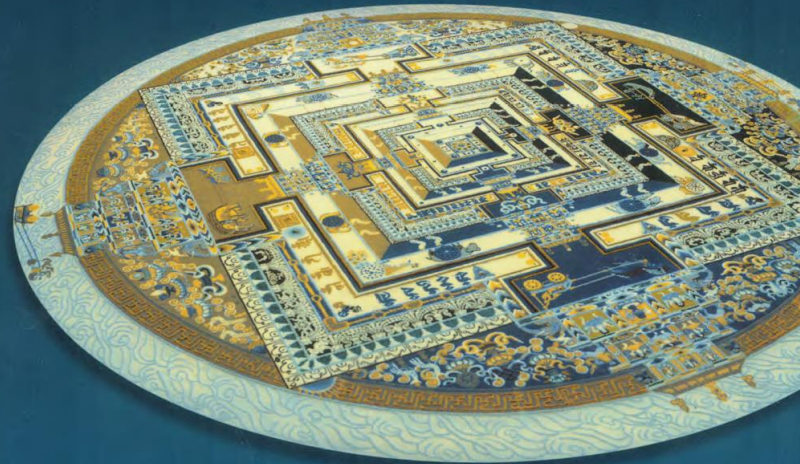


THIRD EDITION

# RESEARCH DESIGN

Qualitative, Quantitative, and  
Mixed Methods Approaches



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## CHAPTER NINE

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# Qualitative Procedures

# PREVIEW

- ✓ The qualitative research paradigm has its roots in cultural anthropology and American sociology (Kirk & Miller, 1986).
  - ✓ The intent of qualitative research is to understand a particular social situation, event, role, group, or interaction (Locke, Spirduso, & Silverman. 1987).
- ✓ It is largely an investigative process where the researcher gradually makes sense of a social phenomenon by contrasting, comparing, replicating, cataloguing and classifying the object of study (Miles & Huberman, 1984).
- ✓ Marshall and Rossman (1989) suggest that this entails immersion in the everyday life of the setting chosen for the study;
  - ✓ The researcher enters the informants' world and through ongoing interaction, seeks the informants' perspectives and meanings.



# PREVIEW

Scholars contend that qualitative research can be distinguished from quantitative methodology:

1. Qualitative research occurs in natural settings. where human behavior and events occur.
2. Qualitative research is based on assumptions that are very different from quantitative designs.
  - ❖ Theory or hypotheses are not established a priori.
3. The researcher is the primary instrument in data collection rather than some inanimate mechanism (Eisner, 1991; Frankel & Wallen. 1990; Lincoln & Guba. 1985; Merriam. 1988).
4. The data that emerge from a qualitative study are descriptive.
  - ❖ Data are reported in words (primarily the participant's words) or pictures, rather than in numbers (Fraenkel & Wallen, 1990; Locke et al., 1987; Marshall & Rossman, 1989; Merriam, 1988).

# PREVIEW

5. The focus of qualitative research is on participants' perceptions and experiences, and the way they make sense of their lives (Fraenkel & Wallen, 1990; Locke et al .. 1987; Merriam, 1988).
  - ❖ The attempt is therefore to understand not one, but multiple realities (Lincoln & Guba, 1 985).
6. Qualitative research focuses on the process that Is occurring as well as the product or outcome. Researchers are particularly interested In understanding how things occur (Fraenkel & Wallen, 1990; Merriam, 1988).
7. Idiographic interpretation is utilized.
  5. Attention is paid to particulars; and data is interpreted in regard to the particulars of a case rather than generalizations.

# PREVIEW

8. Qualitative research is an emergent design in its negotiated outcomes.
  - ❖ Meanings and interpretations are negotiated with human data sources because it is the subjects' realities that the researcher attempts to reconstruct (Lincoln & Guba, 1985; Merriam, 1988).
9. This research tradition relies on the utilization of tacit knowledge (intuitive and felt knowledge) because often the nuances of the multiple realities can be appreciated most in this way (Lincoln & Guba, 1985).
  - ❖ Data are not quantifiable in the traditional sense of the word.

# PREVIEW

10. Objectivity and truthfulness are critical to both (qualitative as well as quantitative) research traditions.
  - ❖ However, the criteria for judging a qualitative study differ from quantitative research.
  - ❖ The researcher in qualitative research seeks believability, based on coherence, insight and instrumental utility (Eisner, 1991) and trustworthiness (Lincoln & Guba, 1985) through a process of verification rather than through traditional validity and reliability measures.



# PREVIEW

- ✓ **Qualitative procedures** demonstrate a different approach to scholarly inquiry than methods of quantitative research.
- ✓ Qualitative inquiry employs different philosophical assumptions; strategies of inquiry; and methods of data collection, analysis, and interpretation.
- ✓ Although the processes are similar, qualitative procedures
  - 1) Rely on text and image data,
  - 2) Have unique steps in data analysis, and
  - 3) Draw on diverse strategies of inquiry.



# PREVIEW

- ✓ The strategies of inquiry chosen in a qualitative project have a dramatic influence on the procedures
- ✓ Looking over the landscape of qualitative procedures shows diverse perspectives:
  - ✓ Social justice thinking (Denzin & Lincoln, 2005)
  - ✓ Ideological perspectives (Lather, 1991)
  - ✓ Philosophical stances (Schwandt, 2000)
  - ✓ Systematic procedural guidelines (Creswell, 2007; Corbin & Strauss, 2007).

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## A Checklist of Questions for Designing a Qualitative Procedure

1. Are the basic characteristics of qualitative studies mentioned?
2. Is the specific type of qualitative strategy of inquiry to be used in the study mentioned?
  - ✓ The history of the strategy,
  - ✓ A definition of the strategy, and
  - ✓ Applications for the strategy
3. Does the reader gain an understanding of the researcher's role in the study
  1. Past historical, social, cultural experiences,
  2. Personal connections to sites and people,
  3. Steps in gaining entry, and
  4. Sensitive ethical issues

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## A Checklist of Questions for Designing a Qualitative Procedure

4. Is the purposeful sampling strategy for sites and individuals identified?
5. Are the specific forms of data collection mentioned and a rationale given for their use?
6. Are the procedures for recording information during the data collection procedure mentioned (such as protocols)?
7. Are the data analysis steps identified?

