The Uses of Qualitative Research:

Powerful Methods to Inform Evidence-based Practice in Education

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Abstract

This paper offers a rationale for the contributions of qualitative research to evidence-based practice in special education. In it, I make the argument that qualitative research encompasses the ability to study significant problems of practice, engage with practitioners in the conduct of research studies, learn and change processes during a study, and provide expansive data sets that help clarify both independent and dependent variables. Qualitative methodologies can shape and advance important questions of educational practice and policy. The concern with the degree to which qualitative research can contribute to the research base may be a reflection of the degree to which our field as a whole adequately prepares its researchers to understand and engage in high quality qualitative research that adheres to benchmarks for internal and external validity from inception through dissemination of results.

Keywords: disabilities, qualitative research, evidence-based practice, improvement science
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Housed in the U. S. Department of Education (USDOE), the Institute of Education Sciences (IES) offers funding to U.S. researchers who study educational problems. On its website (ies.ed.gov/aboutus/), introductory text explains the link between the USDOE and IES: “the statistics, research, and evaluation arm of the U.S. Department of Education.” The IES’s role is to provide scientific evidence that undergirds the nation’s education policy and practice as well as its mission to share knowledge with “educators, parents, policymakers, researchers, and the public.” Before the reauthorization of the Education Sciences Reform Act 2002, the USDOE had a branch with similar responsibilities, OERI, the Office of Educational Research and Innovation. The 107th Congress reaffirmed the government’s commitment to scientific research and emphasized the importance of scientific research as the standard from which educational practice and policy should emerge.

In 2016, this context is important to remember since education research has been dramatically reshaped since the Education Sciences Reform Act. Special education, as a specialization within the field of education, has been deeply influenced by the increasing emphasis on scientifically established knowledge, practice, and policy. By extension, how the field warrants knowledge has been sharply impacted. This paper is an example of that impact since it responds to a request to review the utility of qualitative methods in producing evidence that can identify promising practices and contribute to evidence-based practice in special education in particular. As Shavelson & Towne noted in 2002, there are principles that undergird systematic approaches to understanding and use of carefully researched practices in education. Careful research seeks conceptual understanding, poses empirically testable and
refutable hypotheses, uses observation methods that can be replicated, and recognizes the value of transportability and generalizability. Our work as a scientific community should include the design of multiple kinds of studies that both sharpen our understanding as well guide our use of what we learn, using observational methods linked to theory that allow fellow researchers to trace the links between the data, interpretation, and conclusions reached in any study. Shavelson & Towne acknowledge that any one study may not possess all these qualities. They also conclude “we also urge that randomized field trials be supplemented with other methods, including in-depth qualitative approaches that can illuminate important nuances of practice (p. 125).” In this paper, I advance two major arguments. The first affirms the utility of qualitative methodologies for shaping and advancing important questions of educational practice and policy such as the relationship between cultural knowledge and social inequality, the impact of RTI implementation, and the evolving nature of school-university partnerships (e.g., Bock & Erickson, 2015; Laureau, 2015; Thorius, Maxcy, Macey & Cox, 2014; Waitoller & Kozleski, 2013). The second is to offer a set of benchmarks for assessing the contributions of qualitative studies to expanding how we understand and use qualitative research as part of the landscape of scientific thought, discovery, and practice.

This discussion is important since educational researchers and practitioners may experience the wealth of available research methods as conflicting approaches to knowing that produce divergent approaches to the preparation of the practitioner and research workforce. As the 2002 Education Sciences Reform Act signaled, policy makers continue to search for responses to the pernicious and seemingly intractable issues that plague our educational system. For instance, large percentages of
students from specific population groups exit school without graduating. In 2016, the *Condition of Education Report* indicated that while 70 to 76% of students identified as Hispanic, Black, and American Indian/Alaska Native graduate, 87 to 89% of students identified as Asian/Pacific Islander and White graduate from high school, only about two-thirds of all students with disabilities graduate from high school (Kena et al, 2016). Male, Black students are suspended or expelled from school at higher rates than other demographic group (Musu-Gillette, 2016). In the face of failure, some students, families and teachers turn to remedies and solutions that have very limited evidence to support their use (West et al, 2016). As Hudson et al (2016) point out, the failure to adopt evidence-based practice stems from a complicated, context-driven, mélange of reasons that derive validity from the social contexts of educational practice. Bryk, Gomez, Grunow, and LeMahieu (2015) argue that the field has very few mechanisms that allow researchers and practitioners to work together to accumulate and legitimize knowledge through practice in order to provide answers to these intractable problems.

