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Research methodologies III

Research Methodologies and Scientific Communication

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Qualitative methodology

Learning objectives

- Overview of qualitative research
- When to use qualitative research
- Qualitative approaches
- Types of Qualitative Data
- Validity in Qualitative Research
- Qualtitative sampling methods
- Analyzing qualitative data

Qualitative methodology

Overview of Qualitative Methods

As we already heard there are two approaches to a research problem – **quantitative** and **qualitative** methods.

Quantitative methods are used to examine the relationship between variables with the primary goal to analyze and represent that relationship mathematically through statistical analysis. This methods seeks to **explain**.

Qualitative methods are chosen when a phenomenon has to be examined, understood and described. These methods are often used in social science and are often used to study ideas, beliefs, human behaviors and other research questions that do not involve studying the relationship between variables.
This methods seeks to **understand**.

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Overview of Qualitative Methods

Advantage of qualitative research:

- It can be used describe how people experience an issue
- It focuses on the "perceptions" of the participants which can be highly variable and influenced by other factors.

Qualitative methods are often used to study and identify intangible factors such as opinions, prejudices, values, cultural influences and social contexts just to name a few.

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Overview of Qualitative Methods

Following are examples of research questions where qualitative methods may be appropriately applied:

- How do the perceptions of online learning influence student success in an online course?
- What are the barriers encountered by elderly patients recovering from a fall?
- What factors influence the resilience of PhD candidates during her studies?
- How does the learning style of the instructor influence the students?

More information: *http://www.umsl.edu/~lindquists/qualdsgn.html*

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When to use Qualitative Methods

Before you start with your research you should ask yourself the following questions:

- What type of question am I asking?
- What type of data will I need to collect to answer the question?
- What type of results will I report?

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When to use Qualitative Methods

Coming back to the example of the lesson “quantitative research” when a researcher wanted to determine the link between income and whether or not families have health insurance. This question asks "how many" and seeks to confirm a **hypothesis**. The results will provide numerical data that can be analyzed statistically as the researcher looks for a correlation between income and health insurance. **Quantitative** methodology would best apply to this research problem.

But if a researcher is interested in exploring the **reasons** that people choose not to have health insurance should use **qualitative** methods. These are open-ended questions that will not provide results and no statistical analysis is needed.

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Qualitative Approaches

After deciding for qualitative research, the researcher has to choose the appropriate qualitative approach for the research design. The approach chosen will take into account the purpose of the research, the role of the researcher, the data collected, method of data analysis and how the results will be presented. The most five common approaches include

- Ethnographic research
- Field research
- Phenomenology
- Grounded Theory
- Case study.

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Qualitative Approaches

Ethnographic research

This approach draws from anthropology, in which an entire culture is studied by an outsider. Although ethnography was initially concerned with geographic location and ethnicity, the definition has expanded to include any organization of group, allowing for the study of a particular organization's culture. The most common ethnographic approach is to **observe** the **participants** by becoming immersed in the culture, taking extensive notes about observations and impressions.

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Qualitative Approaches

Field research

This approach offers a broader approach to qualitative research, in that the researcher will literally go into the field, to observe the group in its natural state. Therefore, field research is similar to ethnography, since the field researcher will make extensive notes based on his observations. The difference is that a field researcher will go among his subjects, while an ethnographic approach finds the researcher observing from outside the culture. The notes and data gathered can then be analyzed according to a variety of different criteria.

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Qualitative Approaches

Phenomenology

The goal of phenomenology is to understand how others view the world, and how this view may vary from commonly held views by focusing on a person's subjective interpretations of what he / she experiences.
Phenomenology is done by interviewing the subjects to learn their impressions, and is frequently used in such fields as psychology, sociology and social work.

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Qualitative Approaches

Grounded Theory

Initially developed in the 1960s, this approach attempts to develop theories about the phenomena that is being studied, but these theories must be grounded in observation. As a result, core theoretical concepts are identified while the data is being gathered. Linkages between the theoretical concepts and the data are then formed. Since each new observation can potentially lead to a new linkage, the process never really ends, and only stops when the researcher decides to conclude his study.

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Qualitative Approaches

Case Study

Case study approach presents a detailed analysis of a specific case. Unlike an ethnographic approach, which observes the entire group, a case study focuses on **one specific aspect**, such as a person, group process or activity. The processes involved in preparing a case study are interdisciplinary, so a variety of different theories and concepts can emerge when it comes to interpreting a case study.

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Qualitative Approaches

This chart summarizes the characteristics of each approach.

