



PRACTICAL ADVICE

Qualitative Research: A Consumer's Guide

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ABSTRACT *Qualitative research is best characterized as a family of approaches whose goal is understanding the lived experience of persons who share time, space and culture. Although they are often judged as a single entity, the approaches actually vary in their theoretical assumptions and canons of evidence. Four qualitative research domains that are currently used in studying education for health are reviewed here. They are ethnographic/field work approaches, use of interviews and surveys, audiovisual records, and the study of documents. Characteristics of each domain and brief examples are provided.*

In addition to introducing the four research domains, we offer some general guidelines on how to be a good consumer of qualitative research. We pose a series of questions about the importance of the research question, study design, and trustworthiness of qualitative research results.

In addition, we focus on how research results are presented and discussed. We conclude with the observation that qualitative research approaches are only as good as the questions they set out to illuminate. In the arena of education for health a number of good and important questions remain unaddressed and would benefit by being studied using qualitative research approaches.

Discovery consists of seeing what everybody has seen and thinking what nobody else has thought. (Albert von Szent-Gyorgyi, 1893–1986, Nobel Prize in physiology and medicine, 1937)

What is Qualitative Research?

Qualitative research is best characterized as a family of approaches whose goal is understanding the lived experience of persons who share time, space and

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culture. In contrast to quantitative approaches which generally seek to control and predict phenomena, often using experimental designs and statistical analysis, qualitative studies tend to focus on the natural history of events or relationships and produce what Geertz (1973) calls “thick description.” Qualitative research approaches come from a variety of intellectual traditions, including anthropology, sociology, psychology, ethology and linguistics, some dating back 100 years or more. Often characterized collectively, qualitative research approaches actually vary in their theoretical assumptions and rules of evidence. Our goals in this paper are to introduce four qualitative research domains, illustrate their relevance to problems in education for health, and offer some criteria for evaluating the quality of studies using qualitative research approaches. Table 1 summarizes our discussion.

Four Qualitative Research Domains

Ethnography/Fieldwork. Anthropologists who were trying to understand new and unfamiliar cultures originally developed ethnographic approaches. By immersing themselves and systematically observing and interviewing members of a culture over time, and by using key informants to provide information about relationships and the meaning of daily activities and rituals, a picture of the basic organizing principles of the culture was gradually constructed and provided the basis for comparison and theorizing. Today, researchers use ethnography and other fieldwork techniques such as participant observation to study contemporary societies and the practices people use for making meaning. In medicine, there is a rich tradition of using ethnography and fieldwork to study the process of professional socialization. Early studies (Merton *et al.*, 1957; Fox, 1959; Becker *et al.*, 1961; Mumford, 1970; Friedson, 1975) focused on the path to professionalism by “shadowing” and observing students at work in classrooms, laboratories hospitals and clinics over long periods of time.

A good way to understand how ethnographers and field researchers work is to imagine yourself as a Martian who has landed on earth to study “alien” life forms. In order to accurately portray the language, habits, and customs of these life forms it is necessary to step outside of one’s cultural context and ask the question “What’s going on here?” Through careful observation and controlled contact with certain members of the culture who are willing to provide key insights about the structure and organization of the culture, understanding flows.

Interviews/Surveys. No one knows when the first interview was conducted. The earliest recorded definition of the term offered by the Oxford English Dictionary (Compact Edition) states that an interview was a conversation between high status persons generally conducted for the purpose of entering into a formal agreement. Over time the interview has evolved into a type of encounter where

