerable body of professional knowledge prior to reviewing new research evidence and, therefore, approach the evidence with a well-developed cognitive model of the issues at hand (Spillane, Reiser, & Gomez, 2006). In the conceptual model, research evidence influences the user's working knowledge of the issues at hand although it does not account for decisions (Weiss, 1979). Under this model, evidence is not specifically instructive, but it is nevertheless relevant, and use consists of thinking about and learning from the evidence (Kennedy, 1984).

There are specific versions of the conceptual model that highlight facets of its complex and diffuse process of research evidence use. In the interactive version of the conceptual model, research findings are used along with experience, political insight, and judgement from a variety of actors both internal and external to an organization in a nonlinear process of decision-making (Weiss, 1979). In the enlightenment version of the conceptual model, the concepts and theoretical perspectives that emerge from research evidence serve to shape decision-makers’ general thinking about issues, which then become relevant to specific decisions (Ginsburg & Gorostiaga, 2003). In this version, research evidence is disseminated to policymakers and

practitioners through diverse sources, including the media, professional journals, and communications with peers, shaping their perspective on policy and practice issues (Weiss, 1979) in a process also referred to as knowledge maintenance (Holzner & Fisher, 1979).

The conceptual use of research evidence by administrators is supported by a study by Saha, Biddle, and Anderson (1995) on the awareness and use of research evidence by school administrators in the United States and Australia. The study examined whether principals believed that research had value in their daily decision-making and which factors might explain their attitudes toward the value of educational research evidence. In-depth interviews and standardized questionnaires were administered to samples of school administrators in Australia (n = 39) and the United States (n = 81) about their knowledge and use of the results of educational research. Among their findings, the authors reported that school administrators held a generally positive view of research, considered it to be mostly relevant to their work, and tended to use research in their decision-making. They considered themselves to be regular, thoughtful users of research knowledge. However, when asked about their use of research knowledge, over 77 per cent responded that they learned from research materials in a manner akin to that suggested by the enlightenment version of the conceptual model. Less than 7 percent reported that research affected their opinions, suggesting that the instrumental model of research utilization is not appropriate (Hemsley-Brown & Sharp, 2003; Saha, et al., 1995).

*Strategic or symbolic model.* The strategic or symbolic model of research evidence use suggests that policymakers and practitioners use evidence to support a predetermined position related to a policy or practice decision. There are three distinct versions of this model. In the political version, research evidence is used selectively to provide support for a position previously adopted in relation to a policy or practice decision (Ginsburg & Gorostiaga, 2003). In

the tactical version, the fact that research is being conducted or commissioned is used to enhance the credibility of decision-makers and their actions. Finally, in the promotional version of the strategic model, research evidence is used to promote policy and practice decisions to individuals who may not have been involved in the decision-making process (Ginsburg & Gorostiaga, 2003; Weiss, 1979).

An early and seminal study that contributed to understanding the strategic use of research evidence in district central offices was conducted by Mary Kennedy (1982) under contract to the National Institute of Education (NIE). Kennedy's study focused on how school districts were linking evaluation and test data to managerial, instructional, or programmatic improvement. The researcher conducted site visits to 16 school districts, conducting interviews with a cross-section of district staff and policymakers, including teachers, school administrators, central office administrators, and school board members; the researcher also observed meetings, including school board meetings, when possible. Prominent among her findings was that study participants used evidence in a conceptual or strategic manner. During her observations of meetings, Kennedy observed, for instance, that evidence was used both conceptually and strategically to inform others, to respond to others, and to persuade others. Research evidence contributed to participants' working knowledge but, similar to Weiss's (1998) findings, was not found to be essential to a decision (Kennedy, 1984).

Other studies provide evidence of the strategic use of research evidence within school district central offices. In a qualitative study of three school districts, Corcoran, Fuhrman, and Belcher (2001) found that district central office staff generally felt that decisions ought to be supported by or at least consistent with research. However, consistent with the strategic model of research utilization, the researchers observed through their interviews that district staff who

championed specific reforms examined the research literature selectively and found theories and evidence to justify their approaches. Alternatively, they recruited intermediaries who were advocates of the preferred strategy. Robinson (1988), in her detailed documentation of a district central office's approach to evidence use, described how central office administrators used social science research in school board presentations to influence school board opinions, even when they had not used the research to develop, select, or implement those programs.

The strategic model also informs understanding of why central office administrators avoid using research evidence. Birkeland, Murphy-Graham and Weiss (2005), in their examination of why staff in 16 school districts ignored national evaluation findings of the ineffectiveness of the Drug Abuse Resistance Education (D.A.R.E.) program, found that administrators dismissed the findings in part because they valued the D.A.R.E. program for reasons the evaluations did not usually consider. Research evidence is not likely to be persuasive to those for whom other values have a higher priority (Birkeland, et al., 2005).

### *Use of Research Evidence*

While a few key studies provide an introduction to the complexity of district central office decision-making processes (Honig, 2003; Kennedy, 1982; Spillane, 1998), research on how district central office administrators use research evidence remains scant, in part because researchers have primarily relied on self-report data rather than on the extended in-depth interviewing and/or on-site observations that uncovering decision-making processes may require (Honig & Coburn, 2008). In their review of the literature on evidence-based decision-making in district central offices, Honig and Coburn (2008) provide a model through which to understand the processes of evidence use. According to their analysis of extant studies, evidence use involves two primary activities: a) searching for or accessing evidence from a variety of sources

(i.e., search) and (b) incorporating or deciding not to incorporate evidence into organizational decisions through an intensive process of interpretation (i.e., incorporation) (Honig, 2003; Kennedy, 1982, 1984). The summary of results that follows examines research findings through this lens.

*Search.* Also referred to as exploration (Levitt & March, 1988) and knowledge acquisition (Huber, 1991), search is an integral part of the process of research evidence use (Honig & Coburn, 2008). Search refers to the often haphazard processes by which information enters an organization (Honig, 2003; Kennedy, 1982). Research evidence may be identified and brought into an organization by individual organizational members, including new staff members hired specifically because of the knowledge they will bring with them. An organization may also designate individuals or organizational units to collect information external to the organization (Honig & Coburn, 2008; Huber, 1991). Information may also be transmitted to an organization (Honig & Coburn, 2008) as, for example, when the U.S. Department of Education provides new guidelines for a Federal funding program that affects districts.

District central office administrators appear to search for research evidence within and outside their school systems and to rely on internal and external sources for different types of information. District central office administrators search sources internal to public school systems for evidence about their progress. Offices of research and evaluation within some district central offices conduct evaluations (Robinson, 1988), and central office administrators use evaluation findings to inform their thinking or for political purposes to support or advocate against specific programs or interventions.

An important early study that examined in particular how central office administrators use internal evaluation findings was conducted by Jane David (1981). In this study that examined

how Title I evaluation findings were used in LEAs, the researcher conducted face-to-face interviews with Title I administrators, school administrators, teachers, and parents in 15 Title I districts in six states. Analysis of evaluation reports and related documents was also conducted. David found that internal evaluation evidence was typically viewed as a confirmation of existing beliefs, as an indicator of success, and as a public relations document. Significantly, this response was only triggered by positive evaluation findings. Negative findings were usually not utilized, although the researcher reported a few instances when a negative evaluation report was taken as a gross indicator of a programmatic weakness that must be addressed (David, 1981).

District central office administrators also look beyond their organizational boundaries for evidence not typically available from internal searches. Existing research suggests that while practitioners access research evidence in many different ways, they did not identify scholarly research journals and published research reports as primary sources. Rather, they relied more heavily on professional journals and bulletins, professional associations, conferences, magazines from unions, the Internet (through e-mail and Web sites), national and regional research and development organizations, visiting researchers, and materials distributed by the government, as well as colleagues and “trusted sources” (Biddle & Saha, 2002; Huang et al., 2003; Nelson, Leffler, & Hansen, 2009; St. Clair, Chen, & Taylor, 2003). Professional conferences, particularly regional conferences, are also considered a valued resource for receiving information that was immediately relevant to practitioners’ own contexts (Huang et al., 2003). Colleagues were also mentioned as a valuable resource to district administrators, with more than half the 30 superintendents in the study by Huang and colleagues (2003) reporting that they relied “heavily” on personal communication to receive current information on research in the field.

*Incorporation.* Also referred to as interpretation (Honig, 2003), incorporation refers to how organizational members make sense of and use research evidence once it has been identified and brought into an organization (Weick, 1995). Studies (e.g., Coburn, et al., 2009; Honig, 2003; Kennedy, 1982; Spillane, 1998) confirm that when research evidence enters a district central office, administrators engage in a process of deciding whether and how to use the information. While rational models of decision-making assume that research evidence, once known, can be used to weigh alternative actions, Honig and Coburn (2008, p. 592) point out 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.”

Kennedy’s (1982) seminal study established the notion that individuals and groups in educational organizations fit new knowledge into their preexisting understandings or cognitive framework (Honig & Coburn, 2008; Nutley, et al., 2003). She found that participants interpreted research evidence through the lens of an already-existing body of working knowledge and then used their interpretations of evidence primarily to modify that working knowledge, a finding later confirmed by West and Rhoton (1994). Notably, she found that evidence never directly informs decision-making but influences working knowledge which may in turn influence decision-making. Kennedy (1982) defined working knowledge as:

. . . 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. (1982, pp. 1-2)



Several studies have highlighted the dissemination of research evidence through social processes (Cousins & Leithwood, 1993; Kennedy, 1982; Rogers, 1995). The process of incorporation is highly social in nature, involving many people in meetings and informal conversations across time. That is, knowledge is socially constructed (Hemsley-Brown & Sharp, 2003; Honig & Coburn, 2008; Nutley, et al., 2003). Conceptual frameworks that describe the social construction of knowledge include diffusion of innovations (Rogers, 1995), distributed cognition (Hutchins, 1995), institutional theory (March & Olsen, 1989; Meyer, 1977), organizational change management (Buchanan & Badham, 1999; Huczynski & Buchanan, 1985; Wilson, 1992), organizational learning (Dodgson, 1993; Senge, 1990), and sensemaking (Weick, 1995).

Kennedy (1982) found that these interactive processes created shared beliefs and understandings across groups of people that became part of the working knowledge that shaped decision-making. The districts she visited, for example, made ample use of committees and other shared decision-making bodies, providing ample opportunity for the development of shared knowledge. During these formal interactions, she observed that evidence was used to inform others, to respond to others, and, similar to Rogers' (1995) diffusion of innovations model, to persuade others. Notably, during these interactions, participants may or may not have developed a shared interpretation of the evidence. However, the meaning of the evidence also continued to evolve as it was communicated among and processed by increasing numbers of participants (Kennedy, 1982).

A study conducted by Cousins and Leithwood (1993) that examined the use of knowledge utilization as a strategy for school improvement also found that incorporation is a social process. Employing a survey of district staff (N=155) and school administrators (N=233),

the researchers collected data on the characteristics of the source of information and the context in which dissemination had taken place. The researchers concluded that school improvement was an organizational change process, schools are social systems, and knowledge is socially constructed. In order to promote social learning—a prerequisite to the social construction of knowledge—the authors concluded that school improvement information should be disseminated widely within districts (Cousins & Leithwood, 1993; Hemsley-Brown & Sharp, 2003).

### *Influences upon Research Evidence Use*

In Honig and Coburn's (2008) review of the literature on evidence use by district central office administrators, several factors were highlighted—specifically the characteristics of the evidence itself, individual and collective working knowledge, social capital, and local context, including district central office organization, institutional norms, and political dynamics—that influence evidence use. Nelson, et al. (2009) also emphasize the important role of intermediaries, including educational consultants, who bring research evidence to the attention of administrators and assist in translating research into practice. These influences are discussed below, with support provided from the research literature.

*Nature of the research evidence.* Honig and Coburn (2008) argued that district central office administrators' use of evidence is shaped by the nature of the evidence itself—namely, its availability, accessibility, ambiguity, and credibility. Evidence supporting this statement is found in a 1994 study by West and Rhoton, in which barriers to use of research evidence by school district administrators were identified. The researchers conducted a survey of district administrators (N=543) in 132 school districts in the state of Tennessee to assess attitudes toward the research process. The complexity of research reports, which contributed to the inaccessibility of research and the ambiguity of its interpretation, were identified by survey respondents as

barriers to the use of research (West & Rhoton, 1994). In the previously described study by Corcoran et al. (2001), district central office administrators also commented on the availability of research, reporting that they had trouble finding social science research or evaluation data related to pressing issues within their district.

In a longitudinal case study of one urban school district by Coburn and Talbert (2006), central office administrators (N=24) expressed issues with the credibility of research evidence based on the research design used or type of study site. Drawing conclusions from 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 certain types of research designs, including quasi-experimental designs. Other administrators rejected evidence from studies, regardless of design, if the research sites did not closely resemble their own (Coburn & Talbert, 2006).

*Role of intermediaries.* Several researchers (Coburn, 2005; Corcoran, et al., 2001; Nelson, et al., 2009) have recognized the important role of non-system actors, also known as intermediaries, in bringing research evidence to the attention of district administrators and often facilitating the translation of research into practice. Nonsystem actors, which include educational reform organizations, advocacy organizations, thinktanks, professional associations, independent professional development providers, publishers of curriculum and other educational resources, and universities, promote and translate research evidence and policy ideas to district staff (Coburn, 2005; Nelson, et al., 2009). Nonsystem actors interact with districts in many ways, including as matchmakers who bring researchers and users together to facilitate meetings and other activities to foster collaborative relationships; as translators and processors, who translate information to make it understandable for the user group; as providers who use different vehicles

of communication to get the information out; and as articulators of user perspectives to promote better communications between the research and user groups (Sin, 2008).

The recent study by Nelson, et al. (2009) sought to identify when, how, and under what conditions research evidence is used by policymakers and practitioners; what other sources of information these individuals rely on; and what factors serve as barriers or facilitators to using research evidence in making policy and practice decisions. The researchers collected data through structured focus groups and individual interviews from a limited, self-selected sample of 65 influential leaders in the areas of policy and practice. These leaders represented six groups of Federal, state, and local educational interests and included congressional staff members, deputy state commissioners of education, state education committee legislators, school board trustees, school district superintendents, and school district staff such as central office personnel, building principals, and teachers. The research team found that intermediaries are the most common source for research evidence used in decision-making by policymakers and practitioners. Intermediaries were perceived by participants as the most important component in the process of accessing, understanding, and applying research to decisions related to policy and practice. Notably, “trusted individuals” within intermediary organizations are consulted when decision-makers want to know the most important research relevant to their needs or want assistance in interpreting and translating research into practical terms (Nelson, et al., 2009, p. 49).

*Individuals' working knowledge.* Honig and Coburn (2008) propose that an individual's working knowledge strongly mediates evidence use. As was discussed earlier, studies (Birkeland, et al., 2005; Corcoran et al., 2001; David, 1981; Kennedy, 1982) demonstrate that central office administrators will search for and pay attention to research evidence that is aligned with their expectations or their desires. Conversely, they will ignore research evidence that is not

aligned with their interests (David, 1981). Individual preferences for certain kinds of evidence and individual attitudes about research and evaluation generally also influence searching (Coburn & Talbert, 2006; David, 1981; West & Rhoton, 1994). Searching is also influenced to some degree by the individual characteristics of the district central office administrators. West and Rhoton (1994), reporting findings from a survey of 543 administrators in public school systems in Tennessee, found that individuals' years of administrative experience and educational background had a significant influence on their perceptions of research evidence. Taken together, an individual's beliefs, expectations, preferences, and characteristics shape their working knowledge.

As discussed earlier, working knowledge also influences incorporation of research results as individuals interpret evidence through the lens of their preexisting beliefs, experiences, and content knowledge (Corcoran et al., 2001; Cousins & Leithwood, 1993; Kennedy, 1982; Spillane, 1998; Spillane et al., 2002; West & Rhoton, 1994). The study by Cousins and Leithwood (1993), which examined the use of knowledge utilization as a strategy for school improvement, contributes to an understanding of factors that positively influence incorporation of research evidence by school district administrators. They found that the perceived relevance of the source information was a key factor in the use of research findings and that school administrators and district staff were more likely to use research when the findings met their information needs. Among their conclusions, the authors reported that the alignment of the information with local needs, and its perceived value, relevance, and timeliness all contributed to a positive impact on its use (Cousins & Leithwood, 1993; Hemsley-Brown & Sharp, 2003).

*Individuals' social capital.* A significant variable affecting individuals' search and incorporation of research evidence is their social capital—that is, their formal and informal

relationships with others and the degrees of trust, shared norms, and expertise that characterize those ties (Honig & Coburn, 2008). Individuals' social capital within their organizations, such as a district central office, can influence their incorporation of research evidence. As discussed earlier, several studies, including by Kennedy (1982), suggest that social interactions through meetings and consulting with colleagues can foster the development of common frames of reference or ways of viewing issues that guide how groups interpret evidence and incorporate it into their decision-making (Honig, 2004; Kennedy, 1982).

District central office administrators' external social capital, consisting of relationships that span organizational boundaries, also influences their use of research evidence. Central office administrators with connections to external organizations, such as professional associations and reform support providers, for instance, have easier access to social science research and research-based practice (Spillane & Thompson, 1997). As discussed earlier, these external organizations, especially in the form of intermediaries, may also help administrators link research with local needs and conditions, which arguably is essential to attention and use of research evidence (Hong & Coburn, 2008; Spillane & Thompson, 1997).

*Local context.* Local context, including district central office organization, organizational norms, resource availability, and political dynamics, influences central office administrators' understanding of the research evidence by mediating their attention toward it (Coburn, et al., 2009; Honig & Coburn, 2008; Spillane, 1998). These local contextual factors are discussed in greater detail below.

Honig and Coburn (2008) argued that the organization of district central offices can either hinder or help the use of research evidence. Central office staff may have work demands that limit the time available to search and incorporate evidence. Additionally, poor

interdepartmental communications in mid-sized and large district central offices may impede the use of research in decision-making (David, 1981; Honig & Coburn, 2008; Spillane, 1998). In her study of local uses of Title I evaluations, David (1981) found that districts' administrative structures discouraged a connection between the program staff and the evaluation staff, which hindered the use of internally produced evaluation findings. Corcoran and colleagues (2001) also found that when central office departments failed to unite under common reform agendas, collaborative sensemaking of research evidence was hindered.

A recent longitudinal case study of a mid-sized urban school district by Coburn, et al. (2009) provides an illustrative example of the influence district organization on the use of research evidence. This study examined the role of evidence in instructional decision-making at the central office level and the factors that shaped how decision processes unfolded. Conducted over a three-year period, the study drew its data from in-depth interviewing, sustained observation, and document analysis. The researchers observed that in this district, responsibility for instruction was divided among multiple organizational subunits, each of which had distinct, yet often overlapping, sets of responsibilities. As a result of this structure, decision-making related to instruction was often stretched across multiple subunits and layers of the central office. Because professionals in different subunits typically had different content knowledge and sometimes limited interaction with each other, they often used very different ways of framing problems and conflicting ideas about appropriate solutions. Perhaps in response to this situation, the researchers observed a tendency to respond to these differences by narrowing participation back into particular subunits in which the shared understandings enabled what appeared to district administrators to be more efficient decision-making (Coburn et al., 2009).

The use of research evidence by district central office administrators is strongly influenced by district culture and norms (Birkeland, et al., 2005; Corcoran et al., 2001; David, 1981; Honig, 2003; Honig & Coburn, 2008). David (1981, p. 38) found that in many district cultures evaluation was considered “a dirty word” because of its association with the “threat of accountability.” Ten years later, Corcoran and colleagues (2001), in their study of three school districts, found that the use of research evidence was greater in district central office subunits where norms and expectations supported ongoing engagement with empirical research. In the districts under study, professional development subunits typically did not have an evidence-based culture and, conversely, tended to make decisions that were not grounded in research evidence.

District leadership plays a significant role in district climate as it affects the use of research evidence. District leaders, including superintendents and other district central office administrators with supervisory authority over other administrators, wield considerable power to require or discourage the use of research evidence in decision-making and practice, limit or encourage collective participation in decision-making, and create the expectations for and model different approaches (e.g., conceptual) to using research evidence (Coburn, et al., 2009; Nelson, et al., 2009). Only the longitudinal case study of one urban school district by Coburn, et al. (2009) specifically described how the actions of the district superintendent influenced the use of research evidence in decision-making. In that study, a new superintendent scaled back the extent of participation in decision-making, shifted some administrators into new positions of authority, and brought alternative frames for diagnosing problems. These changes introduced by the superintendent ultimately affected the search for and interpretation of research evidence (Coburn, Toure, & Yamashita, 2009).



The highly politicized nature of many school districts, in which schools and central office subunits engage in political struggles for resource allocations, is another strong influence on use of research evidence (Coburn et al., 2009; Honig & Coburn, 2008; Nelson, Leffler & Hansen, 2009). As was discussed earlier in the section on purposes of research evidence use, the strategic model of research evidence use suggests that policymakers and practitioners use research evidence to support a predetermined position related to a policy or practice decision (Ginsburg & Gorostiaga, 2003). Numerous examples of strategic use of research evidence appears in the research literature, including Kennedy's (1982) findings that administrators looked for and incorporated evidence into their decision-making when that evidence promised to address their interests.

The availability of resources, while related to political dynamicism, is a significant independent variable within the local context that also influences the use of research evidence. In the recent longitudinal case study by Coburn, et al. (2009), budgetary reductions were found to have a profound effect on the use of research evidence and decision-making. The researchers found that decision trajectories became increasingly interrupted and drawn out. Discussions about a particular issue or concern would begin and then recede in the press of competing priorities, only to reappear later in the face of a new crisis or an impending deadline. Resource constraints also contributed to more conservative decision-making, with less interest in searching for new, innovative solutions to problems. Less funding was also available for intermediary organizations to provide consulting services. The researchers observed that constrained resources made it less likely that decision-making involved conceptual use of research, less likely that conceptual use of research enabled shared understandings, and more likely that decision makers used evidence symbolically (Coburn et al., 2009).

## *Conclusion*

As this literature review has demonstrated, Federal educational policies, modeled after evidence-based practice (EBP) models used across the healthcare professions, have increasingly pushed school district central offices to use research evidence in educational decision-making. However, Federal policies and guidelines on research evidence use overlook two critical aspects of EBP. First, Federal policy does not acknowledge the body of implementation research that suggests that research evidence is seldom used in practice to directly inform decision-making. Instead, evidence is used for conceptual and strategic purposes to, respectively, shape the individual and collective working knowledge of district administrators and strategically support predetermined policy or practice decisions. Secondly, Federal policy overlooks the critical and central role of professional wisdom or working knowledge in the interpretation of evidence and ultimately the incorporation of evidence into practice.

The extensive literature on the purposes of research use within districts emphasizes that research evidence is typically not used to directly support decision-making. That is, the use of research evidence is not instrumental. Instead, the conceptual and strategic models developed during the late 1970s and early 1980s still explain effectively why district administrators use research evidence. These models will be used in this study to understand for what purposes rural district administrators leading educational improvement use research evidence.

While the research literature on use of research evidence by district central office administrators remains scant, evidence use consists of two primary activities: search and incorporation. Spanning these activities is the process of sensemaking, in which administrators make sense of evidence by connecting it to what is already known on an individual and collective level. Assuming that knowledge is socially constructed, the process of sensemaking is

critical to understanding how research evidence is transformed into working knowledge and indirectly influences how administrators frame the decision-making process within district central offices. Mediating the sensemaking process are several factors, including the characteristics of the evidence itself, individual and collective working knowledge, and local context, including availability of resources and intermediaries. The sensemaking model will be applied in this study to understand how rural district administrators leading educational improvement use research evidence.

The research on the use of evidence by rural district central office administrators to support educational improvement is nearly non-existent. Still, the unique characteristics of rural districts, especially their comparative lack of a complex bureaucracy but also of management, planning, and evaluation support services, coupled with a paucity of internal expertise, create unique challenges as well as opportunities in how and why administrators gain access to, understand, and use research evidence to support educational improvement efforts. Given the continuing Federal policy press for the use of evidence in decision-making about educational improvement, there is a clear need to learn more about the purposes of and uses for research evidence in these rural contexts, and what influences why and how evidence is used. The nature of these research questions suggested the appropriateness of a non-positivistic research design and methods for this study; the qualitative design for this study is outlined in Chapter 3.

## Chapter 3

This chapter describes the qualitative research design employed to address the research questions outlined in Chapter 1 and to generate data about the motivations and processes for research evidence use by central office administrators in rural school districts. The research paradigm and inquiry strategy were deliberately nonpositivistic in response to the nature of the research questions. The methods for data generation, which included interviews and document analysis, were consistent with the paradigm and inquiry strategy and also consistent with studies to date on the use of research evidence in district central offices. The chapter concludes with a discussion of how trustworthiness and authenticity were assured in this study.

### *Paradigm*

This qualitative study was framed by an interpretivist paradigm. For the purpose of this study, the term qualitative is used to both describe the subject of the research inquiry and to describe the general research approach. The purpose of qualitative inquiry is to understand the meaning of human action (Schwandt, 2007). Through qualitative inquiry, researchers generate data on persons' lived experiences, behaviors, and feelings, as well as about organizational functioning, social movements, and cultural phenomena (Strauss & Corbin, 1998; Schwandt, 2007). Common qualitative data generation methods include interviews, observations, and document analysis. Qualitative analysis typically refers to a nonmathematical process of data reduction and interpretation (Strauss & Corbin, 1998).

A qualitative approach was deliberately selected in response to the nature of the research questions for this study. A qualitative approach is often used to explore substantive areas about which little is known (Stern, 1980), such as research utilization by rural district central office administrators. It is also appropriate for a qualitative approach to be adopted in order to obtain

“intricate details” of a phenomenon, such as the thought processes associated with research utilization, which may be difficult to extract or learn about through quantitative research methods (Strauss & Corbin, 1998, p. 11).

The descriptive goals of this study were best suited to qualitative inquiry undertaken within an interpretivist paradigm. Kuhn (1962), in his landmark monograph, *The Structure of Scientific Revolutions*, used the term paradigm in his arguments about the rationality of scientific inquiry. Kuhn used the term in two distinct ways. First, a paradigm referred to a type of cognitive framework, or, as Schwandt (2007, p. 217) described, “an exemplar or set of shared solutions to substantive problems used by a well-defined, specific community of scientists . . . both to generate and to solve puzzles in their field.” However, Kuhn also used the term to describe a disciplinary matrix, or the values, assumptions, and beliefs about the aims of social inquiry and methods shared across a discipline. It is this latter description of a paradigm that is more commonly used by researchers today (Guba, 1990; Schwandt, 2007; Strauss & Corbin, 1998).

Within qualitative inquiry, there is not a definitive categorization of paradigms (Patton, 2002). Lincoln and Guba (2000) identified five alternative inquiry paradigms: positivism, post-positivism, constructivism, critical theory, and participatory. Schwandt (2000) discussed three epistemological stances for qualitative inquiry, which are interpretivism, hermeneutics, and social constructionism. Crotty (1998) further muddies the paradigmatic waters by identifying three epistemological stances, which are objectivism, constructionism, and subjectivism. Disagreements on paradigmatic categorizations will likely continue, as practitioners propose new paradigms to address anomalies in observed phenomena that current paradigms have failed to address in a process Kuhn (1962) described as revolutionary science.

For this study, Schwandt's (2000) definition of the interpretivist paradigm was used to undergird the research design. The interpretivist paradigm focuses on individuals' experiences in the social world (Rossman & Rallis, 2003), appropriate for a study focusing on how central office administrators use research in an organizational setting. According to Schwandt (2000), the interpretivist stance assumes that social action is inherently meaningful. Thus, to understand a particular social action, the inquirer must understand the meanings that constitute the action. To find meaning in a social action, the inquirer must interpret in a particular way what the actors are doing.

Studies conducted within an interpretivist paradigm share certain characteristics. Interpretivist researchers aim to foster adequate dialogue between themselves and participants in order to collaboratively construct a meaningful reality (Rossman & Rallis, 2003), while respecting and demonstrating fidelity to the lived world of the participants (Schwandt, 2000). Interpretivist research, therefore, requires an inquirer to apprehend and understand this meaningful reality in the lived context of the person experiencing the situation under study (Wilson, 2002). Interpretivist researchers use a method that allows the researcher to "step outside their historical frames of reference . . . and to claim a purely theoretical attitude as observers" (Schwandt, 2000, p. 193). This approach helps the researcher to "bracket," or set aside assumptions about the subject under study (Schwandt, 2000). In their attempts to communicate the rich meanings of lived experience, interpretivist researchers also generate "thick descriptions," defined by Geertz (1973, p. 39) as the "description that goes beyond the mere . . . reporting of an act (thin description), but describes and probes the intentions, motives, meanings, contexts, situations and circumstances of action."

Within qualitative inquiry, there are specific interpretivist stances for this process of interpreting or understanding social action, which, according to Schwandt (2000) are empathic identification or intentionalism, phenomenological sociology, and language games. Empathic identification requires the inquirer to “grasp the subjective consciousness or intent of the actor from the inside,” which requires an “act of psychological reenactment” (Schwandt, 2000, p. 192). Phenomenological sociology aims to identify and describe the subjective experiences of actors in the lived world of everyday life, and to seek the meanings of those experiences (Schwandt, 2000; Schwandt, 2007). Language games refer to the inquirer’s aim to understand human action through the systems of meanings within human language (Schwandt, 2000). The phenomenological stance, with its emphasis on seeking the meaning of lived experiences, was appropriate for this study that examined district administrators’ practices.

### *Inquiry Strategy*

A strategy of inquiry is a bundle of skills, assumptions, and practices that the researcher employs as he or she moves from the research paradigm to the conduct of research (Denzin & Lincoln, 2000). Since the study involved the study of a phenomenon, the appropriate strategy of inquiry was phenomenology. In this study, the phenomenon of rural district central office administrators’ use of research evidence was the focus of inquiry.

Phenomenology is the study of human beings' lived experience (Rossman & Rallis, 2003). Phenomenologists believe that social reality should not be conceived as a fixed and objective external reality. Rather, social reality is a product of human action. The primary object of phenomenological inquiry is human beings, that is, actors considered both in their relations to others, but also with regard to their own subjective lives (Overgaard & Zahavi, 2009). Phenomenology therefore recognizes that both the individual and society through their actions

contribute to social reality. Key to phenomenological inquiry is the concept of intersubjectivity, which Wilson (2002) described as the experience of the lived world with and through others.

Integral to a phenomenological approach is a “careful description of ordinary conscious experience of everyday life,” which Schwandt (2007, p. 225) concisely describes as the “lifeworld.” The phenomena described by the inquirer in study results include what individuals experience: perception through the senses, believing, feeling, deciding, evaluating, and other experiences related to human action (Schwandt, 2007). However, phenomenological descriptions of the lifeworld require the inquirer to turn away from the nature of the phenomena being examined, and instead focus on their meanings. As discussed in the previous section, this process requires the inquirer to “bracket” or to suspend their everyday assumptions in order to focus on the phenomenology of participants’ experiences of the everyday world (Schwandt, 2000; Schwandt, 2007).

Core to a phenomenological strategy of inquiry is identifying the common elements of the experience within a specific societal group. While each individual has a unique set of experiences to which she ascribes meaning, a phenomenological inquirer assumes a commonality across these individual experiences, and uses bracketing to search for those commonalities (Eichelberger, 1989). This concept of common experiences is critical to this study, which sought common experiences in research utilization across a sample of central office administrators in rural school districts.

### *Theoretical Framework*

As described in Chapter 1 and developed further in Chapter 2, this study was framed by a perspective that drew on two theoretical models that have been used to study the use of research evidence to inform educational improvement. The first theoretical model of research utilization



relies on a tripartite scheme of instrumental, conceptual, and symbolic uses of research (Beyer & Trice, 1982; Kennedy, 1982; Rich, 1975, 1977; Weiss, 1979). The second model of sensemaking in organizations (Weick, 1995) updates the older model by emphasizing that individuals and groups construct their own meanings and interpretations of research evidence by placing new information into their pre-existing cognitive frameworks, also called working knowledge (Kennedy, 1982).

The integrated theoretical framework enabled the researcher to understand the cognitive and social processes that inform the search for, interpretation, and use of research evidence by school district central office administrators. It suggested that district administrators initiate a search for research evidence for a variety of reasons that may be examined using the research utilization model. The search for research evidence, which may be understood through the models of instrumental, conceptual, and strategic use, but also through the model of sensemaking, is strongly influenced by internal and external contextual factors. Administrators, for instance, may be motivated to search for evidence for strategic reasons; they may also attend to research evidence—either internally generated or from external sources—that is aligned with their working knowledge. Individually, they make sense of research evidence by constructing new understandings and interpretations through the lens of their working knowledge. As administrators interact with peers in their subunits or across the district, collective working knowledge is reconstructed along the way (Coburn, et al., 2009). Individual and collective working knowledge influence the incorporation of research evidence into practice. These two theoretical models of research utilization and sensemaking have been integrated into a framework for understanding research evidence use in school districts most recently by Coburn et al. (2009).

The resulting theoretical framework, with its emphasis on social processes, is aligned with the interpretivist paradigm, which focuses on individuals' experiences in the social world (Rossman & Rallis, 2003). Consistent with a phenomenological approach, the study sought to describe district administrators' experiences searching for and incorporating research evidence. Using primarily an interview approach, the researcher generated data on administrators' perceptions, beliefs, decisions, and other experiences related to the use of research evidence. Of note, the researcher searched for commonality across individual administrators' experiences, since the intent of this study was to search for common experiences in research utilization across a sample of central office administrators in rural school districts.

### *Methods*

Researchers use methods as tools for generating and analyzing data. In qualitative research, the researcher is the primary instrument for generating data (Denzin & Lincoln, 2000). A researcher-as-instrument statement, also referred to as a researcher identity memo (Maxwell, 2005), describes events in a researcher's personal and professional experience that led him or her to pursue a particular research topic. It also documents values and biases that might affect interpretation of the data. The act of writing the statement helps the qualitative researcher become more conscious of his/her biases and therefore better able to control their impact on data generation and analysis processes.

The researcher as instrument statement, which can be found in Appendix 1, details the researcher's perceptions, beliefs, and values related to research use in school district central offices. The statement also details her 23-year professional involvement with central office administrators through her various roles as an educator and administrator in informal educational institutions that worked in partnership with school districts, as a grant and policy writer working

in a school district central office, and as an external program evaluator and researcher working with school district staff, including central office administrators. These experiences have informed the inquirer's perspective that research is used in a variety of ways by central office administrators, including to inform decision-making but also to justify and advocate for action.

In order to ensure that the research leads to rich data, chosen data generation methods must be rooted in the study's research questions (Stake, 1995). The following sections detail the approaches used to identify and recruit a national sample and to generate data with its members.

### *Sample*

At the core of a phenomenological study are in-depth interviews with people whose lived experiences shed light on the research question (Patton, 2002; Rossman & Rallis, 2003). Since this study proposed to generate and collect data on rural central office administrators' self-reported use of research evidence as part of reform efforts, all of the participants in the sample were currently employed as central office administrators in rural public school districts and leading some type of educational improvement.

