

Unit Two: Introduction to Research Approaches

Research Methodology
Quantitative VS Qualitative Research

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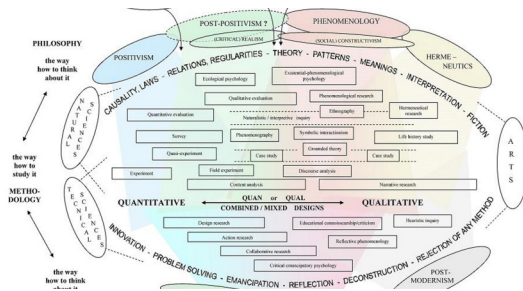
Objectives

By the end of this lecture, students will be able to:

- Understand the purposes of quantitative and qualitative research.
- Recognise the terminology used to describe the differences between both traditions.

Introduction

Generating knowledge about the social world is a common goal in quantitative and qualitative research, and this shared emphasis frequently leads to comparing the two research traditions. Some scholars argue that a better understanding of the value of quantitative research may be gained by comparing it to qualitative research and analysing the differences between the two approaches. Quantitative and qualitative researchers use different methods and focus on different aspects of a problem while doing their research (Burrell & Gross, 2017). This



Quantitative Research

I

"Quantitative methodology is the dominant research framework in the social sciences. It refers to a set of strategies, techniques and assumptions used to study psychological, social and economic processes through the exploration of numeric patterns. Quantitative research gathers a range of numeric data. Some of the numeric data is intrinsically quantitative (e.g. personal income), while in other cases the numeric structure is imposed (e.g. 'On a scale from 1 to 10, how depressed did you feel last week?'). The collection of quantitative information allows researchers to conduct simple to extremely sophisticated statistical analyses that aggregate the data (e.g. averages, percentages), show relationships among the data (e.g. 'Students with lower grade point averages tend to score lower on a depression scale') or compare across aggregated data (e.g. the USA has a higher gross domestic product than Spain) (Coghlan & Brydon-Miller, 2014, p.2)."

1. What is Quantitative Research?

"In the scientific paradigm, quantitative research involves the systematic investigation of observable phenomena in order to explain and predict behaviors, often with the goal to identify patterns of behavior. Research in the quantitative paradigm assumes the existence of one single reality and that researchers can conduct objective, value-neutral research within this worldview. Precise measurement is important in this paradigm because it connects scientific observation to the explanation of differences between or relationships among variables. The data that comes from quantitative research are numerical in form and often take the form of explaining the frequency, degree, value, and/or intensity of a variable (Eden, 2017, p.2)"

2. Purpose of Quantitative Research

According to Burrell and Gross (2017), quantitative research can be used to fulfil various objectives:

- Using scientific inquiry, quantitative research relies on data that are **observed or measured** to examine questions about the sample population.
- The results of quantitative research specify an **explanation** into what is and is not important, or influencing, a particular population.
- Quantitative research also provides answers to questions about **the frequency** of a phenomenon, or **the magnitude** to which the phenomenon **affects** the sample population.

For further reading on this check Fundamentals of quantitative research by Sukamolson (2007) (Find the full reference on References List).

Qualitative Research



1. What is Qualitative Research?

"Qualitative research is a process of naturalistic inquiry that seeks an in-depth understanding of social phenomena within their natural setting. It focuses on the "why" rather than the "what" of social phenomena and relies on the direct experiences of human beings as meaning-making agents in their every day lives. Rather than by logical and statistical procedures, qualitative researchers use multiple systems of inquiry for the study of human phenomena including biography, case study, historical analysis, discourse analysis, ethnography, grounded theory, and phenomenology (University of Utah College of Nursing, n.d)"

2. Purpose of Qualitative Research

As Leeman and Novak put it (2017): Whether the research is interpretive or critical in nature (those being the dominant forms of qualitative inquiry),

the overarching goal of collecting and examining qualitative data is to better understand the meanings held by participants, and to dig into the processes, rules, and categories that their meaning management seems to follow and fall into (P.2)

Qualitative research holds knowledge as subjective and must be interpreted, as we have seen in class through the famous example given by the anthropologist Clifford Geertz about the act of winking. He suggests that if someone were to wink, we would not just say they moved their eye. Instead, we will more likely make sense of the act by attaching meanings.