The *Getting Better* approach advanced by Bryk and his colleagues resonates with the notion of evidence-based practice (EBP), a term that migrated from medicine to education. EBP describes decision-making in practice based on the available, current evidence (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000). The notion in evidence-based medicine is that the best, available research, clinical expertise, and person-centered values converge to create evidence-based practice (Sackett et al, 2000). EBP can empower practitioners and families to draw on research that offers insight into the specific issue being addressed, connect it to craft knowledge built over time through experience, and
address family beliefs and expectations to make the best possible decisions given the context and what is known (Buysse et al., 2012; Slocum et al., 2015).

Evidence-Based Practice in Special Education

However, some special education researchers seem to narrow the notion of EBP so that it is both an intervention practice and a method for the selection of scientifically based interventions (Bal & Trainor, 2015; Cook et al., 2014). As constructed currently, EBP seems to have lost its connotation as a bridging mechanism between highly controlled experimental findings and the messy world of practice. Cook et al. developed a set of descriptors that were designed to help practitioners understand what level of confidence they can have in the use of any given practice: a) evidence-based practice; b) potentially evidence-based practice; c) having mixed effect; d) having negative effect; and e) having insufficient evidence to categorize their effectiveness (CEC, 2014). While the approach to specifying the degree of confidence has promise, it may serve to suppress applied research that can add to a developing body of evidence by describing in some detail the contextual factors that contribute and detract from any one practice being useful in specific settings (West et al., 2016). Odom (2009) helped to frame the evidence based practice conundrum by introducing the notion that some of our efforts to implement research in practice are “expired”, some are “tired” and some are “wired”. His critique reminds us that when EBPs remain descriptions of idealized practice rather than actively engaged practices that produce more knowledge about the conditions for improvement and successful outcomes, the research community remains aloof from the complex work of improvement and innovation and damages the odds of the diffusion of EBPs.
Horner et al (2005) suggested specific criteria for single-case research. These criteria include (a) specific descriptions of participants and settings (which help to address context), (b) precise description and measurement of dependent variables, (c) measurement of the fidelity of implementation of the independent variable, (d) the use of a baseline phase, (e) specific steps to ensure internal validity and experimental control, and (f) attention to external and social validity. Singer, Horner, Dunlap, and Wang (2014) echoed these elements as essential for meeting the criteria for EBP and questioned the sufficiency of qualitative research designs in identifying EBP. On the other hand, Brantlinger, Klingner, and Richardson (2005) asserted that experimental, qualitative studies provide a perspective, grounded in systematic study, that can meet the criteria of evidence-based knowledge produced for the explicit purpose of advancing policy and practice. Reconciling these points of view is important for our field and promises to strengthen the tapestry of evidence on which practice must be grounded. To do this requires much better education about what qualitative research is and what kinds of questions it is best suited to answer.

Bryk et al (2015) advance a case for disciplined, systematic inquiry that accounts for the messy realities of schools and other educational settings. Some systemic reform failures stem from structural assumptions behind the exploration, development and innovation, efficacy and replication, effectiveness, and measurement model embedded in the IES grant application process. Moving rapidly from exploration to effectiveness may mean that researchers, who are external to the organizations that serve as the context for their research, miss important aspects of the context. Therefore, their interventions can be successful only in situations where the research team is available to solve local
issues (Bock & Erickson, 2015; Kozleski & Thorius, 2014; Waitoller & Kozleski, 2015). As the local issues are solved, they are not always addressed in the results of any given research effort. As a result, the conditions necessary for improvement are absent in dissemination efforts (Evans, 2001). Bryk et al (2015) draw on improvement science to advance a research agenda that focuses on learning to improve. Six elements are fundamental to this approach: (a) specify the problem and make it user-centered; (b) focus on variation in performance; (c) make visible the system that produces current results; (d) systematically measure the problem and change result; (e) rely on inquiry that is disciplined and systematic; and (f) create networks among communities working on the same problems.