Since the focus of interest was on research utilization in association with educational improvement, the involvement of rural districts engaged in educational improvement was sought using intensity sampling. In this approach to sampling, information-rich cases that manifest the phenomenon of interest are sought (Patton, 2002). Rural districts engaged in educational improvement initiatives were identified through a review of Web-posted U.S. Department of Education discretionary grant awards to school districts supporting educational improvement during 2008, the most recent fiscal year for which award data were posted at the time work was initiated on this study. Specific discretionary grant programs that support educational improvements were reviewed; a list of grant programs is presented in Appendix 10. A list of

grant awardees from these programs was generated using the U.S. Department of Education's online grant award database.

The rural status of grant awardees was verified by checking their National Center for Education Statistics (NCES) locale code using the 2007-08 dataset from the NCES Common Core of Data (CCD). Districts with the locale code of "rural, remote" or "rural, distant" were considered eligible for this study. These locale codes were used to identify districts in Census-defined rural territories that are more than five miles from an urbanized area as well as rural territories more than 2.5 miles from an urban cluster (National Center for Education Statistics, n.d.). Other studies of rural school districts have used locale codes to identify rural districts (e.g., Yan, 2006). The NCES district locale codes are derived from a classification system originally developed in the 1980s to describe a school's location, ranging from "large city" to "rural." The codes are based on the physical location, which is by an address that is matched against a geographic database maintained by the Census Bureau. A school district's locale code is not assigned on the basis of the central office address, but is derived from the locale codes of the schools in the district. If 50 percent or more of the public school students attend schools with the same locale code, that locale code is assigned to the district (National Center for Education Statistics, n.d.).

Small rural districts were removed from the sample, since it was surmised that districts with very small central office staffs are less likely to be intensively engaged in Federally-supported educational improvement projects. These districts were identified using the U. S. Department of Education's 2008 eligibility list for the Small Rural School Achievement Program. The stated purpose of this program is to address the unique needs of small rural school districts that frequently lack the personnel and resources needed to compete effectively for

Federal competitive grants. To be eligible for this program, the total number of students in average daily attendance at all of the schools served by the school district must be fewer than 600. Alternatively, each county in which a school served by the district is located must have a total population density of fewer than 10 persons per square mile (U.S. Department of Education, 2009).

Once eligible districts were identified, a stratified sampling approach (Patton, 2002) was used to select nine districts from which the central office administrators were recruited. School districts were selected based on geographic location intended to ensure the representativeness of the sample. The U.S. Census Bureau region was used as an indicator of the geographic location of a school district. The four census regions (Northeast, Midwest, South, West) were used to stratify the sample by selecting at least two school districts within each census region from the list of identified rural school districts engaged in educational improvement. If a district was not responsive to the request for participation, a replacement district was sought from the same census region. Once the districts from the pool of potential district participants were recruited, those in this eligibility list were removed before the sample's members were selected.

Within the selected school districts, one or two central office administrators directly involved in the district's educational improvement efforts were identified through an initial contact with the district superintendent's office; a standard email message was used for this initial contact with superintendents' offices (See Appendix 11). This approach of snowball sampling entailed asking key members of the organization to identify potential participants (Patton, 2002). Of note, two district superintendents highly recommended the participation of school administrators who also held joint appointments in the districts' central offices. For this

reason, the definition of central office administrator was broadened for this study to include school administrators who also held central office positions.

Nine central office administrators were interviewed by telephone for this study. The recommended central office administrators were first contacted by email and questioned to make sure that they satisfied the criteria for participation described above; a standard email message was used for this initial contact with central office administrators (See Appendix 11). If administrators agreed to participate and they also met the criteria of holding a central office position and being directly involved in the district's educational improvement efforts, they were confirmed for participation in the research study. A consent form (See Appendix 8) was then emailed to the participants and the first two interview times were arranged. In recognition of participants' time contributed to this study, the researcher offered to contribute \$100 to a school library of each participant's choice. Only two participants provided information about a recipient library in response to the researcher's emailed request at the time that the third interview was scheduled; the other seven participants either declined or did not respond to this request.

### *Data Generation*

In order to understand the use of research evidence by rural central office administrators engaged in educational improvement, phenomenological data collection and generation strategies were used. Telephone interviews were conducted with participants about their use of research evidence. Interviews were transcribed verbatim and coded to find similarities and recurrent themes among participants; the data analysis section that follows describes the analytical process in greater detail. Sample interview transcripts are provided in Appendix 2. Artifacts, such as news articles and evidence-based program fact sheets, were provided by the participants; sample documents are provided in Appendix 3. Analysis of these artifacts, in addition to analysis of

interview transcripts, assisted the researcher in understanding administrators' use of research evidence. This focus on lived experiences is consistent with a phenomenological approach.

*Interviews.* As described in this section, interviews were conducted by telephone with central office administrators to gain insight into the research questions:

1. Why do rural district central office administrators involved in educational improvement search for and use research evidence?
2. How do rural district central office administrators involved in educational improvement search for research evidence?
3. How do rural district central office administrators involved in educational improvement use or incorporate evidence?
4. What influences how rural district central office administrators involved in educational improvement use evidence?

Repeated interviews with participants are characteristic of phenomenological inquiry, since prolonged and in-depth engagement with individuals characterizes this type of study (Rossman & Rallis, 2003). Following Seidman's (1998) recommendations for phenomenologic in-depth interviewing, it was the researcher's intent to conduct three recursive interviews with each participant. The first interview inquired into the participant's professional history and produced general information about that person's orientation to research utilization. The second interview oriented both the researcher and the participant to the specific phenomenon of interest, which is research utilization with regard to educational improvement. The intent of the third interview was to obtain participants' reflections on their own experiences as shared during the earlier interviews and to consider if their own experiences were reflected in a summary of

preliminary research findings prepared following analysis of transcripts from the first and second interviews. At the time of initial communication about this study, each participant was asked to suggest interview dates and times for the first and second interviews. The researcher conducted first and second interviews with all nine participants.

The scheduling of the third interview proved challenging. Using a standard email message (See Appendix 12), the researcher shared the summary of preliminary findings and invited participants to propose dates and times for the third interview. Only two participants responded to this initial request for a third interview. A reminder email was sent to the other seven participants, encouraging them to contact the researcher to schedule a follow-up interview. An additional four participants responded to this follow-up email. After the deadline for scheduling an interview passed, the researcher sent a follow-up email to the remaining three participants, offering them the option of responding by email to the summary of initial findings (See Appendix 12). Following this communication by the researcher, these three participants responded by email to the summary of initial findings. These emails were used in lieu of an interview transcript as the document for analysis; a sample email response is provided in Appendix 2.

All interviews were conducted by telephone. Since a national sample of rural district administrators was selected, telephone interviews were considered to be an acceptable alternative, since face-to-face interviews were not feasible due to time and distance constraints. Studies that compare telephone and face-to-face interviewing tend to conclude that telephone interviewing produces data that are at least comparable in quality to those obtained face-to-face (Worth, 2001).



Each interview was anticipated to last approximately an hour, producing up to three hours of interview data per participant. Individual interviews ranged in length from 30 to 70 minutes. Because a third interview was not conducted with some participants, the total interview time per participant ranged from 70 to 180 minutes.

Interview guides were prepared for all three interviews (see Appendix 9). An interview guide approach involves outlining a series of questions that will be explored with each participant during the interview. The general interview guide allows flexibility to probe deeply to illuminate a particular topic. It served as a checklist during the interview to ensure that all topics were addressed (Patton, 2002). Consistent with a semi-structured interview protocol, the questions were used in a flexible manner, with the researcher reordering or rephrasing the questions as appropriate to the context and flow of each particular interview.

Throughout the interviews, the researcher's understanding was checked by asking participants to verify or correct the researcher's reconstructions of the participants' statements. This process, known as member checking, allowed participants to make corrections to both factual and interpretive information (Guba & Lincoln, 2001). Examples of member checking during interviews are presented in Appendix 6. Member checking will be described in greater detail in the section that follows.

In qualitative research, data analysis begins almost immediately (Stake, 1995). For this reason, interviews were transcribed verbatim immediately following the event; sample transcripts are presented in Appendix 2. Following the recommendations of Strauss and Corbin (1998), analysis of interview transcripts and related text-based artifacts followed each round of interviews so that understanding of concepts gained through the analytical process informed each new round of interviews.

Summaries of the first two interviews for each administrator were prepared, and participants were provided with copies of their two interview summaries via email and asked to recommend corrections. This email also included requests by the researcher for artifacts and/or clarification on topics or issues raised during the interviews. A sample email containing an interview summary and a request for artifacts is presented in Appendix 7. Following data analysis, excerpts of the preliminary findings which contain verbatim quotations by specific participants were shared with those participants, and they were encouraged to recommend corrections; an example is presented in Appendix 7. These are additional forms of member checking, or making sure that the participants' perspectives have been understood and communicated accurately by the researcher (Manning, 1997).

*Artifact collection.* Extant text-based artifacts related to research utilization in support of educational improvement were collected directly from interview participants. During each interview, the researcher listened for the participant to mention extant artifacts, which included meeting minutes, electronic discussion group exchanges, electronic research articles, web pages, and electronic or paper memoranda that included citations or references to research evidence, grant guidelines, Federal guidance documents, and other planning documents that cited research evidence, as well as PowerPoint presentations or other informational documents that cited research evidence. These extant artifacts were those in which the researcher was not involved in construction and that exist independently of the study. An examination of extant artifacts and interview data was intended to spark insights about the relative congruence between participants' words and deeds (Charmaz, 2006). The researcher requested electronic copies of artifacts mentioned during the interviews, following up by email to confirm the requests. Not all participants provided documents; in these cases, the researcher sought documentation through

other means, including examining district websites or online resources specifically mentioned during interviews.

Member checking was conducted with participants to ensure that artifacts were not misinterpreted. An interpretation of the artifact was prepared in the form of an analytic memo, and participants were provided with copies via email and asked to recommend corrections; questions requiring clarification were also submitted at that time. A sample analytic memo and associated member check are provided in Appendix 7. Following data analysis, excerpts of the preliminary findings which contain verbatim quotations from text-based artifacts were shared with corresponding participants; participants were encouraged to recommend corrections. This is another example of member checking to ensure that the participants' perspectives have been represented accurately by the researcher (Manning, 1997).

### *Data Analysis*

A grounded theory data analysis strategy, which employs an inductive approach to research (Patton, 2002), was used to analyze the data collected and generated in the study. Utilizing an inductive approach to qualitative data analysis in which theory is developed from the data, grounded theory methodology is a highly developed, rigorous set of procedures for generating formal theory of social phenomena from data (Schwandt, 2007). The following section details the grounded theory data analysis strategy that was used in this study.

*Analysis of interview data and artifacts.* Grounded theory analysis rests on the practice of coding, which is a procedure that disaggregates data by breaking it into manageable segments and labeling those segments using codes that represent their content relative to the study's focus (Strauss & Corbin, 1998). This study used Strauss and Corbin's (1998) grounded theory analytical method, which includes three levels of coding—open, axial, and selective. Each level

of coding moves further away from the original data to a higher level of abstraction in analysis. The constant comparative method was used throughout the coding process, which allowed the researcher to make ongoing comparisons among participants, among data units from the same participant, between data and the categories used to describe it, and among categories (Charmaz, 2006; Strauss & Corbin, 1998). N-Vivo qualitative data analysis software was used by the researcher as a tool for all levels of coding.

In grounded theory analysis, open coding provides a way of breaking the data apart and “delineating concepts to stand for blocks of raw data” (Strauss & Corbin, 1998, p. 195). The sentence was the unit of analysis for the open coding process. As each sentence of data was reviewed, it was either assigned one or more already-established codes, or new codes were created that better reflected the content of the data segment. The researcher used open coding on the first and second readings of the transcripts and artifacts.

Axial coding, or the act of relating concepts and categories together, was employed during the third reading of the transcripts and artifacts. The process of axial coding involves comparisons of codes in order to relate concepts with categories and group like codes together. Through this process, data that were fractured during the open coding process were reassembled into thematic categories and sub-categories to form explanations about the phenomenon under study (Strauss & Corbin, 1998).

Selective coding involves the integration of the axial categories into a framework for a theory that, in the case of this study, described why and how research evidence was sought and used by rural district central office administrators (Corbin & Strauss, 1998). Selective coding is distinguished from axial coding by it specifying how these groups of codes relate to each other conceptually. Selective coding followed the third reading of the transcripts and artifacts. During

the process of selective coding, the thematic categories generated through axial coding were clustered in five selective categories, thereby offering an organizational structure through which to understand participants' perceptions of their experiences searching for and using research evidence. These categories of experience are the participants' perceptions of research evidence, purposes and uses for research evidence, approaches to identifying research evidence, approaches to incorporating research evidence, and influences on research evidence use. Each of these categories consists of one or more related sub-categories based on axial codes generated through the data analysis. The data within each sub-category may have had multiple themes identified through open codes or axial codes and, in some cases, sub-themes. The codebook of categories, sub-categories, themes, and sub-themes is presented in Table VII in Appendix 4.

Quality was assured throughout the data generation and analysis phases of this study using several methods, including but not limited to maintaining a reflexive journal, developing detailed narrative descriptions of participants, and member checking. Quality assurance is discussed in greater detail in the following section on trustworthiness and authenticity.

### *Trustworthiness and Authenticity*

Trustworthiness and authenticity are two sets of criteria used to evaluate qualitative research (Manning, 1997). Trustworthiness is concerned with the quality of an investigation (and its findings) that makes it noteworthy to audiences (Schwandt, 2007). Authenticity focuses on the ethical actions in which researchers must engage relative to study participants (Manning, 1997). Both sets of criteria will be addressed in this study in multiple ways as outlined below.

#### *Trustworthiness*

The intent of addressing trustworthiness in a qualitative inquiry is to support the argument that the inquiry's findings are "worth paying attention to" (Lincoln & Guba, 1985, p.

290). The quality of qualitative research is judged by four trustworthiness criteria: dependability, transferability, credibility, and confirmability (Guba & Lincoln, 2001). Dependability requires the researcher to be responsible for assuring the logic and the documentation of the research process (Schwandt, 2007). The primary method of documenting dependability in this study was the transparent description of the study's research processes. In addition to describing the research design and methods in Chapter 3, the researcher also maintained all documents related to the study in electronic format, including interview transcripts, artifacts, and coding notes. Another critical method of documenting dependability in this study was the methodological and reflexive journal, which provided a record of the study's process as it was implemented. The journal served two purposes: to record methodological decisions and the reasons for making them, and to document the researcher's reflections upon what was happening in terms of the researcher's own values and interests, as recommended by Guba & Lincoln (2001). Extracts from the journal are presented in Appendix 5. Taken together, these methods for assuring dependability create an audit trail, which allows an observer to trace the course of the research study step-by-step through the methodological decisions made, procedures described, and the researcher's reflections on the research processes (Shenton, 2004; Whitmore & Ray, 1989).

Transferability is concerned with case-to-case transfer of study results. This criterion addresses the researcher's responsibility for providing readers with sufficient background information to establish the context of the study and a detailed description of the phenomenon being explored to allow comparisons to be made with other research studies (Schwandt, 2007; Shenton, 2004). In order to support transferability, the policy context for the study, particularly the No Child Left Behind Act of 2001 with its emphasis on using scientifically-based research to support educational decision-making, was described in Chapter 2, while the narrative

descriptions, including detailed participant profiles, presented in Chapter 4 provided a detailed description of the phenomenon of rural district administrators using research evidence. This background information and detailed description of the phenomenon will help other practitioners and researchers to make judgments about the degree to which the findings of this study can be applied to other situations (Guba & Lincoln, 2001).

Credibility focuses on whether the researcher can provide assurances of the fit between participants' views of their life experiences and the researcher's reconstruction and representation of the same (Schwandt, 2007). According to Lincoln and Guba (1985), ensuring credibility is one of most important factors in establishing trustworthiness. Several methods were employed to assure the credibility of this study. First, a random sample of districts was selected to serve as participants. As Shenton (2004) notes, random selection may negate charges of researcher bias in the selection of participants and help ensure that any unknown influences are distributed evenly within the sample. He also suggested that a random sampling procedure provides the greatest assurance that those selected are a representative sample of the larger group.

Secondly, this study employed two types of triangulation that assure credibility. Multiple data generation and collection methods, also known as data type triangulation, were employed to assure credibility (Shenton, 2004). Specifically, this study used interviews and document review as its primary data generation and collection methods. This study also employed source triangulation, or gathering data from multiple sources, in order to minimize and understand any differences held by different people (Brown, 2005).

Lastly, this study employed member checks, which Guba and Lincoln (2001) considered the most important provision that can be made to bolster a study's credibility. Checks relating to

the accuracy of the data were conducted during interviews. Participants were also asked to review summaries of interviews for accuracy. Also conducted as part of this study were grand member checks (Lincoln & Guba, 1985), in which participants were asked to review drafts of relevant analytical findings in which quotations from their interviews were included. Participants were asked to consider whether the researcher's interpretations of their words matched what they intended to communicate. Another element of member checking used in this study was to verify the researcher's preliminary findings as part of participants' third interview; this form of member checking was recommended Miles and Huberman (1994). All together, use of these methods helped to assure the credibility of this study's results.

The fourth trustworthiness criterion, confirmability, is concerned with how well the data and their interpretations can be traced primarily to the focus of the inquiry, rather than the researchers' beliefs and expectations (Guba & Lincoln, 2001). Confirmability is assured through the use of triangulation of data collection methods, which help to reduce the effect of investigator bias (Shenton, 2004); and the use of a clear audit trail that traces findings through raw data, documentary evidence, and data analysis, and includes the use of a methodological and reflexive journal (Appendix 5). Miles and Huberman (1994) also considered that a key criterion for confirmability is the extent to which the researcher admits his or her own predispositions. The inclusion of the Researcher as Instrument Statement (see Appendix 1), which discussed the researcher's expectations for study findings, helps to demonstrate the confirmability of this study's results by documenting the researcher's values and biases that might affect interpretation of the data. These methods offer assurance of the confirmability of this study.



## *Authenticity*

While the four trustworthiness criteria are concerned with the methodological dimensions of quality in nonpositivistic research, the five authenticity criteria address the ethical dimensions of quality when doing research with people. The five criteria include fairness, ontological authenticity, educative authenticity, catalytic authenticity, and tactical authenticity (Guba & Lincoln, 2000).

Fairness addresses the concern of including stakeholder views, perspectives, and voices in a research study (Lincoln & Guba, 2000). The methods described above which contributed to the trustworthiness of the study's results, including the researcher as instrument statement (Appendix 1), reflexive and methodological journal (Appendix 5), and member checking (Appendices 6, 7) also contribute to the fairness of the study (Manning, 1997). Also contributing to fairness was the use of informed consent; see Appendix 8 for the informed consent form used in this study.

Ontological authenticity emphasizes the growth of the participants as an outgrowth of their involvement in a research study (Manning, 1997). The participants' interactions with the researcher, especially through the process of member checking and during the final reflective interview, probably had the indirect effect of raising the participants' consciousness of research utilization and of the complexities of this phenomenon in their context (Rodwell, 1998).

Educative authenticity refers to participants learning about others as a result of their involvement in the study (Manning, 1997). With the exception of the dissemination of the final report to participants, there will not be opportunities for participants to interact with others in this study, thereby limiting potential growth in the appreciation and respect for others' constructions (Rodwell, 1998).

Catalytic authenticity refers to the extent that action is stimulated and facilitated by the inquiry process. Research results should be worthwhile to participants, stakeholders, practitioners, and researchers (Schwandt, 2007). The researcher will seek opportunities to disseminate research findings through publications and presentations targeted to communities of scholars and practitioners. A copy of the final report will be shared with all participants as well as with the superintendent of each participating district. Since no follow-up is planned with participants, however, it will not be possible to assess if the study catalyzed action.

Tactical authenticity addresses the questions of whether participants are empowered to take action on findings as a result of the research process. In order to ensure tactical authenticity, researchers should recognize participants as co-researchers and understand that researchers do not own the data (Manning, 1997). The use of consent forms, member checking, and providing participants with access to the report contribute to tactical authenticity. However, as with catalytic authenticity, it is not possible to claim that the study led to participants taking action.

### *Conclusion*

This chapter described the study's research design. The qualitative study was framed by an interpretivist paradigm and utilized a phenomenological strategy of inquiry. This approach entailed identifying the common elements of the participants' experiences as rural central office administrators searching for and using research evidence. Data were generated through three phases of telephone interviews with a national sample of rural central office administrators engaged in educational improvement efforts; extant artifacts related to research evidence use also were collected. Underlying themes were uncovered using a grounded theory approach. The study's findings, described in the next chapter, should enrich understanding of why and how rural central office administrators involved in educational improvement use research evidence.

## Chapter 4

This chapter presenting study findings is organized in three sections. First, descriptive statistics regarding the study participants are presented to provide an overview of the sample. Secondly, profiles of the nine participants and their experiences with research evidence as part of reform efforts are summarized. For certain participant profiles, quotes are documented to convey experiences with research evidence in participants' own words. The chapter concludes with a description of the categories of themes that emerged from the data analysis, including pertinent quotes from the interviews.

To help preserve confidentiality, pseudonyms have been assigned to participants and districts. Furthermore, other identifying information, including place names and programs, have been altered in the transcriptions, documents, and the profiles to ensure confidentiality.

### *Participants at a Glance*

Using the sampling strategy discussed in the previous chapter, nine participants were identified for this study. All participants had been engaged in educational improvement within the last three years and worked in a central office of a rural school district. There were, however, differences among the participants. As Table 1 illustrates, there were differences in the size of the rural districts in which the administrator worked, with the size of the enrolled student population used as an indicator for district size, and the geographic location within the United States, as indicated by the Census region. The administrators interviewed also held various central office positions, with four participants holding superintendent positions, one an assistant superintendent position, and the remaining participants holding director-level positions. Of note, two participants worked as school administrators but also held responsibilities for district-wide initiatives or programs. They were recommended by their district superintendents for this study,

since they were considered to be district administrators. Six participants held masters degrees, while the other three had earned doctorates in education. Of those holding masters degrees, three were currently engaged in doctoral study. The location of career work also varied across participants. Four of the nine participants had spent their careers within one school district; the other participants had held previous positions in districts other than the one by which they were currently employed.

Table I

*Characteristics of the Research Participants and their School Districts*

Participant	School District			Participant			
	NCES locale code	Census region	Enrolled student population	Position	Highest degree	Doctoral study in progress	Multi-district experience
Arnold	Rural, distant	Midwest	2,900	Superintendent	Masters	Y	Y
Bruce	Rural, remote	Midwest	2,250	Superintendent	Masters	N	N
Carol	Rural, distant	Northeast	5,200	Assistant Superintendent	Doctorate	N	N
Diane	Rural, distant	Northeast	6,000	Superintendent	Doctorate	N	Y
Ed	Rural, distant	South	3,050	Superintendent	Doctorate	N	Y
Fran	Rural, distant	West	1,750	RTI Coordinator/ Principal	Masters	Y	Y
Gary	Rural, distant	West	1,650	Vertical Alignment Project Director/ Principal	Masters	Y	N
Hayden	Rural, distant	West	1,700	Director of Educational Services	Masters	N	N
Ivy	Rural, distant	South	8,250	Director of Curriculum and Instruction	Masters	N	Y

### *Participant Profiles*

In this section, the nine participants are more closely examined. Their unique characteristics and perceptions of / experiences with research evidence as part of reform efforts are summarized. The primary sources of information for the profiles that appear below were the first two interviews conducted with participants. Quotations from participants are shared to convey their experiences with research evidence in their own words.

#### *Arnold, Superintendent, Midwest I School District*

Among the participants interviewed, Arnold was among the most seasoned administrators. He was in this thirteenth year as a superintendent of a rural Midwestern district serving approximately 2,900 students. He also previously served as superintendent in a smaller school district within the same Midwestern state. Prior to his central office career, Arnold had served thirteen years as a high school principal in three different high schools. He also had taught science at the high school level. He recently had returned to school to work on his doctorate in education.

Arnold understood research evidence as contributing to practitioners' knowledge of "what makes schools effective or how to engage students or how to improve student achievement." When he talked about research evidence that he shared with his staff, he consistently mentioned books by well-known educators, including Ron Clark and Lee Jenkins. Arnold described their work as action research, which is generally acknowledged to be research in which practitioners develop their own research questions, and then act as the collector of data, the analyst, and the interpreter of results (McCutcheon & Jung, 1990).

What Clark and Jenkins do is research-based. It is based on action research... try it, see how it works, document your success. That's the kind of research that makes sense to me.

Arnold did not appear to seek out research, but rather was exposed to it at meetings and conferences or through interactions with other superintendents. He had been introduced to the writings of Ron Clark after hearing the author speak at a national conference. Arnold was more likely to pay attention to research if he believed it had relevance for his district. He recalled first hearing about Lee Jenkins at a state meeting of superintendents.

We were at a state meeting of superintendents. I was chit-chatting with a group of superintendents from mostly rural counties. We were talking about our common problems... teacher recruitment and retention, failing kids, etc.... and my colleague brings up the Jenkins book. He had heard Jenkins speak at a conference and got real excited and bought the book. He saw it as a way of addressing some of the common issues we face in rural districts.

Recognizing the potential for this type of research evidence to influence practice in his district, Arnold created numerous opportunities for his staff to be exposed to this information and then “[translate] the research to our local context and [get] everyone involved in that process.” Professional development events and book studies were two approaches he employed. He shared his experience of contracting Ron Clark to speak at a district-level professional development event. In order to encourage the application of Clark’s work to local practice, he encouraged teachers within his district to read Clark’s book in advance of the event and to lead presentations during the event “to show off what they were doing that was in sync with Ron’s work.” Another favored approach of Arnold’s was to facilitate book studies at the central office and at the school level. Books were selected based on district- or school-level needs or topical interest. During monthly book study meetings, the staff would discuss “how does this apply to us . . . what do we

need to change because of this . . . and then make the ongoing changes as opposed to saying ‘we are going to do this this year and this next year.’”

In both approaches, Arnold was cognizant that research evidence can inspire change. He also recognized that practitioners must buy into the ideas represented by the research before these ideas can be applied across the district or in a school. He perceived his role as introducing the research evidence and facilitating a process through which his staff get to know, understand, and eventually apply the ideas in their work. This approach was very evident in his explanation of how he sought to apply the ideas of Ron Clark in his district.

We’ve been talking off and on about taking [Ron Clark’s] Essential 55 and implementing across the district. I’ve been thinking it’s a matter of time. I mean, you offer the training and let folks sit with the ideas for a while. Like letting a pot simmer. You stir it once in a while—ask questions, for instance. If you keep the fire going eventually the pot will boil. What I hope for is that the faculty will grow to like his ideas and will implement the ideas without me pushing it from on top.

In describing how he led a significant district reform effort, Arnold discussed how he used research evidence to support this effort. The reform initiative involved reconfiguring the grade levels of the district’s elementary schools. The district’s three K-5 elementary schools, with one of the schools housing a pre-K class, were reconfigured during the 2009-10 academic year to a pre-K-2 (primary) school and a 3-5 elementary school. The reconfiguration created, in Arnold’s words, “a bit of anxiety,” with initial Board and parent resistance to the concept and considerable anxiety among the teachers. Arnold and his administrative team identified “working on the culture in our buildings” as a major interest for the 2010-11 school year, and established improved relationships—among students, teachers, administrators, and parents—as a school



improvement goal for the reconfigured schools. School administrators then planned book studies and training events for their faculty to support the school improvement goal of improving relationships.

For Arnold, it was important to work with his administrative team “to give them guidance, help them think through the major issues and how to address them.” But he quickly asserted that “once they’re started down the path, they can figure out the rest. I don’t need to micro-manage them.” He had introduced the research-based ideas and then, in his own words, let the “pot simmer.” However, he did take steps to ensure that the “pot did boil.” He joined administrators on classroom walkthroughs across all schools to ensure that these ideas had been implemented and that progress was being made toward the achievement of school improvement goals.

*Bruce, Superintendent, Midwest II School District*

Bruce serves as the elected superintendent of the Midwest II School District, a rural district located in the Midwest serving approximately 2,250 students. Bruce had been “born and raised” in the county served by the district, was a graduate of the school district, and returned to teach in it following college. He had spent his entire career in the Midwest II District, first as a high school physical education teacher and football coach, then as a principal and finally as the superintendent. Bruce holds a masters degree in education.

Bruce defined research evidence simply as “what works,” or evidence that an educational program or curriculum works to improve student achievement. The research must also be objectively conducted, although he demonstrated a willingness to suspend this requirement if he had an established relationship with the person who provided the research information. Of note, Bruce added an important modifier by stating that research evidence is what works “for kids like

ours.” For him, research evidence must clearly illustrate that a program or curriculum has been tested with children very similar to his local population. For him, this type of research evidence does not necessarily have to meet the same standards of rigor.

In articulating his perspective on research evidence, Bruce offered an example of what should not be considered good research evidence. In his example, he described a vendor who cited research evidence of the successful outcomes of a program but did not produce an actual research report when requested. During his discussion of the transaction, Bruce clearly placed value in the rigor of the original research design.

Let me offer an example of something I reviewed that I thought was research-based but wasn't. We've been working with a vendor who sold us a school-based behavioral system. For a quarter million a year, we bought into this system for use in all our schools. The vendor was a legitimate nonprofit affiliated with a university out in [state]. They sent us a pretty package of information about the program when we inquired about it. . . . They cited their own research about the program... that it's been successful in 10 different school systems. That there's been a 20% reduction in violent incidents in participating schools. That daily attendance improved. . . . So I'm looking at this sheet and asking the project director, “so where is the hard data?” There are a lot of studies mentioned in this brochure and lots of findings, but very few numbers. No discussion of effect size or significance of the findings. Nothing. Our project director asked for a sample research report from which these findings were extracted. We still haven't received anything.

However, when a colleague from a neighboring district presented evidence of the impact of an educational program on its students, Bruce did not demand the same level of rigor of this

action research. That is, he did not question the colleague about the research design or the significance of the findings. He accepted the evidence at face value because of his personal relationship with his colleague.

At [a] meeting, [a colleague from a neighboring district] shared information about the program, including some evidence from their district that the program works. She said, “Discipline referrals are down, and we see more kids on behavioral plans.” She didn’t give me numbers or give me a sheet of paper. But I know her and I trust her. I trust that the evidence she cites is sound.

Unlike Arnold, who did not appear to seek out research, but rather was exposed to it at meetings and conferences or through interactions with peers, Bruce sought out research evidence to directly support decision-making. As described above, he asked a colleague about evidence of outcomes when he was collecting information to guide a decision about the adoption of a positive behavioral system as part of the district’s Federally funded reform initiative. After hearing about these local results, he sought out additional research evidence. He found more information about the program on a USDOE website and “learned through the website that there have been randomized control trials of [the behavioral system] and there are more trials in progress.” He also contacted a local university that had been working with the partner school district on the implementation of this behavioral system. They, too, had been conducting research studies on its implementation in the districts that they worked with. He requested that the university researchers make a formal presentation about the local research evidence for this behavioral system to his district’s initiative steering committee.

For Bruce, seeking out research evidence is part of the “due diligence” of decision-making. He cautions his staff, however, about not accepting research evidence at face value.

Using the example of the vendor who had sold them a program based on weak evidence, Bruce emphasized the importance of asking “better, smarter questions” about research evidence. Research evidence, as he pointed out, isn’t always what it appears to be. It is incumbent on educators to become adept consumers of research in order to make the best decisions for children.

*Carol, Assistant Superintendent, Northeast I School District*

Carol is employed as the Assistant Superintendent and Director of Curriculum in Northeast I School District, a rural district located in the Northeast with about 5,200 enrolled students. Carol has worked continuously in her district for over thirty years, starting as a high school teacher and progressing into various administrative positions, including as an assistant principal and principal. An important role in her current position is leading curriculum reform efforts on behalf of the superintendent. Carol earned a Ph.D. in educational leadership.

Similar to Arnold and Bruce, Carol defined research evidence in terms of its use. Research evidence should be used for “making decisions about curricular innovations or instructional programs.” To her, good research evidence also should meet the standards for rigorous research, such as those established by the U.S. Department of Education. She specifically cited the Department’s What Works Clearinghouse as setting the standard for evidence of what works in education, noting that “there’s a lot of emphasis on experimental research designs, especially randomized control trials, in [the Department’s] evidence standards.”

Carol shared a story very similar to that shared by Bruce about a vendor who claimed “wonderful outcomes” for their product. A principal had carried a brochure about this product to Carol, as support for their request for budget funds to purchase this online reading program.

While the brochure cited “research” about the product, Carol recognized that there was little research behind the vendor’s claims about the product.

“Reading skills improve by an entire grade level in one semester.” “Higher levels of student motivation to read.” We’ve all seen this stuff before. . . . There was no citation of research at all. . . . I suggested that if [the principal] was interested in pursuing the program, she should inquire with the manufacturer about the research evidence for those outcomes. If you can show me the proof, then we’ll talk about finding the money to acquire it for a pilot test. I’m still waiting.

Carol continuously seeks research findings to inform her work. Sometimes she seeks out research that is pertinent to a current topic of interest in her job. At the time of her interview, Carol was searching for and reviewing research studies on specific models of high school reform. However, she also tries to “keep up with the literature on reform” by regularly scanning for new studies. She subscribed to Education Week, a weekly newsmagazine on K-12 education, to stay abreast of current educational research. Education Week “provides a good and timely overview of what’s happening in education. It also highlights new studies.” Reading the brief summaries of new research studies in Education Week was preferable to identifying and reading research reports, since, as Carol shared, “I work in a school district—I don’t have the time to read research!”

Another approach Carol used to stay aware of current research was to attend a major national conference each year. She preferred attending the annual conference of the Association for Supervision and Curriculum Development for this purpose, since this conference covered a “wide variety of topics.” In her job, Carol explained, she needed to know a little about

everything, and this conference provided her with the opportunity to “sample what is happening across a wide range of curricular and instructional issues.”

Despite Carol’s insistence on demanding research-based evidence for making program decisions, she does make decisions based on peer recommendations without the benefit of research evidence. She shared how she had selected a Federally supported reform initiative on the basis of a peer’s recommendation to address the need to improve academic achievement and further the district’s reform agenda:

There was an administrator I’d met in one of my doctoral classes who had [this Federally funded reform initiative] in two of her middle schools. She swore by it. “The best thing since sliced bread.” She talked about how the teachers and the school administrators had bought into the program, how they loved the extra supports that the program brought to the school, how excited the kids were about college now that the program was in place. I know this isn’t research evidence, but a first-hand account like this from a respected colleague is a powerful motivator.

Carol viewed research as instrumental to her role leading reform efforts in the district. In addition to shaping her own thinking about a topic, she looked to research to provide research-based models for her school district. She saw her role as “bringing the theoretical framework of reform, research-based reform, to the discussion” with principals and school faculty. The principal and school faculty are then able to “translate the research-based model to the real world school” using their “practitioner’s knowledge.” The school administrators, in Carol’s words, bring “a dose of reality.” This balance between research and practitioner’s knowledge in planning for reform is illustrated by Carol’s story about planning for the Federally supported reform initiative in her district:

I know the research that indicates that students who enter high school with pre-Algebra will do better at high school advanced math, and students who complete Algebra are more likely to attend and succeed at college. I know that. So my agenda, and the district's agenda, is to get as many students completing pre-Algebra in middle school as possible. The middle school principals especially put the brakes on my enthusiasm. Sure, that's important, they said, but to accomplish this we need a lot of support. A lot of support. The state was pushing [another program] in their state application, but it was our principals who said we needed more in-classroom support for mathematics instruction.