Differences between Quant and Qual Research



	Qualitative Inquiry	Quantitative Inquiry
Goals	<ul style="list-style-type: none"> - seeks to build an understanding of phenomena (i.e. human behaviour, cultural or social organization) - often focused on meaning (i.e. how do people make sense of their lives, experiences, and their understanding of the world?) - may be descriptive: the research describes complex phenomena such as: social or cultural dynamics, individual perception 	<ul style="list-style-type: none"> - seeks explanation or causation
Research Question	<ul style="list-style-type: none"> - Qualitative inquiry is often used for exploratory questions, such as How? or Why? questions. Example: How is bereavement experienced differently by mothers and fathers? 	<ul style="list-style-type: none"> - Quantitative research aims to be more conclusive and pertain to larger populations, answering questions such as What? When? Where? Example: What is the relation between bereavement and clinical depression?

<p>Data</p>	<ul style="list-style-type: none"> - may be comprised of words, behaviors, images - the goal is data that can enhance the understanding of a phenomenon 	<ul style="list-style-type: none"> - can be manipulated numerically - the goal is precise, objective, measurable data that can be analyzed with statistical procedures
<p>Design</p>	<ul style="list-style-type: none"> - Because the goal is exploratory, the researcher often may only know roughly what they are looking for. Thus, the design of the project may evolve as the project is in progress in order to ensure the flexibility needed to provide a thorough understanding of the phenomenon in question 	<ul style="list-style-type: none"> - A central tenet of quantitative research is the strictly controlled research design in which researchers clearly specify in advance which data they will measure, and the procedure that will be used to obtain the data
<p>Data Collection Instruments</p>	<ul style="list-style-type: none"> - researchers are themselves instruments for data collection, via methods such as in-depth interviewing or participant observation. Data are thus mediated through a human instrument - data often collected 'in the field': the researcher observes or records behavior or interviews the participants in their natural setting (e.g. a clinic, the family home) 	<ul style="list-style-type: none"> - tools are employed to collect numerical data (e.g., surveys, questionnaires or equipment) - research environment is often a controlled representation of reality

Informant Selection	<ul style="list-style-type: none"> - usually collected from small non-random samples (e.g., purposive samples, convenience samples, snow-balled samples) - not 'measurable' in a quantifiable or mathematical way 	<ul style="list-style-type: none"> - the aim is ensure that a sample is representative of the population from which it is drawn - gold standard is a random sample
Analysis	<ul style="list-style-type: none"> - often inductive: the researcher builds abstractions, concepts, hypotheses, and theories from the data gathered - often relies on the categorization of data (words, phrases, concepts) into patterns - sometimes this data will then be embedded in larger cultural or social observations and analyses - Often complexity and a plurality of voices is sought 	<ul style="list-style-type: none"> - often deductive: precise measurement, mathematical formula, testing hypotheses
Results	<ul style="list-style-type: none"> - The goal of qualitative research is to understand participants' own perspectives as embedded in their social context - contextually based and thus do not seek generalizability in the same sense as quantitative research 	<ul style="list-style-type: none"> - Goal is prediction, generalizability, causality

Source: McGill Qualitative Health Research Group. (n.d.). Qualitative or quantitative research? Retrieved from <https://www.mcgill.ca/mqhr/resources/what-difference-between-qualitative-and-quantitative-research>

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Advice

This handout goes hand in hand with the slides presented during the face-to-face session. In addition, it can be complemented by class discussions, notes, and the supporting resources offered online.