Qualitative research methods

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Definition of qualitative research - 1 of 2

Qualitative research is a form of social inquiry that focuses on the way people interpret and make sense of their experiences and the world in which they live.

(Holloway, 1997)

Definition of qualitative research - 2 of 2

...qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them.

(Denzin, N.K. and Lincoln, Y.S., 2004)

What is qualitative research? 1 of 2

Commonly called **interpretive research**, it is an inquiry approach with emphasis on seeing the world from the **eyes of participants**.

The approach strives to **make sense of phenomena** in terms of the **meanings people bring to them**.

What is qualitative research? 2 of 2

It has a **holistic emphasis** by studying the person, group or culture in the **natural setting**.

It is a helpful process for exploring a complex research area about which little is known.

The qualitative research approach

Qualitative research methods rely heavily on 'thick' verbal descriptions related to the particular social context under investigation.

They are useful for describing/answering questions about particular, localised occurrences or contexts and the perspectives of a participant group toward events, beliefs, or practices.

Roles of the inquirer

In this investigation the inquirer:

- explores a central concept/phenomenon
- asks participants general/broad questions
- collects detailed participants' points of view in the form of words or images
- analyses and codes the data for description and themes
- interprets the meaning of the information drawing on personal reflections and past research
- writes a final report including personal biases and a flexible structure

Qualitative methods

- historical research
- ethnography
- case study
- ethology
- ethnomethodology

- grounded theory
- phenomenology
- symbolic interaction
- action research

Qualitative methods - historical research



It studies available data to investigate, understand, and interpret past events

Systematic collection & objective evaluation of data of past occurrences to test hypotheses concerning effects, causes & trends of these aimed at explaining present or anticipating future events.

Qualitative methods - ethnography



It studies cultural patterns and participants' perspectives in their natural settings

It focuses on the **sociology of meaning** through **close field observations** of sociocultural phenomena (community).

Qualitative methods - case study



It examines the characteristics of a particular entity, person or phenomenon

It is an **attempt to shed light** on a phenomena through a careful study of a **single case example** of that phenomena.

Qualitative methods - ethology



It studies animal behaviour with a particular focus on behaviour under natural conditions

It is an objective investigation of animal behavioural processes in natural settings, not necessarily restricted to a type of animal group.

Qualitative methods - ethnomethodology



It studies how people make sense of their everyday activities in a way to behave in socially accepted ways

It is an investigation of those **methods** people tend to use for describing/understanding and achieving **social order** in the natural settings they live.

Qualitative methods - grounded theory



It investigates how inductively-derived theory about a phenomenon is grounded in the data of a particular setting

It is an **inductive methodology** that involves construction of theories through a **systematic analysis of data**.

Qualitative methods - phenomenology



It considers how the experience of particular participants exhibits a unique perspective

It describes the **structures of experience** as they present themselves to consciousness, **without recourse to theory, assumption or deductions** from other disciplines.

Qualitative methods - Symbolic interaction



It investigates how people construct meaning and shared perspectives by interacting with other people

It is concerned on **the way people act** towards things according to the **meaning** of those things have for them, this being built from **social interaction and refined through interpretation**.

Qualitative methods - Action research



It is a school-based research. teacher-initiated, used to improve the practitioner's practice by doing or changing something

It is a **research led by individuals** working in a team or community of practice to enhance the ways they tackle an immediate problem or a reflective process.

Qualitative research - key elements

Researchers employing qualitative methods must focus on:

- fieldwork and spend a great deal of time in the settings being studied
- subjectivity and rely on themselves as the main instrument of data collection
- interpretation and analyse data using interpretative lenses
- expressivity and employ expressive language & voice in descriptions and explanations
- depth and seek detail of perspective via ongoing analysis

They are judged according to their trustworthiness, coherence, believability & the logic underlying their interpretations.

Qualitative research - general characteristics

- reality: data sources are real-world situations
- description: data is descriptive
- holistic approach: focus on processes & outcomes
- inductivity: data analysis uses inductive reasoning
- participants: the meaning of research finding is built from the perspective of the participants
- representativeness: generalisation depends on the number of observations

Qualitative research - core activities

- literature review
- clarification of researcher's beliefs
- selection of participants

- definition of participants'0role
- settings for data collection
- approach to data analysis
- saturation

Qualitative research - core activities - literature review

The literature review, is conducted **after** the data has been collected and analysed.

The rationale for delaying the literature review is to avoid leading the participants in the direction of what has already been discovered.

The purpose is to show how current findings fit into what is already known.

