2017

A Qualitative Toolkit for Institutional Research

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**Recommended Citation**  
[https://doi.org/10.1002/ir.20217](https://doi.org/10.1002/ir.20217)

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This chapter provides tools, resources, and examples for engaging qualitative inquiry as a part of institutional research and assessment. It supports the development of individual ability and organizational intelligence in qualitative inquiry.

A Qualitative Toolkit for Institutional Research

Chrystal A. George Mwangi, Genia M. Bettencourt

As an institutional researcher, Sam has just finished analyzing the results of their institutions’ most recent campus climate study. The quantitative findings show clearly that Students of Color have negative experiences both within academic courses and co-curricular involvement. Students of Color responded in high numbers to questions asking about microaggressions on campus, indicating that these pervasive acts of racism permeate their daily experiences. Students of Color were also more likely to report feeling isolation on campus and dissatisfaction with the institution. Sam wants to know more about microaggressions on campus to be able to understand their different manifestations, the impact they have on Students of Color, and potential strategies for intervention. To meet these goals, Sam decides to conduct qualitative research centered on the voices of these students experiencing microaggressions.

Qualitative research is the result of many different decisions, all of which are made within unique contexts. To illustrate these decisions and contexts, we use the example of Sam throughout this chapter. Like Sam, many institutional researchers find they need to integrate traditionally quantitative approaches with qualitative methodologies to obtain the full picture of student experiences in higher education. Qualitative methods naturally align with institutional inquiry that focuses on students’
experiences within a certain context or set of conditions (Harper & Kuh, 2007). As institutions engage in increasingly complex data-driven decision making, “the best decisions are based on a deeper understanding than quantitative methods alone can provide” (Van Note Chism & Banta, 2007, p.15). As such, it is crucial for institutional researcher and institutional research offices to develop qualitative expertise to support methodologies and methods that can be applied to a spectrum of research questions (McLaughlin, McLaughlin, & Muffo, 2001). This chapter provides tools, resources, and examples for effectively grounding and conducting qualitative inquiry as a part of institutional research and assessment. We review key qualitative skills and knowledge areas such as research paradigms, methodologies, and methods.

Paradigms

Paradigms, also known as worldviews, are “systems of beliefs and practices that influence how researchers select both the questions they study and methods that they use to study them” (Morgan, 2007, p. 50). All types of research are rooted in researchers’ paradigms. Paradigms emerge out of researchers’ epistemology, ontology, and axiology, shaping how knowledge is sought out and interpreted. These approaches shape the choices a researcher makes in what and how to pursue their topic.

While there are multiple classifications of paradigms, for simplicity we utilize four overarching categories (Creswell, 2014; Mertens, 2015):

- **Positivism**, which focuses on explaining, testing, and predicting phenomena (Guido, Chávez, & Lincoln, 2010). Information is objective and value-free, and exists within one true reality. This paradigm has evolved into *postpositivism* by incorporating a more critical lens to examine how a cause determines an effect or outcome (Creswell, 2014). In the former, a researcher might conduct a study to prove a hypothesis
is correct and to discover the truth. In the latter, researchers aim to reject a null (false) hypothesis to move closer to the truth.

- **Constructivist**, or interpretive, views knowledge as socially constructed and individuals’ experiences as framed by their unique context. Individuals have a subjective reality based on understanding their views (Creswell, 2014). Instead of a universal Truth, there are only truths that exist for individuals that are reliant on their context and time (Guido et al., 2010).

- **Critical**, or transformative, can incorporate numerous theories that examine the experiences of marginalized individuals and unequal distributions of power. This approach tends to emphasize collaborative research processes to avoid perpetuating power imbalances (Creswell, 2014). These approaches look to restructure the status quo, with the goal of social change. Critical designs may utilize non-hierarchical methodologies which aim to involve participants as co-researchers on investigating a problem and implementing change, such as participatory action research. More widely, critical researchers also cite this paradigm as a way of interpreting results.

- **Pragmatic**, emphasizes that researchers choose the methods, processes, and tools that best answer the research question at hand (Creswell, 2014). Pragmatic paradigms are most commonly associated with mixed methods research.