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

8. Is there evidence that the researcher has organized the data for analysis?
9. Has the researcher reviewed the data generally to obtain a sense of the information?
10. Has coding been used with the data?
11. Have the codes been developed to form a description or to identify themes?
12. Are the themes interrelated to show a higher level of analysis and abstraction?



# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

13. Are the ways that the data will be represented mentioned-such as in tables, graphs, and figures?
14. Have the bases for interpreting the analysis been specified?
  - ✓ Personal experiences,
  - ✓ The literature,
  - ✓ Questions,
  - ✓ Action agenda
15. Has the researcher mentioned the outcome of the study (developed a theory, provided a complex picture of themes)?
16. Have multiple strategies been cited for validating the findings?

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

- ✓ Review the needs of potential audiences for the proposal.
  - ✓ Decide whether audience members are knowledgeable enough about the characteristics of qualitative research that this section is not necessary.
- ✓ If there is some question about their knowledge;
  - ✓ Present the basic characteristics of qualitative research in the proposal and possibly discuss a recent qualitative research journal article (or study) to use as an example to illustrate the characteristics.

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## Characteristics of the Qualitative Researches

### 1. Natural setting-

- ✓ Qualitative researchers tend to collect data in the field at the site where participants experience the issue or problem under study.
  - ✓ They do not bring individuals into a lab (a contrived situation), nor do they typically send out instruments for individuals to complete.
- ✓ This up close information gathered by actually talking directly to people and seeing them behave and act within their context is a major characteristic of qualitative research.
- ✓ In the natural setting, the researchers have face-to-face interaction over time.

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## 2. Researcher as key instrument-

- ✓ Qualitative researchers collect data themselves through examining documents, observing behavior, or interviewing participants.
  - ✓ They may use a **protocol** - an instrument for collecting data - but the researchers are the ones who actually gather the information.
  - ✓ They do not tend to use or rely on questionnaires or instruments developed by other researchers.

## 3. Multiple sources of data

- ✓ Qualitative researchers typically gather multiple forms of data, such as interviews, observations, and documents, rather than rely on a single data source.
  - ✓ The researchers review all of the data, make sense of it, and organize it into categories or themes that cut across all of the data sources.



# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## 4. Inductive data analysis-

- ✓ Qualitative researchers build their patterns, categories, and themes from the bottom up, by organizing the data into increasingly more abstract units of information.
  - ✓ This inductive process illustrates working back and forth between the themes and the database until the researchers have established a comprehensive set of themes.
- ✓ It may also involve collaborating with the participants interactively, so that participants have a chance to shape the themes or abstractions that emerge from the process.

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## 5. Participants' meanings-

- ✓ In the entire qualitative research process, the researcher keeps a focus on learning the meaning that the participants hold about the problem or issue, not the meaning that the researchers bring to the research or writers express in the literature.

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## 6. Emergent design-

- ✓ The research process for qualitative researchers is emergent.
  - ✓ The initial plan for research cannot be tightly prescribed, and all phases of the process may change or shift after the researcher enters the field and begins to collect data.
- ✓ **For example**, the questions may change, the forms of data collection may shift, and the individuals studied and the sites visited may be modified.
- ✓ The key idea behind qualitative research is to learn about the problem or issue from participants and to address the research to obtain that information.

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## 7. Theoretical lens-

- ✓ Qualitative researchers often use lens to view their studies, such as the concept of culture, central to ethnography, or gendered, racial, or class differences from the theoretical orientations.
- ✓ Sometimes the study may be organized around identifying the social, political, or historical context of the problem under study.



# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## 8. Interpretive-

- ✓ Qualitative research is a form of interpretive inquiry in which researchers make an interpretation of what they see, hear, and understand.
  - ✓ Their interpretations cannot be separated from their own backgrounds, history, contexts, and prior understandings.
- ✓ After a research report is issued, the readers make an interpretation as well as the participants, offering yet other interpretations of the study.
  - ✓ With the readers, the participants, and the researchers all making interpretations, it is apparent how multiple views of the problem can emerge.

# THE CHARACTERISTICS OF QUALITATIVE RESEARCH

## 9. Holistic account-

- ✓ Qualitative researchers try to develop a complex picture of the problem or issue under study.
  - ✓ This involves reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges.
- ✓ A visual model of many facets of a process or a central phenomenon aid in establishing this holistic picture (Creswell & Brown, 1992).

# STRATEGIES OF INQUIRY

- ✓ **Strategies of enquiry** focus on data collection, analysis, and writing, but they originate out of disciplines and flow throughout the process of research
  - ✓ Types of problems,
  - ✓ Ethical issues of importance (Creswell, 2007b).
- ✓ Qualitative researchers choose from among the possibilities,
  - 1) Narrative (study individuals),
  - 2) Phenomenology (study individuals),
  - 3) Ethnography (learn about broad culture-sharing behavior of individuals or groups),
  - 4) Case study (explore processes, activities, and events), and
  - 5) Grounded theory (explore processes, activities, and events).

# STRATEGIES OF INQUIRY

✓ In writing a procedure for a qualitative proposal, consider the following **research tips:**

- 1) Identify the specific approach to inquiry that you will be using.
- 2) Provide some background information about the strategy
  - ✓ Its discipline origin,
  - ✓ The applications of it, and
  - ✓ A brief definition of it.
- 3) Discuss why it is an appropriate strategy to use in the proposed study.
- 4) Identify how the use of the strategy will shape the types of questions asked, the form of data collection, the steps of data analysis, and the final narrative.