Qualitative research - core activities - clarification of researcher's beliefs

The inquirer keeps a list of **personal beliefs**, **thoughts and feelings** about a topic.

The goal is to set aside own biases and personal views on a topic (bracketing).

The purpose is **to make the investigator aware** when interpretations of the data reflect personal beliefs rather than those of the participants.

Qualitative research - core activities - selection of participants

Participants must have first-hand experience with the research topic and be able to talk about it (purposive sampling).

The investigator establishes clear rationale and criteria for sample selection.

The goal is **to produce rich descriptions of phenomenon** by those who have experienced it and not a generalisation of findings.

Qualitative research - core activities - definition of participants'0role

The participants being studied are viewed as active **informants** and not subjects.

They 'inform' the investigator about their culture.

The investigator needs to learn about the participants' cultural knowledge through on-going involvement and discussion.

Qualitative research - core activities - settings for data collection

The **collection of data** is **driven by the informant** and not by theories.

The investigator **assumes ignorance** of the participant's **experience or culture**.

Data is collected in the 'field', the **natural context** where the participant experiences life.

Investigator should be **nonintrusive** and spend a significant time in the field.

Three main data collection strategies: participant observation, in-depth interviews, focus group interview.

Qualitative research - core activities - approach to data analysis

The investigator tries to **truly understand what the data says** and tries to **bring structure**, order and meaning to vast narrative.

Data collection occurs simultaneously with data analysis, in a cyclical process: look for meaning in the data as it is gathered.

The investigator reads, re-reads, analyses, synthesises and reports on data (theoretical sampling) and cluster data with similar meaning.

Qualitative research - core activities - saturation

Refers to a situation in data analysis where **participants' descriptions** become repetitive and confirm previously collected data.

When data analysis is complete, data collection is terminated.

Methods of evaluating qualitative research

(Lincoln and Guba) proposed 4 alternate criteria for measuring qualitative research

- Credibility:confidence of findings' degree of truth
- Dependability: demonstrating that the findings are consistent and could be replicated/repeated
- Transferability: demonstrating that the findings are transferrable to & applicable in other contexts
- Confirmability: the extent to which the findings have been shaped by informants and not by the investigator's interest/bias (degree of neutrality)

Methods of evaluating qualitative research - credibility

Credibility refers to *accuracy*.

Goal: making the descriptions plausible and recognised by informants

Methods for enhancing credibility:

- significant time in the field with repeated observations and interaction with the informants
- different data sources, methods, data types
- conducting member checks by involving other investigators in the study

Methods of evaluating qualitative research - dependability

Dependability refers to the *stability* and detectability of the *changes in data* over time and conditions.

Goal: determine the extent to which *another investigator*, with similar training and rapport with participants, *would make the same observations*.

Method for enhancing dependability:

 audit trail: it involves examining research process, documenting the raw data generated, and assessing method of data analysis

Methods of evaluating qualitative research - Transferability

Transferability refers to the *generalizability* of the findings to other settings, populations, and contexts.

Goal: writing a *report* in a way that the *reader* can easily *assess* transferability

Method for enhancing Transferability:

- providing enough details of the findings
- iterating the presentation of the findings to enhance readability

Lack of transferability is viewed as a weakness of qualitative methods

Methods of evaluating qualitative research - Confirmability

Confirmability refers to the *objectivity* of the data.

Goal: making *another investigator agree* about the *meanings* emerged from data & assigned to findings

Method for enhancing Transferability:

 audit trail: the researcher explicates how personal biases may have come into play

Qualitative research - advantages

Focus on the whole of the **human experience** and the meanings ascribed to them by participants.

They provide the investigator with **deep insights** that would not be possible using quantitative methods.

The major strength of qualitative work is the **validity** of the data it produces.

Qualitative research - limitations

Major limitation is its perceived lack of objectivity and **generalizability**.

Researchers become the research tools and may **ack objectivity**.

Suggested readings

- Holloway, I. (1997). Basic Concepts for Qualitative Research. (Oxford. Blackwell Science)
- Denzin, NK and Lincoln, YS. (1994). Introduction: Entering the field of qualitative research. In NK Denzin and YS Lincoln (eds.) Handbook of Qualitative Research. pp. 1-18. (Thousand Oaks: Sage)
- Creswell, J. W. (1998). Qualitative inquiry and research design:
 Choosing among five traditions.)Thousand Oaks, CA SAGE Publications)
- Lincoln, YS. & Guba, EG. (1985). Naturalistic Inquiry. (Newbury Park, CA: Sage Publications)