Sam is interested in engaging in-depth with student voices and experiences, to understand how their experiences on campus are informed by their interactions with others, their daily lives, and their social identities. As such, Sam identifies that their research is rooted in a constructivist paradigm that prioritizes the context of diverse groups of students to learn more about their experiences and perspectives.
Crafting Questions

Qualitative data can provide a great deal of information, some of which may be beyond the scope and nature of what the researcher wants to investigate. Like research paradigms, crafting research question(s) helps to constrain the scope of a study. Research questions provide guidance for one’s inquiry and require a response that emerges from data and analysis. When a study becomes overwhelming, it is important to remember that a primary goal is to answer the research question(s). Good research questions stem from the purpose of the study. Consider whether the research purpose is to describe a phenomenon or explain and theorize about it (Marshall & Rossman, 2006). Is it to explore a problem that has not been previously examined or to empower others and create greater equity (Marshall & Rossman, 2006)? Answering these can help determine how to craft the research question(s). The methodology is another way to help develop the research question(s). For example, an ethnographic study often incorporates a question about culture. Similarly, a theoretical/conceptual framework may also influence the nature of the question(s).

Qualitative research questions are distinct from quantitative research questions in that they tend to ask: How? and/or What? Qualitative research questions often do not begin with “why?” because this tends to be driven by cause and effect or a quantitative purpose. It is important that qualitative research questions cannot be answered with a simple yes, no, or one-word discrete answer. They should balance breadth and specificity. For example, a researcher may want to ask a question that will solve a major problem on campus. However, given the complexity of that problem, the study may not be able to solve it. Instead, ask questions that engage the larger problem by contributing to its solution or that help to better understand the problem. The question(s) should be feasible and researchable given one’s resources, skills, and knowledge (Lawrence-Lightfoot, 2016). As with other parts of
qualitative inquiry, the development of a research question can also be an iterative process. In fact, Stage and Manning (2016) state, “Rarely is a research question as clear in the beginning of the study as it is at the end” (p. 8). Therefore, researchers can change or revise the research question (or add sub-questions) as the study and the data emerges.

Sam asks two research questions (1) How do Students of Color experience microaggressions on campus? and (2) What impact do Students of Color perceive microaggressions have on their college experience? The first question allows for the collection of data that describes occurrences of microaggressions towards Students of Color and focuses on these students lived experience. While qualitative data cannot produce “cause and effect” findings, they can elucidate the perceived impact of an action. The second question will lead Sam to collect data that describes the way that Students of Color feel affected by microaggressions to demonstrate the severity of the problem and inform campus interventions.

Overview of Methodologies

Methodologies demonstrate branches of knowledge and strategies of inquiry that influence research choices (Patton, 2015). They are the guideposts that help a researcher ground a study and shape additional components of the research design. While some studies claim a generic qualitative approach without selecting a methodology, thinking systematically about methodology can help researchers to properly align research questions, data collection processes, and data analyses (Patton, 2015). There are many different qualitative methodologies, but here we have selected four of the more common in higher education research: case study, ethnography, grounded theory, and narrative inquiry.

Case Study. Case study is an appropriate method when the researcher wants to explore contextual conditions that might be critical to the phenomenon of study (Yin, 2003). Within this approach it is essential to
define the boundaries of a case, which are set in terms of time, place, events, and/or processes (Merriam, 1998; Yin, 2003). The case (also described as a bounded system or unit of analysis) is the focus of the study (Merriam, 2009). Case study researchers utilize several sources of information in data collection to provide in-depth description and explanation of the case (Merriam, 2009). Research can be comprised of a single case or multiple cases that are analyzed and/or compared. There are different types of case studies. For example, a descriptive case study generates a rich, thick, and detailed account that conveys understanding and explanation of a phenomenon (Merriam, 1998). Interpretive case studies go beyond describing the phenomena to present data that supports, challenges or expands existing theories (Merriam, 2009). Finally, exploratory case studies help to determine the feasibility of a research project and solidify research questions and processes (Yin, 2003).

