Part 1: Research Fundamentals
Module Three: Research Approaches and Methodologies
Learning Outcomes

At the completion of this module, you will be able to:

- Compare the overall goal of quantitative vs. qualitative research
- Differentiate between quantitative and qualitative research approaches
- Explore data collection methodologies for quantitative and qualitative research approaches
Quantitative Research

Quantitative Research is interested in prediction and manipulation. It is generally concerned with topics where there is enough known about a subject to design an experiment.

Data may include:

- Numerical data (e.g. # participants)
- Non-numerical data (e.g. descriptive adjectives used by participants to describe their experience)
Qualitative Research

Qualitative Research is interested in discovering underlying meanings and patterns of relationships. It allows researchers to observe actions in their natural habitat. Qualitative researchers seek to describe, understand, connect or relate but avoid external control or manipulation over the setting.

Qualitative research is undertaken when little is known about a phenomenon. The researcher is often immersed in the setting and in close contact with the participants.
The Quantitative Researcher

- Looks for cause and effect relationships
- Uses strict protocols to plan a study or experiment
- Follows strict protocols to test ideas
- Looks for relationships among phenomena
- Carefully controls his/her own beliefs and biases
- Controls conditions to minimize bias
- Gathers empirical evidence (objective observations)
- Uses formal instruments to collect data
- Analyses data using statistical methods
- Looks at findings for degree of generalizability
The Qualitative Researcher

The Qualitative Researcher:

- Often constructs experiments/study with the participants
- Uses procedures that are flexible and evolving as the study proceeds
- Minimizes distance with participants
- Participates and interacts
- Develops knowledge in relationship to the research experience
- Collects and analyses data concurrently (using narrative and subjective materials)
- Visits and re-visits data in the on-going data analysis and interpretation
- Provides rich, in-depth data for understanding complex relationships
Can you do both?

Is it possible to conduct research using both quantitative and qualitative approaches and methods? If so, what are examples of research in your area of study?
Quantitative Research Designs

A: Non-Experimental Designs are used for research problems that cannot be addressed with an experimental design because the independent variable cannot be manipulated, or for questions in which little is known about the phenomenon and where the purpose is descriptive:

- There is little control through the quality of measurement (e.g. surveys) and sampling (e.g. the way in which subjects are selected to participate in the study)
- Can be correlational or describe relationships or connections between variables
- Can be cross-sectional or longitudinal
B: Quasi-experimental designs control the independent variable (manipulates it) but will lack either:

- A control group or
- Random assignment (randomization)
Quantitative Research Designs

C: Experimental Designs include:

- Manipulation of an intervention (the independent variable)
- Random assignment of subjects to groups (randomization)
- A control group

Experimental designs:

- Exert the greatest amount of control
- Are usually longitudinal with at least 2 time points of measurement
Qualitative Research Designs

Qualitative Research Designs include:

- Phenomenology
- Ethnology
- Grounded Theory
A: Phenomenology

- Originated in the field of psychology
- Seeks to discover and develop understanding of experiences as perceived by those living the experience
- Seeks to avoid external control by going as directly as possible to those who have lived or are living the experience being studied
- Involves identifying the people who are living or have lived the experience, and seeking their perceptions, usually through structured interviews
- Seeks to discover essential themes in the experience of the phenomenon
- Supports seeking participants who are both currently experiencing the phenomenon of interest and those who have already experienced it to get a breadth of perceptions of experience
- Time is not necessarily a major factor, except as participants experience it
- Neither length of time for collecting data nor number of participants is defined before the study starts
- Data are collected until all information is redundant of previously collected data – i.e. saturation
- Neither limits nor criteria are placed on who can be a participant, other than related to participants’ ability to communicate about the experience
B: Ethnography

- Originated in the discipline of anthropology
- Purpose is for the researcher to participate or to immerse himself in a culture to describe the phenomenon within the context of that culture
- Only way to know a culture is to get both an insider’s view and an outsider’s view
- Controlling the environment or aspects of the study is not part of this method
- Researcher tries to become part of the culture studied
- Long time frames are the norm
- Data is collected “as it happens” and as opportunities present themselves
- Researcher may seek specific opportunities to interact within the culture
- Researcher collects and analyzes data simultaneously (in process)
- Researcher uses knowledge gained to guide additional data collection
Qualitative Research Designs

C: Grounded Theory

- Originated in the field of sociology
- Best used to study social processes and structures
- Researcher studies interactions to understand and recognize links between ideas and concepts
- Functions to DEVELOP THEORIES
- “grounded” refers to the idea that the theory developed is based on participants’ reality rather than on theoretical speculation
- Takes time to study because the focus is often on processes or change
- Interviews and careful observation of interactions and processes are used to collect data