QUALITATIVE RESEARCH DESIGNS: WHICH ONE IS THE BEST FOR YOUR RESEARCH?

Nihan Sölpük Turhan
Assistant Professor, Fatih Sultan Mehmet Vakıf University, Faculty of Educational Sciences, Turkey

Abstract:
This study focuses on five qualitative research designs commonly used in educational research: Phenomenology, Ethnography, Grounded Theory, Case Study and Discourse Analysis. The aim of the study is to compare these designs in terms of their general characteristics, data collection tools, sample sizes, analytical methods and coding procedures. Therefore, it seeks answers to the following questions: “Which design is the most suitable one for a particular qualitative study? What are the key characteristics of each design? Phenomenology seeks an answer to the question “What is the reality?” while focusing on a specific phenomena in detail. Researchers focus on personal experiences of participants in order to explain a specific phenomenon based on the data obtained. Ethnography is used to define human behavior and its cultural and symbolic dimensions. What Grounded Theory focuses on is to emphasize the development of a theory according to the data collected throughout a study. Case Study examines real-life actual research problems in detail within a holistic framework. Discourse Analysis focuses on what is implied in a discourse rather than exact words and those who tell or write them. The study examines different studies conducted in the field of educational research and compares them according to certain criteria. The results revealed important differences and similarities among study-specific qualitative research designs in terms of general characteristics, data collection tools, sample sizes, analytical methods and coding procedures.

Keywords: phenomenology, ethnography, grounded theory, case study and discourse analysis

1. Introduction

Qualitative research methodology has its roots in anthropological, sociological, psychological and philosophical ideas, so it can also be applied in social sciences. This
methodology is based on interpreting and allows researchers to apply different designs because of its flexible structure. Therefore; researchers can discover institutional structures, social practices, processes, obstacles, facilitators as well as reasons of achievements and failures.

In short, qualitative research refers to specific analyses developed according to different designs, and it involves various strategies and procedures. Creswell (1998) classifies qualitative research designs into five categories: biography, phenomenology, culture analysis, grounded theory and case study. Tesch (1990), on the other hand, suggests design (for example, case study), data analysis technique (for example, discourse analysis) and discipline-oriented (for example, culture analysis) as types of qualitative research designs.

2. Phenomenology Design

As one of the qualitative research designs, phenomenology was first defined by Kant in 1764, and later its further development was pioneered by Edmund Husserl. This type of design aims to examine the presence of a specific phenomenon and uses personal experiences of participants in order to explain this phenomenon through the data collected. It seeks an answer to the question: “What is truth?” In other words, experiences of participants are examined, and phenomenon-related truth is defined accordingly.

To put in a nutshell, this type of design aims to obtain information about a particular phenomenon by focusing on participants’ personal experiences. “Phenomenology is a type of research that focuses on phenomena that we are aware of in our daily lives but do not have detailed information about” (Yıldırım and Şimşek, 2006: 72). According to Sokolowski (2000), the statements used as data in phenomenology research are not “new information”; however, they might be important and informative data for scientific research in order to come up with effective solutions.

2.1 Ethnography (Culture Analysis)

Another qualitative research design is called ethnography. Etymologically, “ethno” means “human being” and “graphy” means “defining”. When we use these words together in a single word “ethnography”, it means “defining human being”. This design is a scientific method that examines and observes human relationships and behaviors in their natural environment. According to Alvesson and Skoldberg, this design is classified into two groups. The first group, “inductive ethnography”, emphasizes data and focuses on method while the second group, “interpretive ethnography”, emphasizes interpretations.

In summary, this design is used to define human behaviors and cultural and symbolic dimensions of these behaviors. Researchers using this design aim to observe behaviors directly and define them accordingly. In this respect, researchers establish direct relationships with observed participants, and behaviors are explained through associations with cultural context.
2.2 Grounded Theory
Grounded theory was developed by American sociologists Glaser and Strauss in 1967. The difference of this design is that it emphasizes the development of a theory through the data collected throughout research (Strauss and Corbin 1997). Generally speaking, studies using grounded theory discover a new theory by analyzing the available data. Thus, they suggest new hypotheses and proposals (Baş and Akturan, 2008). The key point in this design is to discover embedded categories with the help of data so that they can be meaningful, and it is possible to form theories that explain study-specific behaviors (Baş and Akturan, 2008).