Further information:
https://www.sagepub.com/sites/default/files/upm-binaries/13421_Chapter4.pdf

	Narrative	Phenomenology	Grounded Theory	Ethnography	Case Study
Focus	Explores the life of an individual; tells their story	Attempts to understand or explain life experiences or a phenomena	Investigates process, action or interaction with goal of developing a theory "grounded" in observations	Describes and interprets an ethnic, cultural, or social group	Examines episodic event in a definable framework; develops in depth analysis single or multiple cases; generally explaining "how"
Data Collection	Interviews and documents	Primarily through interviews, sometimes observation	Interviews with 20-30 individuals to gather enough data	Interviews, observations, and immersion into the cultural as an active participant	Documents of the case, archives, interviews, observations, physical artifacts
Data Analysis	Stories, review of historical content, development of themes	Study and describe experiences, examine meaning and context, look for themes, classify	Open, axial, and selective *coding* used to categorize the data and describe the implications of the categories	Describe and interpret findings by analyzing data and developing themes	Develop a detailed analysis; identify themes; make assertions
Written Report Form	Detailed picture of person's life; often a chronology or biography	Report of "essence" of the experience, description of the context of the experience or phenomena	Results in a theory, theoretical model, or figure that represents the phenomena	Description of the cultural behavior of a group	In-depth study of a case that describes the case, its themes, and possible lessons learned

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Types of Qualitative Data

- Interviews
  - Structured / unstructured
- Focus Groups
- Observations
  - Direct observation / Participant observations
- Written documents
- Artifacts

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Types of Qualitative Data

Factors that should be considered when selecting a method include the objectives of the research, feasibility, time, funding, logistics, experience of research team, the type of participants and so forth.

The following YouTube video provides an overview of some of the most common types of qualitative data collection methods as well as a discussion of advantages and disadvantages of each: https://youtu.be/fEtAJzXEoFg

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Establishing Validity in Qualitative Research

Qualitative research is based on subjective, interpretive and contextual data, the findings have to be scrutinized and questioned. Therefore, it is critical to ensure the reliability and validity of their research findings. The findings must be believable, consistent, applicable and credible if they are to be useful to readers and other researchers.

Reliability refers to consistency, this means the same results have to be produced if repeated. Validity refers to accuracy or correctness of the findings.

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Establishing Validity in Qualitative Research

Qualitative research has become very popular over the last decades. Therefore, much time has been spent reviewing ways to judge the reliability and validity of qualitative research findings. The following four aspects have to be taken into consideration:

- Credibility
- Transferability
- Dependability
- Confirmability

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Qualitative sampling methods

The three main types of data collected and analyzed in qualitative research include

- in-depth interviews
- direct observation
- written documents

In order to collect these types of data for a study, a target population, community, or study area must be identified. It is not possible to collect data from everyone. Therefore, the researcher must gather data from a sample, or subset, of the population in the study.

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Qualitative sampling methods

As the goal of qualitative research is to provide in-depth understanding and it therefore targets a specific group, type of individual or event. Qualitative research focus on criterion-based sampling techniques to reach their target group. There are three main types of qualitative sampling:

- purposeful sampling
- quota sampling
- snowballing sampling

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Qualitative sampling methods

Purposeful sampling: the most common sampling method. In this type of sampling, participants are selected based on the research question. Example: In a study the researcher has to collect data from cancer patients in a particular city or county. The sample size may be predetermined or based on theoretical saturation, which is the point at which the newly collected no longer provides additional insights.

Quota sampling: participant quotas are preset prior to sampling. Typically, the researcher is attempting to gather data from a certain number of participants that meet certain characteristics that may include things such as age, sex, class, marital status, etc

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Qualitative sampling methods

Snowball sampling: In this method, the participants refer the researcher to others who may be able to potentially contribute or participate in the study. This method often helps researchers find and recruit participants that may otherwise be hard to reach.

Further information about different sample techniques:
https://www.fhi360.org/sites/default/files/media/documents/Qualitative%20Research%20Methods%20-%20A%20Data%20Collector%27s%20Field%20Guide.pdf

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Analyzing qualitative data

Qualitative data consist of words, observations, pictures, and symbols. Qualitative Data Analysis refers to the processes and procedures that are used to analyze the data and provide some level or explanation, understanding, or interpretation. Qualitative data analysis typically occurs simultaneously with the data collection. Therefore, meaning and understanding often develop slowly over time in a non-linear fashion as the project progresses. Following are five key steps that are commonly followed in qualitative data analysis:

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Analyzing qualitative data

1. Become familiar with the data, read and re-read the data, write down impressions, determine which pieces of data have value.
2. Focus the analysis
3. Categorize the data and create a framework
4. Identify patterns and make connections
5. Interpet the data and explain findings

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Analyzing qualitative data

Some of the most common approaches

Content Analysis

Narrative Analysis

Discourse Analysis

Grounded Theory

Conversation Analysis