*Diane, Superintendent, Northeast II School District*

Diane serves as Superintendent in Northeast II School District, a rural district located in the Northeast with about 6,000 enrolled students. She began her career in a neighboring district as a teacher and assistant principal. During an internship in the Northeast II District, she was offered a central office position. After the superintendent resigned, Diane was recruited by the board chairman to replace him. She is the district's first female superintendent. Diane earned a doctorate in education.

Similar to other participants in the study, including Arnold, Bruce, and Carol, Diane defined research evidence as "evidence that supports choices we make on programs." However, when she discussed research evidence that had been shared with her, she generally referred to statistical facts found in newspaper articles. During her interview, for instance, she discussed a newspaper article about an educational initiative led by actor Denzel Washington to reduce the drop-out rate of African American boys. The newspaper article cited research originally published in Education Week. Another newspaper article she mentioned, which described the

spread of youth gangs into rural areas, also cited statistics about rising numbers of youth gang members; the U.S. Department of Justice was the data source for the statistics.

The research statistics she located in newspaper articles were often used for communications or advocacy purposes. The research quoted in the article about Washington's initiative was interesting to Diane because it "was . . . something I thought I might add to a future board report." Statistics like this could be used for advocacy purposes, demonstrating the relative success of this district. Diane, for instance, forwarded the Washington story to her senior staff and high school principal with "a cover note that bragged on our successes relative to other districts in the country." Diane kept a folder in her computer with "interesting tidbits such as this. It's helpful to have as a resource."

Diane considered an awareness of larger trends as another benefit associated with research. It is important to Diane, for instance, to understand that gangs are spreading into rural areas. For her, it was too easy in a rural community "to stick our heads in the sand and imagine that we're protected somehow. We're not." By reviewing research, Diane keeps abreast of current trends and issues in education.

While Diane had recognized the importance of the research base supporting programs, she did not seek out research evidence when selecting programs. When seeking a program to address the rising drop-out rate in her district, Diane selected a research-based positive behavioral system. However, her decision was not based on the research supporting the program. Instead, she relied upon the recommendations of state agency staff. Similar to Ed, she assumed that programs recommended by government staff were research-based. In Diane's words, "if you can't trust the state to provide research-based programs, then who can you trust?"



Prior to the decision to adopt this behavioral system for the district’s drop-out initiative, Diane had facilitated a series of discussions with the high school’s leadership and faculty. During these discussions, Diane grew aware that many of the high school faculty members did not understand what contributes to categorizing a student as a “drop-out.” She and the school leadership also recognized that ongoing, low-level student behavioral issues, evident in the discipline referral data, were causing significant disruption to instruction. Results of a teacher survey confirmed potential contributors to this behavioral problem:

. . . there was some dissatisfaction expressed with the school leadership... not general dissatisfaction but concern with how student truancy and discipline are being addressed. Some teachers expressed concern that bad student behavior was not being handled strongly enough—not enough follow-through on unexcused absences, for instance.

Based on her review of the survey data and meetings with faculty, Diane carefully examined the school data on absences, daily attendance, and disciplinary infractions. She noted that daily attendance had dropped about 2 percentage points during the past year, while the number of students with ten or more unexcused absences had increased. There was also a slight increase in low-level disciplinary infractions. She concluded that the school required a more formal system of behavioral management across the entire schools, including the school administrators’ follow-up with truant and misbehaving kids. In sharing this evidence with state agency staff, she received their recommendation to consider adopting a research-based positive behavioral system.

*Ed, Superintendent, South I School District*

Ed serves as Superintendent in South I School District, a rural district located in the Southeast with about 3,050 enrolled students. He had taught at the high school level in a

neighboring district before becoming a school administrator. His first experience in central office was as an assistant superintendent. This is Ed's second superintendency; he has held his current position for four years. Ed earned a doctorate in educational administration.

When asked for his definition of "research evidence," Ed responded that it was research that supported evidence-based programs. He was familiar with evidence-based programs through his leadership in the local implementation of a Federally funded reform initiative, which the district had received from the U.S. Department of Education. Evidence-based programs, according to Ed, were "programs that are proven through research to achieve stated goals and objectives."

Both examples Ed provided that described how he selected evidence-based programs for the district's Federally supported reform initiative involved recommendations from respected authorities. In selecting a behavioral intervention for participating schools, he relied on recommendations for evidence-based programs provided by the Department of Education. Similar to Diane's assertion that programs recommended by government staff were research-based, Ed shared that "if the Department recommends it, I assume they know what they're doing." Another evidence-based intervention approved for implementation through the district's Federally supported reform initiative was cognitive-based therapy. This intervention had been recommended by the regional mental health agency, which was a member of the local consortium charged with implementing this grant. Ed admitted that he was not familiar with the intervention but agreed with the agency's recommendation because "the program was evidence-based" and the agency "knows its business" and therefore its recommendation could be trusted.

While the Department's research evidence was not of interest, Ed did indicate that he reviewed local regional data on the program. Similar to Bruce, Ed used research evidence drawn

from studies with student populations similar to that in his own district to support his final decision to adopt the program. Ed described how he considered regional research evidence during his decision-making process regarding the adoption of a positive behavioral system:

We had written it into our grant based on a recommendation from our partner at the University of [name]. . . I was looking at [the University's] data from nine other districts in our state. Seeing positive changes in attendance, in discipline infractions. Those were biggies for me. . . . I mean, you can hear about evidence-based programs that work in urban districts or in [another state] or elsewhere, but you never can tell if it will work in your school with your kids. Sometimes adapting an evidence-based program that works in an urban setting doesn't work out here.

Ed shared research evidence with his staff to convince them of the credibility of the programs. Ed shared a U.S. Department of Education fact sheet on a positive behavioral system with school staff prior to its adoption. While he had not reviewed the Department's research evidence supporting these programs, he was familiar with online fact sheets about the evidence-based programs provided by the Department. These fact sheets provided an overview of the program, program goals, objectives, and strategies, and a brief summary of the research evidence supporting the program's outcomes.

*Ivy, Director of Curriculum & Instruction, South II School District*

Ivy is in fourth year as Director of Curriculum and Instruction for K-8<sup>th</sup> grade for the South II School District, which serves an enrolled student population of 8,250 students. She also serves as the district's Title I director. Prior to joining this district, she held positions out of state as a classroom teacher, an assistant principal, and a principal. She holds a masters degree with an emphasis on school leadership.

For Ivy, research evidence was associated with research-based products and research-based educational initiatives. She sought research for several purposes. First, she sought research to identify appropriate educational products for district investment. Ivy also used research to guide the selection and implementation of educational programs and initiatives. She was particularly interested in identifying best practices for application in her district. Lastly, Ivy reviewed research in order to prepare white papers for distribution to school staff. These white papers summarized research evidence and provided guidance on products and strategies.

Ivy actively uses research evidence to guide decision-making. She provided an illustrative example:

I'll use coaching for an example. [I identified] some of the things deemed best practices, especially through the What Works Clearinghouse, and I applied it to our needs assessment that we have to do for many of our Title programs. So I applied some of those best practices to our comprehensive needs assessment.

Ivy sought research evidence using a few approaches. Similar to Ed, she consulted a Federal online resource—the U.S. Department of Education's What Works Clearinghouse—to identify research-based programs. Similar to Carol, she also selectively read professional and academic journals according to her current professional interests. One journal she was currently reading was the *International Journal of Learning*. This journal issue, which focused on literacy, was of current interest since the district is expanding its literacy coaching program with the support of a discretionary Federal grant. It was fairly common, according to Ivy, for her district peers to informally share research through professional conversations and sharing copies of studies and articles. Similar to other participants, including Bruce and Carol, Ivy also received research from vendors, but did not give this type of information much attention.

*Fran, RTI Coordinator/Principal, West I School District*

Fran is in her first year of a new position as principal of a K-8 school who also works as a Response to Intervention (RTI) project coordinator in the central office of West I School District. The West I School District has an enrolled student population of approximately 1,750. In her current position, she is responsible for coordinating professional development for and implementation of a district-wide Response to Intervention initiative. RTI “integrates assessment and intervention within a school-wide, multi-level prevention system to maximize student achievement and reduce behavior problems” (Rose, 2010, p. 1). Prior to her current position, Fran served as a classroom teacher for 25 years within this district. She also worked as a teacher and/or central office administrator in five other districts, including a large urban district. She holds a masters degree in special education and is currently working on her doctorate in educational leadership.

Fran viewed research evidence as research findings from qualitative and quantitative research that point to a relationship between particular educational programs and improvement. Similar to Gary, another doctoral student, she looked to academic databases to search for peer-reviewed research to inform her practice. She credited her doctoral studies as providing her with a stronger orientation to using research evidence than her peers.

If you haven't been through a doctoral program as an administrator, you're not taught necessarily how to look for research and what's good research. That's been my experience. Currently [in our district] we have three administrators that are in a doctoral program or already have one, and two of us, who are in a doctoral program currently, are very research-based. We have a real drive to look at periodical articles and other research materials that we feel are worthwhile and use that in our practice.

In leading training and implementation for a RTI initiative in her district, Fran worked closely with the district's curriculum director, who led the overall effort. She was critical about her peer's neglect of research evidence. The director had led a staff briefing for RTI, which consisted of a PowerPoint presentation and the distribution of a resource binder. This briefing highlighted the general outcomes anticipated from a successful RTI initiative, but did not provide or cite research evidence to substantiate these claims nor to provide research-based guidance on school-level implementation. In fact, Fran found the discussion of RTI too vague and unsubstantiated to be useful. In her words, "it didn't drive the point home."

. . . [the curriculum director] gave us some broad points on Response to Intervention that I had seen. . . . But that's not research in my books. That's just people showing what they had done. There was no data attached to it at that time. You know when I say research that I mean a published article in a peer-reviewed journal or something really close.

Since she would be held responsible for school-level training and implementation, Fran conducted her own research on RTI to convince herself that "this is a good thing" and to better prepare her to guide school faculty. She used the academic databases through the university at which she was enrolled to conduct a literature review on RTI implementation. Her research provided her with the guidance she required to successfully plan training sessions for school faculty and implement RTI with fidelity.

Similar to Arnold, Fran infused research evidence into staff training both to enrich the knowledge of the school faculty and to encourage staff acceptance, or "buy-in," of the initiative. First, she created a "sense of urgency" within the schools' faculties by focusing on the need to improve test scores. During a six-month period, Fran then led a series of collaborative staff meetings in each school, meeting first with the school leadership teams and then the entire

faculty, to provide initial training on RTI, which served as a foundation for a more intensive RTI training held during the following summer. During these collaborative meetings, the leadership team and faculty discussed journal articles on RTI and, through the process, developed their knowledge base of successful RTI practices.

Fran credited this approach with the successful implementation of RTI in the district's Title I schools. The success of implementing any reform initiative, she indicated, was "only as good as the knowledge base of the person [implementing] it and how much fidelity was given to your particular intervention." The knowledge of the schools' faculties gained through the research-based discussions enabled them to more successfully address implementation challenges. They were able to better diagnose implementation issues by comparing their situation to the implementation examples in the literature. This, in turn, enabled RTI to be implemented in the district's schools with fidelity. The research became, in effect, a guide for implementation.

*Gary, Vertical Alignment Project Director/Principal, West II School District*

Similar to Fran, Gary held a joint position as a school administrator and as a district administrator directing a vertical alignment project. Working for the West II School District, which served an enrolled student population of 1,650 students, Gary was employed as a curriculum director and as principal of the district's high school. Prior to his current position, he had served as an elementary and a secondary vice-principal, and thirteen years as a high school teacher and football coach. Gary has spent his entire career working in the West II School District. He recently returned to school to work on his doctorate in educational leadership.

Gary viewed research evidence through two different lenses. His first lens was examining local-level evidence of student achievement and the quality of the taught curriculum. Within the category of student achievement data, Gary included student GPA, "high-stakes test scores," and

formative assessment scores. Equally important was evidence of the quality of instruction, which included observations of instruction and review of lesson plans and assessments. Gary also considered research evidence through the lens of evidence produced through peer-reviewed research on the effectiveness of educational practices. While Gary did seek out journal articles on specific topics, he relied to a great extent on research literature he was exposed to through his doctoral classes. Gary's purposes in using both types of research evidence were very similar to other participants—to improve educational practice and the academic achievement of students.

Similar to Arnold and Fran, Gary encouraged school staff to read research articles and reflect on how to apply them to their educational practice. He provided access to a small number of research articles through his high school's website. He also encouraged school administrators and faculty engaged in project teams to read research articles and, during project meetings, to discuss how the research might apply to their work. The infusion of research into discussions about practice supports Gary's commitment to building the capacity of educators.

In his role as curriculum director, Gary is currently leading a district-wide initiative to create a vertical alignment of mathematics instruction across all schools, but with a particular emphasis on the middle and high school. Gary articulated that better curricular connections and collaboration between the middle and high school mathematics teachers are required to improve vertical alignment. He cited the example of Algebra I, which is taught using a different curriculum in the eighth and ninth grades. To inform the discussion of the project team assigned to work on mathematics vertical alignment, Gary assigned to team members the reading of a peer-reviewed research article on the impact on students of repeating Algebra I in the ninth grade. Currently, the district employs what Gary described as a “deficit model” in which students who failed Algebra I in eighth grade are taking it again in ninth grade and, in many cases, are



doing worse the second time around. When team members read the article, the research evidence it presented was used as proof of their existing program. Furthermore, Gary noted that understanding the research behind their problem helped project team members develop a desire to fix the problem.

*Hayden, Director of Educational Services, West III School District*

For the past three years, Hayden has held the position of Director of Educational Services for the West III School District, which serves an enrolled student population of 1,700 students. His previous positions, all in the same district, included elementary teacher, middle school teacher, school counselor, program administrator, and elementary school vice principal. Hayden holds a masters degree in educational administration.

Similar to Diane's description of rigorous research evidence, Hayden referred to research evidence as "scientifically validated research" that demonstrates the effectiveness of educational programs or interventions. He sought out research for several purposes. First, Hayden used research evidence to offer strategic direction on curriculum and instruction issues. Before launching an initiative in service learning, Hayden had read research evidence from a statewide professional association website that demonstrated the effectiveness of service learning. The research he examined indicated that when standards-based service learning is implemented as a strategy, "students do better on the standardized test scores." Special education is another area of instruction that the district is addressing. Hayden has been examining the research literature in special education to provide a research basis for the district's strategic direction in this area.

Basically the research shows that the moment you go in special education, you stop growing in terms of your achievement. Your achievement stops or actually declines. So we're taking a look at that since our special education students don't achieve at the same

level. . . . it's been [this] research that's been motivating our [initiative] . . .it's motivating how we're rolling out our initiative.

Secondly, research evidence is used by Hayden to inform planning for educational initiatives. Similar to Ed, Hayden also described the use of research evidence to support the grant-writing process. While he was not directly involved in securing the grant funding for his district's initiative, Hayden explained that the grant writer tapped into research from a public state university's department of mental health website. It was this research that "was instrumental in [identifying] a model for intervention. . . . The research created a blueprint as to how this concept should come alive."

As the examples above suggest, Hayden has sought research evidence, including from online sources, when faced with a practice issue. However, sometimes peers within the district shared unsolicited research evidence with him. Hayden specifically mentioned a research report from a philanthropic foundation on students' failure to succeed in high school algebra. This particular study had been shared by a high school principal during a face-to-face meeting at the school. The study was relevant to a curricular issue within that district and was therefore highly relevant to Hayden's work.

#### *Findings from Qualitative Data Analysis*

Data analysis yielded five categories of findings, thereby offering an organizational structure through which to understand participants' perceptions of their experiences searching for and using research evidence. These categories of experience are the participants' perceptions of research evidence, purposes and uses for research evidence, approaches to identifying research evidence, approaches to incorporating research evidence, and influences on research evidence use. Tables of category sub-sections of this master list are embedded in the text of this chapter;

these summary descriptions of themes present the essence of the phenomenon under discussion. In the text that follows, the sub-categories, themes and, when applicable, sub-themes are described in greater detail using the words of participants whenever possible.

### *Participants' Perceptions of Research Evidence*

While not an overt research question guiding this study, participants were asked to describe what the term, “research evidence,” meant to them. In responding to this question, participants most commonly described the focus of the research that produced the evidence. As illustrated in Table II below, eight participants identified as effective strategies to improve schools and student engagement and achievement as the focus of research they reviewed. Other research foci mentioned by participants included other educational issues. A smaller number of participants also described the characteristics of research evidence. These sub-categories, and related sub-themes if applicable, are discussed below.

Table II

*Summary Code Table for Category of Participants' Perceptions of Research Evidence*

Sub-Category	Sub-Category Description	Theme	Description	Percent of Transcripts with Code
Research Focus	Participants' descriptions of research evidence by its focus, including effective strategies and other educational issues.	Research on effective strategies	Research evidence on effective strategies to improve schools and student engagement and achievement. Includes references to What Works Clearinghouse.	89%
		Research on other educational issues	Research evidence on other educational issues. Does not include evidence about effectiveness of programs or strategies.	11%
Characteristics of Research Evidence	Participants' descriptions of the characteristics of research evidence, including whether it was scientifically based, rigorous, and comparable to the participants' local settings.	Scientifically based data	Research evidence derived from rigorous research. The term, "scientifically based," was used in The No Child Left Behind Act of 2001, which reauthorized the Elementary and Secondary Education Act. The Act called for the use of "scientifically based research" as the foundation for many education programs and for classroom instruction.	44%
		Comparable data	Research evidence derived from studies conducted in similar settings or with similar populations to the participants' districts, or from studies conducted within the participants' districts.	33%

*Research focus.* When asked to describe what they meant by the term, “research evidence,” eight participants referred to the focus of the research. As noted earlier, eight participants associated research evidence with the research focus of effective strategies, or research on “what makes schools effective or how to engage students or how to improve student achievement.” This prevalent perspective on research evidence is not unexpected, given the emphasis in NCLB (H.R. Res 1, 2002) on the use of research evidence to inform decisions about educational practices.

Of the eight participants who associated research evidence with the research focus of effective strategies, all participants associated research evidence with proving that a program “worked.” The evidence these participants sought was for improvement, although they may not articulate improvement in terms of specific outcomes, such as math achievement. Bruce shared that he and his staff looked “for evidence that a program or curriculum works for kids . . .,” that “something will work to improve the learning of our children.” Similarly, Fran looked for evidence that demonstrated “a relationship between a[n] [educational] practice and improvement.” Hayden’s perspective is reflective of this viewpoint that research evidence is associated with a program that works: “For me, it means that the scientifically validated research shows that there is either something that is a better approach and I’m talking about research evidence in relation to education, of course, or does it work really well.”

While some participants, such as Bruce, were satisfied with research evidence that demonstrated that a program “work[ed] for kids,” other participants associated research evidence with evidence of the accomplishment of more fine-grained outcomes. Carol discussed evidence of specific outcomes in engagement and performance she identified in a study on implementation of the Talent Development High School model. Ed, in discussing his district’s decision to adopt

PBIS, described research evidence that associated this behavioral intervention with “decreases in office discipline referrals” and “positive changes in attendance.” Diane, in discussing research evidence, also commented on specific measurable outcomes, such as the drop-out rate of African American male students.

Bruce and Ed were the only participants to use the term “evidence-based practice” when describing research on effective strategies. As discussed in Chapter 2, evidence-based practice has been described as professional practice guided by evidence derived from research (Nutley, Walter, & Davies, 2007). Both Bruce and Ed mentioned evidence-based practice in association with their districts’ involvement in a Federal discretionary grant initiative. This grant program emphasizes the use of evidence-based programs and strategies and provides applicants and grantees with guidelines and resources for identifying them.

Arnold was the only participant who also associated research evidence with a second research focus of other educational issues. He discussed one researcher’s work, for instance, that focused “on identifying the critical root-cause problems that contribute to the failure of education.” This research evidence was important to Arnold, since it was his perception that these root-cause problems contributed to problems such as failing schools. Beyond this example offered by Arnold, all other participants clearly considered effective strategies as the focus of research evidence.

*Characteristics of research evidence.* Beyond describing research foci, six participants also commented on other characteristics of research evidence, including whether it was scientifically based, comparable to the participants’ local settings and populations, or was conducted within the district itself. Of these characteristics, the scientific basis, or rigor, of externally conducted research was mentioned by four participants. The interest in the scientific

basis of research may stem in part from NCLB (H. Res 1, 2002), which NCLB (H.R. Res 1, 2002), which specifically required that all programs funded through this legislation stem from “scientifically-based research” (Datnow, et al., 2007). The law states that scientifically-based research includes both experimental and quasi-experimental designs. Of the four individuals who mentioned the scientific basis of research evidence, Bruce and Carol exhibited an above average familiarity with the types of rigorous research recommended by the U.S. Department of Education (Coalition for Evidence-Based Policy, 2003). Both Bruce and Carol commented on the use of randomized control trials to assess the effectiveness of strategies. Bruce, in criticizing information he had received from a vendor, noted that there was “no discussion of effect size or significance of the findings.” No other participants used these terms nor discussed research design.

The comparability of research evidence to participants’ local settings and populations, a characteristic of strong research evidence according to a 2003 user guide published by the Coalition for Evidence-Based Policy and supported by the U.S. Department of Education, was mentioned by three participants. Among these three administrators, there was a shared concern that a program, even if it is evidence-based, may not work in their district because of differences in the setting or population. Ed articulated this concern shared by his peers when making this comment:

I mean, you can hear about evidence-based programs that work in urban districts or in [a Western state] or elsewhere, but you never can tell if it will work in your school with your kids. Sometimes adapting an evidence-based program that works in an urban setting doesn’t work out here. . . . Context really makes a difference in a program’s success.

Gary also voiced a similar concern: “I’m not a fan of best practices. Best practices tend to work in certain environments. You take a program that works well in one site and how it works in your own site may be very different.”

Because of these concerns, one participant paid attention when reviewing research evidence to the comparability of the settings and the population. Ed supported the adoption of a positive behavioral system in his district in part because he and his district colleagues “. . . liked seeing the evaluation evidence and knowing [the positive behavioral system] had been implemented in nearby districts with students very similar to [our] own.” Another strategy for ensuring the comparability of research evidence is to conduct evaluations on local initiatives. Gary was a strong advocate for local research, stressing the need to evaluate local programs.

Participants’ understanding of research evidence as focused on effective strategies and, in the case of a minority of participants, scientifically based with comparability to their districts, influenced to a strong degree how they responded throughout their interviews. In the sections that follow, the findings suggest that why and how searching for and incorporating research evidence into participants’ practice was influenced by their perceptions of it.

#### *Approaches to Identifying Research Evidence*

A key research question guiding this study concerned how rural district central office administrators leading educational improvement search for research evidence. Participants were asked in several ways across the three interviews to describe how they had identified research evidence in support of their work leading reform efforts. As illustrated in Table III, most participants identified research evidence in multiple ways, including tapping the resources of Federal and state agencies and learning about research evidence through professional development activities and interactions with intermediaries. However, the most prevalent



approaches to identifying research evidence were professional networking, especially with district colleagues and peers in other districts, and reviewing summaries of research evidence on effective strategies. The sub-categories, and related themes if applicable, are discussed below.

Table III

*Summary Code Table for Category of Participants' Approaches to Identifying Research**Evidence*

Sub-Category	Sub-Category Description	Theme	Theme Description	Percent of Transcripts with Code
Intermediaries	Research evidence shared with participants by representatives of community agencies and partners, foundations, professional associations, universities, and vendors, and by consultants.	Consultants	Research evidence shared with participants by consultants providing grant-writing, evaluation, or training services.	44%
		Universities	Research evidence published or shared by other means by university staff or faculty.	44%
		Vendors	Research evidence published or shared by other means by vendors.	44%
		Community agencies or partners	Research evidence shared with participants by community agencies or partners.	22%
		Foundations	Research evidence published or shared by other means by foundations.	11%
		Professional associations	Research evidence published or shared by other means by professional education associations.	11%
Published research evidence	Research evidence reviewed by participants in research reports or summaries.	Research summaries	Research evidence shared in a condensed format, including in the form of fact sheets about evidence-based programs, online synopses of evidence-based programs (e.g. the Department of Education's What Works Clearinghouse), and in professional publications such as <i>Education Week</i>	66%

		or ASCD <i>SmartBrief</i> .		
		Research reports or periodical articles	Research evidence shared through research reports or periodical articles.	33%
Government agencies	State and Federal agencies, which provide recommendations or resources on evidence-based programs or, through discretionary grant programs, incentivize the use of evidence-based programs.	Federal agencies	Recommendations and resources on evidence-based programs or, through discretionary grant programs, incentives for the use of evidence-based programs.	44%
		State agencies	Recommendations and resources on evidence-based programs or, through discretionary grant programs, incentives for the use of evidence-based programs.	22%
Professional development	Research evidence is shared formally through keynote speeches and presentations at professional conferences and meetings and through doctoral studies.	Conferences and professional meetings	Participants receive or search for research evidence or evidence-based practice at conferences and professional meetings.	33%
		Doctoral study	Participants receive or search for research evidence or evidence-based practice through doctoral classes.	22%
Professional networking	Research evidence shared by colleagues within the district and from other districts or states. Research evidence also shared by board members and community leaders. Evidence may be shared at formal meetings or informally through direct contact.	Peers in other districts	Research evidence shared with participants by colleagues in other districts.	56%
		District colleagues	Research evidence shared with participants by colleagues within the school district.	44%
		Board member	Research evidence shared with participants by board members.	11%

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Community leaders	Research evidence shared with participants by community leaders.	11%
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*Intermediaries.* Through the series of three interviews, seven participants revealed that they had identified or received research evidence through intermediaries, including community agencies and partners, consultants, foundations, professional associations, universities, and vendors. This finding is not dissimilar from the findings of other researchers (e.g., Coburn, 2005; Corcoran, et al., 2001; Nelson, et al., 2009), who have recognized the important role of intermediaries in bringing research evidence to the attention of district administrators and often facilitating the translation of research into practice.

Of these intermediaries, universities were tied with vendors and consultants as the most frequently mentioned by participants in this study. Of the four participants who mentioned receiving or learning about research evidence from university faculty or Web-based resources associated with a university, all mentioned this relationship in the context of preparing a Federal grant application. This is an important finding, since it suggests the roles that universities may play in not only providing research evidence, but also in helping rural districts secure funding for reform initiatives.

For Bruce and Ed, the regional universities played a critical role in their application for and/or implementing their Federal discretionary grants. For Bruce’s district, the concept for this multi-district grant project had been initially developed by university faculty and the grant application written by a university grant-writer. Bruce’s district “signed up after a cursory scan of the initial grant application.” As part of the grant application, the university grant-writer had identified evidence-based programs. A regional university had also approached Ed’s district

about writing a grant. University staff wrote the grant application, although Ed did pull together a group of district staff and community stakeholders to plan the grant project. A positive behavioral system was written into the grant application at the recommendation of the university staff.

Sometimes the contributions of the universities was research that influenced program design. Ivy shared that the local university in her community had partnered with her district and a neighboring district on a Federal discretionary grant. The university staff actively shared research evidence with her to influence the program design. In the example Ivy provided, the project director shared research on the changes in elementary social studies instruction since the implementation of NCLB. For a Federal discretionary grant project in his district, Hayden shared that the program design had been influenced by research from a state university.

Another often-cited source of research evidence was vendors. Four participants reported receiving research evidence from vendors. Typically, this research evidence shared by vendors was not sought by participants and was usually not considered trustworthy, as this quote from Ivy suggests.

Our lovely vendors love to throw research at me, it obviously is for support of their product. I don't honor too much time there until we're ready and we've done a little homework for ourselves first.

Consultants were mentioned by four participants. For these participants, consultants were non-district staff who performed the functions of grant-writing, program evaluation, or training related to educational improvement initiatives. Diane and Fran led educational improvement initiatives that required a consultant to lead training of district staff. For Diane, a contract with a consultant was a smart investment to ensure that the training was thorough:

We did invest in a consultant who led the training and who followed up with the teachers during the year. It was a smart decision. Our administrative team probably could have done it, but they're busy with a million usual things. The consultant was able to spend time with the teachers and do the coaching to ensure that they applied [the positive behavioral system] properly.

Hayden described a local grant writer who volunteered to write Federal grant applications in exchange, typically, for a grant evaluation contract. Since Federal education grant guidelines have required a substantive research basis for grant applications, grant writers played an important role in identifying research evidence or evidence-based programs to support Federal grant applications. In Hayden's district, the grant writer, working in collaboration with district administrators, had identified the research evidence that formed the basis for their Federal grant project supporting RTI implementation.

Following the grant award, program evaluators can play an important role in identifying research evidence to support program implementation or evidence-based programs to improve program outcomes. However, only one participant specifically mentioned using program evaluators in this manner. Bruce commented that their grant team had consulted with the program evaluator on a decision to adopt an evidence-based program:

Another player in the decision-making was our external evaluator. When we were trying to decide about adopting [a positive behavioral system], we asked our evaluator to weigh in on the decision. The evaluator consulted the available research evidence on the program and came back with a ringing endorsement.

Two participants reported that they had received research evidence from community agencies and partners. Bruce and Ed, whose districts work with a range of community partners

and agencies through their Federal discretionary grants, both praised the contributions of these entities. Ed stated that they could not have written the grant without the support of their community partners, who assisted with the needs assessment but also in identifying evidence-based programs and strategies to address the needs. Bruce shared a similarly positive view of community agencies participating in the district's Federal discretionary grant. He highlighted the contributions of the mental health agencies, which made significant contributions by recommending evidence-based programs:

. . . the mental health agencies have recommended modifications to the original grant plan. Their modifications, they have argued, are based on their experience with certain evidence-based practices that are in use in their field. Overall, the mental health agencies have been strong contributors to the post-award phase of planning. They work in a field that is evidence-based, so in respects they have elevated the level of discussion. . . . The changes they have recommended are very positive and based in research.

Professional associations and foundations were mentioned by a few participants as sources of research evidence. A research study supported by one foundation was mentioned by Hayden as helpful in establishing a new direction for the district's algebra curriculum. Hayden also shared that he had accessed research summaries on an educational topic from the website of a state-level professional association.

*Published research evidence.* Nine participants reported learning about evidence through reading publications. As Corcoran and colleagues (2001) pointed out, central office administrators often examine literature selectively for research evidence. While research evidence is available in a myriad of formats, the majority of participants accessed published research as summaries, including as condensed versions of research reports, fact sheets about

evidence-based programs, or the Department of Education's What Works Clearinghouse. A much smaller group of participants reported reading actual research reports or periodical articles. Carol may have reflected the sentiment of the larger group when she made the comment, "I work in a school district—I don't have the time to read research!"

Six participants reported that they had accessed condensed versions of research evidence. This format included brief synopses of research reports published in paper-based or electronic professional newsletters or newsmagazines, including *Education Week* or ASCD's *SmartBrief*; and fact sheets or other synopses about evidence-based programs produced by the U.S. Department of Education, including the What Works Clearinghouse, or by vendors.

Of these participants, three administrators mentioned reading brief synopses of research reports published in paper-based or electronic newspapers, professional newsletters, or newsmagazines. *Education Week* in particular was cited by Carol and Diane as a source for educational research. For the busy district administrator, *Education Week* provided an expedient way of keeping "on top" of new research. Carol explained:

I try to keep up with the literature on reform. It's hard, of course. There are new studies coming out all the time. To keep on top of things, I subscribe to Education Week. It provides a good and timely overview of what's happening in education. It also highlights new studies.

Fact sheets about evidence-based programs, which included research evidence typically in the form of brief findings, were mentioned by four participants. Bruce mentioned that research evidence could be shared through a "brief sheet" shared by a vendor. Ed described and shared a copy of an online fact sheet about an evidence-based program disseminated through a Department of Education website. The fact sheet shared by Ed featured an overview of the



program, including its goals, objectives, strategies, and a brief summary of the research evidence that backs up the program. Ed was very confident of the research evidence cited in the fact sheet, primarily because it had been prepared by the U.S. Department of Education.

What Works Clearinghouse, an online database of evidence-based interventions that met the rigorous evidence standards established by the U.S. Department of Education, represents another resource presenting summaries of research evidence. This online database was mentioned by two participants. Ivy, in particular, mentioned this source frequently as invaluable for making program decisions: “I use What Works Clearinghouse on a fairly regular basis to help us make those instructional purchases.”

As noted earlier, a much smaller group of three participants reported reading actual research reports or periodical articles that presented evidence about educational practices. Of note, two of these participants were current doctoral students, who commented that their studies provided them with access and motivation to use these resources. Fran, who had recently completed her course requirements for her doctoral program, directly associated her experience with research in her academic studies to her use of research evidence in her job as an administrator.

If you haven't been through a doctoral program as an administrator, you're not taught necessarily how to look for research and what's good research. That's been my experience. Currently [in our district] we have three administrators that are in a doctoral program or already have one, and two of us, who are in a doctoral program currently, are very research-based. We have a real drive to look at periodical articles and other research materials that we feel are worthwhile and use that in our practice.

*Government agencies.* Five participants reported receiving research evidence from government agencies. These entities provided information, including recommendations, consultation, and resources on evidence-based programs. Often the use of recommendations or resources for evidence-based practices and programs was incentivized through grant programs. Information provided by government agencies was viewed very highly by participants. Ed, as noted earlier, spoke very highly of the U.S. Department of Education's recommendations. Diane's comments about the credibility of information shared by government agencies were reflective of all five participants: ". . . if you can't trust the state to provide research-based programs, then who can you trust?"

The U.S. Department of Education was mentioned by the four participants as a source of information about evidence-based programs. Participants described the Department's dissemination of research evidence in several ways. The Department's best known resource on evidence-based programs is the What Works Clearinghouse, which was discussed earlier. This resource is available online to anyone, regardless of whether they receive funding from the Department. However, the other methods of research evidence dissemination, as described by participants, were contingent on the nature of the districts' funding relationship with the Department. Since a criterion for this study was that participants' districts had received a discretionary grant supporting educational improvement from the U.S. Department of Education, and since the Department has advocated for the use of scientifically based research to support educational decision-making, it was anticipated that a significant number of participants would discuss the relationship of Department grants to research evidence.

Guidelines for Department grants, many of which the participants reported as requiring evidence-based program, provided guidance to participants on including programs or strategies

that were research-based. Ivy, who coordinated Title I programs for her district, shared a 2006 document by the Department of Education, which provided non-regulatory guidance on local educational agency and school improvement for recipients of formula Title I funds. The Department's stance on the use of evidence-based programs was clearly articulated in this document. For instance, the document included a statement that school improvement plans "must incorporate strategies based on scientifically based research that will strengthen the core academic subjects in the school and address the specific academic issues that caused the school to be identified for school improvement" (U.S. Department of Education, 2006, p. 9). Additionally, the school support team, described as "a group of skillful and experienced individuals charged with providing struggling schools with practical, applicable, and helpful assistance in order to increase the opportunity for all students to meet the State's academic content and student academic achievement standards," must be comprised of individuals who are "knowledgeable about scientifically based research and practice" (p. 17). Furthermore, local educational agencies, after identifying schools for corrective action, must "institute a new curriculum grounded in scientifically based research and provide appropriate professional development to support its implementation" (p. 22).