It helps to explain social situations or processes through data. Study group in this design consists of participants selected according to certain sampling criteria (Baker et.al 1992; Starks and Trinidad, 2007). Anything can be used as data in this design, and there are many alternative data collection methods such as participant observation, interview, literature review etc. (Baker et al., 1992).

2.3 Case Study
This qualitative design was developed by Robert K. Yin and used for the first time in 1829 by Frederic Le Play, a French sociologist, economist and mining engineer. Later, the design was used in some other fields such as psychology, sociology and anthropology in the early 1900s. When positive approach became more popular and common in social sciences in the 1930s, some new research methods were adopted to address the needs of this positive approach. Therefore, especially interpretive approach has had important effects on studies using case study design.

Generally speaking, this design aims to examine real-life actual research problems and phenomena in detail. It is recommended to access a large number of evidence and information sources. Research problems are often related to human lives, social phenomena, institutions and individuals.

The phases of a case study include:
- writing research questions;
- writing sub goals;
- choosing analysis unit(s);
- explaining the focused issue (situation);
- choosing the participants;
- collecting data and finding connections between data and sub goals;
- analyzing and interpreting collected data;
- reporting.

2.4 Discourse Analysis
Another qualitative design is discourse analysis. According to Gee (2005), this design carefully analyzes language use and tracks the historical development of language practices. It also analyzes how language shapes and reflects dynamic cultural, social and political practices (Crowe, 1998). This design defines language and words as a sign system and claims that they are meaningless. In a discourse analysis study, language
mediates our perceptions about “reality”. By doing so, it is possible to define social roles of individuals, and language can be beneficial to reflect their identity (Chandler, 2002).

What researchers should focus in discourse analysis are comparing the utterer to others (who says?), the authority of the utterer (he says based on what?), the audience (who does he tell?), purpose (what does he want to say?). In short, discourse analysis requires speeches and texts. Discourse Analysis focuses on what is implied in a discourse rather than the words and the utterer.

The aim of the study is to compare these designs in terms of general characteristics, data collection tools, sample sizes, analytical methods and coding procedures. Therefore, it seeks answers to the following questions: Which design is the most suitable one for a particular qualitative study? What are the key features of each design?

2.5 The differences among qualitative research designs

This study examined a number of studies where qualitative research designs were applied in order to identify the differences between these designs. The tables below present these studies and their goals so that it can be possible to compare different studies in the field of educational sciences.

Phenomenology asks questions about life experiences. It aims to define a specific phenomenon rather than making generalizations. In this respect, it is important to define phenomena. The aim of phenomenological research is to define and examine the presence of a phenomenon and explain experiences and the meanings attributed to them. Research might focus on conscious experiences of individuals, their daily lives and social actions. The main data collection tools are interviews and observations. Table 1 below displays sample studies using ethnography design and their aims.

Table 1: The studies using “phenomenology” design and their aims

<table>
<thead>
<tr>
<th>The study using “phenomenology” design</th>
<th>The aim of the study</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Preservice Teachers’ opinions about the use of Turkish: A Phenomenological Analysis” (Göçer, 2014)</td>
<td>“To raise awareness about incorrect use of Turkish and introduce suggested solutions to eliminate such problems by obtaining data from preservice teachers of Turkish” (Göçer, 2014)</td>
</tr>
<tr>
<td>Examining Professional Experiences of Research Assistants at Education Faculties: A Phenomenological Study about being a Research Assistant (Yılmaz and Şahin, 2016).</td>
<td>“The study aims to find out how research assistants perceive their profession, which is one of the ignored issues in the related literature” (Yılmaz and Şahin, 2016).</td>
</tr>
<tr>
<td>“I cheated in the exam, because ….” A Phenomenology Study (Özden, Baştürk and Demir, 2015).</td>
<td>“To examine the reasons of cheating behavior of preservice teachers” (Özden, Baştürk ve Demir, 2015).</td>
</tr>
<tr>
<td>Phenomenology and Grounded Theory: A Comparison in Terms of Some Features (Kocabıyık, 2016).</td>
<td>“The aim of phenomenological research is to define participants’ experiences in order to discover common meanings lying behind a given phenomenon”</td>
</tr>
</tbody>
</table>
Investigating the Views of Students Related to the Effect of School Variables upon Academic Success in Terms of Various Variables (Sezer, 2018).