# THE RESEARCHER'S ROLE

- ✓ Qualitative research is **interpretative research**,
  - ✓ The inquirer typically involved in a sustained and intensive experience with participants.
- ✓ This introduces a range of strategic, ethical, and personal issues into the qualitative research process (Locke et al., 2007).
  - ✓ Inquirers explicitly identify reflexively their biases, values, and personal background, such as gender, history, culture, and socioeconomic status, that may shape their interpretations formed during a study.
  - ✓ In addition, gaining entry to a research site and the ethical issues that might arise are also elements of the researcher's role.

# THE RESEARCHER'S ROLE

- 1) Include statements about past experiences that provide background data through which the audience can better understand the topic, the setting, or the participants and the researcher's interpretation of the phenomenon.
- 2) Comment on connections between the researcher and the participants and on the research sites.
  - ✓ **"Backyard" research** (Glesne & Peshkin, 1992) involves studying the researcher's own organization, or friends, or immediate work setting.
    - ✓ This often leads to compromises in the researcher's ability to disclose information and raises difficult power issues.
  - ✓ Although data collection may be convenient and easy, the problems of reporting data that are biased, incomplete, or compromised are legion.
  - ✓ If studying the backyard is necessary, employ multiple strategies of validity to create reader confidence in the accuracy of the findings.

# THE RESEARCHER'S ROLE

- 3) Discuss steps taken to gain entry to the setting and to secure permission to study the participants or situation (Marshall & Rossman, 2006).
- ✓ It is important to gain access to research or archival sites by seeking the approval of **gatekeepers**, individuals at the research site that provide access to the site and allow or permit the research to be done.
  - ✓ A brief proposal might need to be developed and submitted for review by gatekeepers.
  - ✓ **Bogdan and Biklen (1992)** advance topics that could be addressed in such a proposal:
    - ✓ Why was the site chosen for study?
    - ✓ What activities will occur at the site during the research study?
    - ✓ Will the study be disruptive?
    - ✓ How will the results be reported?
    - ✓ What will the gatekeeper gain from the study?

# THE RESEARCHER'S ROLE

- 4) Indicate steps taken to obtain permission from the **Institutional Review Board** to protect the rights of human participants.
  - ✓ Attach, as an appendix, the approval letter from the IRB and discuss the process involved in securing permission.
  
- 5) Comment about sensitive ethical issues that may arise.
  - ✓ For each issue raised, discuss how the research study will address it.
    - ✓ For example, when studying a sensitive topic, it is necessary to mask names of people, places, and activities.
  - ✓ In this situation, the process for masking information requires discussion in the proposal.



# DATA COLLECTION PROCEDURES

✓ The data collection steps include

- 1) Setting the boundaries for the study,
- 2) Collecting information through unstructured or semi-structured observations and interviews, documents, and visual materials, as well as
- 3) Establishing the protocol for recording information.

# DATA COLLECTION PROCEDURES

- I. Identify the **purposefully selected** sites or individuals for the proposed study.
  - ✓ The idea behind qualitative research is to **purposefully select** participants or sites (or documents or visual material) that will best help the researcher understand the problem and the research question.
  - ✓ This does not necessarily suggest random sampling or selection of a large number of participants and sites, as typically found in quantitative research.
- ✓ A discussion about participants and site might include four aspects identified by Miles and Huberman (1994):
  - 1) The **setting** (where the research will take place),
  - 2) The **actors** (who will be observed or interviewed),
  - 3) The **events** (what the actors will be observed or interviewed doing), and
  - 4) The **process** (the evolving nature of events undertaken by the actors within the setting).

# DATA COLLECTION PROCEDURES

## II. Indicate the type or types of data to be collected.

- ✓ In many qualitative studies, inquirers collect multiple forms of data and spend a considerable time in the natural setting gathering information.
- ✓ The collection procedures in qualitative research involve four basic types:
  - 1) Observations
  - 2) Interviews
  - 3) Documents
  - 4) Audio-Visual Materials

**Table 9.2** Qualitative Data Collection Types, Options, Advantages, and Limitations

<b>Data Collection Types</b>	<b>Options Within Types</b>	<b>Advantages of the Type</b>	<b>Limitations of the Type</b>
Observations	<ul style="list-style-type: none"><li>• Complete participant—researcher conceals role</li><li>• Observer as participant—role of researcher is known</li><li>• Participant as observer—observation role secondary to participant role</li><li>• Complete observer—researcher observes without participating</li></ul>	<ul style="list-style-type: none"><li>• Researcher has a first-hand experience with participant.</li><li>• Researcher can record information as it occurs.</li><li>• Unusual aspects can be noticed during observation.</li><li>• Useful in exploring topics that may be uncomfortable for participants to discuss.</li></ul>	<ul style="list-style-type: none"><li>• Researcher may be seen as intrusive.</li><li>• Private information may be observed that researcher cannot report.</li><li>• Researcher may not have good attending and observing skills.</li><li>• Certain participants (e.g., children) may present special problems in gaining rapport.</li></ul>



**Table 9.2** Qualitative Data Collection Types, Options, Advantages, and Limitations

<b>Data Collection Types</b>	<b>Options Within Types</b>	<b>Advantages of the Type</b>	<b>Limitations of the Type</b>
Interviews	<ul style="list-style-type: none"><li>• Face-to-face— one-on-one, in-person interview</li><li>• Telephone— researcher interviews by phone</li><li>• Focus group— researcher interviews participants in a group</li><li>• E-mail internet interview</li></ul>	<ul style="list-style-type: none"><li>• Useful when participants cannot be directly observed.</li><li>• Participants can provide historical information.</li><li>• Allows researcher control over the line of questioning.</li></ul>	<ul style="list-style-type: none"><li>• Provides indirect information filtered through the views of interviewees.</li><li>• Provides information in a designated place rather than the natural field setting.</li><li>• Researcher's presence may bias responses.</li><li>• Not all people are equally articulate and perceptive.</li></ul>