This non-regulatory guidance document clearly described what constituted scientifically based research:

Strategies grounded in scientifically based research are those that have demonstrated, over time and in varied settings, an effectiveness that is documented by high-quality educational research. High-quality scientifically based research employs an experimental or quasi-experimental design and produces replicable results, confirmed by peer review, that can be applied to the general population. For example, scientifically based research

has shown that explicit instruction in (1) phonemic awareness, (2) phonics, (3) vocabulary development, (4) reading fluency, and (5) reading comprehension is effective in teaching reading to students in grades K-3. Strategies that apply this research in a classroom setting would be grounded in scientifically based research (pp. 9-10).

One participant reported that the Department's discretionary grants had similar requirements for the program design to be based on scientific research. Hayden recalled that the guidelines for his district's Federal discretionary grant required funded projects to be research-based, which encouraged staff to locate research evidence on successful interventions. The grant application guidelines that he shared did indicate that the extent to which "activities, curricula, programs, and services proposed by the applicant are evidence-based or reflect current research" was an evaluation criterion for grant applications (U.S. Department of Education, 2010, p. 30). The research conducted by district staff to prepare this grant application, Hayden shared, led to the adoption of the RTI model.

Two participants reported that the Department provided guidance on evidence-based programs during the grant award period. In the examples cited by participants, the guidance took the form of online resources. This form of guidance has been previously described. Ed, for instance, described online fact sheets about evidence-based program disseminated through a Department of Education website developed for grantees. Participants also reported that the Department maintained lists of evidence-based programs pertinent to certain discretionary grant programs. Both Bruce and Ed, whose districts had Federal discretionary grants, mentioned the Department's list of evidence-based programs for this grant program. This list of evidence-based programs is "intended to provide support to grantees as they assist staff and systems with

successful EBP implementation” (National Center for Mental Health Promotion and Youth Violence Prevention, 2010).

During the grant award period, the Federal program officer supervising certain grant projects also plays a role in assuring that grantees utilize evidence-based programs. Bruce shared that his team was interested in using two anti-tobacco programs that were not on the Department’s list of evidence-based programs. The Federal program officer assigned to their grant award reviewed the programs prior to approving the reallocation of grant funds. This is one way in which the Department assures the use of Federal funds for evidence-based programs.

State departments of education were less frequently mentioned as a source of research evidence or information about evidence-based programs. Similar to the Federal government, State agencies provide funding to support the use of evidence-based programs. Two participants reported receiving state direct grants or pass-through Federal funds administered by state agencies. Arnold recounted receiving Federal discretionary funds administered by the State that required the use of evidence-based programs. Diane also described a state-funded credit recovery program that her district adopted and implemented. She had learned about the program through a memorandum issued by the State education department. She was confident in the capability of the program to yield results because, in part, it had been recommended by the State: “. . . if you can’t trust the State to provide research-based programs, then who can you trust?”

Diane and Arnold also reported that they had consulted with State staff about evidence-based practice. Diane had learned about a positive behavioral system through a personal contact at her State educational agency. Arnold, in discussing the major reconfiguration of schools in his district, mentioned that he “had learned about [it] from the [deputy state superintendent], who had implemented it at another district.” State staff also modeled evidence-based practice for one

participant. Arnold, in recounting his district's involvement in a Federally funded initiative, noted that he and his staff had learned about conducting classroom walkthroughs by observing State staff conducting monitoring visits:

One of our elementary schools was [involved in this Federally funded initiative] and we got tons of money for PD and along with that we got lots of visits from the State Department to see if the PD was taking. One of the things that we learned from that process was about walkthroughs.

These examples suggest that State agency staff may influence district administrators, even without the incentive of grant funding.

*Professional development.* Professional development activities provided participants with access to research evidence or information about evidence-based programs. Professional development provides central office administrators opportunities to gain access to researchers (Bickel & Cooley, 1985) and to intermediaries external to the school district (Honig, 2004; Nelson, Leffler, & Hansen, 2009; Tseng, Granger, Seidman, Maynard, Weisner, & Wilcox, 2008). Five participants reported receiving research evidence or learning about evidence-based programs at professional conferences and meetings or through doctoral study.

Three participants reported learning about research or evidence-based programs at professional conferences or meetings. Carol shared that she attended “at least one major conference each year” in order to keep up with the research in the field. She favored attendance at the annual ASCD conference:

. . . because of the wide variety of topics covered across all the sessions. In my job, I have to know a little about everything, so I take advantage of this conference to sample what is happening across a wide range of curricular and instructional issues.

Arnold also recognized the value of keeping abreast of new research through attendance at professional meetings. For him, guest presenters at superintendents' meetings "summarize this research for us, [help] break it down to digestible chunks that we can take away and use in our districts."

Two participants received or searched for research evidence or evidence-based practice as part of their doctoral study. Fran and Gary, both doctoral students in educational administration programs, made repeated comments during their interviews about using research they had been exposed to in doctoral classes. Gary, for instance, described research articles he had posted on a school website for use by faculty. He had learned about some of these articles through a recent class he had taken. Similarly, Fran, a doctoral candidate at the time of the interviews, had developed a database of research articles on RTI during her doctoral study. In both cases, the participants used the research in some way to build staff capacity or to inform implementation.

*Professional networking.* Professional networking with colleagues within the district or from other districts or states, school board members, and community leaders provides opportunities for exchange of information about evidence-based programs or research evidence. Nine participants shared that they had learned about research evidence or received information about evidence-based programs through their professional networks. As discussed earlier, several studies, including by Kennedy (1982), suggest that social interactions through meetings and consulting with colleagues can foster the development of common frames of reference or ways

of viewing issues that guide how groups interpret evidence and incorporate it into their decision-making (Honig, 2004; Kennedy, 1982). Similarly, central office administrators' external social capital, consisting of relationships that span organizational boundaries, also influences their search for research evidence. Spillane and Thompson (1997) had found that central office administrators with connections to external organizations, such as professional groups, had easier access to social science research and research-based practice.

Of the nine participants indicating they had received research evidence through professional networking, four participants shared that they had received evidence or information about evidence-based programs from district colleagues. These colleagues included other central office administrators, school administrators, and, in one participant's case, teachers.

Three participants mentioned that they received research evidence or information about evidence-based programs from other central office administrators. Ivy shared in general terms that her central office colleagues frequently shared research among themselves. She mentioned that "we have a lot of good professional conversations here. People pass things along." Fran and Hayden provided specific examples of how research evidence was identified or shared by colleagues. Fran had mentioned that a colleague had shared with her "broad points on Response to Intervention," which she later built upon through her own research. Hayden mentioned the critical role played by another central office administrator in working alongside the grant writer to identify research for their grant application.

For two participants, another important district source of information about evidence-based programs and research evidence was school administrators. Carol and Hayden shared that principals in their districts had shared research evidence with them. Hayden commented that two of the principals in his district were working on their doctorates in education and were "getting



steeped in research.” As the principals were exposed to research, they in turn shared research with district colleagues:

. . . they also are in our meetings, they say let me show you what I find. You talk about the dissemination of research and how it’s shared. I find this much more effective than in a more formal setting.

Five participants shared that they had learned about research evidence or evidence-based programs through informal communications with peers in other school districts. For instance, Arnold learned about research by talking informally with other superintendents at state meetings:

We were at a state meeting of superintendents. I was chit-chatting with a group of superintendents from mostly rural counties. We were talking about our common problems... teacher recruitment and retention, failing kids, etc.... and my colleague brings up the Jenkins book. He had heard Jenkins speak at a conference and got real excited and bought the book. He saw it as a way of addressing some of the common issues we face in rural districts.

Similarly, Bruce reported hearing about an evidence-based program from a colleague in another district while attending a meeting.

I was in a meeting with a colleague from [name] county school district. They’re collaborating with us on this grant. We had contracted with [this vendor] to provide the program; they had chosen the program that was recommended by the Department of Education. At the meeting, [name] shared information about the program, including some evidence from their district that the program works. She said, “Discipline referrals are down, and we see more kids on behavioral plans.” She didn’t give me numbers or give

me a sheet of paper. But I know her and I trust her. I trust that the evidence she cites is sound.

Carol heard about an evidence-based initiative from a colleague who was studying in the same doctoral program.

I'd heard about [this Federally supported initiative] mostly through colleagues in other districts. There was an administrator I'd met in one of my doctoral classes who had [this Federally supported initiative] in two of her middle schools. She swore by it. "The best thing since sliced bread." She talked about how the teachers and the school administrators had bought into the program, how they loved the extra supports that the program brought to the school, how excited the kids were about college now that the program was in place.

A few participants reported receiving research evidence through their contacts with school board members and community leaders. However, this was not an experience shared by more than one participant. It does point, however, to the diverse sources through which an administrator may be exposed to research evidence.

Participants' approaches to identifying research evidence were varied. They identified research in multiple ways, including tapping the resources of Federal and state agencies, learning about research evidence through professional development activities and interactions with intermediaries, and through consulting published research and online resources. As was articulated at the beginning of this section, the most often-used approach to identifying research evidence was professional networking, especially with district colleagues and peers in other districts. In the sections that follow, findings are presented as to why participants search for research evidence and how they incorporate it into their practice.

## Incorporation of Research Evidence

A research question guiding this study was how rural district central office administrators leading educational improvement incorporate research evidence. Incorporation refers to how organizational members make sense of and use research evidence once it has been identified and brought into an organization (Weick, 1995). Participants were asked in several ways across the three interviews to describe how they had used research evidence in support of their work leading reform efforts. This information was generated in order to determine through inductive reasoning the processes through which they had incorporated research evidence. All participants identified using a social process to incorporate research evidence; by contrast, only two participants had provided an example of individually incorporating research evidence. These sub-categories, and related themes if applicable, are presented in Table IV and discussed below.

Table IV

*Summary Code Table for Category of Participants' Incorporation of Research Evidence*

Sub-Category	Sub-Category Description	Theme	Theme Description	Percent of Transcripts with Code
Individual Process	The incorporation of research is done by the individual.			22%
Social Process	The incorporation of research uses a social process, which at its most basic level may be an informal exchange between two people and at a more sophisticated level may take the form of long-term professional development.	Informal Sharing Between Colleagues	Research evidence is shared and discussed between colleagues.	67%
		Sharing During Meetings	Research evidence is shared and discussed during a meeting.	67%
		Sharing as Part of a Committee Process	Research evidence is shared and discussed within a standing committee or team.	44%
		Professional Development	Research evidence is shared and discussed during a professional development event or longer-term program.	11%

*Incorporation as a social process.* All nine participants provided examples of incorporating research evidence using a social process. This finding is confirmed by existing research that suggests that when research evidence enters a district central office, administrators engage in a process of deciding whether and how to use the information. This process of incorporation is highly social in nature, involving many people in meetings and informal conversations across time (Hemsley-Brown & Sharp, 2003; Honig & Coburn, 2008; Nutley, et al., 2003).

Of the examples shared by the participants, the most common social process for incorporating research evidence was the informal exchange between two people. Six participants shared that they had been involved in the informal exchange of research evidence with a colleague. Sometimes this exchange was done by email. Diane shared that she intended to forward an online article that contained research evidence to some members of her staff, pointing out in her cover email the relevance to the district. Most commonly, however, the informal exchange was done face-to-face. Arnold, Carol, Fran, Hayden, and Ivy all shared examples of the informal sharing of research evidence with colleagues. Sometimes research evidence was shared verbally, as suggested by Ivy's comment: "We have a lot of good professional conversations here. People pass things along." At other times, research articles were shared and the relevance of the research evidence discussed. Hayden shared an example of research evidence shared with him by a school administrator:

There is a Noyce Foundation that produced a study about [algebra]. . . . That research was shared with me by the high school principal. . . . You talk about the dissemination of research and how it's shared. I find this much more effective than in a more formal setting. . . . If I'm over there to attend a Special Education meeting and I stop in to the

principal's office and they say let me show you something. Then in that moment we're talking about it, the implications of it, what do you think.

Sharing of research evidence at formal meetings was mentioned by six participants. Bruce, Carol, Diane, Ed, Gary, and Hayden all shared examples when research evidence had been shared and discussed at a meeting. Staff meetings were often cited by participants as a venue for sharing research. Gary, for instance, had posted research articles online, but then used a regularly scheduled staff meeting to discuss the research evidence. He also incorporated the discussion of research articles into planning meetings for an Advisory program. Bruce raised an example of hearing evidence for a program presented by a colleague from another district at a meeting:

I was in a meeting with a colleague from [name] county school district. They're collaborating with us on this grant. We had contracted with [vendor] to provide this program; they had chosen the program that was recommended by the Department of Education. At the meeting, she shared information about the program, including some evidence from their district that the program works. She said, "Discipline referrals are down, and we see more kids on behavioral plans."

For Bruce, hearing this evidence shared by a colleague was instrumental to his decision to adopt this program for his own district.

In addition to presenting and discussing research evidence at meetings, four participants shared that they had shared or received, as well as discussed, evidence during their service on a committee. Bruce, Diane, Ed, and Fran all shared examples that had taken place during committee service. Bruce, who had oversight for an advisory committee affiliated with his district's Federal discretionary grant, shared several examples of the sharing and discussion of

research evidence during committee meetings. In this example, representatives from regional mental health agencies, who serve on the committee, had offered formal recommendations to modify the grant. In doing so, they discussed evidence-based programs:

The mental health agencies . . . recommended modifications to the original grant plan. Their modifications, they have argued, are based on their experience with certain evidence-based practices that are in use in their field. Overall, the mental health agencies have been strong contributors to the post-award phase of planning. They work in a field that is evidence-based, so in respects they have elevated the level of discussion within the committee.

Finally, one participant—Arnold—contributed examples of sharing and discussion of research evidence through professional development. One strategy Arnold often employed was book study. Over an extended period of time, central office administrators and school staff would participate in discussion groups focused on books by educational writers. Arnold himself led one of the book studies for the administrative staff. For Arnold, what was most powerful about the book studies was “translating the research to our local context and getting everyone involved in that process.” He also mentioned contracting well-known educational speakers, such as Ron Clark, to speak at faculty events to motivate district staff. However, to ensure that some staff reviewed Ron’s writing in advance of his talk, he also scheduled as part of the event an opportunity for teachers to showcase how they applied the principles of Ron’s work in their own instruction:

Ron was the guest speaker, but for that day we decided we would use our own people too. So we did this big PD day called “teachers teaching teachers” with our people who had done some training and stepped up to the plate and really showed expertise in what

they were doing. We encouraged them to read Ron’s book and then to show off what they were doing that was in sync with Ron’s work—you know, focused on student motivation, engagement, and behavior. They came to train the others.

*Incorporation as an individual process.* Only two participants provided examples of incorporating, or interpreting, research evidence by themselves. This is consistent with the research stated earlier that suggests that the process of incorporation is typically social in nature (Hemsley-Brown & Sharp, 2003; Honig & Coburn, 2008; Nutley, et al., 2003). In the cases of Carol and Fran, however, the habit of incorporating research evidence by themselves was established during their doctoral study. This practice of reviewing and interpreting research alone as a doctoral student continued into their professional lives.

Carol, for instance, was well read in the area of secondary reform and used this knowledge to inform her work leading reform efforts in her district. She attributed her depth of understanding of the research in this area to her doctoral studies: “I need to add that I know the literature well on secondary reform only because it was the focus of my doctoral dissertation. . . . I certainly use the research to inform my thinking about reform.”

While participants’ approaches to incorporating research evidence were varied, there was a clear predilection for using social processes to understand and apply the research in the district setting. Informal sharing between individuals and sharing during formal meetings were the two most widely represented approaches to incorporating research evidence. In the sections that follow, the findings concerning why participants search for research evidence and the uses for research are described.



### *Purposes and Uses for Research Evidence*

Key research questions guiding this study concerned why and how rural district central office administrators leading educational improvement use research evidence. Participants were asked in several ways across the three interviews to describe how they had searched for and used research evidence in support of their work leading reform efforts. This information was gathered in order to determine through inductive reasoning the underlying purposes for searching for and using research evidence. The uses for research evidence were documented and analyzed within this section as well. All participants identified using research evidence for advocacy or informational purposes, while eight participants identified using research evidence for instrumental purposes. In some situations, participants identified using research to inform their own thinking but did not apply this knowledge directly. These sub-categories, and related themes if applicable, are presented in Table V and discussed below.

Table V

*Summary Code Table for Category of Participants' Purposes for and Use of Research Evidence*

Sub-Category	Sub-Category Description	Theme	Description	Percent of Transcripts with Code
Research Used for Instrumental Purposes	Administrators used evidence directly to inform a program or practice decision.	To identify new programs or reforms	Research evidence used to inform the selection of new programs or reforms.	44%
		To guide program implementation	Research evidence is used to guide implementation of programs or to ensure fidelity of implementation.	44%
		To predict outcomes for programs	Research evidence used to anticipate program outcomes.	22%
Research used for Advocacy or Informational Reasons	Administrators used evidence to support or promote a program or practice decision.	To advocate for programs or reforms	Research evidence is used to advocate for the adoption of programs or reforms	56%
		To promote products or programs	Research evidence used to promote the sale or adoption of an educational program or product.	44%
		To support funding applications	Research evidence used to guide the writing of and/or support funding applications.	22%
Research that Informs Personal or Group Thinking	Research evidence is reviewed but the participant(s) do not purposively or immediately act on it; research evidence may be used to inform personal or group thinking on an issue or topic.			22%

*Research used for instrumental purposes.* Through the series of three interviews, eight participants revealed that they had used research for instrumental purposes. These purposes included to identify new programs or reforms, to guide program implementation, including monitoring for fidelity of implementation, and to anticipate program or reform outcomes. This finding is not consistent with earlier research on research utilization by school district administrators, which found lower levels of instrumental use of research evidence (e.g., Kennedy, 1984). However, this finding is not surprising in a post-NCLB era, given the emphasis in that law (H.R. Res 1, 2002) to use research evidence to inform decisions about educational practices.

Of the eight participants who used research evidence for instrumental purposes, four described using research to guide program implementation. Of all the participants, Fran was the most passionate about using research to guide implementation. Fran searched for research-based guidance on school-level implementation of Response to Intervention after reviewing the weak guidance provided to her by the district's curriculum director. Her research provided her with the guidance she required to successfully plan training sessions for school faculty, which emphasized best practices in RTI drawn from the research literature. She also infused research evidence into staff training to enrich the knowledge of school faculty, since she believed that the knowledge of the schools' faculties gained through the research-based discussions enabled them to more successfully address implementation challenges.

Hayden, who was leading a district-wide implementation of RTI, shared through his interviews that his review of the research literature on RTI had informed how the program was to be implemented.

... we use research for all of our programs. . . . it's motivating how we're rolling out our RTI initiative. Research has shown that highly effective teachers make a difference in helping kids to do better. Research evidence shows that if students are engaged or the extent they are engaged and have choice and are engaged in project-based learning, it shows that their achievement will improve. So all of those things we're trying to get into our classrooms. We're trying to train our teachers. We're getting those programs into our classrooms.

As part of using research to guide implementation, three participants identified monitoring of implementation as an appropriate use for research evidence. Bruce, in recounting his experience with a vendor who cited research evidence of the successful outcomes of a program but did not produce an actual research report when requested, also shared that the vendor did not provide implementation guidelines. Bruce expected that an evidence-based program "should have clear guidelines for implementation." He reasoned that if a program had demonstrated evidence through research of successful outcomes, then replicating the implementation in a similar setting should yield similar results. Bruce articulated what is described as "fidelity of implementation," or adherence to both the proper execution of specific practices that are part of a program or reform and the effective coordination of all the practices as they are intended to be combined. With fidelity of implementation, a program or practice with demonstrated effectiveness in some settings can be ineffective elsewhere if the way it is being implemented takes it far away from its original, evidence-based design (Center on Innovation and Improvement, 2009).

Fidelity of implementation was a particular concern for Fran, who was overseeing the implementation of Response to Intervention (RTI) in her district. Following a review of the

Response to Intervention research literature on implementation, she realized that “. . . Response to Intervention was only as good as the knowledge base of the person using it, whether or not the intervention was research-based, and how much fidelity was given to your particular intervention.” The research on RTI provided her and her leadership team with the knowledge to monitor the adherence of their district’s implementation to proper execution and coordination of specific practices that are part of this program. Constant monitoring of the RTI implementation, coupled with a review of the RTI literature, provided her team with a method to ensure fidelity of implementation.

. . . when we run up against challenges, we keep going back over the process and we ask ourselves those questions, are we doing these things. Oh, sure, do we acknowledge this, are we doing these things for a while. And then, oh gee, maybe we’re not doing this as faithfully as intended. Like I missed a few weeks of the intervention process, or practice.

Four participants had revealed through their interviews that their reviews of research evidence had been a key factor in identifying or initiating a new program or reform in their district. For these participants, consultation with research evidence or information on evidence-based programs followed an assessment of local data or information to identify the issues that required an intervention. Local data included student performance data but also included other types of data, including feedback from an accreditation process, formal and informal teacher feedback, and other types of student data, including attendance and discipline data.

Ivy and her local team used student performance data and teacher feedback as part of a needs assessment prior to their decision to adopt RTI for their Title I schools. They examined long-term data on students including their end of grade and their summative assessments, and also collected teacher feedback about their comfort level or knowledge of certain instructional

approaches. On the basis of their analysis, they “wrote a . . . countywide goal for last school year in the comprehensive needs assessment,” which focused on closing the achievement gap and raising scores for their highest performing students. Ivy consulted the U.S. Department of Education’s What Works Clearinghouse for evidence-based strategies to achieve this goal. On this website, she reviewed information about Response to Intervention.

Diane used a similar process to Ivy, except she probed beyond student performance data to assess the underlying causes of the situation she hoped to remedy. She faced within her school district a rising drop-out rate in her district high school. Prior to selecting a positive behavioral system to address this issue, Diane had led her district team in a thorough needs assessment that was based on an analysis of student data. After noticing an increase in the district high school’s drop-out rate, Diane initiated a school-level probe. Using a teacher survey, coupled with an analysis of ancillary student data, including unexcused absences, daily attendance, and disciplinary infractions, Diane identified an underlying cause of the escalating drop-out rate as a lack of follow-up with truant and misbehaving kids. She then turned to a contact in her state educational agency to identify an evidence-based program, which would address this underlying cause.

Gary used information gained through the accreditation process for the district high school to identify that students did not feel connected to their school.

One of the criticisms from the accreditation process was that our students didn’t have a lot of connection to school. They weren’t aware of how things functioned and they loved their school but there was a lack of connection in that they didn’t know what was going on in the school.

With awareness of this situation, Gary identified research literature on how to improve learners' engagement. One article he reviewed provided him with a framework to implement a program to improve student engagement.

There was one in particular that was written by a professor at [name of university within state] . . . Essentially the students are allowed to engage in similar levels of high school, and there is an advisory period in which students can engage directly with a teacher. We took the number of students and divided the teachers among them and established advisory periods and students can meet with teachers twice a month with a program. We didn't want to do just study hall, we wanted a program. The idea is to create a forum so that student needs can come forward and to have discussions about how to get through, how to make it through high school. So that was one article in particular that I stole.

Across the participants interviewed, the order in which they consulted research evidence to inform the selection of programs varied. Ed, for instance, selected evidence-based programs after devising an overall strategy to address a community-wide issue based on his understanding of the underlying causes for his district's poor performance. He used his understanding of community conditions and their probable relationship to issues with student performances to identify and secure an appropriate Federal discretionary grant.

Without a doubt the core issue is poverty. Everything else is a by-product of it. We suffer from generational poverty. It's all some families have ever known. So we have other problems that stem from it. Drug use... crime... and it is primarily African American males involved in this stuff. We have serious discipline issues at the middle and high schools. We also have a disturbing issue of teenage pregnancies. We have one of the highest state rates. As a superintendent I look at this situation and say – how can I fix

this? I mean, these are not academic issues. These are society issues that go beyond the confines of the school's traditional purview. But who else will step in and do something? School districts in rural communities play an important role in improving the quality of life. We can't deny this, we can't turn away and do nothing. We have to try to do something to improve conditions for our kids. . . . [This Federally funded] initiative . . . is the major initiative we've undertaken to address the poverty issue head-on.

Once the Federal discretionary grant had been secured, Ed and his team then finalized their selections of evidence-based programs to support the grant initiative. They relied on recommendations on evidence-based programs from the U.S. Department of Education: "We use evidence-based programs that had been recommended by the Department of Education. . . . If the Department recommends it, I assume they know what they're doing."

Not all participants reviewed research evidence or evidence-based programs after an assessment of needs. Hayden provided an example of how his review of research evidence in the field of special education had triggered an examination of local data, which was followed by a recommendation for a significant district-level reform in how students are qualified for special education.

The research is pretty devastating when you look at kids who have been in special education over time. Basically the research shows that the moment you go in special education you stop growing in terms of your achievement. Your achievement stops or actually declines. So it triggered us to look at that since I saw that our special education students don't achieve at the same level. That's the whole point of special education but it doesn't work. . . . We're trying now to look at how we qualify kids for special education. We provide the necessary help that struggling students need, not just special education,



without taking them out [of the classroom] that segregates them from the content in a regular classroom.

Two participants shared through their interviews that they had examined research evidence in order to identify predicted outcomes for programs. Understanding the predicted outcomes for a program prior to selection helps administrators pick the most appropriate evidence-based program to meet their district needs. However, for these participants, knowing the predicted outcomes of the program also provided them with benchmarks for evaluating the program's success. Diane, for instance, intended to measure the success of her positive behavioral system initiative using measurable outcomes drawn from research evidence for this program. The RTI initiative in Hayden's district had specific outcomes derived from research evidence drawn from other RTI initiatives. These outcomes provided a means of measuring the success of his district's implementation of RTI.

[Our measurable outcomes in our RTI grant included] that our test scores would go up over time and they already are. So it is really a twofold thing—decrease in referrals, which includes suspensions and expulsions, and an increase in attendance, test scores.

*Research used for advocacy reasons.* Through the series of three interviews, all nine participants revealed that they or someone they knew had used research for advocacy or informational purposes. These purposes included using research evidence to advocate for the adoption of programs or reforms, to provide information about programs or reforms, to promote the sale or adoption of an educational program or product, and to guide the writing of and/or support funding applications. This finding is consistent with earlier research on research utilization by school district administrators, which found relatively high levels of using research evidence for advocacy purposes (e.g., Kennedy, 1982).

Of the nine participants who reported using research evidence for advocacy or informational purposes, five described using research evidence to advocate for the adoption or support of programs or reforms. In most cases, the participants were advocating to school-based staff to encourage buy-in to a particular idea or to influence school-based decision-making. This approach is consistent with Weiss's (1979) strategic or symbolic model, in which policymakers and practitioners use evidence to support a predetermined position related to a policy or practice decision.

Two participants discussed research evidence with school-based staff through face-to-face meetings. In each case the research evidence was informally introduced during a meeting. When Carol met with school principals to discuss district plans for a Federally funded initiative, she informally shared research evidence that "students who enter high school with pre-Algebra do better at high school advanced math, and students who complete Algebra are more likely to attend and succeed at college." Her intent in sharing the research evidence was to support the district's agenda of getting "as many students completing pre-Algebra in middle school as possible."

I didn't share any "hard evidence", you know like an article or a website. But I shared verbally this information that I had read somewhere, sometime. I can't remember now exactly where I read that. The high school principal was kind of familiar with this research, but it was the first time that the middle school principals had heard about it. . . . Sure, I'm in central office and they have to listen to me [laughs], but honestly when there is research backing up a suggestion, they listen. I do think this information positively influenced the principals and helped them support this strategy of pushing pre-Algebra into the 7<sup>th</sup> grade curriculum.

From one participant's report, some school-level leaders also use a similar approach when trying to influence central office policy. Hayden shared that a copy of a Noyce Foundation study on algebra had been shared with him by his district's high school principal. The principal wanted to get the district's permission to convene a committee to vertically align algebra courses across the middle and high school; he had shared the research study with Hayden since it demonstrated why vertical alignment was needed. For Hayden, this informal sharing of research evidence was appropriate for influencing change.

[This research evidence was] shared informally face to face. I think face to face is best. If I'm over there to attend a special education meeting and I stop in to the principal's office and they say let me show you something. Then in that moment we're talking about it, the implications of it, what do you think. That Noyce study—he shared it with his math staff too. That created some energy that helped motivate some meetings that will look at the continuum of grade 7-12 math instruction.

Carol also shared information about newly adopted programs through formal presentations to the school board and school-level staff. Formal PowerPoint presentations were offered to the board and staff that offered an overview and a rationale for the district's participation in the state's Federally funded initiative, the key program strategies, and the anticipated outcomes. Research evidence supporting some of the key strategies was included in the presentation. Since the school board was "concerned because of the commitment of resources that grants represent," the presentation to the school board was intended to garner support for the initiative.

In an effort to secure buy-in or influence decision-making, three participants shared the research with district colleagues through professional development activities. Through these

activities, school-based staff heard or read the research evidence and then were encouraged through learning activities to apply the ideas gained through the research to their own context. At the most basic level, one participant brought in keynote speakers with research-based messages intended to influence district and school staff. Arnold brought in well-known educators including Ron Clark, a motivational speaker and former Disney Teacher of the Year.

I thought, “Now this fellow could inspire our teachers . . .” I shared the idea with some of my staff. I said, “Have you heard of this fellow?” “Do you think our teachers would get something out of hearing him speak?” Everyone was really excited about hearing Ron. He’s like a celebrity in the education world. He’s been on Oprah, so everyone knows him. It’s easier to buy into a message sold by a celebrity than by a professor.

Arnold and other participants also implemented longer-term professional development activities that engaged staff with research evidence that supported reform or change. These activities usually required staff to read research articles or books and through discussion to apply the research to the local setting. Arnold implemented book studies with his administrative staff and actively encouraged his staff to apply what they discussed:

I led the administration team through a book study—“Permission to Forget” –which is a good book study for us. . . . What I like is translating the research to our local context and getting everyone involved in that process. We meet monthly and talk about the book studies and where we are in this. But mainly with us, we talk about “how does this apply to us” as we go through a book, “what do we need to change because of this” and then make the ongoing changes as opposed to saying “we are going to do this year and this next year.” We just make changes as we go.

Similarly, Fran established a discussion group with school leaders and master teachers and used this mechanism to introduce research evidence underlying the Response to Intervention model. First, she created a “sense of urgency” by sharing student data that illustrated the need for change. Once the administrators were attentive to the situation, she introduced the RTI research and facilitated discussion through a series of collaborative meetings. Over a six-month period, Fran engaged the staff in what she described as an “organizational change” process:

We had a real drive to look at periodical articles and other research materials that we feel are worthwhile and use that in our practice. . . . the things I learned in it to analyze and break down how information could /should be shared. Breaking it down. Basically creating a sense of urgency with staff to get them to want to know about this information. . . . You just have to break it down to get everyone’s attention. Once everyone is attending to it, then you can say, “here are some options.” “Here are some things we can do to meet this challenge.” . . . We took the group through a series of collaborative staff meetings. . . . We met as a large group . . . and read journal articles and discussed them during our collaboration days. So, over a period of six months, we’re doing this. We’re going through the organizational change process as well as talking about Response to Intervention. . . . So I talked with everyone, and see what I could do, and at the same time expose people to the research and model and getting the programs put into place.

Both Arnold and Fran used a participatory approach to guiding school staff toward change, fostering learning and buy-in over an extended period of time. Neither leader exercised top-down authority by dictating change. Arnold offered his perspective on this approach:

I’ve been thinking it’s a matter of time. I mean, you offer the training and let folks sit with the ideas for a while. Like letting a pot simmer. You stir it once in a while—ask

questions, for instance. If you keep the fire going eventually the pot will boil. What I hope for is that the faculty will grow to like his ideas and will implement the ideas without me pushing it from on top.

Of the nine participants who reported using research evidence for advocacy purposes, four reported that they had received research evidence from an entity or individual promoting the sale or adoption of an educational program or product. This research evidence was either shared by a vendor or by a colleague who had received information from a vendor. In very few cases was research evidence of this type received favorably. The participants questioned the rigor of the self-reported research findings, given that the intent of sharing of this information was often to generate sales.

Bruce provided an example of a vendor who had sold the district a school-based behavioral system. The vendor, a university-based nonprofit organization, had presented research evidence to the district on the effectiveness of the behavioral system, pointing out the outcomes achieved by other districts who had invested in the system.

They cited their own research about the program... that it's been successful in 10 different school systems. . . . They sold us the bill of goods and we bought lock, stock, and barrel. So we make the financial investment and send 10 of our staff to their training program. . . . They're given more evidence of how successful this system is. . . . So I'm looking at this sheet and asking the project director, "so where is the hard data?" There are a lot of studies mentioned in this brochure and lots of findings, but very few numbers. No discussion of effect size or significance of the findings. Nothing. Our project director asked for a sample research report from which these findings were extracted. We still haven't received anything.

In retelling this story, Bruce pointed out that his staff was equally at fault for not questioning the vendor about the research evidence provided for the program. By not doing their “due diligence and asking better, smarter questions” about the program, the staff, in Bruce’s opinion, “wasted a quarter million dollars” on an ineffective program.

Carol faced a similar situation when a principal within her district advocated for the purchase on an online reading program and, to bolster her argument, cited research evidence shared by the vendor. The research evidence was presented in a sales brochure, which “cited all the wonderful outcomes that kids could have by using this program.” Carol distrusted the evidence presented in the brochure.

“Reading skills improve by an entire grade level in one semester.” “Higher levels of student motivation to read.” We’ve all seen this stuff before. I mean, the education marketplace has grown by leaps and bounds since No Child Left Behind. Every school, every district is looking for the winning lottery ticket—that one program/intervention that will miraculously improve test scores. It just isn’t out there.

For some participants, the source of information about vendors’ products and programs made a difference in how they responded. Ed had approved several vendor programs for his district’s Federal discretionary grant project on the basis of recommendations presented to him by community partners and faculty from the regional university. Ivy also considered the source of information when making decisions about programs:

And [my response] depends on who [the research evidence] is coming from. And if it’s from our lovely vendors who love to throw research at me, it obviously is for support of their product. I don’t honor too much time there until we’re ready and we’ve done a little homework for ourselves first.

Of the nine participants who reported using research evidence for advocacy purposes, two reported that they or a colleague had used research evidence to guide the writing of and/or support funding applications. This was especially true of districts seeking Federal discretionary grants, since several U.S. Department of Education grant guidelines demanded the use of evidence-based programs. For these participants, research summaries or information about evidence-based programs guided the conceptual framework of grant initiatives or offered evidence-based programs to be named in the narratives.

Hayden reported that his colleagues, including a contract grant-writer, had used research summaries available on a state university website to develop the conceptual basis for a grant application and to select an evidence-based program, Response to Intervention. This research, according to Hayden, “was instrumental in using the Response to Intervention model. . . . The research created a blueprint as to how this RTI concept should come alive.”