Special education researchers have worked extensively to improve our performance with systematic measurement and disciplined inquiry (Carter et al., 2015; Freeman et al, 2015; Oakes, Lane, & Ennis, 2016; Odom et al, 2014). The contributions of our colleagues are extensive and pervasive. However, special education researchers have rarely capitalized on the opportunities that qualitative research creates for understanding problems from a use-based perspective, focusing on variation in performance and making systems visible as well as engaging networks. Qualitative approaches to research have much to offer these problem spaces. Specific contexts, and the perceived and real affordances and constraints they offer, impact the social patterns of students, families, and workers within educational systems (Bal & Trainor, 2015; Leko, Roberts, & Pek, 2015; Kurth, Lyon, & Shogren, 2015). Thus, selecting methods both for understanding and practice that (a) account for context and (b) begin with the people who are affected by the change, are critical for sustained improvements.

Contributing to Social Validity through Qualitative Research
Social validity, a hallmark of applied behavior analysis, has been a cornerstone of the degree to which what is studied offers real-time, applied value to the conduct of everyday life. The results of a study must demonstrate not only that the intervention worked with a specific group but that what was gained has social value in a specific context. For instance, teaching students to “dress for success” only works if what is defined as dressing for success meets local standards for what constitutes success and what dress signals that success. Sustainability is another facet of social validity since social feedback is critical to sustaining a practice over time. An important source of social validity comes from users or participants. Qualitative methods make important contributions to achieving social validity. The degree to which participant voice is heard and embedded in the membership of the research team, engagement of participants in the research design, approaches to transcript analysis, and ways in which meaning is made, iterated, and shared (Jayawickreme, Jayawickreme & Goonasekera, 2012) may be best accommodated using the methods of qualitative research. Qualitative research methods offer feedback loops that can provide information in enough depth and frequency that school practitioners (leaders, teachers, para-educators, related service providers, and staff) can shift, tune, and transform their practice, all hallmarks of learning to improve. The design methodologies of qualitative research are particularly robust when it comes to social validity, culminating in the involvement of participants in member checks of the analysis of qualitative data to ensure that the interpretations of researchers reflect the realities experienced by the individuals and contexts studied (Graungaard & Skov, 2007; Harrison, MacGibbon, & Morton, 2001). While this paper focuses on the affordances of qualitative research, keep in mind that mixed methodologies that focus on findings that intersect across methodology approaches
can offer great benefit to practitioners and researchers alike (e.g. Ainbinder, et al., 1998; Carter et al.,
2015; Dymond, Renzaglia, Gilson, & Slagor, 2007)

The Utility of Qualitative Research

The NRC report (Shavelson & Towne, 2002) asserts that careful descriptive research done
primarily by sustained firsthand observation and interviewing—sometimes called qualitative or case
study or ethnography—can make valuable contributions to educational research, and that careful
descriptive research falls within the range of methods in education that can be called scientific (Erickson
& Gutierrez, 2003). Further, in 2005, Brantlinger, Jimenez, Klingner, Pugach, and Richardson reviewed
the kinds of qualitative design that meet standards of trustworthiness and credibility that undergird
scientific evidence. They note that qualitative research is empirical, stemming from experience and/or
observation. It produces knowledge about perspectives, settings, and techniques. It involves the
systematic use of specific research skills and tools. Further, qualitative research is particularly well suited
to the study of educational treatments which are situated and dynamically interactive. Educational
interventions are locally constructed social ways of life involving continual monitoring and mutual
adjustment among persons.

“What was the treatment, specifically?” is a question best answered by qualitative research
(Morningstar, Shogren, Lee & Born, 2015; Shogren et al., 2015). It is expensive and absolutely necessary,
especially since the push to scale-up research findings continues to be emphasized by policy makers. In
the following sections, I advance an argument that qualitative research is an invaluable approach to
discovery, understanding, and the production of evidence that can serve as the credible basis for the
arrangement and conduct of educational practice. Three sections substantiate this argument. The first explains why qualitative research is needed. The second describes the fundamental principles behind warranting the claims of qualitative studies. The third notes the importance of qualitative research in advancing the use of innovative and transformative approaches to social institutions like schooling.

Finally, I summarize and highlight the key points.

Why We Need Qualitative Research

The argument for the utility and contributions of qualitative research rests in part on the recognition that interactions between individuals, within classrooms and schools, are cultural. It is the relationships that people have to themselves (their psychological understanding), to one another (anthropological and sociological perspectives), to the objects, systems, and artifacts they create (the built environment), to the particular culture in which they are embedded, to other cultures, and to the natural environment that encompass culture (Schafer, 1998). We cannot pursue understanding AND the use of knowledge (Stokes, 1997) without acknowledging the role that culture plays in mediating our everyday activity.