Table 1. Qualitative study approaches

Domain	Typical focus	Advantages	Disadvantages
Ethnography/ fieldwork	Cultural organization and relationships	<ul style="list-style-type: none"> • Relatively inexpensive • Rich description and natural history of events • Developmental approach • Allows investigator to develop ground level perspective 	<ul style="list-style-type: none"> • Relies on real time observations of a single observer • Subject to Hawthorne effects and demand characteristics • Subjects may be lost to study over time • Overwhelming amount of detailed information that may be difficult to interpret
Study of documents	Evidence of care or process outcomes	<ul style="list-style-type: none"> • Relatively easy to obtain • May be compared across selected criteria, e.g. QA • Unobtrusive 	<ul style="list-style-type: none"> • Can be bulky, difficult to transport and code • Issues of accuracy and completeness difficult to assess • Social context of document production difficult to reconstruct
Interviews/ surveys	Attitudes and beliefs	<ul style="list-style-type: none"> • Can be administered to large numbers of subjects • Relatively inexpensive way of sampling opinions, attitudes, values etc. • Results are easily quantified • Generalizable 	<ul style="list-style-type: none"> • Limited or fixed choice questions may give results that are artifactual • Little control over context of responses • Difficult to assess overall accuracy of responses • Potential for oversimplifying issues
Audiovisual records	Social interaction/ language use	<ul style="list-style-type: none"> • Reproducible, low cost • Allows detailed analysis of microscopic events • Access to ensemble of communication, dimensions (e.g. verbal, nonverbal, physical) • Relatively unobtrusive • Allows valid and reliable coding of events 	<ul style="list-style-type: none"> • Easy to become overwhelmed by too much data • Time consuming; easy to lose the forest for the tress • Complexity of human social behavior can be overwhelming • Captures only what the camera/recorder can see/hear • Phenomena of study must be preselected

one person (typically identified as a professional) gathers information from another (typically identified as a client). Social scientists began using interviews around the turn of the 20th century to gather information about groups or classes of people and their beliefs and attitudes about a variety of issues ranging from public health programs to politics. Large-scale interviews using representative sampling designs gained enormous popularity after World War II. Both government and business institutionalized the use of interviews and surveys as a basis on which to make policy and marketing decisions. It was also in this time period that group interviews around a focused topic, now popularly called “focus groups,” were developed. Focus groups are used extensively in marketing and politics to test the attractiveness of products and political positions to the public. They are also being used with increasing frequency in medical education and research. A recent report by Brown (1999) identified some 109 focus group studies published in the medical literature in the past decade (for another example, see Calderon *et al.*, 2000).

A study by Carter *et al.* (1986) illustrates the use of focus groups. The investigators wanted to understand extremely low rates of flu shot utilization in a population of elderly veterans in Washington State. Rather than design a public awareness campaign based on their own limited understanding they decided to convene focus groups and ask open-ended questions like, “What does it mean to you to get a flu shot?” The investigators were surprised by some of the responses they got, such as, “Getting a flu shot means that I will get the flu.”

Using a thematic analysis of the concerns and barriers raised in the first round of focus groups, the investigators then convened a second set of focus groups with other elderly veterans and asked them to consider the first list of concerns and barriers and rank them in terms of their relative importance. On the basis of the weighted averages Carter *et al.* (1986) created a public awareness campaign based on information provided in the focus groups. The intervention resulted in a 33% increase in utilization, one of the largest changes in behavior ever realized from a public awareness campaign.

Audiovisual Records. Relatively new on the scene, the analysis of audiovisual records has been aided in the past 25 years by the availability of high quality, low cost recording equipment. Motion picture film and still photography have been used to a limited extent by ethnographers from the 1880s onward. Systematic use of this approach in the social sciences in general and medical education in particular, did not begin in earnest until the late 1930s when psychiatrists began to make and review wire recordings of their trainers’ psychotherapy sessions (Stoeckle & Billings, 1987). Today, multiple curricula for teaching clinical interviewing skills using audiovisual techniques exist, and there is strong evidence that it is an effective teaching format (Maguire, *et al.* 1986).