Bruce shared a similar story but was less enthusiastic about the grant-writing process. In his opinion, the tight timeline for grant-writing made thoughtful decisions about evidence-based programs nearly impossible. There was no time with his district’s discretionary grant application to verify the grant-writer’s recommendations on evidence-based programs. It was also problematic that the grant-writer was not a district employee but worked for the regional university. As a result, there was very little interaction between the district and the grant-writer during the development of the grant application. The decision to invest grant funds in the behavioral system that was inadequately supported by research evidence demonstrated to Bruce the dangers of not adequately controlling the grant-writing process.

*Research that informs personal thinking.* Two participants indicated through the interview process that they had reviewed or shared research evidence without the intent of



directly acting upon it. Diane, for instance, reviewed research but did not necessarily use every piece of evidence she reviewed. She considered her reading of research evidence as staying “aware of [the] larger trends.” Her response suggests that review of research evidence may inform her thinking on an issue or topic, in some cases building on existing knowledge. This finding is akin to the enlightenment version of the conceptual model of research utilization, which theorizes that concepts and theoretical perspectives that emerge from research evidence serve to shape decision-makers’ general thinking about issues, which then may become relevant to specific decisions (Ginsburg & Gorostiaga, 2003).

Carol read extensively on high school reform and used her knowledge to inform her discussions with principals. Similar to Diane, however, she admitted that not everything she read was used in her practice. In discussing her review of a research report on the Talent Development High School model, she commented:

It is building on knowledge I have of the research literature in secondary reform. Every article I read allows me to have a more nuanced perspective of secondary reform. Has it influenced my thinking about our local high school? Do I want to put the Talent Development High School model in that school? No.

Carol, however, noted that she often shared what she had learned in a very informal manner. She often did not recall the source of the information, simply that she had “read [it] somewhere, sometime.”

Findings about participants’ purposes for and uses of research evidence were generally consistent with the findings of previous research, which found that administrators sought out research for instrumental and advocacy purposes as well as to inform personal thinking. There is, however, a much stronger interest among this sample of administrators in using research

evidence instrumentally. This finding may reflect the administrators' roles with Federal grants or the larger influence of NCLB. The section that follows discusses the influences on how research evidence is used by administrators.

*Influences on Research Evidence Use.*

A key research question guiding this study concerned the influences upon how rural district central office administrators leading educational improvement use evidence. Participants were asked in several ways across the three interviews to describe how they had used research evidence in support of their work leading reform efforts. This information was gathered in order to determine through inductive reasoning the influences on how research evidence was used by participants. The administrator's professional wisdom appeared to be an important influence on whether and how research evidence was used; the availability of resources to take action, the nature of the research evidence, and the credibility of the source providing the research evidence were also significant influences on evidence use. These sub-categories, and related themes if applicable, are presented in Table VI and discussed below.

Table VI

*Summary Code Table for Category of Influences on Research Evidence Use*

Sub-Category	Sub-Category Description	Theme	Theme Description	Percent of Transcripts with Code
Availability of Resources	Time and money aid or hinder the adoption of evidence-based practices and programs. The implementation of evidence-based programs or interventions was closely associated with discretionary grant	Time	Influence of the availability of time on the use of research evidence, especially the adoption of evidence-based practices and programs.	56%
		Money	Influence of the availability of funding on the use of research evidence, especially the	33%

	awards and the availability of low- or no-cost training initiatives.		adoption of evidence-based practices and programs.	
Administrators' "Professional Wisdom"	The influence of administrators' "professional wisdom" on research evidence use, especially the adoption of evidence-based practices and programs.			78%
Source of Research Evidence	The influence of administrators' perceptions of the credibility of the sources providing the research evidence.			56%
Nature of Research Evidence	The influence of administrators' perceptions of the nature of the research evidence, especially its rigor and the transferability of findings to other settings.	Rigor of Research Evidence	Influence of administrators' perceptions of the rigor of research evidence.	66%
		Transferability of Findings to Other Settings	Influence of administrators' perceptions of the transferability of research findings to other settings.	33%

*Availability of Resources.* Seven participants indicated through the interview process that considerations of time and money either aided or hindered the use of research evidence, particularly the adoption of evidence-based practices and programs. As Coburn and colleagues (2009) articulated in their recent longitudinal study, the availability of resources is a significant influence on the use of research evidence. Resource constraints contributes to more conservative decision-making; less funding is also available for intermediary organizations to provide consulting services or to invest in new programs or training. In this study, however, participants were employed in districts that had received Federal discretionary grants, which typically required investments in evidence-based programs. It is not surprising, therefore, that availability of time was a greater influence on research evidence use than funding for these participants.

Five participants indicated that availability of staff time or other timing issues influenced their use of research evidence, especially in regards to the adoption and implementation of evidence-based programs. In implementing his district's Federal discretionary grant project, for instance, Bruce's decision-making about the adoption and implementation of evidence-based programs was influenced far more by time than funding availability.

The district's own priorities are a major factor, and I guess that relates to time. We stalled implementation of a drug prevention program for another year because our district was on Academic Watch. Our time had to be spent improving test scores. We didn't have extra instructional time or staff time to expend on a drug prevention program this year.

Even the decision to pursue a grant to provide evidence-based programs was strongly influenced by administrators' perceptions of the time required to implement the grant project. Carol commented that the documentation and reporting requirements associated with her

district's Federal discretionary grant caused her to seriously weigh the pros and cons of implementing the grant:

You know, you might say it's free money, why would we not do it. But there are a lot of documentation and reporting requirements associated with this grant. As a small district, it is an onerous responsibility. We wouldn't take this on unless we really believed it would make a difference.

Three participants indicated that availability of funding influenced their use of research evidence, especially in regards to the adoption and implementation of evidence-based programs. In light of the current economic climate, with many state and local governments reducing education budgets, two participants made comments about the decreasing funds available for school districts. Gary pointed out that the dual challenge of state budget cuts and declining enrollment is forcing the district to do with less funds than ever before.

Given these pressures, some administrators carefully scrutinized the costs associated with evidence-based programs. Diane, for instance, carefully weighed the decision of implementing an evidence-based program in a manner akin to a cost-benefit analysis:

It's actually a state-funded initiative; therefore, it's low cost and a strong program. . . . But there is an expense with running this program. There is a teacher who coaches students even though they are self-directed. The state doesn't require this staffing, but in our experience students succeed more in online learning if they have the support of a teacher. So, yes, there was an investment required on our part. . . . If I can invest \$40,000 and ensure that another 20 kids stay in school, it's worth every penny.

*Administrators' "Professional Wisdom."* Comments by seven participants suggest that administrators' "professional wisdom" influences research evidence use, especially the adoption of evidence-based practices and programs. Also referred to as "working knowledge," professional wisdom is the judgment that professionals acquire through experience and that includes beliefs, attitudes, pedagogical knowledge, and content knowledge (REL-Southeast, 2007). Honig and Coburn (2008) proposed that an individual's working knowledge strongly mediates evidence use. As was discussed earlier, studies (Birkeland, et al., 2005; Corcoran et al., 2001; David, 1981; Kennedy, 1982) demonstrate that central office administrators will search for and pay attention to research evidence that is aligned with their expectations or their desires. Conversely, they will ignore research evidence that is not aligned with their interests (David, 1981).

There was a common perception among all seven administrators that professional instinct, whether their own or that of their colleagues', was invaluable and, at times, trumped research evidence as an influence on decisions. In assessing needs for an intervention, five of these seven administrators reported that they were likely to forego a formal needs assessment and rely instead on their existing understanding of the situation. Ed stated it simply: "We already had a good sense of what was needed in our district." Gary, also, indicated that he did not conduct a formal needs assessment prior to selecting an intervention. Through his comments, Bruce suggested frequent and open communication with principals allowed him to be fully aware of the issues facing each school. This type of communication was possible because of the small size of the district and its schools.

Four administrators also shared that they relied on their professional wisdom in varying degrees to make decisions about evidence-based programs and practices. Diane, for instance, had

decided to add staff positions to a research-based state initiative, because “in our experience students succeed more in online learning if they have the support of a teacher.” When discussing the Talent Development High School, Carol’s comments also suggest her preference for professional wisdom over research evidence: “I’d heard about coaching through the Talent Development High School model. I’ve never seen any direct research evidence about its success. But honestly, it’s an idea that just makes sense.” This was especially true for Arnold, who stated:

I’ll be real honest here. I’m less concerned about something being research-based as I am about it being tried and true. If a colleague shares with me what they’ve done and what they’ve accomplished, that means a whole lot more to me than a research study.

Fran valued the research on evidence-based programs but also relied on her experience as a teacher to tell her what would work. In regards to her interest in the RTI initiative, she explained:

Obviously the district presentation worked well to whet my whistle and to say this is a good thing. . . . I went to the meeting and I sat in that meeting and I think the reason I wanted to move forward was not because of RTI itself or the proposal but because I knew as a teacher that the things they were saying were true.

Fran was very conscious of striking an appropriate balance between professional wisdom and research evidence. During an interview, she articulated a position on this matter:

. . .it’s a two-pronged approach. One is my belief system about education and what can be done from twenty years of teaching experience in a small school. And the other is the knowledge base that I needed to implement those ideas on a much larger scale. We had to have both pieces to make this work . . .

Participants' comments suggest that administrators' "professional wisdom" is a strong influence on research evidence use. The source of research evidence is also an influence on evidence use, as discussed in the following section.

*Source of Research Evidence.* Comments by five participants suggest that administrators' perceptions of the sources of research evidence influence its use. The degree of influence research evidence had on decision-making seemed to be affected by participants' perceptions of the credibility of the source of that evidence. Overall, research evidence or information about evidence-based programs was held in higher esteem, and therefore was more likely to be used, if it came from a government source, a respected colleague, or a well-known author than from a vendor. This is consistent with Honig and Coburn's (2008) finding that central office administrators' use of evidence was shaped by the nature of the evidence itself, including its credibility.

Research evidence presented by a celebrity, whether an author or actor, seemed to hold credibility for a few participants in this study. Diane, for instance, paid attention to research presented by Denzel Washington, an actor serving as a spokesperson for a drop-out program. Arnold, in discussing the writing of Ron Clark and his involvement in the district's professional development activities, commented on the author's credibility due to his celebrity: "Everyone was really excited about hearing Ron. He's like a celebrity in the education world. He's been on Oprah, so everyone knows him. It's easier to buy into a message sold by a celebrity than by a professor."

Research evidence conveyed by respected colleagues from inside and outside of the district also seemed to increase the probability that it would be used. This was certainly the case



for Bruce, who made a decision on an evidence-based program after a colleague shared information about the success of the program in her district.

As discussed earlier, information on evidence-based programs from government sources was held in high regard by participants. The five participants who commented on the credibility of recommendations from government agencies for the most part did not hesitate to implement those recommendations. Bruce, for instance, indicated that his district “had contracted with [vendor] to provide the [name] program,” following a recommendation from the U.S. Department of Education. Ed also indicated that his district had used evidence-based programs that had been recommended by the Department of Education.

For the most part, information conveyed by vendors was not considered to be trustworthy and therefore was typically not used. As shared earlier, Ivy articulated that she doesn’t give much consideration to vendor-provided information unless she has done “a little homework” first. Her comment suggests that, at least for Ivy, vendor-provided information is not very influential on research evidence use, including adoption of evidence-based programs.

*Nature of Research Evidence.* Comments by six participants suggest that these administrators’ perceptions of the nature of the research evidence, especially its rigor and the transferability of findings to other settings, influenced the degree to which they used it. Participating administrators were more likely to use research evidence if they considered it to be rigorous and conducted in settings that were similar to their own districts. This finding is consistent with results of previous studies, which found that individual preferences for and beliefs about certain kinds of evidence influence the search for research evidence (Coburn & Talbert, 2006; David, 1981; West & Rhoton, 1994). In a longitudinal case study of one urban school district by Coburn and Talbert (2006), for instance, central office administrators

expressed issues with the credibility of research evidence based on the research design used or type of study site. The researchers found that some central office administrators' use of evidence depended on their beliefs about the relative credibility of certain types of research designs, including quasi-experimental designs. Other administrators rejected evidence from studies, regardless of design, if the research sites did not closely resemble their own (Coburn & Talbert, 2006).

Three participants specifically commented on the relevance of research findings to their own district contexts. Similar to the findings in the Coburn and Talbert (2006) study, these participants were less likely to trust findings from research if it was conducted in settings dissimilar to their own districts. As part of his decision-making process to adopt and implement a student advisory program, Gary considered how successful the program had been in other settings. However, he was very cautious about basing his decision on research findings from other settings:

I'm not a fan of best practices. Best practices tend to work in certain environments. You take a program that works well in one site and how it works in your own site may be very different. We have to evaluate our program by what our clientele say about it.

Other participants shared Gary's perspective but further indicated a bias for evidence from research done locally or regionally. As part of his decision-making process to adopt a positive behavioral system as an educational intervention, Ed reviewed findings from evaluations conducted by a local university in nine other districts within his state. In discussing the findings, Ed articulated why he found research evidence from other rural districts similar to his own more important for his decision-making:

I mean, you can hear about evidence-based programs that work in urban districts or in [Western state] or elsewhere, but you never can tell if it will work in your school with your kids. Sometimes adapting an evidence-based program that works in an urban setting doesn't work out here.

Comments by six participants suggested that they considered the rigor of the research when using evidence for decision-making. Similar to the findings in the Coburn and Talbert (2006) study, these participants were less likely to trust findings from research if they believed the research design was not sufficiently rigorous. Four of the six participants noted in the evidence they reviewed the extent to which the research design had reflected the standards for scientifically based research promoted by the Department of Education. Bruce, in particular, was sensitive to asking for evidence of program outcomes that aligned with the Department's research standards. He noted, for instance, that evidence on his selected positive behavioral system was drawn from randomized control trials, considered by the Department to be the gold standard for research (Coalition for Evidence-Based Policy, 2003). Similarly, Carol pointed out that the Department's evidence standard for its What Works Clearinghouse, which she used to identify programs and interventions, was randomized control trials. While Hayden did not specifically mention a particular research design, he did state that he looked for scientifically validated research to support program decisions: "For me it means that the scientifically validated research shows that there is either something that is a better approach and I'm talking about research evidence in relation to education of course. . ."

Fran and Gary applied a different set of standards when determining whether research was rigorous enough to apply to decision-making. Both participants looked for research that met commonly accepted academic standards for research, specifically whether the research had been

peer-reviewed and accepted for publication. This different approach may be in part attributable to their status as doctoral students.

Findings about influences on research evidence use were generally consistent with the findings of previous research. In marked contrast to studies conducted in urban districts, however, the political context of the district was not revealed through participants' comments to be an influence on the use of research evidence. This finding may reflect the structural and political differences between a large urban district and a small rural district.

### *Conclusion*

This chapter documented the study's principal findings. An overview of the sample of nine participants was presented, followed by a detailed profile of each participant that summarized their unique characteristics and perceptions of / experiences with research evidence as part of reform efforts. Findings were presented from the phenomenological analysis of interview transcripts and text-based artifacts, which focused on the development of themes common across all data sources (Van Manen, 1990). The codes generated through the qualitative data analysis were clustered in five categories, thereby offering an organizational structure through which to understand participants' perceptions of their experiences searching for and using research evidence. These categories of experience are the participants' perceptions of research evidence, purposes for research evidence, approaches to identifying research evidence, approaches to using research evidence, and influences on research evidence use. Discussion of the findings, presented in the next chapter, will respond to the study's original research questions in the context of the extant research literature on this topic. Implications of this study will also be discussed.

## Chapter 5

### *Introduction*

The purpose of this study was to develop a rich understanding of why and how rural central office administrators engaged in educational improvement search for and use research evidence. In pursuit of this understanding, nine rural school district administrators were interviewed multiple times to understand for what purposes they searched for research evidence, how they searched for and used research evidence, and what influenced how they used research evidence. The literature review, presented in Chapter 2, presented background information on current Federal policy in evidence-based practice in the field of education and a summary of research on the purposes and use of research evidence in education. Based on the interpretivist study design presented in Chapter 3, the data were generated and findings presented in Chapter 4. Each participant was profiled and common themes identified that help to explain why and how rural central office administrators searched for and used research evidence. This chapter summarizes the purpose and design of the study, examines key findings in the context of existing research studies, discusses the implications for Federal educational policy on evidence-based decision-making, and offers general conclusions.

### *Purpose and Design of the Study*

As outlined in Chapter 1, the development and implementation of the study was guided by four research questions:

1. Why do rural district central office administrators leading educational improvement search for and use research evidence?
2. How do rural district central office administrators leading educational improvement search for research evidence?

3. How do rural district central office administrators leading educational improvement use or incorporate evidence?
4. What influences how rural district central office administrators leading educational improvement use evidence?

In order to address these questions, a qualitative study positioned within the interpretivist paradigm (Schwandt, 2000) was conducted. The study used interviews and document analysis to generate data on why and how rural district central office administrators engaged in educational improvement searched for and used research evidence. Multiple interviews with nine individuals identified through a sampling strategy provided insight into these topics. Documentation provided by participants offered additional data. The interviews were transcribed and transcripts and documentation were analyzed using a grounded theory approach.

The study's findings provided descriptions of participants' experiences searching for and using research evidence. Five categories emerged from the data: participants' perceptions of research evidence, purposes for research evidence, approaches to identifying research evidence, approaches to incorporating research evidence, and influences on research evidence use. Each category of experience was comprised of one or more related sub-categories and, if applicable, themes and sub-themes. Throughout the research process attempts were made to uphold the authenticity and the trustworthiness of the study. In line with phenomenological methods (Schwandt, 2000), the author engaged in bracketing her assumptions about the study topic. The following section highlights key findings in the context of existing research studies.

### *Key Findings*

By establishing a focus on use of research evidence by rural district central office administrators leading educational improvement efforts, this study sought to fill a gap in the

existing research, which has focused almost exclusively on administrators in urban school districts. In discussing the key findings, differences and similarities between existing research and this study's findings are highlighted. Differences are examined carefully to assess whether the characteristics associated with rural districts—namely the small-scale, flat organizational structure and fewer resources to collect and interpret research evidence—significantly influenced administrators' use of research evidence.

*Perception of research evidence.* The majority of participants perceived research evidence as evidence demonstrating the effectiveness of strategies to improve schools and student engagement and achievement. In fact, many participants frequently used research evidence interchangeably to describe evidence for effective interventions as well as evidence-based programs. A smaller number of participants characterized research evidence as drawn from research that was rigorous in nature.

This perception of research evidence is consistent with the policy concept of using evidence from rigorous research to inform educational practice, which first emerged in the U.S. during the debates over Federal reading policy in the 1990s (Manna & Petrilli, 2009). As noted in Chapter 2, the authorization of NCLB (H. Res 1, 2002) extended this emphasis in using evidence-based approaches to other areas of education beyond reading. NCLB also introduced the term, “scientifically-based research,” which referred to research evidence supporting the identification and implementation of educational interventions. This term is defined in the Act as research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs (H. Res 1, 2002).

While the Department of Education considers local evaluation findings and data as appropriate evidence of an intervention's effectiveness (REL-Southeast, 2007), this type of data

was less frequently mentioned by participants. Only Gary specifically advocated for evaluating programs within the district, although a few participants noted that they had used evaluation data collected by other districts or universities within their immediate region to inform decision-making. Since other studies have referred to the use of district evaluation findings (Robinson, 1988), the lack of discussion of the use of local program evaluation data may reflect to some degree the absence of research and evaluation offices within these rural district central offices.

*Purposes for research evidence use.* Research evidence is utilized in a variety of ways and for diverse purposes by district office administrators. Instrumental, conceptual, and strategic purposes for research evidence use are common models employed by researchers to understand why research evidence is used (Ginsburg & Gorostiaga, 2003). This study found that all participants identified using research evidence for advocacy purposes, which aligns with the strategic model for research use. Six participants identified using research evidence for instrumental purposes, while only three participants used research evidence in a conceptual manner.

On the basis of research conducted to date, Weiss (1998) and Kennedy (1984) argued that the instrumental use of research evidence is quite rare. Yet in this study, six participants provided examples of using research evidence in an instrumental manner, including to identify new programs, guide program implementation, and predict outcomes for programs. However, this finding is not surprising in a post-NCLB era, given the emphasis in that law (H.R. Res 1, 2002) to use research evidence to inform decisions about educational practices.

Conceptual and strategic uses of research evidence, on the other hand, have been more frequently reported in the existing research (Corcoran, Fuhrman, & Belcher, 2001; Hemsley-Brown & Sharp, 2003; Robinson, 1988; Saha, et al., 1995). The frequent examples of strategic



uses of research evidence among the participants, including to advocate for decisions already made, promote programs, or support funding applications, is consistent with the existing research. However, the lower frequency of conceptual uses of research evidence is at odds with the existing research within the education field.

There is emerging research on predictive factors for research use in other fields that may suggest a reason for this finding. In a survey of 833 government officials, Amara, Ouimet, and Landry (2004) found that, in general, the three types of research use simultaneously played a significant role in government agencies. However, a small number of factors explained the relative differences in levels of instrumental, conceptual, and symbolic utilization of research. Higher instrumental use was significantly associated with research that focused, among other things, on adaptation of research for the user's need. Higher symbolic use was associated with the respondents from regional government agencies (as opposed to those from the Federal government agencies) and also the adaptation of research to users' needs. Higher conceptual use, on the other hand, was significantly associated with the qualitative research products and individuals with advanced graduate study. In this study, all three individuals who shared research in a conceptual manner either had a doctorate or were currently engaged in doctoral study. Scholars have suggested that more studies are needed in this area to further understand what drives the different uses of research evidence (Sudsawad, 2007).

*Use of research evidence.* Searching is an integral part of the process of research evidence use (Honig & Coburn, 2008). The term often refers to the often haphazard processes by which information enters an organization (Honig, 2003; Kennedy, 1982). Most participants in this study identified research evidence in multiple ways, including tapping the resources of Federal and state agencies and learning about research evidence through professional

development activities and interactions with intermediaries. However, the most prevalent approaches to identifying research evidence were professional networking, especially with district colleagues and peers in other districts, and reviewing summaries of research evidence on effective strategies.

Existing research suggests that the rural district central office administrators in this study seek research evidence from similar external sources as their urban peers. As noted in Chapter 2, existing research suggests that practitioners in the field of education rely heavily on professional journals and bulletins, professional associations, conferences, magazines from unions, the Internet (through e-mail and Web sites), national and regional research and development organizations, visiting researchers, and materials distributed by the government, as well as external colleagues and “trusted sources” as sources of research evidence (Biddle & Saha, 2002; Huang et al., 2003; Nelson, Leffler, & Hansen, 2009; St. Clair, Chen, & Taylor, 2003).

Of interest, universities, which are frequently mentioned in other studies (Honig, 2004; Nelson, Leffler, & Hansen, 2009; Tseng, Granger, Seidman, Maynard, Weisner, & Wilcox, 2008) as a primary source of research evidence, were less frequently cited by participants in this study. Less than half of the rural administrators interviewed had sought or received research evidence from a university. In fact, they were as likely to receive research evidence from a vendor as from a university representative. While the reason for the less frequent mention of universities is not clear, the relative geographic isolation of the rural districts represented in this study as compared to their urban counterparts, coupled with the greater attractiveness of urban districts as research sites, may have contributed to this finding.

There are some differences with regard to the internal sources tapped by administrators for research evidence. While Robinson (1988) had found that central office administrators use

evaluation findings to inform their thinking or for political purposes to support or advocate against specific programs or interventions, this was not the case for the rural districts represented in this study, none of which had research or evaluation offices. Instead, the internal source of research evidence most cited by participants was other district staff.

Also referred to as interpretation (Honig, 2003), incorporation refers to how organizational members make sense of and use research evidence once it has been identified and brought into an organization (Weick, 1995). While participants in this study incorporated research evidence in several ways, there was a clear predilection for using social processes to understand and apply the research in the district setting. Informal sharing between individuals and sharing during formal meetings were the two most widely represented approaches to incorporating research evidence.

The study findings on incorporation are consistent with that of existing studies (e.g., Coburn, et al., 2009; Honig, 2003; Kennedy, 1982; Spillane, 1998), which confirm that when research evidence enters a district central office, administrators engage in a process of deciding whether and how to use the information. Honig and Coburn (2008, p. 592) point out 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.”

The strong evidence in this study of the social processes used to incorporate research evidence is consistent with earlier research (e.g., Cousins & Leithwood, 1993; Kennedy, 1982; Rogers, 1995). This body of research demonstrates that the process of incorporation is highly social in nature, involving many people in meetings and informal conversations across time. That

is, knowledge is socially constructed through a sensemaking process (Hemsley-Brown & Sharp, 2003; Honig & Coburn, 2008; Nutley, et al., 2003). Consistent with Kennedy's (1982) findings, the districts in which the participants worked provided many opportunities for individuals to incorporate research evidence using social processes, including committees, meetings, and other less formal opportunities for exchange.

*Influences on research evidence use.* While there are many influences affecting the use of research evidence by central office administrators, this study found that the participants' professional wisdom was a primary influence on whether and how research evidence was used. Also referred to as "working knowledge," professional wisdom is the judgment that professionals acquire through experience and that includes beliefs, attitudes, pedagogical knowledge, and content knowledge (REL-Southeast, 2007). Participants' perceptions of the rigor of the research evidence were also a significant influence on evidence use.

The emergence in this study of administrators' professional wisdom as a strong influence on research evidence use is consistent with existing research. In their review of the literature on evidence use by district central office administrators, Honig and Coburn (2008) proposed that an individual's working knowledge strongly mediates evidence use. As was discussed earlier, studies (Birkeland, et al., 2005; Corcoran et al., 2001; David, 1981; Kennedy, 1982) have demonstrated that central office administrators will search for and pay attention to research evidence that is aligned with their expectations or their desires. Conversely, they will ignore research evidence that is not aligned with their interests (David, 1981). This was demonstrated consistently in this study by the majority of participants who perceived that professional wisdom, whether their own or that of their colleagues', was invaluable and, at times, trumped research evidence as an influence on decisions.

Honig and Coburn (2008) also argued that district central office administrators' use of evidence is shaped by the nature of the evidence itself. For participants in this study, the credibility of the study—in particular, the rigor of the research design and, to a lesser extent, the transferability of research findings to other settings—influenced their use of the evidence. This finding was similar to the findings of an earlier study conducted in an urban school district, which found that central office administrators expressed issues with the credibility of research evidence based on the research design used or type of study site. Coburn and Talbert (2006) found that some central office administrators' use of evidence depended on their beliefs about the relative credibility of certain types of research designs, including quasi-experimental designs. Other administrators rejected evidence from studies, regardless of design, if the research sites did not closely resemble their own.

In studies of research evidence use in urban districts, district central office organization and political dynamics, played an influential role in central office administrators' understanding of the research evidence (Coburn, et al., 2009; Honig & Coburn, 2008; Spillane, 1998). Honig and Coburn (2008) noted that the organization of district central offices can either hinder or help the use of research evidence. Poor interdepartmental communications in mid-sized and large district central offices may impede the use of research in decision-making (David, 1981; Honig & Coburn, 2008; Spillane, 1998). Similarly, the highly politicized nature of many school districts, in which schools and central office subunits engage in political struggles for resource allocations, is another strong influence on use of research evidence (Coburn et al., 2009; Honig & Coburn, 2008; Nelson, Leffler & Hansen, 2009). In the small rural districts involved in this study, these factors were absent. In fact, administrators commonly spoke of the ease of

communications between the superintendent, other central office administrators, and school administrators, suggesting the absence of silos that could impede sensemaking.

*Influence of the rural setting on research utilization.* Overall, the findings in this study of rural district central administrators were fairly consistent with earlier studies on research evidence use by their urban counterparts. However, the differences between urban and rural district administrators in research evidence use are worthy of further discussion. First, there was comparatively little interest in the use of local evaluation data to assess the effectiveness of interventions. While the participants frequently referred to student data to assess needs and identify the issues that required an intervention, only one participant discussed using the same data to assess the effectiveness of the selected intervention. This may be reflective of the fact that none of the small rural districts in this study retained the full-time services of research and evaluation staff. This is typical of rural agencies, which have on average lower fiscal capacity, fewer management support services, less availability of planning support services, and fewer evaluation support services than their urban counterparts (Stephens, 1998). With rural districts facing difficulties attracting quality administrators (Schwartzbeck, 2003), it is questionable whether central office administrators would be sufficiently trained to guide evaluation processes. Without this internal expertise or an intermediary to provide this service, the rural districts represented in this study would be hard pressed to know if the interventions they have invested in are producing the intended outcomes.

Secondly, intermediaries, such as consultants, vendors, and universities, were engaged with some districts in this study, but overall they played a lesser role in these rural settings than in their urban counterparts. Recent studies, including the 2009 study by Nelson, Leffler, and

Hansen, have identified intermediaries as central to the research utilization process. The authors reported that:

Throughout our focus group discussions and interviews, participants repeatedly referred to their reliance on intermediaries, who were described as unbiased organizations and individuals that can help locate, sort, and prioritize the available research. Intermediaries include research institutions, professional organizations, partners, coalitions, networks, peers, and constituents. Within these intermediary organizations, policymakers and practitioners appear to have a special relationship with small groups of “trusted individuals,” who are valued as credible, objective sources of information. From the responses we heard, it appears that intermediaries are in a prime position to help users aggregate, translate, and apply research evidence directly to specific, local issues (2009, v).

Given this central role that intermediaries can play in research utilization, rural districts, often geographically isolated from major universities and research institutions, may be handicapped compared to their urban peers in research utilization.

Lastly, interviews with participants in this study’s sample of rural districts did not reveal some of the negative organizational factors experienced by larger districts that can hinder the effective incorporation of research evidence, such as poor communications between departments and political in-fighting for limited resources. Instead, the findings suggest that there are strong social processes across participating districts and within their extended communities to incorporate research evidence. This is likely the result of the relatively flat, small-scale organizational structures of these rural districts and the strong degree of integration with their communities (Harmon, et al., 2007; Stephens, 1998).

Taken together, these findings suggest that research utilization in rural central offices, while similar in many respects to that in urban districts, has some fundamental differences due to the differences in human resources and organizational structure. Understanding these differences provides policy-makers concerned with grounding educational improvement in research evidence with an opportunity to differentiate funding streams and technical assistance to more effectively meet the unique needs of small rural districts. The following section discusses the study's implications for Federal educational policy in promoting the use of evidence-based practice (EBP) in rural districts.

### *Implications for Federal Educational Policy*

Federal policies direct that school district central offices use evidence to ground their educational improvement efforts within an evidence-based practice framework. Yet the extant research on EBP within school districts raises questions about the viability of the EBP model promoted by the Federal government (Coburn, et al., 2009; Honig & Coburn, 2008). Its purely instrumental perspective that research evidence can be used directly to drive decision-making without accounting for other variables, including the considerable role of professional wisdom and human resources in applying research evidence in decision-making, is naïve.

As Honig and Coburn (2008) point out in their review of the research literature on evidence-based practices in district central offices and this study also confirms, the Federal ideal of EBP does not address the intricacies of how evidence is actually interpreted and used by central office administrators across all types and sizes of school districts. As was discussed in the previous section, rural school districts face unique challenges for engaging in EBP. Limited access to human resources, whether in the form of internal research and evaluation staff or intermediaries, is a significant handicap to the effective utilization of research for educational



improvement. The lack of evaluation staff in particular hinders the use of data to assess the effectiveness of interventions. Federal policy, especially as it is implemented through grant-making and technical assistance, should be sensitive to these differences in capacity for research utilization across different types of districts.

There is a growing understanding within the Federal government that facilitating EBP in the nation's school districts requires a different approach. Under the leadership of director John Easton, the Institute of Education Sciences, the U.S. Department of Education's unit for education research, evaluation, assessment, development, and statistics, has become more sensitive to this issue of research utilization. While the use of rigorous research in educational decision-making continues as a significant policy theme for IES, Easton has espoused a shift "away from disseminating research findings to facilitating the use of research" (Easton, 2010, 4). To do this, Easton believes, it is essential to have:

. . . a closer partnership with practitioners and policy makers, and the commitment on the part of researchers to assist in school improvement efforts. That means we're not just dropping research findings on schools and saying, "Here's good stuff that you need to use." Rather, we invite practitioners and policy makers to the table from the beginning, so we're studying the right problems of practice, and so research is not something we're doing to them. They're at the table, so they understand the work and are more able and willing to adopt some of these findings (Easton, 2010, 4).

Easton also addressed the topic of helping districts make more productive use of data to respond to significant questions of practice. While the Federal government has made significant financial investments in state longitudinal data systems, Easton admitted that "there are increasingly robust and rich data systems out there that a lot of users simply don't know how to

wrangle” (Easton, 2010, 6). Using district data to answer significant questions of practice is emerging as a policy theme under this administration. Easton has stated that he wants the Department of Education to “help districts plan stronger evaluation and research designs that can answer meaningful questions” (Easton, 2010, 6).

This “closer partnership” between practitioners and policy makers envisioned by Easton holds potential for rural districts. Targeted discretionary grants and technical assistance to rural districts to facilitate stronger collaborative partnerships between rural districts and intermediaries, including universities and research institutions, and build staff capacity in program evaluation and more effective use of district data could have a profound effect on the capacity of rural districts to harness research to improve education. By differentiating policy to address the differences in capacity for research utilization across types and sizes of districts, the Federal government could help foster improved equity and excellence in American schools.

### *Conclusion*

The results of the current study contribute to an emerging body of research on research utilization in school district central offices by investigating why and how operational knowledge is constructed from research and incorporated into practice by central office administrators responsible for leading educational improvement in school districts. Studies to date on research evidence use have been conducted primarily in urban districts. However, given the importance of organizational context as a variable in research utilization (David, 1981; Honig & Coburn, 2008; Spillane, 1998), we cannot assume that the motivations and processes for research evidence use are similar across all school district central office settings. This study confirmed that there are unique conditions in rural districts that both help and hinder the use of research evidence to improve education.

While the primary findings from this study were interpreted in this chapter using a policy lens, the detailed descriptions of the findings presented in Chapter 4 may be used by readers of this report to construct their own interpretations and generalizations (Stake, 1995). While it is impossible to predict who will read a research report or, more reasonably, as this study found, a summary of the study's findings, Stake suggests that it is possible to anticipate a reader and his reactions. In the case of this study, possible readers might include researchers and scholars with interests in educational administration, educational reform, rural school issues, and research utilization, and policy-makers interested in rural school issues, educational reform, or research evidence use.

For researchers and scholars, the descriptions of participating rural district administrators' use of research evidence may be used to generate ideas for new research studies. A ripe area for investigation is the social processes used to incorporate research evidence in small rural districts. The unique organizational context of the small rural district, with its flat organizational structure and strong connection with its community, suggest that the social processes used to incorporate research evidence could be significantly different than, for example, what was observed in a case study of an urban district conducted by Coburn, Toure, and Yamashita (2009). This study employed a longitudinal case study design. In addition to in-depth interviews and document analysis, its data also included observations of planning meetings. This focus on a single case allowed for the depth of observation necessary to track the role of research evidence in instructional improvement throughout a school district. A similar study conducted in a rural setting would provide the opportunity to generate new hypotheses or build theory about the social processes in rural districts used to incorporate research evidence in educational improvement efforts.