Schafer (1998) describes culture in the following way:

[Culture is] an organic and dynamic whole which is concerned with the way people see and interpret the world, organize themselves, conduct their affairs, elevate and enrich live, and position themselves in the work [through] complex interrelationships that comprise the domain of culture… (p. 42).
Gutierrez and Rogoff (2003) remind us that culture exists in the participation practices of specific cultural communities. This idea draws on the work of cultural psychology which is concerned with the ways that psychological processes emerge through participation in activity with tools (Cole, 1996). Tools in this context are both material (e.g., a book) and virtual (e.g., video) objects as well as language, gesture, and symbolic representations of reality such as organization charts or data graphs. These tools mediate how we organize and structure our understanding of the world around but they also change and restructure our daily patterns of activity, making culture a reflexive product of our localized experiences and the communities of people that we engage. This means that culture is not static. Rather, it evolves within context, changing both individual and group interaction. For instance, while faculty and students at different schools may be assigned to classrooms and follow the same academic calendars, what happens within a school and any given classroom varies greatly. This variance results from the dynamic culture of everyday life that develops through resident tools and the individuals who use them within a specific context (Kozleski & Artiles, 2014).

Researchers engage in cultural practices by using tools that ostensibly function in standard ways but, when enacted, may have very different meanings and impacts. The use of graphs by researchers provides an example. For example, the graph of research data is both a signal that a certain kind of activity is occurring and a prompt to engage in that kind of activity. It symbolizes both activity and product. In this case, graphs signal novice researchers that graphing and graphs are what researchers do and produce. But how specific individuals use graphs with what frequency and for what purpose changes how the tool is understood and appropriated. A team of researchers might use graphs as a way of
showing how a particular research design might progress. The graph provides a clearer picture to the researchers than a description of the data. The use of graphs can also demonstrate the amount of data gathered from different methods to answer the same question. This kind of graph encourages researchers to consider the value of certain forms of data collection and their value to the analysis and interpretation of data. Graphs used to illustrate progress over time in an instructional environment help educators to think of progress over time rather than focus on the events of a single day. The tool shapes the audience’s point of view. From a cultural view, it suggests a particular way of considering everyday activities.

It is this shifting, nuanced understanding of human activity that lends itself particularly well to observation, interview, videotaping, artifact analysis and subsequent detailed analytic approaches to examining the relationship between multiple sources of data. Through careful observation, informed questioning, and detailed data gathering, qualitative research offers evidence of learning, defined as participation in cultural practice.

We need the Methodological power that comes from both studying how culture mediates what we do while we also compare various approaches, methods, and activities. We require methodological rigor to study cultural practice to warrant our findings qualitatively with the same confidence that we produce experimental and quasi-experimental findings that point the way forward to solving and resolving the complex practice issues that special educators face daily in teaching individuals with diverse cultural, physical, emotional, psychological, and sensory abilities.

**Qualitative Methods Illuminate Context**
Qualitative methods can help us understand the nature of classrooms as socially and culturally organized environments for learning (Erickson & Gutierrez, 2002; Morningstar et al., 2015; Shogren et al., 2015). In doing so, we may better understand how classrooms seem to work for some students, but not for others (Erickson, 2011). We also may be able to understand how the role of the teacher and the design of curriculum shape some students access to knowledge and discovery while constraining others. We need qualitative methods because they may be the best choice for helping to make visible the everyday activities of life in classrooms that often go unexamined but may offer explanations for how some students lose interest in engaging in formal schooling. Further, local meanings permeate what teachers know and bring with them to school since 85% of all teachers begin their teaching career within 40 miles of where they graduate from high school (Kozleski et al, 2014). Importantly, qualitative methods situate research participants in the role of “story-teller”, providing participants the opportunity to highlight issues that are important but may not have occurred to researchers who are not typically entrenched in the social spaces of teachers, students, and families. Qualitative methods allow for new discoveries in the moment unlike more restrictive quantitative data sources like surveys that are structured for participants to respond to rather than with the research team.