**Ethnography.** Situated within the field of anthropology, ethnographers seek to understand and describe cultural and/or social groups (Spradley, 1979). Ethnographic studies examine individuals and groups interacting in ordinary settings and attempt to discern pervasive patterns such as life cycles, events, and cultural themes. Ethnography describes a culture-sharing group, uses themes or perspectives of the culture-sharing group for organizational analysis, and seeks interpretation of the culture-sharing group for meanings of social interaction (Spradley, 1979). Ethnography assumes that the principal research interest is largely affected by community cultural understandings. Thus “ethnographies recreate for the reader the shared beliefs, practices, artifacts, folk knowledge, and behaviors of some group of people” (LeCompte, Preissle, & Tesch, 1993. pp. 2-3). Ethnography can be emic (focused on the perspectives of the group under study), etic (focused on the researcher/outsider perspective), or blend the two approaches. The ethnographic process of inquiry suggests prolonged observation within a natural setting and in-depth interviews. Ethnographic
studies also define the researcher as a key instrument in the data collection process, who describes and interprets observations of the cultural group (Mertens, 2015).

**Grounded Theory.** Grounded theory is an explanatory methodology developed to construct theory that emerges from and is grounded in data (Glaser & Strauss, 1967). Through this process, researchers can create a substantive theory, which is a working theory for a specific social process or context (Corbin & Strauss, 2008; Strauss & Corbin, 1998; Glaser & Strauss, 1967). Grounded theorists do not use theoretical frameworks and historically have sought to limit a priori knowledge of the problem being studied (Glaser & Strauss, 1967), but more recent approaches have emphasized the need for sensitizing concepts, or ideas from extant literature, to provide a structure for inquiry (Charmaz, 2014). This allows for substantive theory to be created inductively, from the data. Grounded theory is also defined by its sampling and data analysis procedures. Grounded theory researchers use theoretical sampling by selecting participants based on relevant constructs and participants' experience with the phenomenon under study, rather than solely demographic criteria (Strauss & Corbin, 1998). Researchers should use data from their initial sample as a guide for recruiting additional participants to provide data to address emerging categories (Charmaz, 2014; Corbin & Strauss, 2008; Strauss & Corbin, 1998). When new data from the sample no longer adds to a category or concept, the study has reached theoretical saturation and the sampling process ends. Grounded theory is also known for the constant comparative method of analysis in which data are iteratively collected and compared to emerging categories through a coding process (Strauss & Corbin, 1998). The constant comparative method will be further explained in the Data Analysis section.

**Narrative Inquiry.** Narrative inquiry centers on telling a story or stories and thus, “takes as its object of investigation the story itself”
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(Riessman, 1993, p. 1). Researchers using this methodology organize the narrative of a single participant or narratives of multiple participants to share, shape and connect their experiences (Chase, 2011). Chronology and timeline are central features of narrative inquiry (although narratives themselves do not need to follow a linear story). In addition, this methodological approach often involves multiple, in-depth interviews and/or other data such as existing documents, and necessitates a reflexive relationship between researchers and their participants in order to re-tell stories through empirical findings (Chase, 2011). Data collection methods for this approach should allow for telling by the participant(s), interpretation of the experience(s) by the researcher, representation of the story or stories, and reflection on assumptions made about the self while engaging in telling and re-telling the narratives (Jackson & Mazzei, 2013). There are many forms of narrative inquiry including oral histories, biographies, testimonies, and memoirs. Given Sam’s interest in focusing on the voices of Students of Color regarding microaggressions they select narrative inquiry. This methodology can use participants’ stories to expose oppressive actions (Chase, 2011). Narrative inquiry will shape the study’s emphasis on examining students’ experiences with microaggressions throughout their time at the university and in eliciting specific examples or stories, related to those experiences.

Tools for Data Collection

The main types of data collection in qualitative research include participant observation, individual interviews, and focus groups (Guest, Namey, & Mitchell, 2013). The research questions and methodologies may lead towards a certain type of data collection, or a study that combines multiple approaches to gather data (multimodal design). All three approaches require some initial planning beyond crafting questions to include establishing a location, obtaining any necessary tools prior to implementation (e.g.,
recording devices), and dedicating time immediately afterwards to process through initial reflections and analysis (Guest et al., 2013).