“The aim of this study is to determine the effects of teachers’ classroom management attitudes on students’ academic emotional and social development.” (Sezer, 2018).

When the studies displayed in Table 1 and using phenomenology design are examined, it can be seen that they focus on real-life experiences. Another design called ethnography is used to define individuals, their behaviors and cultural and symbolic dimensions of behaviors. One important characteristic of this design is longitudinal data collection procedures. However, the use of this design in educational research is still debatable since educational research usually have shorter data collection time and short data collection time is considered a deviation from anthropological research perspective by some anthropologists. According to researchers, ethnographical educational research should be longitudinal. Table 2 below display sample studies using ethnography design and their aims.

Table 2: The studies using “ethnography” design and their aims

<table>
<thead>
<tr>
<th>The study using “ethnography” design</th>
<th>The aim of the research</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Qualitative Analysis of Classroom Culture and Participation Competence in an Early Childhood Setting (Yahşi, 2017).</td>
<td>“This study aims to examine the problems the children from traditional family background have when they encounter modern interactional forms for the first time in schools.” (Yahşi, 2017)</td>
</tr>
<tr>
<td>Determining Visual Culture Perceptions of Students of Art Education in Image Analysis and Application (Özalp, 2018)</td>
<td>“To determine art students’ skills to use cultural images and symbols to develop visual culture while interpreting cultural images.” (Özalp, 2018).</td>
</tr>
<tr>
<td>Organizational Culture In a Successful Primary School: An Ethnographic Case Study (İşık and Gürsel, 2010).</td>
<td>“This study aims to describe in detail the school culture of a successful primary school in Konya.” (İşık and Gürsel, 2010).</td>
</tr>
<tr>
<td>An Analysis of School Culture from Symbolic Perspective: An Ethnographic Study (Özoğlu, 2015)</td>
<td>“This study deals with school culture as a network of meanings formed by individuals involved in a school environment and this culture was analyzed through symbols; which are classified as physical, verbal and functional symbols in the study” (Özoğlu, 2015)</td>
</tr>
</tbody>
</table>

According to Table 2, the studies using ethnography design often focus on identifying cultural and symbolic dimensions. Another qualitative research design is “grounded theory” design, which is also called embedded theory, theory formation and sub theory etc. Grounded theory questions how social structures and processes are constructed. It is also a research strategy and data collection method in which data are systematically brought together for analysis. In this way, it is possible to discover new phenomena (Glaser and Strauss, 1967). Table 3 below presents sample studies using grounded theory design and their aims.
According to Table 3, the studies using Grounded theory design aim to find grounds for unknown theory or theories. Case study examines actual real-life research problems and phenomena in a holistic way in detail. Generally, there are various evidence and information resources for a specific research problem (Yin, 1984). Case study design is often used to find answers to “why” and “how” a phenomenon occurs. Researchers carrying out case studies generally have very limited control on events and processes, if not any. Table 4 below shows sample studies using case study design.

According to Table 4, the studies using case study design is about the analysis of a specific case. The final qualitative research design in this study is discourse analysis, which deals with information structures that change, transform and is exchanged in a specific discourse. Discourse analysts examine how language is constructed. Discourse analysis has its own rules, point of views and scientific methods. Table 5 below displays sample research using discourse analysis design and their aims.
Table 5: The studies using “discourse analysis” design and their aims