Kozleski, Gibson, and Hynds (2012) reported on two contiguous districts in the same state; both reduced their racial disproportionality in special education. Qualitative methods revealed the differences in approaches that led to the similar outcomes. One district produced sustained, purposeful activity in teachers, school administrators, and central administrative staff that predicted continued successful reduction in disproportionality. Three layers of activity produced this sustained and distributed result.
First, the superintendent met with leaders of local religious, mental health, police, recreation institutions along with representatives of the Chamber of Commerce. Community leaders studied data from the school district showing inequitable results for students distributed by racial identities. Together with the superintendent, they began to look at how their local practices reified distinctions being made in school across racial groups. In one instance, the Parks and Recreation district looked at who was participating in what kinds of activities and began to recruit adolescents to try a menu of activities after school. In another, the police department began stationing on duty police at various community activities specifically to build relationships with middle and high school students through friendly dialogue and shared interest. The focus was on humanizing the police and personalizing relationships. Second, within the district, the superintendent led monthly meetings with her principals. Each meeting focused on a structural aspect of implementing culturally responsive practices in schools. The process was to examine a specific practice each month. The superintendent would facilitate discussions of articles about specific practices and then lead the administrators through a visit to a specific school looking for that practice. The administrators would then discuss what they saw and interpreted during the walk through with the superintendent to discuss what they saw and what could be improved. One month, the focus might be on teaching modeling in the classroom. Another month, it might be on feedback, conflict management, or leading discussions. In each case, the superintendent led the conversation, the school walk through, and the debrief. Third, as a result of the intense focus on instruction, the principals began to visit classrooms more often. They spent more time with individual and small groups of teachers focusing on specific practice strategies. Principals modelled new practices in classrooms. They
became more familiar with their students. Students acknowledged how their teachers continued to work on improving their practice. Teachers noticed the investments of time and effort by administrators who were focused on the quality of interaction and instruction. These data came from multiple sources. Teachers, administrators, students, and members of the community who participated in ongoing meetings with the superintendent reported on these same activities from different vantage points.

As well, the research team conducted systematic observation of classrooms, including capturing the discourse of teachers and students. In this district, the observations provided evidence of confident, skilled teaching. Teachers who were observed were also interviewed subsequent to classroom observations to probe their intent, observations of what worked in their classrooms, and connect the teachers’ observations to professional learning activities. Professional learning agendas, professional development leaders as well as school leaders corroborated the information through interview.

The other district revealed instrumental, temporary responses to avoid state sanctions that offered little in terms of changing teacher or school leader behavior. This analysis came from the same, systematic approach to observation, interview, and artifact collection. Without this close, careful observation and data collection in both contexts, there would have been little data to inform how the districts produced the results they reported. We need qualitative methods because they can be used to look deeply at local practice across settings, offering a comparative look at how the same outcome is produced in very different ways.
Engaging in Inclusive Education

In addition to its power in revealing local context, qualitative research offers an important contribution to a justice agenda that can no longer be ignored. Inclusive education is a response to systemic exclusion of students who are viewed as different (e.g., students with disabilities, refugee, immigrant, ethnically and linguistically diverse students, and students from low socioeconomic backgrounds) from meaningful access and participation in education. As our world becomes increasingly polycultural, blurring boundaries of citizenship, place, ability, language, experience, values, and developmental norms, inclusivity is vital to the planet’s survival and continued capacities in a number of dimensions including environmental, social, and economic well-being. Education is and will continue to be a fundamental stepping stone for a just and equitable future. We need to embrace multiple ways of knowing in order to build the educational enterprise that will be necessary for life-long learning. Just as improvement science offers an approach to learning, sharing, and building while doing, we need a big umbrella for the methods that will undergird such an effort. Qualitative research methods will move us closer to an expansive view of inclusive education that includes:

1. the redistribution of quality opportunities to learn and participate in educational programs,

2. the recognition and value of differences as reflected in content, pedagogy, and assessment tools,

and

3. the opportunities for marginalized groups to represent themselves in decision-making processes that advance and define claims of exclusion and the respective solutions that affect their children’s educational futures (Waitoller & Kozleski, 2013, p. 36).
It is through careful observation about how the everyday work and accomplishments of students are facilitated by differing levels of opportunities to learn and how those affordances are created and reified that we can best understand the problems that inclusive education poses and build strategies that account for the myriad of differences that exist in schools. Through this careful understanding, educators will begin to fashion responses that meet the challenges and possibilities of inclusive education.