**Observations.** Observations are typically the result of the researcher’s experiences in a given situation or environment. As opposed to direct observation, like the detail recovered by a video camera or a two-way mirror, participant observation includes the researcher as a part of the environment directly absorbing and processing information (Guest et al., 2009). Researchers are engaged in the environment by taking notes, recording their environment, and asking questions to uncover meaning (Guest et al., 2013). This form of data collection is used to discover complex interactions in social settings (Marshall & Rossman, 2006). By being in a space where the topic of interest occurs, researchers record the behavior of interest as it happens and to provide context (Merriam, 2009). The degree of what a researcher can observe may be determined by the relationships they have in the community, the access they negotiate, and the amount of time spent gathering data (Guest et al., 2013).

In observations, the goal of the researcher is to record field notes with a high degree of detail. These notes involve physical surroundings, context, people, and their actions (Neuman, 2006). Prior to beginning observations, the researcher should choose an organizational system that will allow for tracking direct observations with inferences, analysis, and personal journaling (Neuman, 2006). While many of these notes are conducted during the observation, the researcher should also budget time shortly after finishing the observation to jot down additional notes. The time after observation may be used to create analytic memos in which to record plans, reflect on ethical decisions, and create maps or diagrams of occurrences or relationships (Neuman, 2006). While observations may involve a large time commitment of many hours, as a form of data collection they allow for a
researcher to engage directly with human behavior, particularly of which participants are less aware or able to discuss.

**Interviews.** The most popular form of data collection, individual interviews use open-ended questions to learn about participants’ experiences, memories, reflections, and opinions (Magnusson & Marecek, 2015). Different types of interviews allow researchers to incorporate varying degrees of flexibility as desired by their paradigm, methodology, and style. There are four interview types outlined by Rossman and Rallis (2017; adapted from Patton, 2015): (1) informal interviews in a casual setting, often recorded through field notes; (2) a guided interview guide approach, with pre-set categories and topics but flexibility to address emerging topics; (3) a standardized open-ended interview with a set order of fixed questions; and (4) true conversations in the form of dialogic interviews. The goal of an interview is to gain rich, in-depth, personal experiences that relate directly to the research topic (Magnusson & Marecek, 2015).

To conduct an interview, a researcher should have “superb listening skills and be skillful at personal interaction, question framing, and gentle probing for elaboration” (Marshall & Rossman, 2006). Guest and colleagues (2013) recommend using interviews to gain in-depth insight, explore new topics, and gain information about potentially sensitive or polarizing topics. In approaching interviews, they provide the following suggestions:

- Schedule interviews at times that are mutually convenient, with an emphasis on the interviewee’s preferences
- Allot around 45 to 90 minutes for an in-depth interview
- Pilot the interview protocol prior to implementation to ensure effectiveness
• Plan ahead for what kind of data will be needed during analysis. This can include summaries of the conversation, expanded interview notes, audio/video recordings, and verbatim transcripts.

While these suggests provide an initial framework, all decisions around interviews are contingent on an understanding of the participants and topic under study.

**Focus groups.** For researchers interested in understanding how individuals discuss a topic collectively, focus groups can save time and money while gathering rich data. Focus groups tend to be most useful to gain information on group norms and processes, opinions and perspectives, reactions and responses, and brainstorming (Guest et al., 2013). Since focus groups allow the researcher to see real-time responses, they provide beneficial opportunities to view how individuals agree, disagree, or respond to one another. A key benefit of focus groups is their assumption that an individual’s attitudes and beliefs do not form in a vacuum: participants develop their opinions and understandings by engaging with others (Marshall & Rossman, 2006).