Other topics that were suggested by aspects of this study's results may also provide foci for future investigations on the role of research evidence in educational improvement in rural districts. The relationships between university faculty and rural central office administrators, for instance, provides an avenue for scholarly exploration. In this study, the four participants who mentioned receiving or learning about research evidence from university faculty or Web-based resources associated with a university mentioned this relationship in the context of preparing a Federal grant application. This finding suggests the role that universities may play in not only providing research evidence, but also in helping rural districts secure funding for reform initiatives. Findings from a descriptive study examining the role of university faculty in initiating, facilitating, or supporting educational improvement grants in collaboration with rural school districts may yield ways to inform and support more effective partnership-building between universities and school districts.

Another potential avenue of exploration is the role of doctoral programs in education in influencing how research evidence is identified and incorporated by central office administrators. This study provided some evidence of distinctive search and incorporation patterns related to research evidence use among participants who were either enrolled in a doctoral program or had previously earned doctorates. For two participants, for instance, the habit of incorporating research evidence by themselves appears to have been established during their doctoral study. This practice, however, is not typical of the social processes used by the other participants for incorporating research evidence. An examination of curricula and instructional strategies in doctoral education programs could reveal how doctoral students are taught to incorporate research evidence in administrative practice.

The weak use of local evaluation data to assess the effectiveness of educational improvement strategies identified in this study's results also suggests a focus for future research. None of the small rural districts in this study retained the full-time services of research and evaluation staff, so it is not known to what extent this finding would apply to other rural districts that do have staff responsible for local evaluation work. There are several research questions that could guide a descriptive study focused on this topic. What percentage of rural districts conduct program evaluations of their educational improvement initiatives? What percentage of rural districts employ research and evaluation staff? If research and evaluation staff are not employed by the district, to what extent do rural district administrators hold expertise in program evaluation or, alternatively, utilize the expertise of external evaluators? What are the roles of universities, regional service centers, or inter-district collaboration in providing evaluation expertise? The results of studies such as these could inform Federal- or state-level policy on providing technical assistance in program evaluation to rural districts.

Lastly, the key findings of this study were interpreted as strongly influenced by characteristics of rural districts, which include on-average lower fiscal capacity and fewer management, planning, and evaluation support services than their urban counterparts, as well as relatively flat, small-scale organizational structures and a strong degree of integration with their communities (Harmon, et al., 2007; Stephens, 1998). Arguably, these characteristics also apply to some extent to small school districts, regardless of their rural status. A larger-scale replication of this study involving a sample of small districts from a variety of settings, including rural, small town, and urban settings, may clarify the degree to which this study's findings were influenced by the rural settings of the participating administrators' districts versus their fiscal capacities, support services, organizational structures and/or degrees of community integration.

For policymakers, further review of the descriptions of participating rural district administrators' use of research evidence may inform thinking about the unique aspects of the rural context for educational improvement or research evidence use. Greater understanding of conditions in rural schools provides an opportunity to differentiate policy strategies to more efficiently target areas for assistance. Policymakers may consider how policy tools ranging from laws and regulations to discretionary grants may be harnessed to address the unique challenges faced by rural districts in educational improvement.

This study sought to develop a richer understanding of the phenomenon of rural central office administrators using research evidence. While the study's findings confirm and to some degree add to the results of existing research on research utilization in school districts and in central offices in particular, the primary value of this study lies in contributing to the understanding of this phenomenon in a rural setting. In fact, given the paucity of research in small rural districts, this study contributes to the larger picture of educational improvement in rural locales. With enrollments declining and poverty increasing in rural districts across the U.S. (Schwartzbeck, 2003), the desire to understand and support educational improvement in rural districts should increase as we struggle to maintain and improve equity and excellence in the nation's schools.

## Appendix 1: Researcher as Instrument Statement

I am the research instrument for my study. Therefore, it is important for me, and the readers of this study, to recognize and understand my experience, beliefs, values, and expectations as they might influence the generation, comprehension, reduction, analysis, interpretation, and reporting of the data and information that will form the basis of this study. I will explore these issues as they relate to my interest in examining district central office administrators' purposes and search for, and interpretation of, research evidence in relation to their responsibilities for planning and/or implementing educational improvement.

### *Experience, Beliefs, and Values*

I have interacted in a variety of capacities with district central office administrators extensively throughout my twenty-two year professional career. During my first career as a museum educator and administrator, I worked with district central office administrators in Ontario, Canada, and Georgia on community-based collaborative projects ranging from a multi-media initiative to multi-year teacher professional development programs. I did not discuss nor did I present research evidence to central office administrators throughout this phase of my career, which concluded in 2005.

During the time period of 1995 through 2000, I completed a masters of arts degree in curriculum studies at the Ontario Institute for Studies in Education (OISE) of the University of Toronto. I had entered the program with an interest in educational research that had been sparked by a visitor study that I had undertaken at a museum, but I emerged from the program with a heightened interest in school reform and the evaluation of teacher professional development. My masters thesis was a by-product of the formative evaluation process for The National Faculty professional development initiative. As part of that study, I utilized the Change Facilitators'

Stages of Concern questionnaire as a research-based survey instrument to assess teachers' readiness to introduce arts-based instructional strategies to their school peers.

When my husband accepted a position in the Hampton Roads area in late 2005, I made the decision to change my career focus and focus specifically on educational research and evaluation. Serendipitously, I arrived in Hampton Roads at the same time that a fellow Canadian was relocating an educational policy research organization from Washington, D.C., to this region. I worked as a contractor for the Educational Policy Institute (EPI) during 2006, preparing grant and contract proposals and working on higher education research contracts. After spending a year and a half working in a local school district central office as a grant and policy writer, I returned to EPI as its vice president for research and development for the period of July 2008 through April 2010.

During my tenure at EPI, I worked to build the organization's capacity to conduct evaluations of K-12 reform initiatives especially in the area of teacher professional development. Under my leadership, we have conducted evaluations or studies of several Federally funded professional development initiatives for Federal, state, and local educational agencies. I also led EPI's Federally-supported study of evidence-based decision-making processes in small school districts in a southeastern state, conducted on behalf of the REL-Southeast. The goal of this study was to improve understanding of the evidential bases for administrators' decisions about professional development for teachers. Administrators from eight small and medium-sized school districts in a southeastern state were interviewed. Results indicated that while they reviewed multiple sources of data to assess needs for professional development, research-based evidence of the effectiveness of some of the professional development strategies selected was not consulted. Also, changes in teacher knowledge and instructional practices appeared to be



incompletely monitored and assessed in some of the districts studied. This study directly influenced my decision to study district administrators' use of research evidence in the planning and implementation of professional development.

I also had the opportunity to work closely over a one-year period with a rural school district in a southeastern state that was engaged in a district-wide improvement initiative that was supported by a Federal grant. Although my role was to provide external evaluation support, I often was tapped by the district project staff to advise on the adoption and implementation of evidence-based programs. This district had purchased an evidence-based program, including a curriculum and training package, from a nonprofit vendor at considerable cost. While the program was popular among some district staff, it became clear during implementation that the evidence base for the program was negligible. The vendor provided weak guidance for implementation and, as a result, it was difficult through the evaluation process to collect evidence of its success. I advised the district to reduce their resource commitment to this program and to redirect resources to a stronger evidence-based program that had similar goals. My involvement in this project enhanced my understanding of the role of evaluators in the adoption of evidence-based programs and influenced me to pursue this topic of evidence-based practice in rural districts.

As mentioned earlier, I also had the opportunity to work in the central office of a mid-sized urban school district as a grant and policy writer. In this position, I worked directly for the district's deputy superintendent for curriculum and instruction and collaborated on grant proposals with staff across central office, including staff responsible for educational improvement, curriculum directors, and members of the senior leadership team responsible for elementary and secondary schools and student support services. This role enabled me to gain a

familiarity with staff positions across a district central office. As part of my job responsibility, I also served as a gatekeeper for external grant applications, especially those prepared by university faculty and other research teams. I frequently consulted research evidence as I wrote grants, and I also brought research evidence to the attention of central office administrators who served on grant-writing teams. If central office administrators brought ideas for grant initiatives to me, I questioned them on the research evidence for their proposed projects. It was under my leadership that a grant approval protocol was established in the district, requiring district staff to demonstrate the evidence base for proposed grant projects.

### *Researcher Paradigm*

Given the centrality of educational research to this study, it is important to declare a researcher paradigm. Unlike many educational researchers, who would place themselves squarely in the qualitative or quantitative paradigmatic camp, I would describe myself as a pragmatist. As a pragmatist, I strongly disagree with the incompatibility thesis, which posits that qualitative and quantitative research paradigms, including their associated methods, cannot and should not be mixed (Howe, 1988). I believe that the paradigm should be established by the nature of the research questions and not by the researcher's personal paradigm.

### *Study Expectations*

Based on my past research and the literature review conducted as part of this proposal, I anticipate that the district central office administrators do not use research evidence to directly inform decisions about educational improvement. This finding would be consistent with existing research on research utilization that suggests that research evidence is seldom used in practice to directly inform decision-making. Instead, evidence is used for conceptual and strategic purposes

to, respectively, shape the individual and collective working knowledge of district administrators and strategically support predetermined policy or practice decisions.

I anticipate finding that the interpretation of evidence will vary according to the individual or group. That is, evidence is not neutral but is mediated by interpretation (Coburn et al., 2009). I anticipate finding that the working knowledge of administrators will be central to the interpretation of evidence and ultimately the incorporation of evidence into practice.

Furthermore, in the socially complex setting of a school district office, there may be multiple as well as shared interpretations of the meaning and implications of a given piece of evidence (Coburn et al., 2009), which may lead to conflict and controversy.

While the use of evidence in decision-making by rural school district central office administrators, including those responsible for educational improvement, has not been well researched, I anticipate finding that the incorporation of evidence into day-to-day district central office decisions will be profoundly shaped by a host of conditions including the nature of the research evidence itself, limited opportunities for district staff to engage in collective sense making, and the availability of professional role models that demonstrate what evidence use involves (Honig & Coburn, 2008).

## Appendix 2: Verbatim Transcript and Email Documentation Examples

### *First Interview with Carol, October 28, 2010.*

*Tell me about your academic preparation for your current position.*

I hold a Ph.D. in educational leadership from [name of public university within state], B.S. in Special Education and M.Ed in Counseling from [out of state university], and an Education Specialist degree in Administration and Supervision from [out of state university]. I have an administrative license and also hold a teaching certificate.

*What is your current job title? Can you describe your primary responsibilities?*

I am Assistant Superintendent and Director of Curriculum for this district. I oversee curriculum and instruction across all schools; I also directly supervise principals, although they ultimately report to the superintendent. The superintendent also charged me with leading reform efforts in our district.

*What previous positions have you held in this school district?*

I've been with this district a long time—my entire career of over 30 years. I've been in my current job since 2006. I began my career here as a . . . teacher at [name] High School. I've also served as a Guidance Counselor and an Assistant Principal and Principal at the secondary level.

*What are the major issues facing the district at this time?*

I'm sure you'll get different answers depending on who you ask. For me, it's primarily about poverty. Our county has higher than average poverty. About 13 percent of our residents live below the poverty level, 3% higher than the state average. The percentage of county children living below the poverty level is 24%, 11% higher than the state average. Our free and reduced rate hovers at about 45%. There are rural communities worse off than us, but poverty is a real factor that seems to lead to other issues.

*How so?*

Crime, for instance. Our per capita juvenile crime rate is about 45 crimes for every 1,000 youth. This rate's way above the state per capita rate, which is about 10. It's mostly non-violent—break-ins, for instance—but there's a lot of peer violence going on. We don't have gangs like our urban counterparts but we do have kids posing as 'wannabees.' We do an annual climate survey in our schools. Last year, our 41% of our middle school students indicated they did not feel safe at their school. I don't have kids in the district anymore, but my neighbors complain that they don't feel good about sending their kids to school.

Another issue is our growing Hispanic population. This is a community that had been predominantly white most of its history. We're a rural county in the foothills, good farming, generations of farm families have worked the land. But the large farms need laborers, the chicken processing plants need laborers. This demographic change puts serious pressure on our schools to address the child with limited English proficiency.

*What are the major instructional issues facing the district at this time?*

Academic achievement is a big issue. The district as a whole did not make AYP last year. Most of our schools failed AYP and are in some stage of Improvement. Math is a particularly troublesome area for our middle and high schools. We're also dealing with a low graduation rate at our high school. It's been declining at a proportionately greater rate than the state's.

*What decline have you seen in your graduation rate?*

We dropped 8% last year to 73%. Not good news.

Another significant issue is retention of highly qualified teachers. We don't have any Nationally Board Certified Teachers (NBCT) on staff. Our schools have lower percentages of teachers with advanced degrees than the state average. The teacher turnover rate is higher than it should be, especially among young teachers.

*The focus of my research study is on research evidence. What does the term, "research evidence," mean to you?*

First, I think of research evidence in terms of its use. Like using research evidence in making decisions about curricular innovations or instructional programs. What is the research evidence for X program?

*What is your expectation for research evidence?*

I'm familiar with the What Works Clearinghouse on the US Department of Education website. IT sets the standard for evidence of what works in education. There's a lot of emphasis on experimental research designs, especially randomized control trials, in their evidence standards.

*Do you keep these expectations in mind as you examine research evidence?*

[Laughs] I try but I know I'm not a critical reader of research in my daily work. Even when I did my Ph.D. work, I was not as critical a reader as I should have been. I'm probably more sensitive to research quality than some administrators, though.

*Why do you say that?*

It's just what I observe working with administrators. Here's an example. During a visit I made to one of our elementary schools, the principal came up to me and told me about this great reading program that they had learned about from a colleague. It was a commercial product—came with an online diagnosis tool, guided online learning, etc. Very slick. She wanted me to find budget funds to purchase the program. The "research" she referred to was a sales brochure from the program representative. The brochure cited all the wonderful outcomes that kids could have by using this program. "Reading skills improve by an entire grade level in one semester." "Higher levels of student motivation to read." We've all seen this stuff before. I mean, the education marketplace has grown by leaps and bounds since No Child Left Behind. Every school, every

district is looking for the winning lottery ticket—that one program/intervention that will miraculously improve test scores. It just isn't out there.

*Did you doubt the legitimacy of the stated outcomes?*

Gosh yes. They were claims. There was no citation of research at all.

*Do you still have a copy of the brochure that you could share?*

Oh I don't. I threw it in the trash as soon as I returned to the office.

*How did you address the situation with the principal?*

I suggested that if she was interested in pursuing the program, she should inquire with the manufacturer about the research evidence for those outcomes. If you can show me the proof, then we'll talk about finding the money to acquire it for a pilot test.

*And did she?*

I'm still waiting.

*Have you seen or reviewed any research evidence in the past three months?*

I mentioned I work on reform issues on the superintendent's behalf. We currently have a [Federal discretionary] grant, and we are examining how we might leverage the [grant] funding to further reform efforts in our high school. I've been examining some of the recent research on small schools and school within school models.

*What have you been reading?*

I've been looking at a 2000 study on small schools in Chicago for one thing. I'm also very interested in the Talent Development High School model. There's a study that I've been looking at that examines initial impacts of the model on ninth graders' engagement and performance.

*Where did you find this study on the Talent Development High School model?*

I try to keep up with the literature on reform. It's hard, of course. There are new studies coming out all the time. To keep on top of things, I subscribe to Education Week. It provides a good and timely overview of what's happening in education. It also highlights new studies. I also make sure I get out to at least one major conference each year.

*Which conference do you like to attend?*

I enjoy ASCD because of the wide variety of topics covered across all the sessions. In my job, I have to know a little about everything, so I take advantage of this conference to sample what is happening across a wide range of curricular and instructional issues.

I need to add that I know the literature well on secondary reform only because it was the focus of my doctoral dissertation. I don't want to leave the impression I'm well read. I work in a school district—I don't have the time to read research! [laughs]

*Have you used this research on secondary reform in district decision-making?*

I certainly use the research to inform my thinking about reform. I don't quote research at district meetings, if that's what you mean. But I enter discussions with the high school principal with the research in mind. I understand what works and I use this knowledge to guide the discussion. I see my role as bringing the theoretical framework of reform, research-based reform, to the discussion. The principal, and school faculty, know the context of the school. They can help translate the research-based model to the real world school.

*Am I correct in understanding that you are using research to inform discussions?*

Yes, very much. I'm not advocating for a particular program when I walk into a discussion. I try to always be sensitive to the practitioner's knowledge that is brought to the table.

*Thinking about the study you mentioned on the Talent Development High School, has this study influenced your thinking about high school reform?*

Influenced, yes. Really, it is building on knowledge I have of the research literature in secondary reform. Every article I read allows me to have a more nuanced perspective of secondary reform. Has it influenced my thinking about our local high school? Do I want to put the Talent Development High School model in that school? No.

*Why do you say no?*

I must admit to taking an eclectic approach to reform. Steal a little from this model, and a little from that model. Put together what works for our school, our teachers, our kids. I'm not a purist.

*Have you shared this study with a colleague?*

No.

### *Second Interview with Ed, December 16, 2010*

*In our last interview, you spoke about some of the issues facing the district, especially poverty and its impact on your community. You told me a bit about the [Federal discretionary grant] initiative. I'd like to focus our discussion today on that initiative.*

*You had shared that the University had initiated contact with the district about the grant opportunity. This grant requires a significant investment of time by a district. Why did you agree to pursue this grant?*

I think we talked about [the positive behavioral system] earlier but I didn't need the grant to invest in [the positive behavioral system]. Frankly, it would have been much easier to just have found the money we needed to implement [the positive behavioral system] than to go through the rigmarole of applying for this grant and managing this grant. But what I liked about [this federally funded] program was its comprehensive nature and the partnership model. We have a complex issue – poverty that feeds a host of other problems. This isn't a problem fixed by one behavioral system or by one superintendent. For me, the most powerful part of this grant has been using the funds to mobilize new partnerships and intensify existing partnerships. We've worked with juvenile justice before but it's been highly dependent on who's in the job and their interest. When there's money on the table, there's no excuses.

*Is there a risk, then, of the partnership dissolving after the grant ends?*

Oddly, no. At least I don't want to believe that. The partnerships we're forming are very deep, systemic.

*What do you mean by "systemic"?*

In so many ways we have embedded these partnerships, these new ways of doing things, into our system. What has made a huge difference is bringing our community partners to the table as partners. It's not about us and them. They're now part of us. They're part of the governance of this grant. We're not calling the shots ourselves. We are working collaboratively to make decisions that benefit our children inside and outside of school. So I feel reasonably confident that when the grant funds go away, we'll still be sitting at the table with our partners, figuring out how to continue the good work we've started through this grant.

*So I hear you say that you are confident the partnerships will continue because of their systemic nature.*

Yes that is exactly right.

*Let's return now to the time of the writing of [the Federal] grant. Was a needs assessment conducted at the time the grant was written?*

Not in a formal sense, no. We already had a good sense of what was needed in our district. Did we identify data that would support our grant application? Yes. We had no shortage of good data. We pulled the usual data from our systems—attendance, achievement, discipline—but we also pulled data from our partners. The court system provided data on first-time offenders and re-offenders. The health department provided data on teenage pregnancies and STD infections. The mental health agency provided data on services provided to children and families. I remember we had a meeting and we informally talked about the data we all collected. I remember being stunned by the teenage pregnancy data. We knew this to some extent, but we didn't keep stats on it to the same degree as the health department did. When we all learned about the extent of the problem, we made sure that a significant portion of the grant would be dedicated to that problem. So... not a formal needs assessment, but we did use data to inform our decision-making about the grant focus.

*You've talked about the involvement of your community partners in this process. Did you consult with other district administrators or teachers about perceived needs?*



I worked with a small group of administrators on the planning. There was four of us: the deputy superintendent and the principals from the middle and high schools. My secretary helped out too. The school administrators kept the planning process real. Throughout the process they kept asking questions, probing partners, making sure that what was proposed was in the best interest of their students. I was proud of them.

*And how did they help you assess needs for this initiative?*

Well, I sat down with school-level staff shortly after I'd been approached by the University. I had a good sense of the needs of the middle and high schools. But with this opportunity, I wanted to hear first-hand how this project could support the schools best and meet their needs. So I opened the conversation by telling them about the University's interest and getting their gut reaction. Then I steered the conversation to talking explicitly about the schools' major needs. For me, a central question beyond whether the schools' needs could be met, even partially, by an initiative was whether the schools could actually manage the multiple interventions brought to them by [the initiative]. I also needed to know what interventions or programs were already in place or planned in the near future. [This Federal discretionary grant] is a large-scale program and it can overwhelm schools.

*How so?*

Well, we're talking about four, five, even seven or eight different programs launched within the first year of the grant. It can be overwhelming. I mean, I would not want to launch a program like this if I had schools in improvement status and already focused on academic interventions. I'd have a rebellion on my hands. [laughs]

*Were teachers part of this needs assessment process?*

No. No, we just didn't have time to reach out to them.

*Did you or another central office administrator use in-house research or evaluation reports as part of your needs assessment process?*

We don't have the capacity for in-house research. It's great through this program to be able to fund an evaluator. Really great. But this is a luxury we can't usually afford.

*Let's talk about the planning of the initiative. What did your grant-writing team establish as the goals / objectives of the initiative?*

This grant is about improving the conditions of learning. The grant's major objectives are to reduce student recidivism in the court system, provide greater socio-emotional support through mentoring and school-based mental health services, support improved student behavior in school, provide abstinence education, and provide support for teenage parents. We want through this project to reduce the use of alcohol, tobacco and other drugs, to provide students with a safe learning environment, and provide behavioral, social and emotional support for youth and their families.

*You've mentioned the involvement of the university and of your staff in the planning of the grant. To what degree were other community partners involved at the planning stage?*

Yes! I mean we couldn't have written this grant without support from our community partners. The court system, mental health agency, health department—all were involved in identifying needs but also identifying programs and strategies to address those needs. What I enjoyed most about this process was learning about solutions to problems that I didn't even know existed. The mental health folks especially were incredible. It was through them that I learned how much mental health issues affect student learning. I learned that teachers can be trained to identify basic indicators of mental health issues. A school-based team, including a mental health counselor, can then triage the situation and refer a student for school-based or clinic-based services. They use a case management approach that I think has real value for us in education.

*Why do you think that?*

Just basic stuff—keeping an electronic file on students that is shared among caregivers, entering data when services are offered, appointing one staff member to oversee the case file. We kind of do that, but not the idea of tracking individual interventions given to a student. It's the idea of treating a student as an individual.

*What was your role in the planning process?*

I led the planning process myself. I could have delegated it to my deputy, but given the range of community partners and the potential impact of this initiative on students and the resources of the district, I felt it was important to lead the charge.

*You've already mentioned about data being shared by the community partners. Did they also recommend programs or strategies?*

Yes. For example, the mental health agency recommended . . . cognitive-based therapy. The first words they said was that the program was evidence-based. Don't you like that?

*And what did they share or mention?*

Well, they didn't share any evidence, if that's what you mean. But they know their business.

*Did the health department make any recommendations for programs?*

Yes, they recommended a few programs—[a drug prevention program] and an abstinence program for middle schoolers, but I can't remember the name of the abstinence program. They did share some data from the program vendor for the abstinence. It looked good.

*What type of data was shared for this program?*

The abstinence program uses a pre-post survey that asks students about their sexual attitudes and practices. The vendor had collected the data from across four or five school districts and had aggregated and analyzed the data. There was a statistically significant difference between the pre- and post-survey. We've found the same thing here too, even in the first year of the program.

*Do you know if the data shared was from districts with similar demographics to your own?*

Um. No, I don't know that. I don't know what districts the data was drawn from. You know that stuff is covered by privacy law so we won't know that. But I guess it would have been helpful to know this.

*You mentioned that you've collected this pre-post survey data from your students. Did you face any issues from parents concerning the collection of sexual practice data from middle schoolers?*

We did need to do parental consent surveys. As you probably know, sexual attitudes and practices are one of the special protected areas for student data. I think that's a US Department of Education regulation. We were pretty thorough. But the parents were very enthusiastic about the survey. Less so when they realized we would not share results with them. [laughs]

*Is the survey instrument you used provided by the vendor?*

Yes.

*You mentioned that research evidence was shared for the [positive behavioral system] and abstinence programs during the planning process for your [Federal discretionary grant] initiative. Can you recall if any other evidence was shared or discussed as part of the planning process?*

Those are the two I most strongly recall. I'm sure research was mentioned in conjunction with the other strategies, but I can't recall which ones other than [the positive behavioral system] and the abstinence program.

*What are the primary strategies of the initiative?*

Oh it's quite the laundry list. The [drug prevention program], [the positive behavioral system], abstinence program, mentoring, a case management approach in which the school staff engage with the mental health and court staff, a teenage parent education program.

*We've already discussed how several of these strategies were identified - mostly by community partners - and some of these strategies or programs were backed up by research evidence. Did you or the school staff identify any strategies or programs for use in this program?*

Our staff were very enthusiastic about mentoring. It was an enthusiasm born not out of examining research but more so from our past experience working with community volunteers in our schools. And it's just plain common sense. Our kids need someone to work with them one on one, to care about them, to listen to them.

*So this is an academic mentoring program?*

Yes, mostly, but we wanted a strong emphasis on relationship-building. There is an academic tutoring program but, to be honest, most mentors don't like to tutor middle or high school kids. The academic piece is more about developing good study habits and thinking about college.

Our mentoring program is based on the work of MENTOR, which is a national mentoring organization. They had a downloadable toolkit that we've been using. It's fairly straightforward, socio-emotional support stuff. And I believe what MENTOR offers is based on research. We

plan outings for students and their mentors but they also meet one on one on school property. Always in a supervised setting.

*Do you have a copy of the toolkit?*

I'll send you the URL.

*Did you examine studies/research that identified this approach as appropriate to address needs?*

I was more familiar with the research on Big Brothers Big Sisters mentoring and their outcomes. But we don't have a Big Brothers Big Sisters organization here. But we do have good community connections and the wherewithal to organize a mentoring program. So we did it on our own with local resources and the guidance and resources of MENTOR.

*You mentioned the research on the Big Brothers Big Sisters program. Do you have a copy of this research or recall where you saw it?*

It's been years. I'm sure I heard about it at a conference or maybe a colleague mentioned it. I can't remember.

*You mentioned colleagues. To what degree did you consult with colleagues from other districts?*

The superintendents in our state get together and, of course, we talk about things we've tried in our district to address common issues. I don't recall if I specifically talked about any of the strategies we used with another superintendent. But it would make sense if I did. You know, these ideas are just floating around sometimes for years, and then all of a sudden you have an opportunity to make it happen. It was like that with this grant. All of a sudden, we had the opportunity to make stuff happen. So we got the money and it was then, yes, we can finally make this mentoring idea a reality.

*Did you have any prior experience with mentoring?*

In the last district I'd worked in, we'd had a fairly good mentoring program in place. I had not worked directly with it, but I received the positive feedback.

*You mentioned MENTOR earlier. Did they assist with your decision to implement mentoring?*

When we'd sought out MENTOR, we had already made the decision to pursue mentoring as part of this grant. What they assisted with was how to do it. We used their resources to set up the structure of the program especially. It was very helpful when we prepared the grant application.

*To what degree did you consider resources (money, time) in your decision to implement mentoring?*

Well a lot. I mean, if we had not received the grant, we would not have done this. Mentoring takes both time and money to set up, especially at the district level. I knew we needed to have a staff person at least 50% dedicated to the program, especially at start-up. No district has a half-time person they can just devote to a new program for a few years. We needed the money for the staff person in order to establish this program.

*What the initiative presented to the school board? If yes, how was this initiative presented?*

All grants that commit the resources of the district must be approved by the school board. So I informed the board of the grant application at the time we submitted the application. Then when we received the award, I gave a formal presentation to the board that consisted of an overview of the Safe Schools grant program, the specific details of our local partnership and programs, and the overall implementation plan. There were questions of course, mostly about the commitment of resources, but the grant passed without debate.

*Did you share any of the research evidence about the initiative's strategies?*

Only in very broad terms. I did not cite evidence but did allude to the fact that it was research – based.

*How was the initiative rolled out to the district staff?*

We send out a newsletter to all staff in the weeks prior to school reconvening in the late summer. In the year we launched the grant, we prepared an extensive write-up about the initiative— basically a who, what, where, why, and when article. For the faculty in participating schools, the school administrators and I gave a face to face briefing, I think we prepared a PowerPoint about the program that was a more intensive version of the write-up.

*Do you have copies of either the write-up or the PowerPoint that you could share?*

I'll check. I'm sure we do somewhere.

*Was research evidence about the initiative's strategies shared with the staff and faculty?*

Um. No. What we did say was the programs selected were for the most part research-based, but we did not share evidence. But the staff seemed satisfied with what they heard. They were just pleased that we had won the grant and that their kids were getting more support.

*Third interview with Gary, January 11, 2011*

*Thanks so much for participating in two interviews and contributing documentation for this study.*

You're welcome!

*I sent you by email a summary of initial findings from the eighteen interviews conducted with rural district administrators. As you can see in the email, the findings are organized by the original research questions. I wanted to get your response to these findings. As we review each category of research findings and the summarized findings that follow it, ask yourself if your own experiences are reflected in this summary.*

*The first category of study findings was about how rural district administrators define research evidence. Initial findings suggest that the majority of administrators described "research evidence" as evidence produced through independent research about the effectiveness of*

*educational programs or interventions. Based on your experience, do you agree with this definition?*

For me, this definition makes sense. Maybe it's the emphasis on independent research.

*Can you give an example from your experience to support this?*

Well, independent research is important as much of the data we collect is unique to our district environment only.

*What is the issue with data unique to your schools' environment?*

Well, it's not generalizable for one thing. Research should be generalizable. It should be rigorous in design. Just examining local data isn't the same. That's it.

*The second category of study findings was about how rural district administrators leading educational improvement search for research evidence. Initial findings suggest that there are many sources administrators turned to for research evidence about effective programs or interventions. The top sources included government agencies, intermediaries, professional conferences or meetings, published research evidence, and district colleagues. Do these findings reflect your own experience?*

It is important to have these sources available. I would say I've turned to most of these sources at one time or another. But it is just as critical to approach concepts for educational improvement carefully. Best practices at an urban school may not be the same at a rural school.

*So you are concerned that evidence collected through research at one site may not be transferable to another?*

Yes. This is a big concern of mine.

*The third category of study findings was about why rural district administrators leading educational improvement search for and use research evidence. Initial findings suggest that administrators sought and used evidence for instrumental, conceptual, and symbolic purposes. Do these findings reflect your own experience?*

I tend to lean toward using research evidence for promoting a program decision. Research evidence, particularly when it is generated at a local level, is essential for convincing staff of the need for organizational change. My experience has shown me that there tends to be little internal motivation to change practices at a local level. Research evidence can provide that outside pressure that in my experience offers a better chance at educational improvement.

*When you mention research generated at a local level, what are you referring to?*

Local data mostly. I mean, if I implement a new program at the school level, I would look at pre- and post-data for sure. Better yet, I would have an evaluator collect and analyze the data for greater objectivity. It's the local data that is far more convincing than other research evidence.

*The fourth category of study findings addressed what influences how rural district administrators leading educational improvement use research evidence. Initial findings suggest that administrators were influenced by their perceptions of the quality of research evidence, the district culture for using research evidence, the administrator's own knowledge and interests, and availability of resources. Do these findings reflect your own experience?*

You've already heard my views about using local data. That's a big factor for me. But the administrator's perspective is interesting, you know, as an influence. I think less about me than about the faculty I work with. They are very interested in looking at their own data.

*How so?*

Well, it's pretty exciting for them if they see a pre-post change. It gives them a sense of accomplishment.

*Did you have any other thoughts you'd like to add about searching for or using research evidence?*

No. I think we've covered all the bases and then some.

Subject: Research Use by Rural District Administrators - Feedback

Hi Patricia, all my comments are in red. Good luck with the rest of your work!

-Arnold

> Research Use by Rural District Administrators Leading Educational Improvement: Initial Findings

> Initial findings from a series of nine interviews conducted with rural district administrators are provided below.

> 1. How do rural district administrators define research evidence?

The majority of administrators described “research evidence” as evidence produced through independent research about the effectiveness of educational programs or interventions.

Agreed. I think I said the same thing during our chats. I’m interested in research about making schools effective or helping kids be successful learners. There’s a lot of research out there that’s interesting, but this is the stuff that really matters.

> 2. How do rural district administrators leading educational improvement search for research evidence?

There are many sources administrators turned to for research evidence about effective programs or interventions. The top sources listed were:

> • Government agencies at the state and Federal level. Primary among these is the U.S. Department of Education, which provided information about evidence-based programs through its What Works Clearinghouse, grant guidelines, web-based resources, and/or program staff.

> • Intermediaries, including regional service centers, universities, educational vendors, community agencies/partners, consultants, professional associations, and foundations. Research is shared through intermediaries in many ways, including through training/professional development programs, brochures, reports, funding guidelines, and direct interactions with personnel.

> • Professional conferences and meetings. Research evidence is shared formally through keynote speeches and presentations at professional conferences and meetings, and also informally at these events through educational vendors and networking with peers. ASCD conferences and state-level meetings of peer groups were most commonly identified in this category.

> • Published research evidence. Administrators reviewed summaries of research reports, found online, in academic journals, and in professional publications such as Education Weekly or ASCD SmartBrief. Administrators engaged in doctoral study were more likely to have conducted topical reviews of literature and consulted professional journals.

> • District colleagues. Administrators frequently received and shared research about educational programs and interventions with their district peers in central office and in schools. Contract or volunteer staff, including grant writers and program evaluators, also shared research



evidence or information about evidence-based programs. In all cases, the sharing of research was conducted face-to-face and/or online through web-posting or email.

This was interesting to me. I tend to rely on colleagues but not those in my own district. I rely on my peer group—other superintendents across the state especially. I agree that professional conferences and meetings are a good source of research information. It is often at professional meetings and conferences that I'm introduced to speakers or writers whose work I later use.

Looking at the other categories, it gives me ideas as to where I should be looking for information. Even though I'm a member of ASCD, I hadn't signed up for their email blasts. Maybe I will. Thanks for the tip!

> 3. Why do rural district administrators leading educational improvement search for and use research evidence? And how do they use research evidence in their work?

> • For instrumental purposes. Administrators use research evidence as part of the decision-making process about programs or interventions, including to identify solutions or to guide implementation. Evidence-based programs are frequently sought by administrators to address local educational issues. Administrators also may use research evidence to inform professional development, monitoring, and evaluation to support the implementation of educational programs and interventions.

> • For conceptual purposes. Research evidence may influence administrators' working knowledge of the issues at hand, but it sometimes does not account directly for decisions. Administrators may encourage the review of research by their district peers to inform their thinking about educational issues; book study, sharing or discussing research at staff meetings, and guest speakers at staff assemblies are popular strategies to encourage review of research or evidence-based practices. These social processes also help to create shared understanding about certain educational issues across schools and districts.

> • For symbolic purposes. Administrators used evidence to support or promote a program or practice decision. This included citing research evidence as part of presentations about new program initiatives to the school board, district staff, parents, and other educational stakeholders. Administrators also were presented with research evidence by stakeholders and intermediaries who were advocating for an educational program or intervention.

Looking at this, I guess I would have to say that my use of research falls pretty clearly in the second category (conceptual purposes). I mostly use research evidence to inspire and motivate my staff to change practice. I'm less interested in using research for symbolic purposes as it's described here.