Questions to be Answered through Qualitative Methods

Another powerful argument for including qualitative methods within the tool kit for EBP is that qualitative methods are well suited for the specific kinds of questions that Bryk and his associates (2015) name. Anthropologists and sociologists have developed many of the qualitative methods that we now employ in education settings (Beail & Williams, 2014). Qualitative work blurs disciplinary and inquiry boundaries and field- or site-specific usage of terms and constructs for scholarly work. It offers the opportunity to draw on theoretical and practical knowledge from a number of social sciences that rarely speak to each other in the research literature. Hallmarks of qualitative research include intensive, long-term participation in a field setting (Brantlinger et al, 2005). Researchers carefully record what happens in the setting by writing field notes and collecting other kinds of documentary evidence (e.g., memos, records, examples of student work, digitally recorded interviews). They reflect analytically on their data as they collect it, developing working hypotheses that can be tested through interviews and observations during the study to rule out some lines of inquiry while advancing others. This is precisely what improvement science calls for.
Subsequent analytic reflection on the documentary evidence obtained in classrooms and other practice locations may advance and hone what works, helping legions of researchers to shape their work in progress (Erickson, 2012) while guiding practitioners to adapt practices to their local contexts. Reporting means drawing on detailed description, using narrative vignettes and direct quotes from interviews, as well as by more general description in the form of analytic charts, summary tables, and descriptive statistics. Because of the thorough and reflective field notes, along with audio and video records, researchers can draw on a rich set of data to describe everyday events in education settings. The interpretation of the significance of these events can be revisited by other researchers as well as the participants themselves to warrant any claims that are made. In this way important questions can be asked such as “what is happening, specifically, in social action that takes place in this particular setting?” Further, researchers can explore what the actions mean to the participants at the moment the actions took place and test those analyses through member checks with the participants. Video ethnographic tools are particularly powerful since what people do and what they think that they have done can be very different. Researchers can examine their evidence to chronicle how activity is organized in patterns of social organization and cultural principles that privilege specific kinds of learning and knowledge building. Further, qualitative methods help researchers to examine how what is happening in a classroom relates to happenings at other system levels outside and inside the setting. Finally, because of the ability to collect similar sets of data across settings, researchers can explore how everyday life in one setting compares with other ways of organizing social life in a wide range of settings in other places, at other times, and with a variety of populations.
Design of High Quality Qualitative Research

While this paper is not intended to be a tour of qualitative methods, I highlight some of the methods and practices that qualitative researchers employ to ensure the rigor of the claims that they make about data. Qualitative research methods encompass multiple approaches to design research and analyze the resulting data. High quality qualitative research begins with a question or set of questions that help guide the researcher (Ritchie & Lewis, 2003). These questions should be unambiguous, focused, relevant, informed by research and theoretical propositions, and feasible. While the questions need to be located in a specific context, sampling considerations should be focused on what kinds of data will be collected, in what time frame, across how many micro-contexts and individuals. Questions that guide sampling include discussion of the whole population within a context and ensuring that the perspectives and experience of various groups within the whole are represented in the decisions to collect specific kinds of data. For instance, in one recent study of a teacher preparation reform, I worked across two years to collect data with a team of researchers to ensure that the data that we collected would help to provide sufficient evidence of how our transformation affected students with disabilities, their teachers, school administrators and the teacher residents who were earning their teaching credentials (Waitoller & Kozleski, 2015). As a result, we observed classrooms, participated in teacher meetings and other professional activities, conducted professional learning workshops, coached teacher residents, and provided feedback on their progress. Interviews, focus groups, teacher recall interviews were anchored by their teaching videos, and classroom observations were documented using audio and video recordings that were subsequently transcribed (e.g., audio recordings). The videos were uploaded to
NVivo (a software tool for storing, coding, and analyzing qualitative data) and coded directly. Fieldnotes, audio tapes of coaching sessions were all added to our data library and, over time coded, re-coded, categorized, and themed. Along the way, sets of data assumed significance in the study and we reported on several sets of analysis that were not predicted when we first developed our study. This process of data collection, review, analysis, and additional data collection is the hallmark of the relationship between questions, data collection, and emerging evidence. This relationship is fluid and neither hierarchical nor uni-directional (Ritchie & Lewis, 2003). As a result, early design decisions may be revisited as themes and important topics emerge from the data.