The ideal group contains approximately seven to ten individuals that are ideally strangers, to encourage varying viewpoints (Rossman & Rallis, 2017). Utilizing strangers also helps to decrease social desirability bias that can occur in interview settings to respond or behave in a certain way. Depending on the study, researchers could choose to recruit homogenous or heterogeneous groups of participants (Mertens, 2015). As focus groups include multiple moving pieces, they rely greatly on the skill of the facilitator to keep the conversation on track, ask appropriate probes, and ensure a balance of voices. Interview protocols should establish ground rules prior to beginning, prioritize key questions to allow for as much fluidity in the conversation as possible, and create a limited time commitment (Guest et al., 2013).
For their study, Sam decides to do individual interviews to understand how Students of Color describe microaggressions and their manifestations within the context of their overall college experience. Sam chooses interviews because microaggressions can be a sensitive topic for individuals to share in a focus group, and there is no clear context in which Sam could conduct observations of this behavior. They choose a standardized open-ended interview with questions that include (1) in thinking about the past week, can you describe any microaggressions you have encountered and the context in which they occur? and (2) how would you describe the impact of these microaggressions on your overall student experience? Sam prepares prompts for the interview questions and pilots the interview protocol with several colleagues who identify as People of Color before determining that the interviews will last around an hour each.

Data Analysis

While there are numerous qualitative data analysis techniques, they all share at least three common characteristics. First, the qualitative data analysis process often begins during data collection. Thus, the analytic process is considered iterative or non-linear (Creswell, 2014). A researcher may collect data and engage in early analysis only to realize that more data are needed to fully understand the participants’ experiences. Even when formal data analysis does not begin while data collection is ongoing, qualitative researchers often use memos to document emerging ideas and patterns, which form the basis for subsequent analysis. Initial data analysis that occurs during data collection can also allow researchers to consider whether they are obtaining the type and quality of information they intended. Second, a major goal of qualitative data analysis is data reduction (Creswell, 2014). Qualitative research can produce large amounts of data and the analytic process works to reduce the volume of information by identifying major patterns and themes within it. Researchers can engage this process on
their own, in teams, and/or using computer-assisted qualitative data analysis software (CAQDA) such as NVIVO (see Bazeley & Jackson, 2013) or Atlas.ti. Third, the process is immersive, meaning that it requires a high level of engagement with the data. This can include reading and re-reading interview transcripts multiple times to exhaust exploration of the data. During this process, researchers often write memos that help to document initial interpretations of the data as well as engage in reflexivity (e.g., processing how one’s background, biases, and perspectives may influence the analytic process) (Lincoln & Guba, 1985). These memos can be used as part of one’s audit trail, which is a record of research steps that helps to ensure data quality and transparency (Lincoln & Guba, 1985).

One popular analytical tool is the constant comparative method. While grounded theorists developed this method, it is commonly used as a general tool for analyzing data and is useful for those learning how to engage in qualitative analysis because it provides a specific three-phase process. This process is known as coding, in which short words or phrases are used to “assign a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (Saldaña, 2013, p. 3). Codes can reflect activities, relationships, roles, processes, emotions, perspectives, and other units of social organization. The constant comparative method begins with open coding words, lines, several sentences, or paragraphs of data. Open coding can be deductive and/or inductive (Strauss & Corbin, 1998). Deductive codes stem from borrowed concepts such as components of the theoretical framework or key themes from relevant literature. Inductive or in vivo codes are emergent from the data. Inductive coding can be developed from data that “strike as interesting, potentially relevant, or important to the study...for answering the research questions” (Merriam, 2009, p. 178). Whether the open codes are deductive or inductive, it is important to clearly identify the codes with names and definitions
The next stage in the constant comparative method is axial coding, which is both performed iteratively during the open coding process and also after open codes are developed. This stage begins the reduction process and includes comparing and connecting emerging codes into categories (Strauss & Corbin, 1998). Categories are "conceptual elements that cover or span many individual examples or codes previously identified" (Merriam, 2009, p. 181). For example, while a researcher may have 100 open codes, the researcher might reduce these codes into 20 categories. One can do this by grouping together data by related open codes to reassemble the data and demonstrate recurrent patterns and themes (Strauss & Corbin, 1998). The axial coding process is also useful for separating data that are essential to the purpose of the study from data that fall outside the scope of the research purpose and question(s). The final phase of the constant comparative approach is selective coding; however, some researchers will only perform open and axial coding, particularly for exploratory studies. During the selective coding process the researcher pulls together themes to develop a storyline and identify a core category (Strauss & Corbin, 1998). The core category "is the central defining aspect of the phenomenon to which all other categories and hypotheses are related or interconnect" (Merriam, 2009, p. 200). For example, moving from 20 categories to potentially one to five overarching themes. This reflects the primary narrative emerging across the data that provides a response to the research question(s).

