

# Conducting Qualitative Research Introduction

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## LEARNING OBJECTIVES

1. Compare and contrast qualitative and quantitative research methods and their uses.
2. Identify the five commonly used qualitative research methods.

**INDEX TERMS:** Qualitative research, narrative study, phenomenological study, grounded theory study, ethnographic study, case study

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## INTRODUCTION

“Within the last twenty years qualitative research has become a mature field of study with its own literature base, research journals, special interest groups, and regularly scheduled conferences”.

- Dr. Sharan B. Merriam, professor of adult education and continuing education, University of Georgia, 2009

Medical laboratory practitioners know how to perform experiments and have participated in surveys. However qualitative research and its methods remain an unknown to many in the medical laboratory science profession. This series provides readers with an

introduction to qualitative research methods.

A simple definition of qualitative research is not possible; therefore a description of its purpose and characteristics is provided. As Merriam (2009) described, “Qualitative researchers are interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences.” The primary characteristics of qualitative research include: 1) the focus on understanding peoples’ experiences with intent to convey experiences into meaning, 2) the researcher is the key instrument for data collection and analysis, 3) the research process is inductive and not deductive, and 4) the product of qualitative research is richly descriptive. Other characteristics of qualitative research include that the study design is often emergent and flexible, data is often collected in the natural setting, multiple forms of data may be collected, and sample selection is usually purposeful and small.<sup>1,2</sup>

## Qualitative versus Quantitative

There are three approaches to research, qualitative, quantitative and mixed methods. The qualitative research approach was introduced and described in the section above. A quantitative research approach is used for “testing objective theories by examining the relationship among variables” and measuring these variables in order to produce numerical data that is analyzed statistically.<sup>3</sup> Mixed methods is an approach that combines the collection of qualitative and quantitative data in order to provide a more comprehensive understanding of the research problem. Table 1 provides the major characteristics of qualitative research and quantitative research demonstrating the vast differences between these two approaches to research.

Early in the research study, the researcher must determine which research approach best fits their study and this depends upon the purpose of the inquiry and

the types of answers being sought.<sup>5</sup> As Patton (2002) described, if you want to know if a person is obese then you weigh them, measure their body fat and compare it to population norms thus using a quantitative approach. However, if you want to understand what their weight means to them, then you must learn about their experiences by asking open-ended questions thereby using a qualitative approach.

**Table 1.** Qualitative and quantitative research characteristics.<sup>1,3-4</sup>

Point of Comparison	Qualitative Research	Quantitative Research
Approach	Exploring and understanding	Testing objective theories
Research design options	Narrative, phenomenology, grounded theory, ethnography and case studies	Experimental and nonexperimental
Use of theory	Varied, e.g., may generate a theory or use a theory as a lens through which the study is developed	Test theories
Role of researcher	Personal involvement	Detached and objective
Design characteristics	Flexible and emergent	Predetermined and structured
Sample	Purposeful, nonrandom and small	Large and random
Data collection	Interviews, observations and documents	Scales, tests, surveys, questionnaires, etc.
Modes of analysis	Inductive; constant comparative method	Deductive; statistical
Findings	Richly descriptive; text	Precise; numerical
Presentation of findings	Descriptive write up as narratives, poems, songs, etc.	Uses abstract language in charts and tables

**Five Approaches to Qualitative Inquiry and Research Design**

Creswell (2013) offers five common approaches to qualitative research – narrative inquiry, phenomenological research, grounded theory research, ethnographic research, and case study research. Common characteristics for these qualitative research methods include the researcher as the primary data collection tool, identification of a purposive sample, use of interviews as a form of data collection, and written narratives as the mechanism of reporting the findings. Each of these research methods is described as follows.

**Narrative Approach**

Narrative research or inquiry is rooted in several social and humanities disciplines such as anthropology, and sociology.<sup>6</sup> Narrative researchers are seeking “experiences as expressed in lived and told stories of individuals”.<sup>2</sup> Collecting these stories will provide the researcher with a better understanding of the culture, historical experiences, identity, or lifestyle of the narrator.<sup>7</sup> Data is collected in the form of stories, humans are natural storytellers, through interviews with research participants. Data analysis will vary depending on the research purpose and may focus on what was shared (thematic) or nature of the storytelling (structural). The challenges of narrative research include that analysis is extremely slow and meticulous and unpractical for large sample sizes.<sup>8</sup>