From the teacher education data set, we published several studies. The first looked at how teachers prepared intensively in practice settings, bolstered by video recall interviews of teaching episodes, and anchored in semesters designed by themes that focused on developmental growth, produced teachers with particular critical consciousness about the design and delivery of curriculum for students with intersectional identities such as race and dis/ability (Waitoller & Kozleski, 2013). Another article focused expressly on a particular interview that was representative of a number of similar interviews that were conducted over the course of the two years. In this interview, practicing teachers discussed how they understand and made meaning of student assessment data in reading (Waitoller & Kozleski, 2015). What we learned is the way that the graphic display of data reduced teachers focus on individual needs of students and replaced it with a focus on undifferentiated groups of students who were either failing or performing.
Qualitative researchers maintain hypervigilance in storing their data and notating pivots that are made in what is sampled and for what reason. It is this record keeping that enables qualitative researchers to be transparent in decisions that are made in the field to pursue specific lines of inquiry. And, it is also this kind of fluidity that requires specific, explicit mapping in descriptions of methodological procedures that are often lacking in articles submitted for publication. This kind of documentation entails careful recording of what happens in the setting by writing field notes and collecting other kinds of documentary evidence (e.g., memos, records, examples of student work, audiotapes, videotapes); and subsequent analytic reflection on the documentary record obtained in the field. Further substantiation of the subsequent analysis is explicated through detailed description, using narrative vignettes and direct quotes from interviews, substantiated by the set of emergent codes, as well as by more general description in the form of analytic charts, summary tables, and descriptive statistics.

Warranting Claims: Triangulate methods, data sources, and theories

Leech and Onwuegbusie (2011) list seven approaches to qualitative data analysis including constant comparative, content analysis, key-word-in-context, word count, domain analysis, taxonomic analysis and componential analysis. Discourse analysis (Gee & Green, 1998) offers another analytic tool that helps researchers link activity in the classroom to the activities of other arenas that influence classroom life such as textbook publishers, curriculum developers, policy makers, and politicians in and out of office. While some of the methods that Leech and Onwuegbusie outline lead us to making decisions about what was said and meant, discourse analysis pushes qualitative researchers to not only synthesize what was said to understand how the pattern and function of talk in classrooms (and
elsewhere) shapes particular kinds of activity and limits others. Gee and Green (1998) note that through contrasting the outcomes of talk and participation for different participants at different times in a lesson, researchers can begin to understand what students are expected to know as a result of activity in the classroom (not as stipulated in the scripted curriculum), what views of a discipline are visible (e.g., what does reading mean in this context?), which students have access to the prevailing view of the discipline (e.g., are able to identify plot, use of language, shifts in point of view), and whose views count in each of these phases of activity. Using this kind of lens, researchers can begin to look at how participation in particular forms of instruction engage and involve some groups of students and not others. This forms the beginning of hypotheses about how classroom discourse might be shaped to change rates of participation and opportunities to learn.

Researchers must bring a wealth of information about learning and learning within disciplines as well as specific knowledge about how learning develops and changes over time in order to participate effectively in understanding the nuanced shifts in learning and discourse that happen in the classroom. As well, it takes more than one capable researcher to triangulate the analysis and validate findings in a way that other researchers can look at the same data and converge on similar analyses. What is illuminated in these kinds of analyses forms the basis of hypotheses that can tested in the same or similar contexts. Over time, through a network of researchers, skilled in the same toolkit, convergence of findings becomes coherence. Spatial analysis of socially constructed phenomenon like disproportionality in referral, identification, and placement in special education requires expertise in the use of geographical information systems (GIS), the overlay of individual student records on GIS
coordinates, and the development of resulting maps that demonstrate the geographical distribution of disproportionality at the school, district, and state levels. Since the data are not universally available a number of researchers with similar research questions can bring their data together to examine a problem more effectively than single sets of researchers focused in one geographic area. Qualitative analysis of these artifacts can give rise to another set of questions about how and why various patterns emerge. This second wave of questions requires extensive qualitative work to look at local contexts but from similar frames so the methods and the frames have the potential to create convergence.

Not all questions lend themselves to this methodology, matching methods to questions is critical, but qualitative research can conform to the heart of evidence-based practice because it begins with an authentic and rigorous analysis of what occurs in classrooms between and among students and their teachers. Qualitative researchers acknowledge the subjectivity of their analysis. Rather than seek objectivity as a condition of experimentation, qualitative researchers acknowledge its presence in their work and seek, through member checks, ongoing verification of their data analysis to ensure that what emerges from the data through the lens of the analysts converges with the lived experiences of the research participants. The choices that qualitative researchers make among and between methods such as discourse and conversational analysis, grounded theory, constant comparative approaches are linked to the kinds of questions that emerge both as the study begins and as the data begin to take shape. In acknowledging and describing subjectivity, consumers of qualitative research, in essence, are charged with evaluating the validity and reliability of the claims that mirror what consumers of quantitative research must do to vigorously evaluate their claims. Many would argue that “objective” approaches to
research still rely on human researchers who are never free from subjectivity. Recognition of the
subjectivity and blind spots that are embedded in the questions that researchers ask and the methods
that they employ help the research community to focus on the unit of analysis, the importance of the
questions, as well as the rigor of the data collection and subsequent analyses and interpretations.