**Table 9.2 (Continued)**

<b>Data Collection Types</b>	<b>Options Within Types</b>	<b>Advantages of the Type</b>	<b>Limitations of the Type</b>
Documents	<ul style="list-style-type: none"><li>• Public documents, such as minutes of meetings, or newspapers</li><li>• Private documents, such as journals, diaries, or letters</li></ul>	<ul style="list-style-type: none"><li>• Enables a researcher to obtain the language and words of participants.</li><li>• Can be accessed at a time convenient to researcher—an unobtrusive source of information.</li><li>• Represents data which are thoughtful in that participants have given attention to compiling them.</li><li>• As written evidence, it saves a researcher the time and expense of transcribing.</li></ul>	<ul style="list-style-type: none"><li>• Not all people are equally articulate and perceptive.</li><li>• May be protected information unavailable to public or private access.</li><li>• Requires the researcher to search out the information in hard-to-find places.</li><li>• Requires transcribing or optically scanning for computer entry.</li><li>• Materials may be incomplete.</li><li>• The documents may not be authentic or accurate.</li></ul>

**Table 9.2 (Continued)**

<b>Data Collection Types</b>	<b>Options Within Types</b>	<b>Advantages of the Type</b>	<b>Limitations of the Type</b>
Audio-Visual Materials	<ul style="list-style-type: none"><li>• Photographs</li><li>• Videotapes</li><li>• Art objects</li><li>• Computer software</li><li>• Film</li></ul>	<ul style="list-style-type: none"><li>• May be an unobtrusive method of collecting data.</li><li>• Provides an opportunity for participants to directly share their reality.</li><li>• It is creative in that it captures attention visually.</li></ul>	<ul style="list-style-type: none"><li>• May be difficult to interpret.</li><li>• May not be accessible publicly or privately.</li><li>• The presence of an observer (e.g., photographer) may be disruptive and affect responses.</li></ul>

# DATA COLLECTION PROCEDURES

In a discussion about data collection forms, be specific about the types and include arguments concerning the strengths and weaknesses of each type.



# DATA COLLECTION PROCEDURES

- ✓ **Qualitative observations** are those in which the researcher takes field notes on the behavior and activities of individuals at the research site.
  - ✓ In these field notes, the researcher records, in an unstructured or semi-structured way (using some prior questions that the inquirer wants to know), activities at the research site.
- ✓ Qualitative observers may also engage in roles varying from a nonparticipant to a complete participant.

# DATA COLLECTION PROCEDURES

- ✓ In **qualitative interviews**, the researcher conducts face-to-face interviews with participants, interviews participants by telephone, or engages in focus group interviews, with six to eight interviewees in each group.
  - ✓ These interviews involve unstructured and generally open-ended questions that are few in number and intended to elicit views and opinions from the participants.

# DATA COLLECTION PROCEDURES

- ✓ During the process of research, the investigator may collect **qualitative documents**.
  - ✓ These may be public documents (e.g., newspapers, minutes of meetings, official reports) or private documents (e.g., personal journals and diaries, letters, e-mails).
- ✓ A final category of qualitative data consists of **qualitative audio and visual materials**.
  - ✓ This data may take the form of photographs, art objects, videotapes, or any forms of sound.

# DATA COLLECTION PROCEDURES

- ✓ Include data collection types that go beyond typical observations and interviews.
- ✓ These unusual forms create reader interest in a proposal and can capture useful information that observations and interviews may miss.
  - ✓ **For example**, examine the compendium of types of data in next slides that can be used, to stretch the imagination about possibilities, such as gathering sounds or tastes, or using cherished items to elicit comments during an interview.



# DATA COLLECTION PROCEDURES

## Observations

- 1) Gather field notes by conducting an observation as a participant.
- 2) Gather field notes by conducting an observation as an observer.
- 3) Gather field notes by spending more time as a participant than as an observer.
- 4) Gather field notes by spending more time as an observer than as a participant.
- 5) Gather field notes first by observing as an outsider and then moving into the setting and observing as an Insider.

# DATA COLLECTION PROCEDURES

## Interviews

- 1) Conduct an unstructured, open-ended Interview and take interview notes.
- 2) Conduct an unstructured, open-ended interview, audiotape the interview, and transcribe it.
- 3) Conduct a semi-structured interview, audiotape the interview and transcribe the interview.
- 4) Conduct a focus group interview, audiotape the interview, and transcribe it.
- 5) Conduct different types of interviews: email, face-to-face, focus group, online focus group, telephone interviews

# DATA COLLECTION PROCEDURES

## Documents

- 1) Keep a journal during the research study.
- 2) Have a participant keep a journal or diary during the research study .
- 3) Collect personal letters from participants.
- 4) Analyze public documents (e.g., official memos, minutes. records, archival material).
- 5) Examine autobiographies and biographies.
- 6) Have participants take photographs or videotapes (i.e., photo elicitation).
- 7) Chart audits
- 8) Medical records

# DATA COLLECTION PROCEDURES

## Audio-visual Materials

- 1) Examine physical trace evidence (e.g. footprints in the snow).
- 2) Videotape or film a social situation or an individual or group.
- 3) Examine photographs or videotapes.
- 4) Collect sounds (e.g., musical sounds, a child's laughter, car horns honking).
- 5) Collect e-mail messages.
- 6) Collect cell phone text messages.
- 7) Examine possessions or ritual objects.
- 8) Collect sounds, smells, tastes, or any stimuli of the senses.



# DATA RECORDING PROCEDURES

- ✓ The proposal should identify what data the researcher will record and the procedures for recording data.
- ✓ Use a **protocol** for recording observational data.
  - ✓ Researchers often engage in multiple observations during the course of a qualitative study and use an **observational protocol** for recording information while observing.

# DATA RECORDING PROCEDURES

- ✓ This may be
  - ✓ A single page with a dividing line down the middle
  - ✓ Separate **descriptive notes**
    - ✓ (portraits of the participants, a reconstruction of dialogue, a description of the physical setting, accounts of particular events, or activities)
  - ✓ **Reflective notes**
    - ✓ (the researcher's personal thoughts, such as "speculation, feelings, problems, ideas, hunches, impressions, and prejudices" Bogdan & Biklen, 1992, p. 121).
- ✓ Also written on this form might be **demographic information** about the time, place, and date of the field setting where the observation takes place.