Analysis of taped encounters between practicing clinicians and their patients has also yielded important results. In an early qualitative study of the opening

moments of routine clinic visits, for example, Beckman & Frankel (1984) observed that internists interrupted their patients, on average, 18 seconds into their description of concerns. In a follow-up study, Beckman *et al.* (1985) found that there was a strong relationship between interrupted statements of concern and so-called "hidden agendas," last minute concerns raised by patients at the very end of the visit. Linking these occurrences provides the basis for the recommendation that patients be given an uninterrupted opportunity to express concerns at the beginning of the visit to reduce the probability of last minute concerns.

The major advantage of audiovisual recordings is their reproducibility and availability for others to view. Much like the invention of the microscope, film, video and audio records permit multiple observers to assess the same interaction specimen directly. The main disadvantage of audiovisual records is the overwhelming amount of material they contain and their potential intrusiveness in the settings where they are present.

Study of Documents. Writing is the hallmark of literate societies. Qualitative researchers have studied written documents in a variety of medical and educational contexts. Three areas which have been investigated are: narratives (patient, physician or both), critical incidents, and medical records.

Narratives are ubiquitous in medical practice. They are the basis of the medical history as well as a medium of exchange for physicians and patients to communicate and memorialize their experience. Researchers have begun to explore the use of narrative in the patient encounter as a diagnostic and prognostic tool. Rich & Stone (1996), for example, studied the stories of young black males presenting to the emergency room (ER) at Boston City Hospital. Using sociolinguistic analysis the investigators identified themes of violence in the narratives and found two types of responses to trauma. One response involved a recognition by the teller that the experience had put them at risk, which they wanted to reduce or avoid in the future. For example, "I realize that staying in a gang got me shot this time and could get me killed the next time." The second response type was a desire on the part of the teller to "get even" for the trauma that had been inflicted, saying, for example, "They got one this time, but I'm going to get revenge." On the basis of these narrative styles Rich & Stone tracked the study participants, reasoning that the second type would be much more likely in the future to present in the ER with additional trauma. With this knowledge in hand counseling interventions have been developed to help reduce the probability of additional trauma related to violence.

Another type of qualitative narrative approach, critical incidents, has been used in medical education (Branch *et al.*, 1993). The researchers were interested in knowing how medical students were relating to an experimental curriculum (the New Pathway at Harvard). As an alternative to being interviewed, the students were asked to write about a memorable experience in the new curriculum. The narratives were then analyzed and common themes were derived. The

major benefit of this approach is its focus on the context of meaning for the students. Like Inui and Carter's use of focus groups to better understand the lived experience of the population for which an intervention was being planned, the use of critical incidents with the students allowed the investigators to discover what was meaningful from their point of view.

Perhaps the most visible and frequently studied documents are medical records. From the turn of the century onward medical records have been used as a source of data to study everything from the epidemiology of heart disease to the quality and completeness of care rendered.

Over the past two decades qualitative researchers have focused on understanding the medical record, not so much as a source of factual information but as a social production (Frankel & Beckman, 1995). One study by Cicourel (1982) looked at the relationship between chart entries and a transcript of the encounter to which the chart referred. Cicourel and others, such as Waitzkin (1991), have found that patient concerns, especially social problems, tend not to be recorded in the chart despite having been discussed during the encounter. A study by Frankel (1996) compared tapes of medical encounters with chart entries. He found that four out of five biomedical problems mentioned during the encounter, which were judged independently to be moderately to very important, were recorded in the chart. By contrast, two out of every three moderately to very important psychosocial problems mentioned by patients were not recorded in the chart. One conclusion from this study was that the medical record is a poor proxy for understanding quality of psychosocial discussion and care provided.

How to Be a Good Qualitative Research Consumer

We have now presented four domains in which qualitative researchers have made contributions to the study of education for health. Several recent papers examine the question of criteria for evaluating qualitative research in detail (for example, Devers, 1999; Frankel, 1999). Here we focus on some general guidelines for evaluating the quality of qualitative research studies and discuss three aspects of qualitative studies that readers should, and reviewers typically do, use when determining whether a study is worth reading and the findings are trustworthy.

Is the Research Question Important?