Validity

Qualitative researchers attend to three kinds of validity that resonate specifically with the
methods reviewed in this paper. Audit trails help to assure that researchers engaged in specific studies as
well as the audiences for their studies are aware of reflexive subjectivity through careful documentation
of how the researcher’s assumptions have been affected by the data. Face validity is achieved through
recycling categories, emerging analysis, and conclusions through at least a subsample of respondents.
Finally, catalytic validity documents how the research process has led to insight and ideally, action. The
processes described in qualitative studies should attend to this kind of validity. Powerful analytic
software can help researchers to share their emerging analyses and offers approaches to cross-checking
and triangulation of different sets of data such as the use of school policy documents that mediate
discipline procedures with observed discipline events. By entering each piece of data and applying a
consistent naming convention, researchers are able to develop, manage, audit their analyses so that other
researchers can cull the same data set as well as follow similar procedures in alternative settings. Finally,
divergent analyses of the same sets of data can develop. Thus qualitative research teams engaged in
rigorous analysis meet regularly to share the results of their independent analysis, develop coding
dictionaries, validate the use of these dictionaries, and challenge each other, using data, to re-examine
and reach convergence on the direction of the data analysis. As these studies move from analysis to publication, it is critical that peer reviewers attend to the features of rigorous qualitative research to ensure that what is published provides the detailed methodology that allows peers and practitioners to have confidence in the findings. Further, studies that ask similar questions in different contexts need road maps for conducting new studies that will solidify our understanding of context and its impact on intervention work.

Summary

For a variety of reasons that include the ability to study significant problems of practice, engage with practitioners in the conduct of research studies, learn and change processes during a study, and provide expansive data sets that help clarify both independent and dependent variables, qualitative research contributes to evidence-based practice. Indeed, qualitative methodologies can shape and advance important questions of educational practice and policy. The reason for this article, a discussion of the degree to which qualitative research can contribute to evidence-based practice has been asserted in a number of publications including the National Research Council report on Scientific Research in Education (Shavelson & Towne, 2002). Eisenhart and DeHaan (2009) remind us that the actual practice of scientific research is more descriptively oriented, dependent on context, less cumulative, and more qualitative than is implied by experimentation that is idealized as leading to causal explanations. Distinguished researchers in our special education community have made similar arguments (Brantlinger et al, 2005; Trainor & Graue, 2014). The concern with the degree to which qualitative research can contribute to the research base may be a reflection of the degree to which our field as a
whole adequately prepares its researchers to understand and engage in high quality qualitative research that adheres to benchmarks for internal and external validity from inception through dissemination of results.

Through an extensive literature base, reaching back at least 40 years, qualitative researchers have amassed a set of procedures that allow the qualitative research community to assess the contributions of qualitative studies to the landscape of scientific thought and practice. These methods operationalize a research response to the notion that variety and changeability are embedded in contexts of social life. Qualitative research allows researchers to expand the array of variables that may contribute to the production of specific outcomes across multiple settings. By defining social and cultural features of local context as activity through participation, researchers can begin to examine how local practice communities like classrooms develop over time. Further as participants in one practice community migrate to another, they bring with them the cultural practices of the previous community. Their presence in the new community, along with all the other new participants, changes that community in specific ways that are not simply generalization but are transported and further evolved. We might think of this as analogous to epigenetic variation, only in social context. The unit is social exchange as opposed to genetic expression. Qualitative research allows us to work at this level of observation.

Bryk et al (2015) reminds us that learning to improve is based on the notion that change is accomplished locally through rapid testing and redesign with each step. Qualitative research has some, but not all, of the keys to contributing to this kind of learning. It relies on facilitating the growth of
knowledge of practitioners and researchers and is, therefore, essential to learning to improve and contributes to the evolution and development of evidence-based practice.
References


Qualitative Methods Inform Evidence-Based Practice