<table>
<thead>
<tr>
<th>The studies using “discourse analysis” design</th>
<th>The aim of the study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discourse designs and communication approaches used in nature of science teaching (Kaya et. al, 2016).</td>
<td>“The study uses discourse analysis in order to determine in-class discourse designs and communication approaches for the purposes of the study.” (Kaya et.al, 2016).</td>
</tr>
<tr>
<td>The Opinions of Preservice Teachers in Transition From Traditional Approach to Constructivism: A Discourse Analysis (Gür, Dilci and Arseven, 2013).</td>
<td>“In this qualitative study, it is aimed to describe preservice teachers’ ideas and assessments about their knowledge and education related to constructivism.” (Gür, Dilci and Arseven, 2013).</td>
</tr>
<tr>
<td>How do Universities Define Themselves? Discourse Analysis About University Promotional Films (Aydoğan and Karaarslan, 2017).</td>
<td>“The aim of the study is to determine how Turkish universities define themselves and the discourse they produce while designing their publicity activities.” (Aydoğan and Karaarslan, 2017).</td>
</tr>
</tbody>
</table>

Table 5 reveals that the studies using discourse analysis design aim to determine communication approaches. It is clear that the focus is on identifying the opinions and critics of participants.

The following statements list one basic difference of each design from the others:

- One distinctive characteristics of phenomenology design is that each participant in a study has experience and background knowledge about this specific research topic.
- The most significant difference of data collection procedures in an ethnographic study is the need for longer longitudinal field research by researchers who carry out observations in the research field.
- In grounded theory design, data analysis starts with data collection, while data is collected first and then analyzed in other designs.
- Research problems in case studies drive from human lives, social phenomena, institutions and individuals. Research is built on defined cases.
- Discourse analysis focuses on themes and roles expressed through language.

2.6 Sampling

In qualitative studies sampling size changes according to the following variables: scope of study, data quality, research design and use of data.

Since phenomenology design is interested in common characteristics of life experiences, data collected from several individuals reflecting such experiences are sufficient to determine basic factors. Typically, sample size of phenomenology research is between 1 and 10. Creswell (1998) suggests 5-25 participants while Morse (1994) recommends at least 6 participants.

Ethnography research examines, observes and documents the relationships and behaviors of a particular group of human beings in their natural environment. Here, researchers establish direct bonds with observed group members and try to explain behaviors through associations with cultural context. The number of participants suggested for ethnography design is between 30 and 50 (Morse, 1994).
Grounded theory design uses theoretical sampling. Researchers continue this sampling process until whole structure is represented by data and theoretical saturation is reached. Typically, grounded theory research has a sampling size ranging between 10 and 60. Morse (1994) suggests a sampling size between 30 and 50 and Creswell (1998) only 20 and 30.

Case study examines actual real life research problems in a holistic way in detail. Often, there are a large number of evidence and information resources for a particular research problem. Therefore, larger sampling size is recommended to understand variations in detail in case studies.

Discourse analysis requires different sampling groups in a specific discourse. By applying discourse analysis, it is possible to figure out how participants use and affects discourse. Sampling size depends on analytical target and data source. For instance, it is possible to use one single quotation and compare it to written documents. Alternatively, larger sampling size might be preferred to understand language variations in detail in discourse analysis.

The methods used determine sampling size in qualitative design differs from those used in quantitative ones. In a quantitative study, the size of population and sampling is between certain ranges, and these studies examine a phenomenon within specific confidence intervals. On the contrary, qualitative studies require a sampling size that is big enough to identify all important dimensions and variations. Qualitative research use theoretical saturation rather than power analysis in order to determine sample size (Strauss and Corbin, 1997). In short, data quality and long data analysis procedures are important characteristics of qualitative research. Sample size in qualitative research is much lower than in quantitative research.

2.7 Data collection
The data collection techniques used in these five design types are observation, interview and document analysis. Observation provides data about behaviors of participants in their natural environment. Interview provides information obtained from the answers and utterances of the interviewee. Document analysis is about detailed and in-depth analysis of available related documents.

Data collection procedures significantly differ for qualitative and quantitative research. In short, qualitative research might focus on non-numerical data, utterances and observations. Another important difference is the use of open-ended questions instead of questions requiring short answers.