There is general agreement that good qualitative studies answer a clearly stated, important research question. To assess the importance of a research question, readers should ask themselves, "If the author answers the question(s) posed, will my understanding of the problem or field under study be significantly altered?" In addition, the reader should ask, "Will the research provide new theoretical and/or methodological insights that will be useful for future research?" For

example, many studies of education for health (and many other health sciences) are more “applied” than “basic.” Their primary goal is to address practical problems in professional or public education. The potential cost of this applied focus is a loss of theoretical grounding that may make it difficult for the consumer to place findings in the broader context of qualitative research traditions. To minimize these costs readers should also ask themselves if the answers to the research questions posed fit into a coherent theoretical framework or will result in improved methodological tools within an established framework of understanding.

Is the Study Design Well Suited for Answering the Research Question(S) and Are the Results Credible and Trustworthy Enough to Guide Future Action?

Table 1 illustrates that the range of qualitative research and methods is diverse and that each domain has particular strengths and weaknesses. Given the diversity in qualitative research domains, a key question to ask of a qualitative study is, “Does the qualitative study design answer the question(s) posed?” The author should provide some rationale for the theoretical perspective (if utilized) and methods employed, including a discussion of whether the research design was modified or changed in light of a new, emerging research question.

Research consumers can employ four strategies to gain further understanding of the most appropriate uses of qualitative research. The first is to increase their knowledge and familiarity of the qualitative research domains or their application in education by reviewing additional articles or texts. The second is to draw analogies from known processes to better understand unfamiliar approaches. For example, Elder & Miller (1992) use clinical analogies to illustrate aspects of the qualitative research process. Other texts provide exercises that illustrate how qualitative methods are more conscious and rigorous applications of skills we use everyday—looking, listening, collecting, recording, questioning, and interpreting. A third strategy is to enter into an e-mail or telephone dialog with investigators of published studies to gain a deeper understanding of their approach. Finally, consumers could design and conduct a small study of their own and critique it using established guidelines.

If the general research approach is deemed appropriate for answering the study question, additional questions need to be posed about the context in which the research occurred, the sampling strategy employed, the specific data collection and analysis process used, and the general strategies for enhancing rigor (see Table 2). Several recent articles discuss these issues in detail (see, for example, Devers, 1999; Frankel, 1999). Here we discuss four features of qualitative research designs that are both important and different from criteria readers may now be using.

First, there currently are at least two sets of criteria for assessing qualitative studies, positivist and post-positivist. While the positivist criteria are most

Table 2. Criteria for evaluating qualitative research

Area	Criteria
Research question	Clearly stated and important research question Whether, and how, the research question emerged or changed should be described Investigator's perceptions and assumptions throughout the research process should be clearly stated
Context	Clear and detailed description of the study context Clear and detailed description of the investigator's role in the context Clear delineation of how the context, and changes occurring in it, affects the study design and ability to answer the original research question
Research study design	Overall, the research strategy most appropriate for answering the question should be employed
Sampling strategy	Clear description of the purposive sampling strategy used and why it was selected Additional criteria for specific domain(s) should be used
Data collection methods	
Data analysis methods	
Strategies and techniques for enhancing rigor	Data archiving/creating an audit trail Reflective journal keeping Search for disconfirming evidence Testing "rival" hypotheses Skeptical peer review Subject review Triangulation

Modified from Devers (1999).

familiar and frequently used (internal and external validity, reliability, and objectivity), alternative criteria tailored to the goals of qualitative methods and the more "naturalistic" research settings in which they take place have been proposed (credibility, transferability, dependability, and confirmability). Devers (1999) discusses the similarities and differences between these two sets of criteria and advantages and limitations of adopting one or the other, or some combination of the two. As is true in health services research, the field of education for health may wish to engage in this larger discussion about which set of criteria should be adopted and why.

