

Using the Research Question to Guide Qualitative Data Collection Tool Design

Your research questions . . . are at the heart of your research design. They are the one component that directly links to all of the other components of the design . . . and will have an influence on, and should be responsive to, every part of your study.

(Maxwell, 2005, p. 65)

The Role of the Research Question in the Design of Qualitative Tools

The overview of qualitative research designs in Chapter 1 helps the reader connect the qualitative research purpose with the qualitative data collection tool. Each researcher must ask the following questions in anticipation of developing their tools: What do you want to know, and where will your data come from?

All research, regardless of the research approach, must be systematic, rigorous, and grounded in empirical data, and adhere to the following principles:

- Systematic procedures are carefully designed, with formal plans for setting up a study (an investigation or exploration) where the process is so clearly articulated and delineated that it allows others to follow the same steps for their own studies.
- Rigor is an essential element of authentic research, where the aforementioned procedures allow for corroboration and quality control and eliminate extraneous interference or undue bias.

- Empirical studies guarantee that the data can be collected, is accessible, and is based on or verifiable by observation or experience, rather than theory or assumption (Gall, Gall, & Borg, 2006).

Before any tools can be developed, the qualitative researcher must frame a research problem and purpose, identify collectible data, and clarify research questions. These questions, emanating from the problem and the purpose, determine the research design and selection of data collection tools. In the qualitative study, the choice of words is important. Words that imply quantification or measurement can be misleading; words are more meaningful in the development of qualitative instrumentation if they reflect the interpretive nature of the inquiry. For instance, using words such as *explore*, *uncover*, *discover*, *interpret*, *ascribe meaning to*, *assess*, *describe*, *understand*, and *perceive* relate directly to the emergent nature of qualitative research.

Constructing a qualitative purpose statement and subsequent research questions depends on answering the following questions (Moustakas, 1994; Patton, 2015; Silverman, 2013):

- What is going on here?
- What is the phenomenon under study?
- What is important in the study of this phenomenon?
- How do participants live through or experience this phenomenon?
- How do participants describe, ascribe meaning to, perceive this phenomenon?

Therefore, when developing a qualitative purpose statement, it is important to identify (1) the research design, (2) the research focus and problem, (3) participants and research site, (4) means of accessing the site, as appropriate, and (5) the conceptual framework, if applicable.

After constructing a purpose statement, research questions must be crafted that flow from the purpose statement. For qualitative designs, a central, overarching research question is typical, followed by subquestions. The central research question should include a broad question that denotes the exploration of the central phenomenon under study. The subquestions that follow these main questions are often used to probe specific aspects of the phenomenon and may also be used as the basis for interview, observation, or focus group protocols or guides.

If a conceptual framework of theory is included in the study (the operational plan for conducting the study and integrating the elements of the project), elements of the theories that help to frame the study's findings may also be included in the subquestions.

Connecting Qualitative Designs With Guiding Questions, the Research Purpose, and the Research Questions

Aligning the research design, research purpose, and research questions is a coordinated effort. Tables 2.1, 2.2, and 2.3 highlight the connections between qualitative designs, guiding questions (the overarching focus for designing a research question), purpose statements, research questions, keywords, data collection strategies, and data collection tools. Table 2.1 outlines the foundational connections between the research design, guiding questions, and the purpose statement. In this table (2.1), the purpose statement is presented as an *example*.

Table 2.1 Qualitative Research Designs, Guiding Questions, & Research Purpose Statements

Design	Guiding Question	Purpose statement (example)
Descriptive/interpretive	How can we understand a participant's experience through his or her self-constructed meaning of the phenomenon under study?	The purpose of this QL descriptive study is to describe...
Phenomenological	What is the essence of the lived experience under study?	The purpose of this phenomenological study is to uncover the lived experience of . . .

(Continued)

Table 2.1 (Continued)

Design	Guiding Question	Purpose statement (example)
Ethnographic	How can we study, uncover, and understand the intact culture of this group?	The purpose of this ethnographic study is to understand the culture of . . .
Narrative	What does this story(ies) reveal about this individual(s) and his or her (their) world(s)?	The purpose of this narrative study is to report the life history of . . .
Case Study	How do stakeholders describe this process or event, and what does it tell us about future practice(s)?	The purpose of this QL case study is to assess the program that contributed to the development of . . .
Grounded Theory	What theory emerges from the systematic, comparative analysis of data originating from participants sharing the same experience?	The purpose of this grounded theory study is to represent participant perspectives on the transition from . . .
Historical	How does the analysis of past events or lives of pivotal individuals inform us about the present or future state of things?	The purpose of this historical study QL is to . . .