4. What influences how rural district central office administrators leading educational improvement use evidence?

• Quality of research evidence. The rigor of the research design and the credibility of the source providing the research evidence matter to administrators, who especially questioned evidence from vendors. However, evidence collected through rigorous research may be questioned if the research site does not closely resemble the administrator's own district.

> • District culture for using research evidence. Administrators frequently report that decisions about program selection and implementation were made at the school level. Central office administrators support this decision-making process by informally sharing research and

information about evidence-based programs and/or convening meetings at which research was discussed by school administrators and teachers.

> • Administrator's knowledge and interests. Research reviewed by administrators is "filtered" through their existing knowledge gained through experience and previous reading or academic study. Administrators' choices of what research to review are typically influenced by the current educational issues affecting their district. The exception to this would be administrators engaged in doctoral study, whose reviews of research are heavily influenced by their academic curriculum.

> • Availability of resources. Time and money aid or hinder the adoption of evidence-based practices and programs. The implementation of evidence-based programs or interventions was closely associated with discretionary grant awards and the availability of low- or no-cost training initiatives.

Agreed. For me, I would rank administrator's knowledge and interests very high. I know the issues in my district and therefore use research that is most likely to positively affect those issues. I have to act as a filter for what to present to my staff. Otherwise, given the amount of research that's produced every month, they'd be overwhelmed. I guess, too. I'm concerned that the research I share is relevant to the needs of my district. I'm not interested in a lot of the research that's going on in urban districts unless it's relevant to my kids and my staff.


## Appendix 3: Document Examples

### Example of PBIS Fact Sheet cited by Ed

National Center for Mental Health Promotion and Youth Violence Prevention

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ABOUT US FOR PROJECT DIRECTORS IMPLEMENTING THE SS/HS INITIATIVE MEETINGS & WEBINARS

CONTACTS FOR GRANTEEES RESOURCES

- ▼ National Center Publications
  - Best Practices
  - EBP Fact Sheets
  - Grantee Grantees
  - Monographs
  - PD Tools
  - Prevention Briefs
  - Promote-Prevent Guides
  - Toolkits
- ▶ Other Resources

#### EBP Fact Sheets

- Across Ages
- Aggression Replacement Training (ART)
- Botvin's Life Skills Training (LST)
- Brief Strategic Family Therapy (BSFT)
- Common Sense Parenting (CSP)
- DARE to be You
- Families and Schools Together (FAST)
- Functional Family Therapy (FFT)
- Get Real About Violence
- Guiding Good Choices (GGC)
- Incredible Years: Parents Teachers and Children Training Series (IY)
- Multisystemic Therapy

## Positive Behavioral Interventions and Supports (PBIS)

Positive Behavioral Interventions and Supports (PBIS) uses a systems approach to establish the social environment and behavioral supports needed for a school to be an effective learning setting for all students. PBIS is not a prepackaged curriculum. Rather, the concept is to assess and design unique support systems that meet the cultural and programmatic needs of each school. The approach is grounded in recent advances in applied behavior analysis, instructional design, mental health, and education reform. PBIS, also called School-Wide Positive Behavior Support (SW-PBS), employs three tiers of support:

- 1 **Primary Prevention Practices.** Provides proactive support for students in all locations at all times.
- 2 **Secondary Prevention Practices:** Targets students at risk for behavioral problems and educational failure.
- 3 **Tertiary Prevention Practices.** Provides intensive support for students with chronic patterns of problem behavior.

#### Target Audience

PBIS is a school-wide system (rather than a curriculum or program) that can be utilized at the elementary, middle, and/or high school level. It has traditionally been most successful in elementary and middle schools, however, a forum that took place in Naperville, Illinois, in 2004 focused on implementation challenges specific to high school settings. A monograph on this topic can be found at <http://www.pbis.org/files/PBIS%20monograph%20complete.pdf>.

#### Special Populations/Available Adaptations:

PBIS has roots in the inclusion movement and person-centered philosophy. With its focus on systems change and its emphasis on matching the intensity of the intervention to the intensity of the problem behavior, PBIS is applicable to students of all abilities and needs.

#### Program Components:

PBIS is a school-wide or district-wide system of positive behavioral support, which includes the following components (<http://www.pbis.org/schoolwide/11#Components>):

- (a) An agreed-upon and common approach to discipline

#### About this fact sheet

Each year the National Center reviews the EBPs being implemented by new and current grantees. Fact sheets are prepared for the EBPs most frequently selected by SS/HS grantees. These fact sheets are intended to provide support to grantees as they assist staff and systems with successful EBP implementation.

#### Selected Resources

[Positive Behavioral Interventions and Supports \(PBIS\) Guide | Brief/Guide](#)  
[Promote-Prevent Guides](#)

#### Other Related Resources

[A Review of School Readiness Practices in the States: Early Learning Guidelines and Assessments | Brief/Guide](#)

[Home-School Differences: What It Means for Kindergarten Readiness | Brief/Guide](#)

[Facing the School Dropout Dilemma | Brief/Guide](#)

[Promising Models for Funding and Sustaining School Mental Health](#)

- (MST)
- Olweus Bullying Prevention Program
  - Parenting Wise y
  - Parents as Teachers
  - Peers Making Peace
  - Positive Action
  - Positive Behavioral Interventions and Supports (PBIS)
  - Project ACHIEVE
  - Project ALERT
  - Project North and
  - Project SUCCESS
  - Project Towards No Drug Abuse (Project TND)
  - Promoting Alternative Thinking Strategies (PATHS)
  - Reconnecting Youth (RY)
  - Second Step A Violence Prevention Curriculum
  - Strengthening Families Program (SFP)
  - Too Good for Drugs

- (b) A positive statement of purpose
- (c) A small number of positively stated expectations for all students and staff
- (d) Procedures for teaching these expectations to students
- (e) A continuum of procedures for encouraging displays and maintenance of these expectations
- (f) A continuum of procedures for discouraging displays of rule-violating behavior
- (g) Procedures for monitoring and evaluating the effectiveness of the discipline system on a regular and frequent basis

Evaluation tools are available to monitor the extent to which schools are implementing the three tiers of PBIS, as well as the extent to which implementation is associated with improved school safety and improved student outcomes. An overview of these evaluation instruments is available at [www.pbssurveys.org](http://www.pbssurveys.org) and [www.pbis.org](http://www.pbis.org). (See below for details on evaluation tools.)

**Training and Technical Assistance:**

Training is available for school teams and coaches, and there is also a training manual for individuals who have been trained and have participated in implementation (see [pbismanual.ueecs.org/](http://pbismanual.ueecs.org/)). School teams include teachers, administrators, and other personnel with direct student contact, and training typically involves 24–30 hours of training during each of two to three years. The training emphasizes prevention of problem behavior, active instruction on positive behaviors, predictable and consistent consequences for problem behavior, functional behavioral assessment procedures, applied behavior analysis interventions, and ongoing use of data for active decision making. Training and technical assistance are available through the Office of Special Education Programs (OSEP) Technical Assistance Center on PBIS (See [www.pbis.org](http://www.pbis.org)).

**Contact Information:**

OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports  
 Educational and Community Supports  
 1235 University of Oregon  
 Eugene, OR 97403-1235  
 E-mail: [pbis@uoregon.edu](mailto:pbis@uoregon.edu)  
 Phone: (541)346-2505  
 Fax: (541)346-5517  
 Web site: [www.pbis.org](http://www.pbis.org)

**Program and Training Costs:**

The OSEP Technical Assistance Center works with each state to build a leadership team and model for training. The costs vary depending on the support each state defines as needed locally. The goal of the TA Center is to help each state build local capacity to provide training for school teams. Since district-based coaches become PBIS trainers, the cost of conducting a training must take into account the coaches' time as a percentage of their regular salary.

**Evaluation Results:**

Evaluation results indicate that PBIS (a) can be adopted with fidelity by schools, (b) is associated with decreases in office discipline

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referrals, and (c) is associated with increases in academic gains (if effective instructional practices are also in place). Evaluation procedures and results are available at [www.pbis.org](http://www.pbis.org) and [www.pbsurveys.org](http://www.pbsurveys.org) and are reported in Horner, Sugai, Lewis-Palmer, and Todd (2005). Additional evaluation outcomes are reported in state evaluation documents (e.g., Illinois evaluation reports, Eber, 2005).

**Evaluation Components:**

Tools for Self-Assessment and Fidelity Assessment are available through [www.pbis.org](http://www.pbis.org) and [www.pbsurveys.org](http://www.pbsurveys.org). Specific instruments for measuring school use of SW-PBS practices include (a) Team Implementation Checklist; (b) School-Wide Evaluation Tool (SET); (c) EBS Self-Assessment Survey; and (d) Individual Student System Evaluation Tool (I-SSET). Instruments for assessing the effect of implementation are defined in the SW-PBS Evaluation Template, and these include student office discipline referrals ([www.pbis.org](http://www.pbis.org)), student academic achievement, and perceptions of student "risk and protective factors" (Student Safety Survey).

**Agency/Institution Recognition:**

PBIS is described in the publication *Safeguarding Our Children: An Action Guide*, produced by the U.S. Department of Education, U.S. Department of Justice, and the American Institutes for Research ([www.ed.gov/admins/lead/safety/actguide/action\\_guide.pdf](http://www.ed.gov/admins/lead/safety/actguide/action_guide.pdf), p.19). Please note: Although this publication does not assign ratings of effectiveness like other registries of evidence-based interventions, evidence of effectiveness was necessary for it to be included.

**Web Resources:**

Positive Behavior Interventions and Supports: Strategies for Success

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#### **Keywords**

Topics: PBIS School Environment and Education  
Prevention Programs and EBIs: School Programs  
Resource Type: Fact Sheet

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# Denzel Washington, Boys & Girls Clubs fight dropouts

Updated 9/14/2010 8:30 PM

By Michelle Healy, USA TODAY



By Gregory Smith, Boys & Girls Clubs of America

Denzel Washington at a Boys & Girls Clubs of America event Sept. 17 in Washington, D.C.

Long before he became a Hollywood star, Denzel Washington was a Mount Vernon, N.Y., schoolboy who spent after-school hours and weekends at his local Boys & Girls Club.

For 18 years, Washington has been national spokesman for the Boys & Girls Clubs of America. On Wednesday, he's in Washington to help launch a new national program, called Be Great: Graduate, to identify kids who are at risk of dropping out of school and give them the help they need to stay and finish.

"Our goal is simple to state but hard to achieve," Washington said in a statement. "We want to help every Boys & Girls Club member advance to the next grade level every year and graduate from high school on time, prepared with the attitude, knowledge and confidence to succeed and achieve."

**DIPLOMAS NOW:** To fight 'dropout factories' school program starts young

**FIRST TO GO TO COLLEGE:** Students stay the course

When he was a child, he says, "the club staff motivated us to dream big and take our education seriously. Kids today need that . . . more than ever."

About a third of U.S. students don't graduate from high school, says a 2010 report by *Education Week* and the Editorial Projects in Education Research Center; for Latino and black boys, the rate jumps to nearly 50%.

Many of the 4 million children and teens who participate in Boys & Girls Clubs "have the least and need the most to achieve a great future," says organization president Roxanne Spillett.

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*Example of Research Article Posted Online by Gary*

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## **Youth Engagement, High School Reform, and Improved Learning Outcomes: Building Systemic Approaches for Youth Engagement**

Francine Joselowsky  
*NASSP Bulletin* 2007; 91; 257  
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The online version of this article can be found at:  
<http://bul.sagepub.com/cgi/content/abstract/91/3/257>

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## Appendix 4: Codebook

Selective Category	Sub-Category	Sub-Category Description	Theme	Description	Percent of Transcripts with Code
Participants' Perceptions of Research Evidence	Research Focus	Participants' descriptions of research evidence by its focus, including effective strategies and other educational issues.	Research on effective strategies	Research evidence on effective strategies to improve schools and student engagement and achievement. Includes references to What Works Clearinghouse.	89%
			Research on other educational issues	Research evidence on other educational issues. Does not include evidence about effectiveness of programs or strategies.	11%
	Characteristics of Research Evidence	Participants' descriptions of the characteristics of research evidence, including whether it was scientifically based, rigorous, and comparable to the participants' local settings.	Scientifically based data	Research evidence derived from rigorous research. The term, "scientifically based," was used in The No Child Left Behind Act of 2001, which reauthorized the Elementary and Secondary Education Act. The Act called for the use of "scientifically based research" as the foundation for many education programs and for classroom instruction.	44%

			Comparable data	Research evidence derived from studies conducted in similar settings or with similar populations to the participants' districts, or from studies conducted within the participants' districts.	33%
Participants' Approaches to Identifying Research	Intermediaries	Research evidence shared with participants by representatives of community agencies and partners, foundations, professional associations, universities, and vendors, and by consultants.	Universities	Research evidence published or shared by other means by university staff or faculty.	44%
			Vendors	Research evidence published or shared by other means by vendors.	44%
			Consultants	Research evidence shared with participants by consultants providing grant-writing, evaluation, or training services	44%
			Community agencies or partners	Research evidence shared with participants by community agencies or partners.	22%
			Foundations	Research evidence published or shared by other means by foundations.	11%
			Professional associations	Research evidence published or shared by other means by professional education associations.	11%

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Published research evidence	Research evidence reviewed by participants in research reports or summaries.	Research summaries	Research evidence shared in a condensed format, including in the form of fact sheets about evidence-based programs, online synopses of evidence-based programs (e.g. the Department of Education's What Works Clearinghouse), and in professional publications such as <i>Education Week</i> or <i>ASCD SmartBrief</i> .	66%
		Research reports or periodical articles	Research evidence shared through research reports or periodical articles.	33%
Government agencies	State and Federal agencies, which provide recommendations or resources on evidence-based programs or, through discretionary grant programs, incentivize the use	Federal agencies	Recommendations and resources on evidence-based programs or, through discretionary grant programs, incentives for the use of evidence-based programs.	44%

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		of evidence-based programs.	State agencies	Recommendations and resources on evidence-based programs or, through discretionary grant programs, incentives for the use of evidence-based programs.	22%
Professional development		Research evidence is shared formally through keynote speeches and presentations at professional conferences and meetings and through doctoral studies.	Conferences and professional meetings	Participants receive or search for research evidence or evidence-based practice at conferences and professional meetings.	33%
			Doctoral study	Participants receive or search for research evidence or evidence-based practice through doctoral classes.	22%
Professional networking		Research evidence shared by colleagues within the district and from other districts or states. Research evidence also shared by board members and community leaders. Evidence may be shared at formal meetings or informally through direct contact.	Peers in other districts	Research evidence shared with participants by colleagues in other districts.	56%
			District colleagues	Research evidence shared with participants by colleagues within the school district.	44%
			Board member	Research evidence shared with participants by board members.	11%
			Community leaders	Research evidence shared with participants by community leaders.	11%
Participants' Incorporation of Research	Individual Process	The incorporation of research is done by the individual.			22%

Evidence	Social Process	The incorporation of research uses a social process, which at its most basic level may be an informal exchange between two people and at a more sophisticated level may take the form of long-term professional development.	Informal Sharing Between Colleagues	Research evidence is shared and discussed between colleagues.	67%
			Sharing During Individual Meetings	Research evidence is shared and discussed during a meeting.	67%
			Sharing as Part of a Committee Process	Research evidence is shared and discussed within a standing committee or team.	44%
			Professional Development	Research evidence is shared and discussed during a professional development event or longer-term program.	11%
Participants' Purposes for and Use of Research Evidence	Research Used for Instrumental Purposes	Administrators used evidence directly to inform a program or practice decision.	To identify new programs or reforms	Research evidence used to inform the selection of new programs or reforms.	44%
			To guide program implementation	Research evidence is used to guide implementation of programs or to ensure fidelity of implementation.	44%
			To predict outcomes for programs	Research evidence used to anticipate program outcomes.	22%
	Research used for Advocacy or Informational Reasons	Administrators used evidence to support or promote a program or practice decision.	To advocate for programs or reforms	Research evidence is used to advocate for the adoption of programs or reforms	56%
			To promote products or programs	Research evidence used to promote the sale or adoption of an educational program or product.	44%

			To support funding applications	Research evidence used to guide the writing of and/or support funding applications.	22%
	Research that Informs Personal or Group Thinking	Research evidence is reviewed but the participant(s) do not purposively or immediately act on it; research evidence may be used to inform personal or group thinking on an issue or topic.			22%
Influences on Research Evidence Use	Availability of Resources	Time and money aid or hinder the adoption of evidence-based practices and programs. The implementation of evidence-based programs or interventions was closely associated with discretionary grant awards and the availability of low- or no-cost training initiatives.	Time	Influence of the availability of time on the use of research evidence, especially the adoption of evidence-based practices and programs.	56%
			Money	Influence of the availability of funding on the use of research evidence, especially the adoption of evidence-based practices and programs.	33%
	Administrators' "Professional Wisdom"	The influence of administrators' "professional wisdom" on research evidence use, especially the adoption of evidence-based practices and programs.			78%

Source of Research Evidence	The influence of administrators' perceptions of the credibility of the sources providing the research evidence.			56%
Nature of Research Evidence	The influence of administrators' perceptions of the nature of the research evidence, especially its rigor and the transferability of findings to other settings.	Rigor of Research Evidence	Influence of administrators' perceptions of the rigor of research evidence.	66%
		Transferability of Findings to Other Settings	Influence of administrators' perceptions of the transferability of research findings to other settings.	33%



## Appendix 5: Reflexive Journal Entry Examples

This appendix includes excerpts from the reflexive journal maintained by the researcher during this study.

<b>Plans Considered/Decisions Made/Actions Taken</b>	<b>Reasons, Questions, Reactions</b>
<p>Date: May 19, 2010 The proposal was defended and approved.</p>	<p>Relief!</p>
<p>Date: June 1, 2010 First step is to identify the sample. I began the process of pulling lists of school districts who have received U.S. Department of Education discretionary grant awards supporting educational improvement during 2008, the most recent fiscal year for which award data are posted. Specific discretionary grant programs that support educational improvements were identified; a list of grant programs was originally presented in Appendix D of the proposal. A list of grant awardees from these programs will be generated using the U.S. Department of Education's online grant award database (<a href="http://wdcrobcolp01.ed.gov/CFAPPS/grantaward/start.cfm">http://wdcrobcolp01.ed.gov/CFAPPS/grantaward/start.cfm</a>).</p>	<p>This is a very labor-intensive process, although it does produce a thorough list of potential candidates.</p>
<p>Date: June 17-22, 2010 The raw list of grantees consists of nearly 900 grant awards. I then identified the locale code for each district using the 2007-08 dataset from the NCES Common Core of Data (CCD). Districts with the locale code of "rural, remote" or "rural, distant" were deemed eligible for this study. This approach yielded a sample pool of 75. Student population size was also added to the spreadsheet for those same districts.</p>	
<p>Date: June 28, 2010 The sample pool was further reduced and then stratified. The sample pool was compared to the USDOE's 2008 eligibility list for the Small Rural School Achievement Program. Any school districts that appeared on both lists were removed from the sample pool. This act reduced the sample pool to 47. The Census region for each remaining district was then identified using Census region information as a resource (<a href="http://www.census.gov/geo/www/us_regdiv.pdf">http://www.census.gov/geo/www/us_regdiv.pdf</a>). By doing this, it became apparent that Census regions 2 and 3 (Midwest, South) were over-represented.</p>	<p>The over-representation of the Midwest and South in the sample is not at all surprising, since these regions are more rural than the other regions of the country. It does raise the question if equaling representing each region is a wise approach. Region 4, for instance, is represented by only two districts. If recruitment efforts are unsuccessful, there will be no representation from that region (West). I decided for</p>

	<p>now to continue with the approved approach. However, if recruitment efforts do fail, then I will concentrate efforts on the Midwest and South.</p>
<p>Date: January 7, 2011  The deadline for responses from interviewees is tomorrow. As of this date, I have received a handful of responses—two to schedule interviews and one who responded by email to the questions. I am sending out a reminder email today.</p>	<p>The point of the third round of interviews is to ensure that all possible data has been generated and to test my assumptions of the findings. The response to the call for interviews has been weak. It may have to do with the timing of the call—immediately after the December holidays. Hopefully today’s email will trigger responses.</p>

## Appendix 6: Interview Member Checking Examples

### *Excerpt from Ivy's First Interview*

*From your perspective, what are the major issues facing your district at this time?*

It's probably the same for most districts in this state, compounded by the fact that we're rural. Our state is one of the top three states in economic troubles right now, so we're receiving information that we could receive a 5, 10, or 15% cut next year. And our state is a right to work state, and it's a state pay scale system for all staff. So pay scales are not determined locally. We do add supplements. Because our community is not bringing in a lot of revenue, we can't afford to offer the supplements that other cities around us can. We are at risk of not adding the supplements next year and we will lose good teachers because of it.

*One of your major issues then would be the potential loss of teachers due to the state budget situation?*

Yes, we currently supplement by 5%. The closest city supplements by 10%. Other large cities in our state will supplement up to 20%.

*So teachers are attracted away from your district by higher salaries in adjacent or nearby districts in your state?*

Yes, exactly.

*What major instructional issues are you facing in the district?*

Instructional issues... differentiation is our focus for PD. We have put a lot of time and effort into our really talented teachers to focus on differentiation and 21<sup>st</sup> century skills. We have been hiring and supporting those teachers. We have done a few school audits since I've been here and we've seen too much whole-class instruction, so we're trying to change that by supporting the use of RTI.

*Any other instructional issues?*

Our dropout issue – we are decreasing the dropout rate. But our white males have been a problem dropout group—we are struggling to keep them in.

*Shifting to research, what does the term “research evidence” mean to you?*

Research-based instruction, if you are talking about products. I focus on guiding our schools through white papers and any kind of results that are presented in a neutral way. For instance, I use What Works Clearinghouse on a fairly regular basis to help us make those instructional purchases. And research-based initiatives – as I mentioned we have a fairly large RTI initiative going on right now. It's definitely been hard for us because it runs the gamut if you don't use a program. So if you are talking about the repetition of [illegible] skills, then I don't necessarily

expect our teachers to go out and find the research for it. I can obviously produce that. So we take it from one extreme to the other and make decisions based on what type of commitment it will be.

*Have you reviewed in the past three months any research evidence?*

Do you mean specifically in regard to product or to research practices?

*Either one.*

I guess most of what I've reviewed in the last three months has been related to the common core, since I'm getting ready to prepare our teachers. Then, in regards to research, we added a coaching program. We just added two coaches last year. So that's where I've been spending some time looking at research, specifically best practices.

*So coaching has been an area you've been examining research on?*

Yes.

*Where have you found information on coaching? What information sources have you used?*

I have been .... Just give me one second... When I first started my position, the source I used the most was What Works Clearinghouse. And there is a little bit in a RCI coaching model. And now I'm expanding to instructional coaching; we started with literacy coaching. So I'm actually able to expand [the program] because of our [Federal discretionary grant] funds. So, for example, what's sitting on my desk right now is the International Journal of Learning with a theme of understanding new literacies in new times. Somebody passed it along to me. I don't know if you're familiar with that. Most of my reading has been focused on the common core, trying to understand the research that was done to get them to that point, so we can make a good action plan here.

*My next question is whether you sought out the research or if it was given to you, but it sounds as if you sought it out and it was passed along to you.*

Yes, definitely both. We have a lot of good professional conversations here. People pass things along. So definitely a combination of both.

*Have you used any of the information for decision-making and if so, how?*

Actually what I did. I'll use coaching for an example. And some of the things deemed best practices, especially through the What Works, and I applied it to our conference of needs assessment that we have to do for many of our Title programs. So I applied some of those best practices to our comprehensive needs assessment. Then I got feedback from our teachers whether we were actually coaching with fidelity.

*Beyond decision-making, have you used the information for other purposes, such as advocacy?*

No, not really anything in particular. With RTI, we're trying to build our intervention toolbox. So we're trying to add a lot of different things in different schools. We are, from a financial point of view, very site-based managed. I will help them make decisions and we will make county-wide decisions, but how much they choose to purchase they do at a site level. I'm more of a partner with them. I'm glad this is shared leadership.

*So information has influenced your thinking about issues?*

Oh yes, definitely. I can give you an example. We did research on a benchmarking tool. Ames web was the decision we made as a district, mainly because of the data warehousing aspect. We had an elementary principals meeting and looked at our historical 3-year data using Ames web. We made some data points and then discussed what we should be looking for in terms of instruction and resources.

*To clarify, is RTI in your district a program that is advocated by a particular vendor or is it an approach?*

No, it is an approach. Our state actually adopted the problem-solving model within RTI and renamed it Responsiveness to Instruction. But it is just like the national model. One of the things that our state provides is about 6 days of training. We've trained 12 of our 16 school teams already. There are no costs except for travel and lodging. We have taken advantage of that.

*So you are gearing up to implement the model but not buying into a particular program?*

No, and the only thing that we bought into was Ames web. We do use that exclusively.

*Have you shared this research with colleagues?*

We're all county systems here, and I am on an advisory board at the state level with other county representatives. There are two counties surrounding us that are part of that. One of those new counties has a relatively new director so I've been working with him.

*When you say working with him, what do you mean?*

I'll send you an email from the advisory board; I'm meeting with the newer director. I'll try to do an agenda for that that I can share with you.

*Can you describe any research evidence that a colleague or supervisor has shared with you formally or informally in the past six months?*

We've partnered with another county and a local university on a [Federal discretionary] grant. The director for that program is one of our former teachers. I'm preparing for a meeting with her and one of the university representatives. In her research, she focused on social studies in the elementary school since NCLB. There has been a much greater focus on social studies in schools. We're meeting and trying to correct some of those bad habits that had been created.

*So that was more of a formal sharing. And the person who shared the information was the [grant] project director?*

Yes. And she's in a doctoral program, and in fact just defended her dissertation.

*Excerpt from Diane's Second Interview*

*What are the major issues facing the district at this time?*

[County name] is rural. I have six schools. Three that are K-4, one 5-6, one 7-8, and one high school. Most of the elementary schools have a free and reduced lunch that is over 50%, so we have a substantial low-income population but we have students from the very rich to the very poor. We had three major industries close in the past six years. Our largest industry just laid off 600 workers a few months ago. We haven't lost as many students as I thought we did. We have many more homeless children now. We have a solid middle class. Our schools are zoned. One elementary school is in a poorer area of town, but the zoning ameliorates the poverty level. Our new elementary school has over 500 students in the central part of town. I've very proud of our teachers and principals. We made AYP this past year. We missed our dropout rate by 2 students previously but we made it this past year.

We have great community support. Great support from city council. I still haven't met all my goals for the system. I want my future replacement to step into a great situation. I have two more years before I plan to retire, but I may go at that time. We were cut about 6 million this year, but some funding may be restored. Our normal budget is about \$36 million. We also offered a one-time buyout to staff in order to get some higher-salaried staff. There was zero money in the current budget for PD. PD is very important to us. We do have some Federal money for PD, Title II. It's recruiting and retaining teachers and class size reduction. There is some Title I money for PD.

*So your major issues right now are funding-related?*

Yes. But we also have a drop-out problem in our high school. How to improve our dropout rate is a major focus for our district.

*In our next discussion, we'll focus on what you're doing to improve the dropout rate. Today we will focus on your perceptions of research evidence. First of all, what does "research evidence" mean to you?*

I guess that refers to evidence that supports choices we make on programs.

*Have you seen or reviewed any research evidence in the past three months?*

Um... I don't recall that I have.

*Have you read any articles that mentioned research?*

I do recall reading an article in the newspaper about kids dropping out. I think it was in USA Today. Yes, it was. I was staying in a hotel last month, and I recall noticing an article about Denzel Washington starting an educational initiative to reduce the drop-out rate of black boys. I remember downloading the article when I got home. I bet I still have it on my computer. .... [pause]. Yes, here it is. "Denzel Washington, Boys & Girls Clubs fight dropouts." Denzel is a national spokesman for the Boys and Girls Clubs of America, and he was in Washington to help launch a new national program, called Be Great: Graduate, to identify kids who are at risk of dropping out of school and give them the help they need to stay and finish. Somewhere in the article they quote research. Let me find it. Yes, here it is. About a third of U.S. students don't graduate from high school, says a 2010 report by *Education Week* and the Editorial Projects in Education Research Center; for Latino and black boys, the rate jumps to nearly 50%.

*What was it about this article that prompted you to follow up on the Internet?*

Two things. First, we have a Boys and Girls Club here in our community, and I was interested to know if they were doing anything like this here. (When I returned to the office and called the local director, he told me that the initiative had not been seeded here.) Secondly, the research quote was interesting and something I thought I might add to a future board report. We have a sizable minority population here, so the quote about Latino and black boys I thought would be quite powerful.

*Have you shared this quote yet with the School Board?*

No I haven't. But as you can see, I've saved the article for future reference. I keep a folder on my computer with interesting tidbits such as this. It's helpful to have as a resource.

*What would be the purpose of sharing this quote with your Board?*

I mentioned earlier that we had missed our dropout rate by 2 students previously but we made it this past year. This in spite of a substantial low income and minority population. This school district does a great job of educating its children. Too often we take this for granted. By looking at statistics like this, we're reminded that our success should be celebrated.

*The district made its dropout rate but you were interested in the Boys and Girls Club initiative. Why?*

We can always do better. We aren't successful because we sit around bragging about our successes. We're successful because we are out there always looking to improve how we work with students, how we teach students. That's what makes a difference in this county.

*You intend to share this information with the Board. Have you shared this information already with a colleague?*

I forwarded the online article to my senior staff and the high school principal with a cover note that bragged on our successes relative to other districts in the country.

*Could you forward a copy of that email?*

I'll see if I can find it. But I'll forward a copy of the online article right now, since I have it up on our screen.

[pause while D prepares and sends email]

*My last set of questions is about research evidence that might have been shared with you by a colleague or perhaps your Board. Can you describe any research evidence that they may have shared with you formally or informally in the past six months?*

That's an interesting question. In fact, one of my Board members had raised an issue with me privately about rural gangs last summer. It's not really an issue we have here—at least not yet. But the Board member had been sent an article by their sister, who lives in Milwaukee about how some gangs had migrated from the city into smaller towns and even into rural areas. I bet I can find this on file too. [pause]

Yes, here it is. [Reading] “Gang members are increasingly leaving Milwaukee, Madison and Chicago to sell illegal drugs or commit other crimes in smaller cities and towns in Wisconsin, and even in rural areas, law enforcement officials say. The migration is bringing stabbings, shootings and other violent crime to areas once thought to be exempt from them and forcing police agencies to adapt.” My Board member read this and became agitated.

*Have you seen any evidence of gangs in your community?*

No, not yet. And I don't want to believe that this could ever happen in our community. But the fact that it has elsewhere suggests that it could happen here.

*You identified this article as research-based. Did it cite research evidence?*

Yes, the article cited research drawn from the US Department of Justice's National Gang Threat Assessment. Here's what it says [she was reading from article]:

“Gang members across the country are moving from the big metropolitan centers, according to the U.S. Department of Justice's National Gang Threat Assessment, released in 2009. According to the report, the number of law enforcement agencies in the country reporting gang problems rose from 45 percent in 2004 to 58 percent in 2008, largely due to the rise in rural and small city gangs.



The National Youth Gang Survey, last conducted by the department in 2008, found the number of gang members had risen about 8 percent in rural counties, 10 percent in suburban ones and almost 15 percent in small cities since 2002, as compared to just 2 percent in large cities.”

I’ll send you this article. I’ll email it right now. [pause]

*You mentioned the Board member had shared it with you. Electronically?*

Yes, he forwarded the online article.

*Did the Board member state any expectations about how they expected you to use this information?*

No expectations, other than I should stay aware of these larger trends. It is too easy in a pleasant community like ours to stick our heads in the sand and imagine that we’re protected somehow. We’re not. It is completely possible that we could see rural gangs here in the future. We need to stay vigilant.

## Appendix 7: Post-Interview Member Checking

### *Interview Summary and Member Checking Example from Gary*

**From:** Gary  
**Sent:** Tuesday, November 30, 2010 2:59 PM  
**To:** Patricia Moore Shaffer  
**Subject:** RE: Follow up to interviews

Patricia,

Enclosed are the documents you requested. Please let me know if you need anything else. The summary looks fine.

Thanks.

---

**From:** Patricia Moore Shaffer [mailto:pms haf@email.wm.edu]  
**Sent:** Saturday, November 27, 2010 6:13 PM  
**To:** Gary  
**Subject:** Follow up to interviews

Gary,

Thank you for taking the time to participate in the two interviews this month. As an initial follow-up to our interviews, I prepared a summary of the two interviews which should present your experiences searching for and using research evidence. It is very important to this study that I accurately depicted your experiences. Please review the summary at the bottom of this email; feel free to correct as necessary.

I also would like to request copies of documentation about your Advisory program (e.g., schedule of sessions, planning meeting agendas). If these documents are easily accessible to you and can be emailed, I would appreciate a copy. I did have a chance to visit your school website and found the page with the research article links – very nice!

Thank you very much. After I have conducted an initial analysis of data, I will be back in touch with a final round of questions. Meanwhile, I hope you had a terrific holiday weekend.

Patricia Moore Shaffer

## Interview Summary:

### *Gary, Curriculum Director/Principal, West I School District*

Gary holds a joint position as a school and central office administrator. Working for the West I School District, which served an enrolled student population of 1,650 students, Gary is employed as a curriculum director and as principal of the district's high school. Prior to his current position, he had served one-year terms as vice-principal for the high school and vice principal for a K-8 school, and thirteen years as a high school teacher and football coach. Gary has spent his entire career working in the West I School District. He recently returned to school to work on his doctorate in educational leadership.

Gary viewed research evidence through two different lenses. His first lens was examining local-level evidence of student achievement and the quality of the taught curriculum. Within the category of student achievement data, Gary included student GPA, "high-stakes test scores," and formative assessment scores. Equally important was evidence of the quality of instruction, which included observations of instruction and review of lesson plans and assessments. Gary also considered research evidence through the lens of evidence produced through peer-reviewed research on the effectiveness of educational practices. While Gary did seek out journal articles on specific topics, he relied to a great extent on research literature he was exposed to through his doctoral classes. Gary's purposes in using both types of research evidence were the same—to improve educational practice and the academic achievement of students.

Gary encouraged school staff to read research articles and reflect on how to apply them to their educational practice. He provided access to a small number of research articles through his high school's website. He also encouraged school administrators and faculty engaged in project teams to read research articles and, during project meetings, to discuss how the research might apply to their work. The infusion of research into discussions about practice supports Gary's commitment to building the capacity of educators.

In his role as curriculum director, Gary is currently leading a district-wide initiative to create a vertical alignment of mathematics instruction across all schools, but with a particular emphasis on the middle and high school. Gary articulated that better curricular connections and collaboration between the middle and high school mathematics teachers are required to improve vertical alignment. He cited the example of Algebra I, which is taught using a different curriculum in the eighth and ninth grades. To inform the discussion of the project team assigned to work on mathematics vertical alignment, Gary assigned to team members the reading of a peer-reviewed research article on the impact on students of repeating Algebra I in the ninth grade. Currently, the district employs what Gary described as a "deficit model" in which students who failed Algebra I in eighth grade are taking it again in ninth grade and, in many cases, are doing worse the second time around. When team members read the article, the research evidence it presented was used as proof of their existing program. Furthermore, Gary noted that understanding the research behind their problem helped project team members develop a desire to fix the problem.