# DATA RECORDING PROCEDURES

- ✓ Use an **interview protocol** for asking questions and recording answers during a qualitative interview. This protocol includes the following components:
  - ✓ A heading (date, place, interviewer, interviewee)
  - ✓ Instructions for the interviewer to follow so that standard procedures are used from one interview to another
  - ✓ The questions (typically an ice-breaker question at the beginning followed by 4-5 questions that are often the sub-questions in a qualitative research plan, followed by some concluding statement or a question, such as, "Who should I visit with to learn more about my questions?")

# DATA RECORDING PROCEDURES

- ✓ Probes for the 4-5 questions, to follow up and ask individuals to explain their ideas in more detail or to elaborate on what they have said
- ✓ Space between the questions to record responses
- ✓ A final thank-you statement to acknowledge the time the interviewee spent during the interview (Creswell, 2007)



# DATA RECORDING PROCEDURES

- ✓ Researchers record information from interviews by making handwritten notes, by audiotaping, or by videotaping.
  - ✓ Even if an interview is taped, it is recommended that researchers take notes, in the event that recording equipment fails.
  - ✓ If audiotaping is used, researchers need. to plan in advance for the transcription of the tape.

# DATA RECORDING PROCEDURES

- ✓ The recording of documents and visual materials can be based on the researcher's structure for taking notes.
  - ✓ Typically, notes reflect information about the document or other material as well as key ideas in the documents.
- ✓ It is helpful to note whether the information represents primary material (i.e., information directly from the people or situation under study) or secondary material (i.e., secondhand accounts of the people or situation written by others).
- ✓ It is helpful to comment on the reliability and value of the data source.

# DATA ANALYSIS AND INTERPRETATION

- ✓ The process of data analysis involves making sense out of text and image data; it involves
  - 1) Preparing the data for analysis,
  - 2) Conducting different analyses,
  - 3) Moving deeper and deeper into understanding the data
    - ✓ some qualitative researchers like to think of this as peeling back the layers of an onion,
  - 4) Representing the data, and
  - 5) Making an interpretation of the larger meaning of the data.

# DATA ANALYSIS AND INTERPRETATION

- I. Qualitative data analysis is an ongoing process involving continual reflection about the data, asking analytic questions, and writing memos throughout the study.
- ✓ Qualitative data analysis is conducted concurrently with gathering data, making interpretations, and writing reports.
  - ✓ While interviews are going on, for example, the researcher may be analyzing an interview collected earlier, writing memos that may ultimately be included as a narrative in the final report, and organizing the structure of the final report.



# DATA ANALYSIS AND INTERPRETATION

- II. **Data analysis** involves collecting open-ended data, based on asking general questions and developing an analysis from the information supplied by participants.
- III. **Qualitative data analysis** are often reported in journal articles and books in a generic form of analysis (**basic qualitative analysis**).
  - ✓ In this approach, the researcher collects qualitative data, analyzes it for themes or perspectives, and reports 4-5 themes.

# DATA ANALYSIS AND INTERPRETATION

- ✓ Many qualitative researchers go beyond generic analysis to add a procedure within one of the qualitative strategies of inquiry.

## For example

- ✓ **Grounded theory** has systematic steps (Corbin & Strauss, 2007; Strauss & Corbin, 1990, 1998); these involve;
  1. Generating categories of information (open coding),
  2. Selecting one of the categories and positioning it within a theoretical model (axial coding), and
  3. Explicating a story from the interconnection of these categories (selective coding).

# DATA ANALYSIS AND INTERPRETATION

- ✓ **Case study and ethnographic research** involve a detailed description of the setting or individuals, followed by analysis of the data for themes or issues (Stake, 1995; Wolcott, 1994).
- ✓ **Phenomenological research** uses the analysis of significant statements, the generation of meaning units, and the development of what Moustakas (1994) calls an essence description.
- ✓ **Narrative research** employs restorying the participants' stories using structural devices, such as plot, setting, activities, climax, and denouement (Clandinin & Connelly, 2000).