Second, in qualitative approaches the researchers are the research instruments. Almost all qualitative research and methods requires the development, maintenance, and eventual closure of relationships with research "subjects." Therefore, the research results obtained in qualitative studies will be influenced by charac-

teristics of the researchers, the context in which this research relationships are formed, and whether and how effectively researchers document and reflect upon how their own characteristics and biases may shape the research results. Many of the criteria for evaluating qualitative research are designed as checks and balances for researchers and their relationship to the research subjects.

Third, in many qualitative research domains data collection and analysis occur simultaneously rather than sequentially. While this approach allows researchers to “test” evidence and ideas and maintain the flexibility to pursue the most important research questions, it often raises methodological concerns (e.g. the researchers found what they were looking for). Understanding why and how research design decisions were made, and whether disconfirming evidence was actively searched out and rival theories actively explored is critical for evaluating qualitative studies.

Finally, consumers of qualitative research need to know whether, and to what extent, the reported findings can be applied to their own situations or settings (i.e. whether the findings are transferable). Making such determinations requires detailed descriptions of the context and setting in which the research took place. In particular, what features of the context or setting, and the researchers’ roles in it, have shaped the results?

It should be noted that results from a single study can be powerful, but more often, the understandings that emerge from multiple studies are required to spur action. Further work is needed on how to synthesize and evaluate research results from multiple qualitative studies (Dingwall *et al.*, 1998).

How Are Results Presented and Discussed?

Regardless of the genre in which the research results are reported, sufficient evidence must be presented to convince skeptical readers that the data support the conclusions drawn. In qualitative research, evidence consists primarily of segments of text that must be kept in context. Such information is difficult to include in journal length articles, making it hard for consumers to fully evaluate the data and the authors’ interpretations. Many fields are exploring ways that qualitative researchers can provide sufficient evidence to convince readers while staying within the existing journal format (e.g. researcher making raw data and codes available on disk, journals publishing more expanded version of qualitative papers on their websites).

Even if such mechanisms existed, it is important to point out that they fundamentally rely on the researcher keeping detailed records (this is referred to as “data archiving” and “creating an audit trail”). Such records enable others to review the data, and the researcher’s interpretations of them, to assess their dependability (i.e. extent to which similar findings would be produced if someone else carried out the research as described) and confirmability (i.e. extent to which evidence corroborates the findings).

Another criterion for evaluating qualitative results is whether it is possible to

discern where the raw data end and the researcher's interpretation begins. In qualitative research, complete separation can be difficult to achieve, given the need to keep the findings in context (including the temporal order of events) and the place of the researcher in the narrative. However, authors strive to be clear about which portions of the article text are "data" and which portions are their own reflections and interpretations.

Finally, in any field, there is a need to avoid jargon in presenting research results. Different domains of qualitative research have their own language (and even dialects!) that may be unfamiliar to generalists. Therefore, authors should make the findings accessible to the audience, which is likely to be drawn from many disciplines, with many who are relatively unfamiliar with qualitative research methods.

Conclusion

In closing, we offer the following observation attributed to Albert Einstein: "Not everything that counts can be counted and not everything that can be counted counts" (Jason, 1999). Qualitative research is a family of research approaches with different assumptions from other systems of investigation, such as those based on causal inference and statistical modeling. The best and most useful guideline we have found for selecting a research method is based on the type of question one is asking and the extent to which the method will inform the question. That having been said, we believe that a better appreciation of the range and diversity of qualitative research approaches by investigators in the field of education for health will lead to important new breakthroughs in theory, knowledge and practice.