Sam considers the constant comparative approach, but instead chooses an analytic approach that stems from narrative inquiry. This involves four phases: (1) initial reading of transcripts to indicate general themes and consider how each part contributes to the whole story; (2) re-reading the transcripts to view whether there are multiple narratives present and to consider the structure, content, and larger contexts involved; (3)
investigate the patterns emerging which includes how the whole story and its parts are told, and d) engage the literature/theoretical framework with the participants’ narrative(s) to glean a more in-depth understanding of the story (Josselson, 2011).

Research Quality

While quantitative inquiry strives for reliability and validity, in qualitative research trustworthiness is the predominant standard of research quality (Guba & Lincoln, 1989; Lincoln & Guba, 1985). Trustworthiness can be established in multiple ways. One is by producing work that is transferable, or that provides enough context for readers to infer similar results in their own context (Krefting, 1999; Lincoln & Guba, 1985). This can be done by providing detailed documentation of data collection and analysis procedures as well as by using thick, rich description of participants’ experiences (Krefting, 1999; Lincoln & Guba, 1985). One goal of qualitative research is credibility or having data that accurately reflects the phenomenon (Krefting, 1999; Lincoln & Guba, 1985). Fostering credibility can begin during the data collection phase with prolonged engagement with participants. Another tool is member checking, which involves testing the interpretations of the data with study participants by sharing initial data analysis for their feedback (Krefting, 1999; Lincoln & Guba, 1985). Peer debriefing requires meeting with an individual who is unaffiliated with the research (disinterested peers) and can give honest feedback (equal power dynamic) about the plausibility of data interpretations. Additionally, triangulation can be built into the research design to produce divergent constructions of reality (Lincoln & Guba, 1985). For example, one can engage methodological triangulation through use of multiple forms of data collection (interviews, participant observation) or data triangulation through multiple data sources. Triangulation can establish confirmability to ensure that findings are shaped more by study participants than by researcher biases. Reflexive processes such as journaling, engaging
in dialogue with other researchers, and naming one’s positionality (e.g.,
relationship between researcher and participants/study topic) within the
write-up of the study can develop confirmability. Lastly, trustworthy studies
should be dependable, or demonstrate consistent findings that could be
repeated (Lincoln & Guba 1985). To establish dependability (and
confirmability), researchers can create an audit trail that documents the
steps and processes they engaged in during the qualitative investigation.

Sam selects multiple strategies to increase the trustworthiness of the
study. One is member checking. Sam sends each of the participants their
transcript with initial interpretations and questions. After giving the
participant time to review the transcript and notes, Sam calls each
participant to briefly ensure that the interpretations reflect the
participants’ meaning and to clarify any questions about the narratives.
Another is by using thick, rich description by including direct quotes from
participants in the final write-up of the study. Lastly, Sam engages in peer
debriefing with an institutional researcher in the office. This individual is
not involved in the study, but is a Person of Color who graduated from a
predominantly white institution three years prior.

Conclusion

Qualitative research provides an important opportunity to engage with
participants’ experiences through their own voices and behaviors. Unlike
quantitative methodologies, qualitative approaches view the researcher as the
instrument through which data is collected (Patton, 2015). As such,
intentional engagement throughout each step of the research process is
crucial to ensure a well-aligned, accurate, and ethical design. Successful
use of qualitative methodologies fosters opportunities for institutional
researchers to pursue new questions and experiences within their work
(McLaughlin et al., 2001). The rest of the volume continues to look as
specific contexts and considerations in which qualitative research can aid institutional research.
References


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