There are several methods to collect data in qualitative research. Interview is the most common method and it has two popular forms: structured and semi-structured. It is possible to collect detailed data from participants about their experiences by using this technique. Interviewer should be equipped with some certain skills and techniques to collect valuable data (Mearns ve Thorne, 1988). If interviews are successful, valuable data might be obtained for analysis. Hill et al. (1997) suggests that interview questions should be given to interviewees in advance so that interview data quality might increase.
2.8 Analytical Methods and Coding

Analytical methods in these designs are quite similar. In the first phase, analysts assign codes to meaning units in texts during conceptualization. In the second phase called reconceptualization, analysts recombine and arrange data around themes and relationships. The third phase involves forming categories and concepts to reach conclusions (Ayres, Kavanaugh and Knafl, 2003; Morse and Field, 1995).

As for phenomenology design, certain statements are analyzed and categorized into meaningful units for study-specific phenomenon. In this design, a systematic data coding procedure is defined so that researchers may come up with some explanations (Creswell, 1998).

Ethnography observes behaviors directly and defines them accordingly. Researchers have direct relationships with participants and try to explain behaviors by associating them with cultural context. According to Hammersley and Atkinson (1995), ethnography design derives from various research methods.

In grounded theory design, data are coded in three phases: open coding (examining, conceptualizing and categorizing data), axial coding (defining a higher category based on the patterns of already defined ones) and selective coding (defining “main category” from data) (Dey, 1999; Strauss and Corbin, 1997). In this analysis type, each interview and observation is coded before it is done so that new information can be added to further comparisons.

Research problems in case studies are often about lives, social phenomena, institutions and individuals. Case studies are defined in three categories: explanatory, descriptive and exploratory case studies (Yin, 1984). Explanatory case study focuses on why and how a phenomenon occurs; it is not open to interpretations. Descriptive case study describes a phenomenon in detail in a holistic framework. Exploratory case study is a preliminary study for large scale studies and provides evidence for the necessity of further studies.

Generally speaking, discourse analysis aims to understand how people use language in certain situations. Thus, discourse analysis needs to define themes and roles expressed through language. By doing so, researcher can examine how technical language and professional jargon are used.

In a qualitative study, data is either coded or categorized under each predetermined group. Categories emerge from meanings in meaningful units. In short, category aims to identify regular patterns and similarities (Glaser and Strauss, 1967). Categories emerge based on data (Hill et al., 1997). The next step here is to categorize categories into sub categories according to regular patterns and similarities. Thus there are hierarchical and systematic categories (Rennie, 1990).

3. Conclusion and Discussion

This study presented characteristics of five qualitative design, their differences, sample sizes, data collection methods, analytical methods, and coding procedures. Studies in the field of education research were examined and their titles and aims were displayed
in tables. The study aimed to present differences among qualitative research designs by examining a number of studies using different qualitative designs. By doing so, researchers want to provide valuable information to help other researchers to choose the most suitable qualitative research design for their studies. The results of the study might help researchers choose the most suitable design for their studies. A scientific study report should include certain sections such as methodology, research design, sampling, research questions, data collection and data analysis, which are quite important to organize and develop a scientific study.

The literature review of the studies published in Turkish revealed limited number of research focusing on comparing qualitative research designs. Such studies are important to increase the number of qualitative studies and improve research designs for better. This study aims to provide a well-organized summary and comparison data about the differences and similarities among qualitative research designs. Designing a qualitative study according to different designs might lead to different results.

References

Note: In the reference section, the “*” pattern was used for comparison of the differences among qualitative research design sections studies.

*Aydın, İ. S. (2013). İki dilli türk öğrencilerin yazılı anlatım becerilerine yönelik bir durum çalışması. Electronic Turkish Studies, 8(9).
Nihan Sölpük Turhan
QUALITATIVE RESEARCH DESIGNS: WHICH ONE IS THE BEST FOR YOUR RESEARCH?


Starks, H. & Trinidad, S.B. (2007). Choose your method: a comparison of phenomenology, discourse analysis, and grounded theory. Qualitative Health Research, 17 (10), 1372-1380


Nihan Sülpiğ Turhan
QUALITATIVE RESEARCH DESIGNS: WHICH ONE IS THE BEST FOR YOUR RESEARCH?