# DATA ANALYSIS AND INTERPRETATION

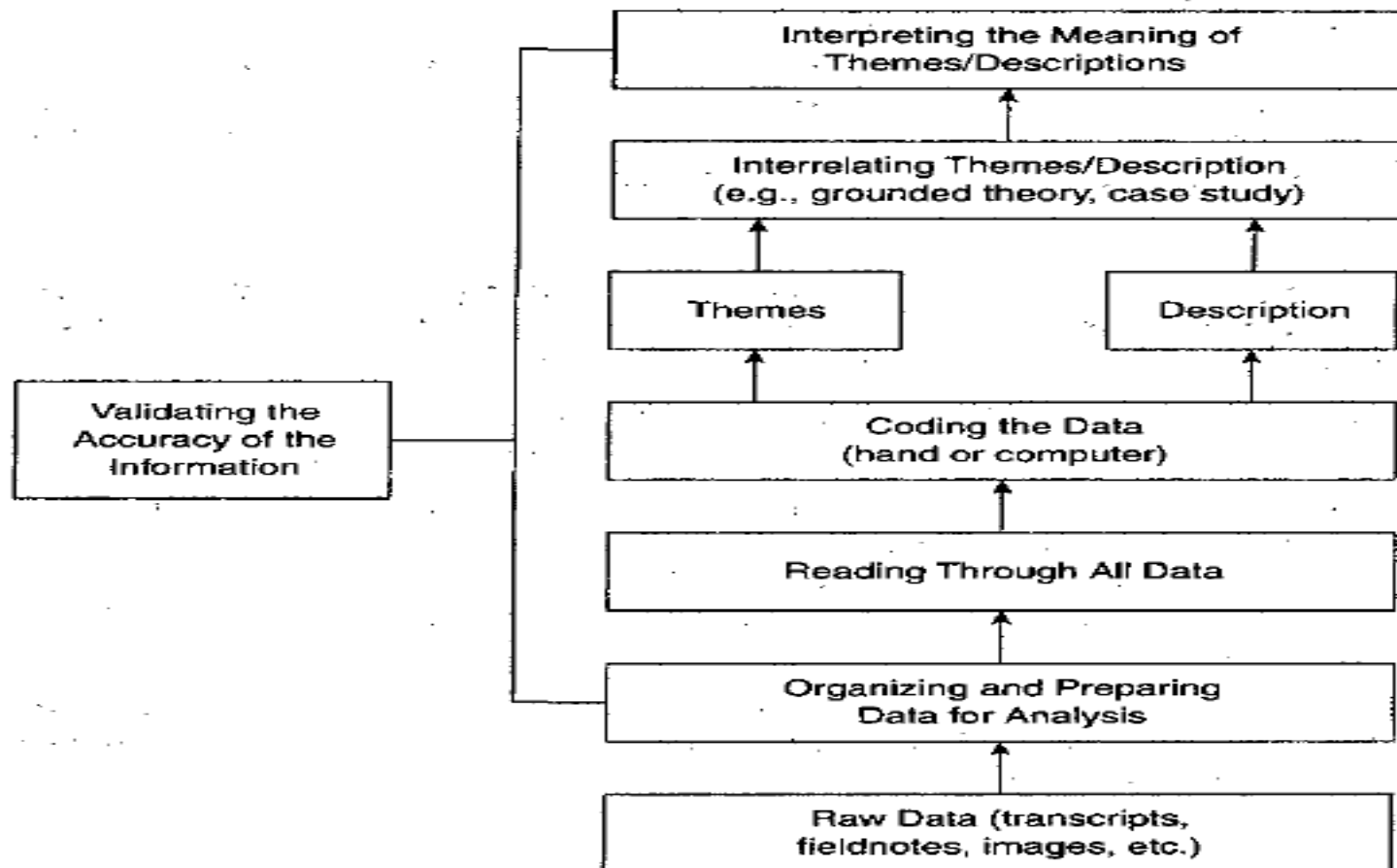


Figure 9.1 Data Analysis in Qualitative Research



# DATA ANALYSIS AND INTERPRETATION

**Step 1.** Organize and prepare the data for analysis.

- ✓ This involves transcribing interviews, optically scanning material, typing up field notes, or sorting and arranging the data into different types depending on the sources of information.

**Step 2.** Read through all the data.

- ✓ A first step is to obtain a general sense of the information and to reflect on its overall meaning.
  - 1) What general ideas are participants saying?
  - 2) What is the tone of the ideas?
  - 3) What is the impression of the overall depth, credibility, and use of the information?
- ✓ Sometimes qualitative researchers write notes in margins or start recording general thoughts about the data at this stage.

# DATA ANALYSIS AND INTERPRETATION

**Step 3.** Begin detailed analysis with a coding process.

- ✓ **Coding** is the process of organizing the material into chunks or segments of text before bringing meaning to information (Rossman & Rallis, 1998, p. 171).
- ✓ It involves taking text data or pictures gathered during data collection, segmenting sentences (or paragraphs) or images into categories, and labeling those categories with a term, often a term based in the actual language of the participant (called an *in vivo* term).

# DATA ANALYSIS AND INTERPRETATION

## Systematic Process of Analyzing Textual Data

- 1) Get a sense of the whole.
  - ✓ Read all the transcriptions carefully.
  - ✓ Perhaps jot down some ideas as they come to mind.
  
- 2) Pick one document (i.e., one interview)-the most interesting one, the shortest, the one on the top of the pile.
  - ✓ Go through it, asking yourself, "What is this about?"
  - ✓ Do not think about the substance of the information but its underlying meaning.
  - ✓ Write thoughts in the margin.

# DATA ANALYSIS AND INTERPRETATION

- 3) When you have completed this task for several participants, make a list of all topics.
  - ✓ Cluster together similar topics.
  - ✓ Form these topics into columns, perhaps arrayed as major topics, unique topics, and leftovers.
- 4) Now take this list and go back to your data.
  - ✓ Abbreviate the topics as codes and write the codes next to the appropriate segments of the text.
  - ✓ Try this preliminary organizing scheme to see if new categories and codes emerge.



# DATA ANALYSIS AND INTERPRETATION

- 5) Find the most descriptive wording for your topics and turn them into categories.
  - ✓ Look for ways of reducing your total list of categories by grouping topics that relate to each other.
  - ✓ Perhaps draw lines between your categories to show interrelationships.
- 5) Make a final decision on the abbreviation for each category and alphabetize these codes.
- 7) Assemble the data material belonging to each category in one place and perform a preliminary analysis.
- 8) If necessary, recode your existing data.

# DATA ANALYSIS AND INTERPRETATION

Some research tip for qualitative researchers to analyze their data

- 1) Codes on topics that readers would expect to find, based on the past literature and common sense.
- 2) Codes that are surprising and that were not anticipated at the beginning of the study.
- 3) Codes that are unusual, and that are, in and of themselves, of conceptual interest to readers.
- 4) Codes that address a larger theoretical perspective in the research.

# DATA ANALYSIS AND INTERPRETATION

Bogdan and Bilden (1992, pp. 166-172) presented a list on the types of codes that they look for in a qualitative database:

1. Setting and context codes
2. Perspectives held by subjects
3. Subjects' ways of thinking about people and objects
4. Process codes
5. Activity codes
6. Strategy codes
7. Relationship and social structure codes
8. Preassigned coding schemes

# DATA ANALYSIS AND INTERPRETATION

- ✓ In coding of qualitative data, the researcher should decide whether;
  - 1) Develop codes *only* on the basis of the emerging information collected from participants
  - 2) Use predetermined codes and then fit the data to them,
  - 3) Use some combination of predetermined and emerging codes.
- ✓ The traditional approach in the social sciences is to allow the codes to emerge during the data analysis.