*Analytic Memo Member Check Example from Gary*

**From:** Gary  
**Sent:** Thursday, December 16, 2010 2:18 PM  
**To:** Patricia Moore Shaffer  
**Subject:** RE: Document Interpretation

Patricia,

Very interesting comments you made about the planning meeting agendas for the Advisory Program. It's important to make note that some planning meetings also included student representatives. This was an important way that we ensured the program's relevancy for our kids. Please let me know if you need anything else.

Thanks.

---

**From:** Patricia Moore Shaffer [mailto:pms haf@email.wm.edu]  
**Sent:** Saturday, December 11, 2010 2:11 PM  
**To:** Gary  
**Subject:** Follow up to interviews

Gary,

Thanks for sending the Advisory program document that includes the planning meeting agendas. I prepared a short analytic memo on the document. Since it is important to the study that I accurately depict your experiences with research evidence, would you mind reviewing these notes and providing feedback.

Thanks, and feel free to email if you have any questions.

Patricia Moore Shaffer

*Analytic Memo on Advisory Program Planning Meeting Agendas (Gary)*

The planning meeting agendas contained in the document shared by Gary pertain to the Advisory program he described in his interview. The agendas are for planning meetings with faculty related to this program. The dates for the meetings extend from November 2009 through May 2010, suggesting a six-month planning period. The agenda items in the early meetings, such as "ideas for student engagement," seem intended to introduce faculty to strategies for student engagement and also to solicit their ideas. The first agenda also included the URL for the webpage with research articles related to the Advisory program, while the second agenda included time to discuss the research articles. By the third month, the agendas focused on the program framework, strategies, and meeting themes. The final meetings focused on strategy implementation and assessment of results. Some meetings were attended by all school staff while other meetings only included the school administration and department heads. Meetings that

included teachers focused on implementation planning, such as planning meeting topics for students.

*Grand Member Check Example for Gary*

**From:** Gary  
**Sent:** Wednesday, January 19, 2011 3:16 PM  
**To:** Patricia Moore Shaffer  
**Subject:** Study check

Patricia,

This is really interesting to read. The only addition I'd make is that I used some of the planning meeting time related to the Advisory program to discuss relevant research articles.

Thanks for inviting me to participate!

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**From:** Patricia Moore Shaffer [mailto:pms haf@email.wm.edu]  
**Sent:** Saturday, January 15, 2010 4:28 PM  
**To:** Gary  
**Subject:** Study check

Gary,

I hope you had a great holiday! Thanks again for taking the time to participate in the three interviews during the past two months. I would like to share with you excerpts from the preliminary findings which contain verbatim quotations from either our conversations or from documents that you provided. As I requested earlier about the interview summary, please read the information presented in this email to ensure that I accurately depicted or interpreted your experiences. Please review the information at the bottom of this email; feel free to correct as necessary.

Thanks,  
 Patricia Moore Shaffer

*Characteristics of the Research Participants and their School Districts*

	School District			Participant			
Participant	NCES locale code	Census region	Enrolled student population	Position	Highest degree	Doctoral study in progress	Multi-district experience
Arnold	Rural,	Midwest	2,900	Superintendent	Masters	Y	Y

	distant						
Bruce	Rural, remote	South	2,250	Superintendent	Masters	N	N
Carol	Rural, distant	Northeast	5,200	Assistant Superintendent	Doctorate	N	N
Diane	Rural, distant	South	6,000	Superintendent	Doctorate	N	Y
Ed	Rural, distant	South	3,050	Superintendent	Doctorate	N	Y
Fran	Rural, distant	Midwest	1,750	Title I Coordinator/ Principal	Masters	Y	Y
<b>Gary</b>	Rural, distant	West	1,650	Curriculum Director/ Principal	Masters	Y	N
Hayden	Rural, distant	West	1,700	Director of Educational Services	Masters	N	N
Ivy	Rural, distant	Northeast	8,250	Director of Curriculum and Instruction	Masters	N	Y

### *Participant Profile*

Similar to Fran, Gary held a joint position as a school and central office administrator. Working for the West I School District, which served an enrolled student population of 1,650 students, Gary was employed as a curriculum director and as principal of the district’s high school. Prior to his current position, he had served one-year terms as vice-principal for the high school and vice principal for a K-8 school, and thirteen years as a high school teacher and football coach. Gary has spent his entire career working in the West I School District. He recently returned to school to work on his doctorate in educational leadership.

Gary viewed research evidence through two different lenses. His first lens was examining local-level evidence of student achievement and the quality of the taught curriculum. Within the category of student achievement data, Gary included student GPA, “high-stakes test scores,” and

formative assessment scores. Equally important was evidence of the quality of instruction, which included observations of instruction and review of lesson plans and assessments. Gary also considered research evidence through the lens of evidence produced through peer-reviewed research on the effectiveness of educational practices. While Gary did seek out journal articles on specific topics, he relied to a great extent on research literature he was exposed to through his doctoral classes. Gary's purposes in using both types of research evidence were the same—to improve educational practice and the academic achievement of students.

Gary encouraged school staff to read research articles and reflect on how to apply them to their educational practice. He provided access to a small number of research articles through his high school's website. He also encouraged school administrators and faculty engaged in project teams to read research articles and, during project meetings, to discuss how the research might apply to their work. The infusion of research into discussions about practice supports Gary's commitment to building the capacity of educators.

In his role as curriculum director, Gary is currently leading a district-wide initiative to create a vertical alignment of mathematics instruction across all schools, but with a particular emphasis on the middle and high school. Gary articulated that better curricular connections and collaboration between the middle and high school mathematics teachers are required to improve vertical alignment. He cited the example of Algebra I, which is taught using a different curriculum in the eighth and ninth grades. To inform the discussion of the project team assigned to work on mathematics vertical alignment, Gary assigned to team members the reading of a peer-reviewed research article on the impact on students of repeating Algebra I in the ninth grade. Currently, the district employs what Gary described as a "deficit model" in which students who failed Algebra I in eighth grade are taking it again in ninth grade and, in many cases, are

doing worse the second time around. When team members read the article, the research evidence it presented was used as proof of their existing program. Furthermore, Gary noted that understanding the research behind their problem helped project team members develop a desire to fix the problem.

### *Findings from Qualitative Data Analysis*

1. The comparability of research evidence to participants' local settings and populations, a characteristic of strong research evidence according to a 2003 user guide published by the Coalition for Evidence-Based Policy and supported by the U.S. Department of Education, was mentioned by three participants. Among these three administrators, there was a shared concern that a program, even if it is evidence-based, may not work in their district because of differences in the setting or population. Ed articulated this concern shared by his peers when making this comment:

I mean, you can hear about evidence-based programs that work in urban districts or in [a Western state] or elsewhere, but you never can tell if it will work in your school with your kids. Sometimes adapting an evidence-based program that works in an urban setting doesn't work out here. . . . Context really makes a difference in a program's success.

**Gary** also voiced a similar concern: "I'm not a fan of best practices. Best practices tend to work in certain environments. You take a program that works well in one site and how it works in your own site may be very different."

Because of these concerns, one participant paid attention when reviewing research evidence to the comparability of the settings and the population. Ed supported the adoption of [a



positive behavioral system] in his district in part because he and his district colleagues “. . . liked seeing the evaluation evidence and knowing [a positive behavioral system] had been implemented in nearby districts with students very similar to [our] own.” Another strategy for ensuring the comparability of research evidence is to conduct evaluations on local initiatives. **Gary** was a strong advocate for local research, stressing the need to evaluate local programs.

2. Two participants received or searched for research evidence or evidence-based practice as part of their doctoral study. Fran and **Gary**, both doctoral students in educational administration programs, made repeated comments during their interviews about using research they had been exposed to in doctoral classes. **Gary**, for instance, described research articles he had posted on a school website for use by faculty. He had learned about some of these articles through a recent class he had taken. Similarly, Fran, a doctoral candidate at the time of the interviews, had developed a database of research articles on RTI during her doctoral study. In both cases, the participants used the research in some way to build staff capacity or to inform implementation.

3. Sharing of research evidence at formal meetings was mentioned by six participants. Bruce, Carol, Diane, Ed, **Gary**, and Hayden all shared examples when research evidence had been shared and discussed at a meeting. Staff meetings were often cited by participants as a venue for sharing research. **Gary**, for instance, had posted research articles online, but then used a regularly scheduled staff meeting to discuss the research evidence. Bruce raised an example of hearing evidence for a program presented by a colleague from another district at a meeting:

I was in a meeting with a colleague from [name] county school district. They're collaborating with us on this grant. We had contracted with [vendor] to provide this program; they had chosen the program that was recommended by the Department of

Education. At the meeting, she shared information about the program, including some evidence from their district that the program works. She said, “Discipline referrals are down, and we see more kids on behavioral plans.”

For Bruce, hearing this evidence shared by a colleague was instrumental to his decision to adopt this program for his own district.

4. **Gary** used information gained through the accreditation process for the district high school to identify that students did not feel connected to their school.

One of the criticisms from the accreditation process was that our students didn’t have a lot of connection to school. They weren’t aware of how things functioned and they loved their school but there was a lack of connection in that they didn’t know what was going on in the school.

With awareness of this situation, **Gary** identified research literature on how to improve engagement with students. One article he reviewed provided him with a framework to implement a program to improve student engagement.

There was one in particular that was written by a professor at [name of university within state] . . . Essentially the students are allowed to engage in similar levels of high school, and there is an advisory period in which students can engage directly with a teacher. We took the number of students and divided the teachers among them and established advisory periods and students can meet with teachers twice a month with a program. We didn’t want to do just study hall, we wanted a program. The idea is to create a forum so that student needs can come forward and to have discussions about how to get through, how to make it through high school. So that was one article in particular that I stole.

5. Three participants indicated that availability of funding influenced their use of research evidence, especially in regards to the adoption and implementation of evidence-based programs. In light of the current economic climate, with many state and local governments reducing education budgets, two participants made comments about the decreasing funds available for school districts. **Gary** pointed out that the dual challenge of state budget cuts and declining enrollment is forcing the district to do with less funds than ever before.

The biggest issue here is financial. At the state level we've really suffered with financial difficulties. . . . And we have a twofold issue going on in our school district where not only do we have an average daily attendance issue – we're suffering from declining enrollment – but we have budget cuts from the state as well. So we're losing students and we're being asked every year to cut back a little more and the teachers are asked to be creative and to do with less. It's at the point now that our system is kind of used to it in a sense. We're used to being in duress. But in so many ways it's getting harder to do more with essentially less money.

6. There was a common perception among all seven administrators that professional instinct, whether their own or that of their colleagues', was invaluable and, at times, trumped research evidence as an influence on decisions. In assessing needs for an intervention, five of these seven administrators reported that they were likely to forego a formal needs assessment and rely instead on their existing understanding of the situation. Ed stated it simply: "We already had a good sense of what was needed in our district." **Gary**, also, denigrated the idea of conducting a formal needs assessment prior to selecting an intervention, stating:

In terms of a formal needs assessment I would have to say no. However, when you're dealing with a group that has been working together for so long, it's more of a clan-like

situation because everyone talks about what the needs are and everyone has a voice at faculty meetings.

7. Three participants specifically commented on the relevance of research findings to their own district context. Similar to the findings in the Coburn and Talbert (2006) study, these participants were less likely to trust findings from research if it were conducted in settings dissimilar to their own districts. As part of his decision-making process to adopt and implement a student advisory program, **Gary** considered how successful the program had been in other settings. However, he was very cautious about basing his decision on research findings from other settings:

I'm not a fan of best practices. Best practices tend to work in certain environments. You take a program that works well in one site and how it works in your own site may be very different. We have to evaluate our program by what our clientele say about it.

8. Fran and **Gary** applied a different set of standards when determining whether research was rigorous enough to apply to decision-making. Both participants looked for research that met commonly accepted academic standards for research, specifically whether the research had been peer-reviewed and accepted for publication. This different approach may be in part attributable to their status as doctoral students.

9. While the Department of Education considers local evaluation findings and data as appropriate evidence of an intervention's effectiveness (REL-Southeast, 2007), this type of data was less frequently mentioned by participants. Only **Gary** specifically advocated for evaluating programs within the district, although a few participants noted that they had used evaluation data collected by other districts or universities within their immediate region to inform decision-making. Since other studies have referred to the use of district evaluation findings (Robinson,

1988), the lack of discussion of the use of local program evaluation data may reflect to some degree the absence of research and evaluation office within these rural district central offices.

Appendix 8: Participant Informed Consent Form

Study title: Research Use by Rural District Central Office Administrators Leading Educational Improvement

Researcher: Patricia Moore Shaffer, Doctoral Candidate, The College of William and Mary

The general nature of this study entitled " Research Use by Rural District Central Office Administrators Leading Educational Improvement" conducted by Patricia Moore Shaffer has been explained to me. I understand that I will be asked to participate in a minimum of three individual interviews, conducted by telephone and scheduled at my convenience, over a period of approximately three (3) months. These interviews will focus on my experiences searching for and using research evidence related to my role as a central office administrator leading educational improvement. I understand that the interviews will be audio-recorded. I will be asked to provide one or more artifacts that reflect my involvement in planning and implementing educational improvement. My participation in this study should take a total of about six hours.

I understand that a pseudonym will be selected for me, which will be used to identify me throughout the study's data and in any published results. Other identifying characteristics will also be masked in the results to further protect the confidentiality of my identity. I am aware that I may refuse to answer any question asked, and I may withdraw from the study at any time without penalty by informing the researcher in writing by email ([pms haf@wm.edu](mailto:pms haf@wm.edu)) or mail (18 Southall Landing, Hampton, VA 23664). I understand that my present and/or future relationships with the researcher or with the College of William & Mary will not be affected by my refusal to participate or my withdrawal from this study.

In exchange for my participation in this study, I will receive a donation of books for a school library of my choice with an equivalent value of \$100 following the third and final interview. I understand that any payment for participation will not be affected by the content of my responses or by my exercising any of my rights. There are no known potential risks resulting from my participation in this project. I am aware that I may report dissatisfactions with any aspect of this experiment to the Chair of the Protection of Human Subjects Committee, Dr. Michael Deschenes, 757-221-2778 or [mrdesc@wm.edu](mailto:mrdesc@wm.edu), or to Dr. Tom Ward, 757-221-2358 or [tjward@wm.edu](mailto:tjward@wm.edu).

I am aware that I must be at least 18 years of age to participate. My signature below signifies my voluntary participation in this project, and that I have received a copy of this consent form.

\_\_\_\_\_

Date

\_\_\_\_\_

Signature

\_\_\_\_\_

Print Name

THIS PROJECT WAS APPROVED BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone: 757-221-3966) ON **2010-07-15** AND EXPIRES ON **2011-07-15**.

Any questions with regard to this project should be directed to the researcher: Patricia Moore Shaffer, 703-582-9749, [pms haf@email.wm.edu](mailto:pms haf@email.wm.edu).

## Appendix 9: Interview Questions

### *Interview Guide for Phase A Interviews*

#### *Professional History and General Background with Research Utilization*

1. Educational background
  - a. Tell me about your academic preparation for your current position.
2. Professional history with current and other districts / organizations
  - a. What is your current job title? Can you describe your primary responsibilities?
  - b. What previous positions have you held in this school district?
  - c. What previous positions have you held in other school districts or organizations?
3. Contextual background
  - a. What are the major issues facing the district at this time?
  - b. What are the major instructional issues facing the district at this time?
4. General background with research utilization: Purposes and Search
  - a. What does “research evidence” mean to you?



- b. Have you seen or reviewed any research evidence in the past three months? [If yes, focus the following series of questions on one specific event in which the interviewee reviewed research evidence.]
  - i. What was it?
  - ii. Where did you find it? [Probe as necessary to assess whether it was an internal or external source, including whether a person, department, or organization was responsible for forwarding the research evidence to the interviewee.]
  - iii. Did you seek it out or come across it?
  - iv. Have you used this information in decision-making? If yes, how? [request documentation if applicable]
  - v. Have you used this information in any other way, such as to advocate for a particular program or strategy?
  - vi. Did this information influence your thinking about a particular issue, topic, or practice? If yes, how?
  - vii. Have you shared this information with a colleague? If yes, how? Why did you share this information? [request copy of email or memorandum if applicable]
  
- 5. Can you describe any research evidence that a colleague or supervisor has shared with you formally or informally in the past six months?
  - a. Who shared it?
  - b. What was it?
  - c. How was it shared with you? [request copy]

d. For what purpose do you think your colleague shared this information?

Why do you think that?

*Interview Guide for Phase B Interviews*

*Focus on Research Utilization for Planning of Instructional Reform Initiative*

1. In our last interview, you spoke about some of the instructional issues facing the district. Would you describe a district-wide instructional reform initiative with which you have been involved in your district during the current school year (2009-10) that were designed to address these issues?
  
2. For the \_\_\_\_\_ initiative, would you tell me a little more?
  - a. Why did the district invest in this initiative?
  
  - b. Was a needs assessment conducted prior to planning this initiative? If yes, what data or information was examined as part of the needs assessment?

*Probes*

- i. Did you or another central office administrator speak with or survey staff or faculty about perceived needs? What type of information did you collect from them?
  
- ii. Did you or another central office administrator examine student data? What type of data?
  
- iii. Did you or another central office administrator examine teacher data, such as teacher quality data?
  
- iv. Did you or another central office administrator use in-house research or evaluation reports?

- v. Did you or another central office administrator use other sources of information to identify needs?
- c. What are the goals / objectives of the initiative?
- d. Would you describe how this initiative was planned?

*Probes*

- i. Who was involved in the planning of the initiative? Was there a formal planning team or committee? What did each individual contribute to the planning process?
- ii. What was your role in the planning process?
- iii. Was research evidence discussed or shared as part of the planning process? Would you describe how research evidence was discussed or shared?
- iv. Did discussions with colleagues affect your or others' perception of the need for this instructional reform? If yes, how?
- e. What are the primary strategies of the initiative?
- f. How did you identify these strategies to address these needs that you had identified?

*Probes*

- i. Did you examine studies/research that identified this approach as appropriate to address needs? Were these internally produced studies or

external studies? Please tell me about these studies and their findings.

What was it about these findings that influenced your decision?

ii. Did you consult with colleagues within your district? From other districts?

Other colleagues?

iii. Did you use your previous experience with strategies as the basis for identification? How?

iv. Did you receive information from or about vendors, consultants, or other intermediaries?

g. What did you consider when making the decision to adopt these strategies?

*Probes*

i. How did you review the evidence about the quality or possible impact of these strategies? Did you review the evidence with colleagues? If yes, how? How did your discussions about the research evidence influence your perceptions about the strategy?

ii. To what degree did you consider resources (money, time)?

iii. To what degree did you consider the opinions of other staff? Opinions of external consultants?

iv. What political constraints (school board, parents, community) affected your decision?

- h. What the initiative presented to the school board? If yes, how was this initiative presented?

*Probes*

- i. Were materials about the initiative prepared and distributed to board members? [request copy]
  - ii. Were presentations made to the school board? [request copy] What was the response to the initiative?
  - iii. Was research evidence about the initiative's strategies shared with the school board? What was the response to the research evidence presented?
- i. How was this initiative rolled out to the district staff?

*Probes*

- i. Were materials about the initiative prepared and distributed to staff and faculty? [request copy]
- ii. Were presentations made to the staff and faculty? [request copy] What was the response to the initiative?
- iii. Was research evidence about the initiative's strategies shared with the staff and faculty? What was the response to the research evidence presented?

## *Interview Guide for Phase C Interviews*

### *Reflection on Preliminary Findings*

Thank you for participating in two interviews and contributing documentation for this study examining *Research Use by Rural District Administrators Leading Educational Improvement*.

Today I'm going to ask for your thoughts about the summary of initial study findings that I shared with you by email. During the next thirty or so minutes, we will briefly review the findings by major study finding. I will then ask you to reflect on your own experience as you shared it during our earlier conversations and share if and how your own experiences are reflected in these findings.

1. The first category of study findings was about how rural district administrators define research evidence. Initial findings suggest that the majority of administrators described "research evidence" as evidence produced through independent research about the effectiveness of educational programs or interventions.
  - a. Based on your experience, do you agree with this definition?
  - b. If you agree with this definition, can you give an example from your experience to support this?
  - c. If you don't agree with this definition, can you offer an alternative?
2. The second category of study findings was about how rural district administrators leading educational improvement search for research evidence. Initial findings suggest that there are many sources administrators turned to for research evidence about effective programs or interventions. The top sources included government

agencies, intermediaries, professional conferences or meetings, published research evidence, and district colleagues.

- a. Do these findings reflect your own experience?
- b. If yes, can you give an example from your experience to support this?
- c. If your experience is not similar, can you describe how you search for research evidence?

3. The third category of study findings was about why rural district administrators leading educational improvement search for and use research evidence. Initial findings suggest that administrators sought and used evidence for instrumental, conceptual, and symbolic purposes.

- a. Do these findings reflect your own experience?
- b. If yes, can you give an example from your experience to support this?
- c. If your experience is not similar, can you describe how you search for research evidence?

4. The fourth category of study findings addressed what influences how rural district administrators leading educational improvement use research evidence. Initial findings suggest that administrators were influenced by their perceptions of the quality of research evidence, the district culture for using research evidence, the administrator's own knowledge and interests, and availability of resources.

- a. Do these findings reflect your own experience?
- b. If yes, can you give an example from your experience to support this?
- c. If your experience is not similar, can you describe how you search for research evidence?



Appendix 10: List of U.S. Department of Education Grant Programs Reviewed for Sample Selection

Carol M. White Physical Education Program
Early Reading First Program
Elementary and Secondary School Counseling Program
Foundations for Learning Program
Full Service Community Schools Program
Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)
Grants for the Integration of Schools and Mental Health Systems
High-Quality Supplemental Educational Services and After-School Partnerships Demonstration
Improving Literacy through School Libraries Program
Jacob K. Javits Gifted and Talented Students Education Program
Mentoring Program
Model Development and Dissemination Grants Program-Arts in Education
Partnerships in Character Education Program
Professional Development for Arts Educators
Project School Emergency Response to Violence (SERV)
School Leadership program
Smaller Learning Communities
Striving Readers Program
Teacher Incentive Fund
Safe Schools/ Healthy Students Program
Teaching American History Program

## Appendix 11: Participant Recruitment Emails

### *Initial Contact Email with District Superintendent*

**Subject:** Invitation to participate in rural district research study

Dear -----:

Your district has been selected to participate in a dissertation study examining *Research Use by Rural Central Office Administrators Leading Educational Improvement*. Your district was selected for its size, rural setting, and its history of involvement with educational improvement initiatives.

Findings from this study will contribute to an emerging body of research on how research evidence is utilized in school district central offices. Federal policies, including the No Child Left Behind Act, direct that school districts ground their educational improvement efforts within an evidence-based practice framework. However, the Federal perspective on the use of “scientifically based research” does not address the intricacies of how evidence is actually interpreted and used by central office administrators across all types and sizes of school districts. Only by understanding the patterns by which personnel responsible for educational improvement in school district central offices actually use evidence, and the factors that affect this use, can we begin to understand the promise and possibilities of evidence use to support educational improvement efforts. Research to date on research evidence use has been conducted primarily in urban districts. The intent of the proposed study is to develop a rich understanding of how rural central office administrators use research evidence.

If you consent to your district’s participation, I will ask you to recommend for involvement one or two members of your senior leadership staff who have been actively engaged in leading educational improvement efforts in your district. These staff will be asked to participate in up to three interviews, conducted by telephone and scheduled at their convenience, over a period of approximately three (3) months. These interviews will focus on their experiences searching for and using research evidence related to their role as a central office administrator. Their total participation in this study will not exceed five (5) hours. In exchange for their participation in this study, I will offer a donation of books to a school library of their choice with an equivalent value of \$100. Following the conclusion of the study, your district will receive a copy of the research findings and also will be invited to participate in an online meeting at which I will provide a briefing of the research findings.

To signal your permission for your district to be involved in this study, please reply to this email and state your approval of the involvement of your district in this study. At the same time, please provide the names and contact information for up to two of central office administrators who are actively engaged in leading educational improvement in your district. I will follow up with these members of your staff and provide additional information. Please know that your district’s participation in this study is completely voluntary.

If you have questions about this study, feel free to write an email or call me at your convenience. Thank you in advance for your consideration of this request.

Sincerely,

Patricia Moore Shaffer  
Ph.D. Candidate  
College of William and Mary, School of Education  
<http://education.wm.edu/academics/>

*Initial Contact Email with Central Office Administrators*

**Subject:** Invitation to participate in rural district research study

Dear -----,

Dr. ----- had passed along your contact information and your possible interest in participating in a dissertation study on *Research Use by Rural Central Office Administrators Leading Educational Improvement*.

I would appreciate your participation in this study. If you agree to participate, I will ask you to participate in up to three interviews, conducted by telephone and scheduled at your convenience, over a period of approximately two (2) months. These interviews will focus on your experiences searching for and using research evidence related to your role as a central office administrator. Your total participation in this study will not exceed five (5) hours. In exchange for your participation in this study, I will offer a donation of books to a school library of your choice with an equivalent value of \$100. Following the conclusion of the study, your district will receive a copy of the research findings and also will be invited to participate in an online meeting at which I will provide a briefing of the research findings.

If you are willing to participate, please reply to this email and state your interest to participate. Please also confirm that you currently hold a central office position and are involved in at least one educational improvement project in your district. Please suggest some dates/time prior to Thanksgiving for the first and second interviews, which should take no longer than 45 minutes each.

If you have questions about this study, feel free to write an email or call me at your convenience. Thank you in advance for your consideration of this request!

Sincerely,

Patricia Moore Shaffer  
Ph.D. Candidate  
College of William and Mary, School of Education  
<http://education.wm.edu/academics/>

## Appendix 12: Emails Requesting Third Interview or Feedback on Summary of Initial Findings

### *Standard Email Message Requesting Third Interview*

Subject: Research Use by Rural District Administrators - Request for Third Interview

Dear -----,

Thank you for participating in two interviews for the dissertation study examining *Research Use by Rural District Administrators Leading Educational Improvement*.

I am pleased to present you with a summary of initial findings from the eighteen interviews conducted with rural district administrators (see below). The findings are organized by the original research questions. I would like to schedule a third interview with you prior to January 14, 2011, to discuss the degree to which you see your own experiences reflected in this summary.

Again, thank you very much for your contributions to this study. When you respond to this email, please also send me the name, address, and contact person of the school to which I should direct a donation in the amount of \$100 for the purchase of books for the school library.

Best wishes for a successful new year!

Patricia Moore Shaffer

### **Research Use by Rural District Administrators Leading Educational Improvement: Initial Findings**

Initial findings from a series of nine interviews conducted with rural district administrators are provided below.

#### **1. How do rural district administrators define research evidence?**

The majority of administrators described “research evidence” as evidence produced through independent research about the effectiveness of educational programs or interventions.

#### **2. How do rural district administrators leading educational improvement search for research evidence?**

There are many sources administrators turned to for research evidence about effective programs or interventions. The top sources listed were:

- Government agencies at the state and Federal level. Primary among these is the U.S. Department of Education, which provided information about evidence-based programs through its What Works Clearinghouse, grant guidelines, web-based resources, and/or program staff.
- Intermediaries, including regional service centers, universities, educational vendors, community agencies/partners, consultants, professional associations, and foundations. Research is shared through intermediaries in many ways, including through training/professional development programs, brochures, reports, funding guidelines, and direct interactions with personnel.
- Professional conferences and meetings. Research evidence is shared formally through keynote speeches and presentations at professional conferences and meetings, and also informally at these events through educational vendors and networking with peers. ASCD conferences and state-level meetings of peer groups were most commonly identified in this category.
- Published research evidence. Administrators reviewed summaries of research reports, found online, in academic journals, and in professional publications such as Education Weekly or ASCD SmartBrief. Administrators engaged in doctoral study were more likely to have conducted topical reviews of literature and consulted professional journals.
- District colleagues. Administrators frequently received and shared research about educational programs and interventions with their district peers in central office and in schools. Contract or volunteer staff, including grant writers and program evaluators, also shared research evidence or information about evidence-based programs. In all cases, the sharing of research was conducted face-to-face and/or online through web-posting or email.

### **3. Why do rural district administrators leading educational improvement search for and use research evidence? And how do they use research evidence in their work?**

- For instrumental purposes. Administrators use research evidence as part of the decision-making process about programs or interventions, including to identify solutions or to guide implementation. Evidence-based programs are frequently sought by administrators to address local educational issues. Administrators also may use research evidence to inform professional development, monitoring, and evaluation to support the implementation of educational programs and interventions.
- For conceptual purposes. Research evidence may influence administrators' working knowledge of the issues at hand, but it sometimes does not account directly for decisions. Administrators may encourage the review of research by their district peers to inform their thinking about educational issues; book study, sharing or discussing research at staff meetings, and guest speakers at staff assemblies are popular strategies to encourage review of research or evidence-based practices. These social processes also help to create shared understanding about certain educational issues across schools and districts.

- For symbolic purposes. Administrators used evidence to support or promote a program or practice decision. This included citing research evidence as part of presentations about new program initiatives to the school board, district staff, parents, and other educational stakeholders. Administrators also were presented with research evidence by stakeholders and intermediaries who were advocating for an educational program or intervention.

#### 4. **What influences how rural district central office administrators leading educational improvement use evidence?**

- Quality of research evidence. The rigor of the research design and the credibility of the source providing the research evidence matter to administrators, who especially questioned evidence from vendors. However, evidence collected through rigorous research may be questioned if the research site does not closely resemble the administrator's own district.
- District culture for using research evidence. Administrators frequently report that decisions about program selection and implementation were made at the school level. Central office administrators support this decision-making process by informally sharing research and information about evidence-based programs and/or convening meetings at which research was discussed by school administrators and teachers.
- Administrator's knowledge and interests. Research reviewed by administrators is "filtered" through their existing knowledge gained through experience and previous reading or academic study. Administrators' choices of what research to review are typically influenced by the current educational issues affecting their district. The exception to this would be administrators engaged in doctoral study, whose reviews of research are heavily influenced by their academic curriculum.
- Availability of resources. Time and money aid or hinder the adoption of evidence-based practices and programs. The implementation of evidence-based programs or interventions was closely associated with discretionary grant awards and the availability of low- or no-cost training initiatives.

Patricia Moore Shaffer  
Ph.D. Candidate  
College of William and Mary, School of Education  
<http://education.wm.edu/academics/>

*Standard Email Message Requesting Feedback on Summary of Initial Findings*

Subject: Research Use by Rural District Administrators - Request for Feedback

Dear -----,

Thank you for participating in two interviews for the national study sponsored by the College of William and Mary examining *Research Use by Rural District Administrators Leading Educational Improvement*.

I am pleased to present you with a summary of initial findings from the eighteen interviews conducted with rural district administrators (see below). The findings are organized by the original research questions. For your final contribution to this study, please read each research question and the summarized findings that follow it.

Since I understand that you may be pressed for time and unable to commit to a third interview, I would appreciate it if you could provide feedback on this summary of initial findings by email. To do so, please reflect on your own experience as you shared during your interviews and ask yourself if your own experiences are reflected in this summary. Please add comments after each question and summarized findings that will help us to better understand your own experience finding and using research in your school district. Please return your comments in an email to me by January 28, 2011.

Again, thank you very much for your contributions to this study. When you return your comments, please remember to send me the name, address, and contact person of the school to which I should direct a donation in the amount of \$100 for the purchase of books for the school library.

Best wishes for a successful new year!

Patricia Moore Shaffer

### **Research Use by Rural District Administrators Leading Educational Improvement: Initial Findings**

Initial findings from a series of nine interviews conducted with rural district administrators are provided below.

1. **How do rural district administrators define research evidence?**

The majority of administrators described “research evidence” as evidence produced through independent research about the effectiveness of educational programs or interventions.

2. **How do rural district administrators leading educational improvement search for research evidence?**

There are many sources administrators turned to for research evidence about effective programs or interventions. The top sources listed were:

- Government agencies at the state and Federal level. Primary among these is the U.S. Department of Education, which provided information about evidence-based programs through its What Works Clearinghouse, grant guidelines, web-based resources, and/or program staff.
- Intermediaries, including regional service centers, universities, educational vendors, community agencies/partners, consultants, professional associations, and foundations. Research is shared through intermediaries in many ways, including through training/professional development programs, brochures, reports, funding guidelines, and direct interactions with personnel.
- Professional conferences and meetings. Research evidence is shared formally through keynote speeches and presentations at professional conferences and meetings, and also informally at these events through educational vendors and networking with peers. ASCD conferences and state-level meetings of peer groups were most commonly identified in this category.
- Published research evidence. Administrators reviewed summaries of research reports, found online, in academic journals, and in professional publications such as Education Weekly or ASCD SmartBrief. Administrators engaged in doctoral study were more likely to have conducted topical reviews of literature and consulted professional journals.
- District colleagues. Administrators frequently received and shared research about educational programs and interventions with their district peers in central office and in schools. Contract or volunteer staff, including grant writers and program evaluators, also shared research evidence or information about evidence-based programs. In all cases, the sharing of research was conducted face-to-face and/or online through web-posting or email.

### **3. Why do rural district administrators leading educational improvement search for and use research evidence? And how do they use research evidence in their work?**

- For instrumental purposes. Administrators use research evidence as part of the decision-making process about programs or interventions, including to identify solutions or to guide implementation. Evidence-based programs are frequently sought by administrators to address local educational issues. Administrators also may use research evidence to inform professional development, monitoring, and evaluation to support the implementation of educational programs and interventions.
- For conceptual purposes. Research evidence may influence administrators' working knowledge of the issues at hand, but it sometimes does not account directly for decisions. Administrators may encourage the review of research by their district peers to inform their thinking about educational issues; book study, sharing or discussing research at staff meetings, and guest speakers at staff assemblies are popular strategies to encourage review of research or evidence-based practices. These social processes also help to create shared understanding about certain educational issues across schools and districts.



- For symbolic purposes. Administrators used evidence to support or promote a program or practice decision. This included citing research evidence as part of presentations about new program initiatives to the school board, district staff, parents, and other educational stakeholders. Administrators also were presented with research evidence by stakeholders and intermediaries who were advocating for an educational program or intervention.

**4. What influences how rural district central office administrators leading educational improvement use evidence?**

- Quality of research evidence. The rigor of the research design and the credibility of the source providing the research evidence matter to administrators, who especially questioned evidence from vendors. However, evidence collected through rigorous research may be questioned if the research site does not closely resemble the administrator's own district.
- District culture for using research evidence. Administrators frequently report that decisions about program selection and implementation were made at the school level. Central office administrators support this decision-making process by informally sharing research and information about evidence-based programs and/or convening meetings at which research was discussed by school administrators and teachers.
- Administrator's knowledge and interests. Research reviewed by administrators is "filtered" through their existing knowledge gained through experience and previous reading or academic study. Administrators' choices of what research to review are typically influenced by the current educational issues affecting their district. The exception to this would be administrators engaged in doctoral study, whose reviews of research are heavily influenced by their academic curriculum.
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