**Phenomenological Approach**

Phenomenology is a school of philosophy (perception of human experiences) and an approach to qualitative research. A phenomenological study “describes the common meaning for several individuals of their lived experiences of a concept or phenomenon” thereby focusing on the commonality amongst participants of the same experience.<sup>2</sup> Researchers seek to explore how participants perceive, describe, feel about, remember, and make sense of the experience shared.<sup>5</sup> The phenomenon being studied may include emotions (jealousy, anger), a relationship (marriage), an organization, or a culture.<sup>5</sup> The overall purpose of this approach is to describe and understand the essence of the phenomenon in order to fully grasp the very nature of the experience. Data is collected in the form of in-depth interviews, often multiple interviews are required, from those who have experienced the same phenomenon. Data analysis seeks to explain what individuals experienced and how they experienced it. The challenges of phenomenological research include finding participants who have shared the same phenomenon and biases the researcher may possess.<sup>2</sup>

**Grounded Theory Study**

Grounded theory research is a qualitative method that seeks not to simply understand, but to build a theory that explains the phenomenon of interest. This theory is considered “grounded” because it is anchored in the words and experiences of the study participants.<sup>9</sup> Grounded theory research emphasizes discovery and is particularly suited to investigating problems for which

little theory has been developed.

Data collection is guided by theoretical sampling in which the researcher jointly collects, codes, and analyzes data and decides what data to collect next to inductively develop a theory as it emerges. Data analysis in grounded theory research is based on a process called constant comparative analysis in which the researcher looks for patterns that cut across various aspects of the data. These patterns organize different segments of the data into themes which eventually contribute to the overall substantive theory.<sup>10</sup> The major purpose for doing grounded theory research in an applied field, such as medical laboratory science, is to improve professional practice and provide a conceptual tool with which to guide future work.<sup>11</sup>

### **Ethnographic Study**

Ethnographic study is a study of “an entire culture-sharing group” and typically involves extended observations through participant observation.<sup>2</sup> In order to conduct an ethnographic study, the researcher must spend an extensive amount of time in the field. The “researcher is immersed in day-to-day lives of the people and observes and interviews the group participants.”<sup>2</sup> Behaviors, language and member interactions are observed in-depth.

The defining features of an ethnographic study include the ability to “develop a complex, complete description of the culture of the group.” Specifically, this is a study of “behaviors of an identifiable group of people.”<sup>2</sup> Interviews, observations, symbols and artifacts serve as data collection methods. Participant views provide the meaningful data and findings are often reported as verbatim quotes from the participants.

The challenges of being an ethnographic researcher include possessing an understanding of cultural anthropology and the meaning of social-cultural systems. The researcher needs to recognize the need for long periods of time in the field. Narratives are often written in a story telling fashion therefore solid writing skills are necessary. The researcher should possess the ability to be “sensitive to the needs of individuals in the group.”<sup>2</sup> Lastly, the researcher should report their impact on the study.

### **Case Study**

Case study research is a “...study of a case within a real-life contemporary context or setting.”<sup>12</sup> Qualitative case study research “seeks to describe that unit, in depth and detail, holistically and in context.”<sup>5</sup> Furthermore, conducting case study research is the preferred method when “how and why questions are asked, a researcher has little or no control over behavioral events and the focus of study is a contemporary phenomenon.”<sup>13</sup> The case is bounded by time and activity and involves a purposive sample.

The researcher conducts data collection methods by conducting interviews, documenting field notes and reviewing documents and artifacts. Coding the data begins with open coding and progresses to axial coding to develop themes and categories. The findings are validated by member checks, rich-thick description of the data, an external audit and an awareness of researcher bias.

### **CONCLUSION**

As medical laboratory science professionals, we may be more familiar with quantitative research methods and the data that is generated from such research. However, there are qualitative research methods that are applicable to the field of medical laboratory science. Five of the more commonly used qualitative research methods are presented with explanations that offer basic information. A comparison of qualitative and quantitative research is also provided. Additionally, in-depth descriptions of three of the qualitative research methods are presented. Through narrative inquiry, findings regarding how medical laboratory practitioners view themselves, their profession and their professional identity is presented in *A Narrative Approach to Qualitative Inquiry*. The grounded theory research method is used to illuminate how medical laboratory science clinical instructors view themselves as teachers in *Understanding Grounded Theory*. The career path of women medical laboratory scientists who moved to higher education administrators is documented in *Conducting Case Study Research*.

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