# DATA ANALYSIS AND INTERPRETATION

- ✓ In the health sciences, a popular approach is to use predetermined codes based on the theory being examined.
  - ✓ The researchers might develop a **qualitative code book**, a table or record that contains a list of predetermined codes that researchers use for coding the data.
  - ✓ This code book might be composed with the names of codes in one column, a definition of codes in another column, and then specific instances (e.g. line numbers) in which the code was found in the transcripts.
- ✓ The use of a code book is especially helpful for fields in which quantitative research dominates and a more systematic approach to qualitative research is needed.

# DATA ANALYSIS AND INTERPRETATION

✓ The computer software programs that qualitative researchers use might include:

- 1) MAXqda (<http://www.maxqda.com/>).
- 2) Atlas.ti (<http://www.atlasti.com/>).
- 3) QSR NVivo (<http://www.qsrinternational.com/>)
- 4) Hyper RESEARCH (<http://www.researchware.com/>).

# DATA ANALYSIS AND INTERPRETATION

**Step 4.** Use the coding process to generate a description of the setting or people as well as categories or themes for analysis.

- ✓ **Description** involves a detailed rendering of information about people, places, or events in a setting.
  - ✓ Researchers can generate codes for this description.
  - ✓ This analysis is useful in designing detailed descriptions for case studies, ethnographies, and narrative research projects.
- ✓ Then use the coding to generate a small number of **themes** or categories, perhaps five to seven categories for a research study.
  - ✓ These themes are the ones that appear as major findings in qualitative studies and are often used to create headings in the findings sections of studies.
  - ✓ They should display multiple perspectives from individuals and be supported by diverse quotations and specific evidence.

# DATA ANALYSIS AND INTERPRETATION

- ✓ Qualitative researchers could interconnect themes into a story line (as in narratives) or develop them into a theoretical model (as in grounded theory).
- ✓ Themes are analyzed for each individual case and across different cases (as in case studies) or shaped into a general description (as in phenomenology).
- ✓ Sophisticated qualitative studies go beyond description and theme identification and into complex theme connections.



# DATA ANALYSIS AND INTERPRETATION

**Step 5.** Advance how the description and themes will be *represented* in the qualitative narrative.

- ✓ The most popular approach is to use a narrative passage to convey the findings of the analysis.
  - ✓ This might be a discussion that mentions a chronology of events, the detailed discussion of several themes (complete with subthemes, specific illustrations, multiple perspectives from individuals, and quotations) or a discussion with interconnecting themes.
- ✓ Many qualitative researchers also use visuals, figures, or tables as adjuncts to the discussions.
  - ✓ They present a process model (as in grounded theory), advance a drawing of the specific research site (as in ethnography), or convey descriptive information about each participant in a table (as in case studies and ethnographies).

# DATA ANALYSIS AND INTERPRETATION

**Step 6.** Making an **interpretation** or meaning of the data.

- ✓ Asking, "What were the lessons learned?" captures the essence of this idea (Lincoln & Guba, 1985).
  - ✓ These lessons could be the researcher's personal interpretation, couched in the understanding that the inquirer brings to the study from her or his own culture, history, and experiences.
  - ✓ It could also be a meaning derived from a comparison of the findings with information gleaned from the literature or theories.
- ✓ In this way, authors suggest that the findings confirm past information or diverge from it.
- ✓ It can also suggest new questions that need to be asked-questions raised by the data and analysis that the inquirer had not foreseen earlier in the study.

# DATA ANALYSIS AND INTERPRETATION

- ✓ One way ethnographers can end a study, says Wolcott (1994), is to ask further questions.
  - ✓ The questioning approach is also used in advocacy and participatory approaches to qualitative research.
- ✓ Moreover, when qualitative researchers use a theoretical lens, they can form interpretations that call for action agendas for reform and change.

Thus, interpretation in qualitative research can take many forms, be adapted for different types of designs, and be flexible to convey personal, research-based, and action meanings.

# RELIABILITY, VALIDITY, AND GENERALIZABILITY

- ✓ **Qualitative validity** means that the researcher checks for the accuracy of the findings by employing certain procedures, while **qualitative reliability** indicates that the researcher's approach is consistent across different researchers and different projects (Gibbs, 2007).

How do qualitative researchers check to determine if their approaches are consistent or reliable?

- ✓ Yin (2003) suggests that qualitative researchers need to document the procedures of their case studies and to document as many of the steps of the procedures as possible.
- ✓ He also recommends setting a detailed case study protocol and database.



# RELIABILITY, VALIDITY, AND GENERALIZABILITY

- ✓ Gibbs (2007) suggests several **reliability procedures**:
  - 1) Check transcripts to make sure that they do not contain obvious mistakes made during transcription.
  - 2) Make sure that there is not a drift in the definition of codes, a shift in the meaning of the codes during the process of coding.
    - ✓ This can be accomplished by constantly comparing data with the codes and by writing memos about the codes and their definitions.
  - 3) For team research, coordinate the communication among the coders by regular documented meetings and by sharing the analysis.
  - 4) Cross-check codes developed by different researchers by comparing results that are independently derived.

# RELIABILITY, VALIDITY, AND GENERALIZABILITY

## Intercoder Agreement (or Cross-Checking)

- ✓ It is an agreement based on whether two or more coders agree on codes used for the same passages in the text;
  - ✓ It is not that they code the same passage of text. but whether another coder would code it with the same or a similar code.
- ✓ Statistical procedures or reliability subprograms in qualitative computer software packages can then be used to determine the level of consistency of coding.
- ✓ Miles and Huberman (1994) recommend that the consistency of the coding be in agreement at least 80% of the time for good qualitative reliability.

# RELIABILITY, VALIDITY, AND GENERALIZABILITY

- ✓ **Validity** is based on determining whether the findings are accurate from the standpoint of the researcher, the participant, or the readers of an account (Creswell & Miller, 2000).
- ✓ Terms abound in the qualitative literature that speak to this idea, such as **trustworthiness**, **authenticity**, and **credibility** (Creswell & Miller, 2000), and it is a much-discussed topic (Lincoln & Guba, 2000).