Table 2.2 extends the elements of Table 2.1 by highlighting *sample* research questions that align with qualitative keywords, appropriate to each research design.

Table 2.2 Qualitative Research Designs, Research Questions, & Keywords

Research Design	Research Questions (example)	Keywords
Descriptive/ Interpretive	How do participants construct meaning for a particular situation?	Describe, interpret, perceive
Phenomenological	How do participants describe or ascribe meaning regarding a lived experience shared by others?	Uncover, ascribe, perceive
Ethnographic	How can we understand a culture and the interactions, cultural forms, and history of an intact cultural group?	Describe, uncover, explore
Narrative	What are the stories of key individuals? What do they tell us about critical events?	Report, describe, perceive
Case Study	How can we explore a process or event that is currently underway or has already occurred that will help us understand that process or event more comprehensively?	Report, describe, assess
Grounded Theory	How can we discover the process and sequence of steps that individuals employ to adjust, change, transform, or make a transition in their lives?	Discover, describe, ascribe
Historical	How can we analyze the components of an historical event or key figure in history to understand the impact on our lives today or for the future?	Describe, analyze, contextualize

Connecting Qualitative Designs With Data Collection Strategies and Tools

Qualitative research purpose statements and research questions constitute the guideposts for determining the appropriate data collection strategies and tools for a project. While the research purpose indicates the overall intent of the study, the research questions direct the researcher to the specific data collection strategies. A detailed discussion and rationale for crafting qualitative research questions is beyond the scope of this text, but the focus here is on how to connect the purpose statement and research questions in order to help the researcher construct the appropriate tools. By designing the right tools that reflect the research objectives, qualitative researchers will obtain their data in a meaningful way. Table 2.3 builds on Tables 2.1 and 2.2 by extending the connection between research designs, data collection strategies, and the optimal data collection tools.

Table 2.3 Qualitative Research Designs, Data Collection Strategies, & Tools

Research Design	Data Collection Strategies	Data Collection Tools
Descriptive/Interpretive	Interviews, dyads Focus groups Documents Observation Reflections	Interview protocols Moderator guides Document rubrics Observation rubrics Questionnaires
Phenomenological	Depth interviews Reflections Documents	Interview protocols Journals Questionnaires Document rubrics
Ethnographic	Depth interviews Documents Artifacts Observation Reflections	Interview protocols Document rubrics Artifact rubrics Observation rubrics Discourse/ conversational tools Journals—informants Journals—researcher Field notes

Narrative	Depth interviews Reflections	Interview protocols (life history, bio) Questionnaires Journals—informant Journals—researcher
Case Study	Interviews, dyads Focus groups Documents Artifacts Observations	Interview protocols Moderator guides Document rubrics Artifact rubrics Observation rubrics Discourse/ conversational tools
Grounded Theory	Interviews Documents Reflections	Interview protocols Document rubrics Questionnaires
Historical	Interviews Documents Artifacts	Interview protocols Document rubrics Artifact rubrics

Piloting Qualitative Tools

Every data collection tool should be tested in advance of live data collection to ensure its value, integrity, and salience. If you do not conduct pretests, you run the risk of invalidating your data due to ineffective design or the inadequacy of the tool to collect data appropriately and authentically. This process is known as piloting, and it is an essential step in every study. Qualitative designs are no exception.

In most cases, piloting requires five steps: (1) identifying a pilot sample that resembles your final participant group without including your final participants, (2) preparing your tools for testing, (3) conducting the pilot test using your draft tools, (4) debriefing and assessing the effectiveness and viability of your data collection tools and procedures for using those tools, and (5) modifying your tools to reflect any changes deemed necessary and preparing them for use in your live data collection cycle. In the chapters that follow, where design is discussed, specific guidelines are offered for piloting and modifying the different types of tools. While the general pretest guidelines apply to all tools, some qualitative tools require particular strategies to ensure their effectiveness.

HIGHLIGHTS

Using the Research Question to Guide the Design of Qualitative Tools

The nature of all research consists of the use of systematic procedures and rigor and an empirical approach that includes data that can be accessed and collected.

Role of the qualitative design purpose statement and research questions: What is going on here? What is the phenomenon under study? How do participants live through or experience that phenomenon? What is the focus of the inquiry?

Qualitative designs and guiding questions: Each specific design is guided by an overarching statement, posed as a question, that identifies the focus of that design.

Qualitative designs, guiding questions, and purpose statements determine the research questions, data collection strategies, and data collection tools that are most appropriate.

Piloting qualitative tools must follow a prescribed set of procedures before collecting live data, based on the nature of the study and the specifics of the research design/tool.