References

- BECKER, H., GEER, B., HUGHES, E.C. & STRAUSS, A. (1961). *Boys in white: student culture in medical school*. Chicago: University of Chicago Press.
- BECKMAN, H.B. & FRANKEL, R.M. (1984). The effect of physician behavior on the collection of data. *Annals of Internal Medicine*, 101, 692–696.
- BECKMAN, H.B., DARNLEY, M. & FRANKEL, R.M. (1985). Soliciting the patient's complete agenda: a relationship to the distribution of concerns. *Clinical Research*, 33, 7174A.
- BRANCH, W., PELS, R.J., LAWRENCE, R.S. & ARKY, R. (1993). Becoming a doctor: critical incident reports from third year medical students. *New England Journal of Medicine*, 8, 1130–1132.
- BROWN, J.B. (1999). The use of focus groups in qualitative research. In: B.F. CRABTREE & W.L. MILLER (Eds), *Doing qualitative research*, 2nd edn. Thousand Oaks: CA, Sage.
- CALDERON, J.L., BAKER, R.S. & WOLF, K.E. (2000) Focus groups: a qualitative method complementing quantitative research for studying culturally diverse groups. *Education for Health: Change in Learning and Practice*, 13, 91–95.

- CARTER, W.B., BEACH L.R. & INUI, T.S. (1986). The flu shot study: using multi-attribute utility theory to design a vaccination intervention. *Organizational Behavior and Human Decision Processes*, 38, 378–391.
- CICOUREL, A.V. (1982). Language and belief in a medical setting, In: Byrnes, H., (Ed.), *Contemporary perceptions of language: interdisciplinary dimensions*. Washington, DC: Georgetown University Press, pp. 48–78.
- DEVERS, K.J. (1999). How will we know “good” qualitative research when we see it?: beginning the dialogue in health services research. *Health Services Research*, 34, 1153–1188.
- DINGWALL, R., MURPHY, E., WATSON, P., GREATBATCH, D. & PARKER, S. (1998). Catching goldfish: quality in qualitative research. *Journal of Health Services Research and Policy*, 3, 167–172.
- ELDER, N.C. & MILLER, W.L. (1992). Reading and evaluating qualitative research studies. *Journal of Family Practice*, 41, 279–285.
- FOX, R. (1959). *Experiment perilous*. New York: The Free Press.
- FRANKEL, R.M. & BECKMAN, H.B. (1995). The accuracy of the medical history. In: M. LIPKIN, S. PUTNAM & A. LAZARE (Eds), *The medical encounter: clinical care, research and education*. New York: Springer-Verlag.
- FRANKEL, R.M. (1996). A-symmetry in the doctor–patient relationship: are we looking in all the right places? Samspel and Variation: Sprokliga studier tillagande Bengt Nordberg pa 60-arsdagen, Institutionen for Nordiska Sprak, Uppsala Universitet.
- FRANKEL, R.M. (1999). Standards of qualitative research. In B.F. CRABTREE & W.L. MILLER (Eds), *Doing qualitative research*, 2nd edn. Thousand Oaks, CA: Sage.
- FREIDSON, E. (1975). *Doctoring together*. New York: Elsevier.
- GEERTZ, C. (1973). *The interpretation of cultures*. New York: Basic Books
- JASON, H. (1999). What deserves to be published? Toward an EfH policy statement. *Education for Health: Change in Learning and Practice*, 12, 141–143.
- MAGUIRE, P., FAIRBAIRN, S. & FLETCHER, C. (1986). Consultation skills of young doctors: I. Benefits of feedback training in interviewing as students persist. *British Medical Journal (Clinical Research Ed.)*, 292, 1573–1576.
- MERTON, R.K., READER, L.G., KENDALL, P.L. (1957). *The student physician* Cambridge, MA: Harvard University Press.
- MUMFORD, E. (1970). *Intern: from students to physicians*. Cambridge, MA: Harvard University Press.
- RICH, J.A. & STONE, D.A. (1996). The experience of violent injury for young African–American men: the meaning of being a “sucker”. *Journal of General Internal Medicine*, 1, 77–82.
- STOECKLE, J.D. & BILLINGS, J.A. (1987). A history of history-taking. *Journal of General Internal Medicine*, 2, 1119–1127.
- WAITZKIN, H. (1991). *The politics of medical encounters: how patients and doctors deal with social problems*. New Haven, CT: Yale University Press.