# RELIABILITY, VALIDITY, AND GENERALIZABILITY

## Validity Strategies

- 1) Triangulate different data sources of information by examining evidence from the sources and using it to build a coherent justification for themes.
  - ❖ If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding to the validity of the study.
- 2) Use member checking to determine the accuracy of the qualitative findings through taking the final report or specific descriptions or themes back to participants and determining whether these participants feel that they are accurate.
  - ❖ This does not mean taking back the raw transcripts to check for accuracy; instead, the researcher takes back parts of the polished product, such as the themes, the case analysis, the grounded theory, the cultural description, and so forth.
  - ❖ This procedure can involve conducting a follow-up interview with participants in the study and providing an opportunity for them to comment on the findings.



# RELIABILITY, VALIDITY, AND GENERALIZABILITY

## 3) Use rich, thick description to convey the findings.

- ✓ This description may transport readers to the setting and give the discussion an element of shared experiences.
- ✓ When qualitative researchers provide detailed descriptions of the setting, for example, or provide many perspectives about a theme, the results become more realistic and richer.

## 4) Clarify the bias the researcher brings to the study.

- ✓ This self-reflection creates an open and honest narrative that will resonate well with readers.
  - ✓ Reflectivity has been mentioned as a core characteristic of qualitative research.
- ✓ Good qualitative research contains comments by the researchers about how their interpretation of the findings is shaped by their background, such as their gender, culture, history, and socioeconomic origin.

# RELIABILITY, VALIDITY, AND GENERALIZABILITY

- 5) Also present negative or discrepant information that runs counter to the themes.
- ✓ Because real life is composed of different perspectives that do not always coalesce, discussing contrary information adds to the credibility of an account.
  - ✓ A researcher can accomplish this in discussing evidence about a theme.
  - ✓ Most evidence will build a case for the theme: researchers can also present information that contradicts the general perspective of the theme.
  - ✓ By presenting this contradictory evidence, the account becomes more realistic and hence valid.

# RELIABILITY, VALIDITY, AND GENERALIZABILITY

- 6) Spend prolonged time in the field; in this way, the researcher develops an in-depth understanding of the phenomenon under study and can convey detail about the site and the people that lends credibility to the narrative account.
  - ✓ The more experience that a researcher has with participants in their actual setting, the more accurate or valid will be the findings.
- 7) Use peer debriefing to enhance the accuracy of the account.
  - ✓ This process involves locating a person (a peer debriefer) who reviews and asks questions about the qualitative study so that the account will resonate with people other than the researcher.
  - ✓ This strategy-involving an interpretation beyond the researcher and invested in another person-adds validity to an account.

# RELIABILITY, VALIDITY, AND GENERALIZABILITY

## 8) Use an external auditor to review the entire project.

- ❖ As distinct from a peer debriefer, this auditor is not familiar with the researcher or the project and can provide an objective assessment of the project throughout the process of research or at the conclusion of the study.
- ❖ The role is similar to that of a fiscal auditor, and specific questions exist that auditors might ask (Lincoln & Guba, 1985).
- ❖ The procedure of having an independent investigator look over many aspects of the project (e.g., accuracy of transcription, the relationship between the research questions and the data, the level of data analysis from the raw data through interpretation) enhances the overall validity of a qualitative study.



# RELIABILITY, VALIDITY, AND GENERALIZABILITY

## Qualitative generalization

- ✓ The intent of qualitative research is not to generalize findings to individuals, sites, or places outside of those under study.
  - ✓ The value of qualitative research lies in the particular description and themes developed in context of a specific site.
  - ✓ Particularity rather than generalizability (Greene & Caracelli, 1997) is the hallmark of qualitative research.

# RELIABILITY, VALIDITY, AND GENERALIZABILITY

## Qualitative generalization ...

- ✓ According to Yin (2003) qualitative case study results can be generalized to some broader theory.
  - ✓ The generalization occurs when qualitative researchers study additional cases and generalize findings to the new cases.
- ✓ It is the same as the replication logic used in experimental research.
  - ✓ To repeat a case study's findings in a new case setting requires good documentation of qualitative procedures, such as a protocol for documenting the problem in detail and the development of a thorough case study database (Yin, 2003).

# THE QUALITATIVE WRITE-UP

- ✓ The basic procedure in reporting the results of a qualitative study are to develop descriptions and themes from the data to present these descriptions and themes that convey multiple perspectives from participants and detailed descriptions of the setting or individuals.
- ✓ Using a qualitative strategy of inquiry, these results may also provide
  1. A chronological narrative of an individual's life (narrative research),
  2. A detailed description of their experiences (phenomenology),
  3. A theory generated from the data (grounded theory),
  4. A detailed portrait of a culture-sharing group (ethnography), or
  5. An in-depth analysis of one or more cases (case study).

# THE QUALITATIVE WRITE-UP

✓ Some writing strategies for qualitative studies could be as follows:

1. Use quotes and vary their length from short to long embedded passages.
2. Script conversation and report the conversation in different languages to reflect cultural sensitivity.
3. Present text information in tabular form.
  - ❖ e.g., matrices, comparison tables of different codes.
4. Use the wording from participants to form codes and theme labels.
5. Intertwine quotations with (the author's) interpretations.
6. Use indents or other special formatting of the manuscript to call attention to quotations from participants.



# THE QUALITATIVE WRITE-UP

7. Use the first person "I" or collective "we" in the narrative form.
8. Use metaphors and analogies (see, for example, Richardson, 1990, who discusses some of these forms).
9. Use the narrative approach typically used within a qualitative strategy of inquiry.
  - ❖ e.g., description in case studies and ethnographies, a detailed story in narrative research.
10. Describe how the narrative outcome will be compared with theories and the general literature on the topic.
  - ❖ In many qualitative articles. researchers discuss the literature at the end of the study.



*The End*