

Lecture 03: Quantitative and Qualitative Methods

The design of any study begins with the selection of a topic and a research methodology. These initial decisions reflect assumptions about the social world, how science should be conducted, and what constitutes legitimate problems, solutions, and criteria of "proof." Different approaches to research encompass both theory and method. Two general approaches are widely recognized: **quantitative research** and **qualitative research**.

1. **Quantitative research** is an inquiry into an identified problem, based on testing a theory, measured with numbers, and analysed using statistical techniques. The goal of quantitative methods is to determine whether the predictive generalizations of a theory hold true.

By contrast, a study based upon a

2. **Qualitative inquiry** has the goal of understanding a social or human problem from multiple perspectives. Qualitative research is conducted in a natural setting and involves a process of building a complex and holistic picture of the phenomenon of interest.

The selection of which research approach is appropriate in a given study should be based upon the problem of interest, resources available, the skills and training of the researcher, and the audience for the research. Although some research may incorporate both quantitative and qualitative methodologies, in their 'pure' form there are significant differences in the assumptions underlying these approaches, as well as in the data collection and analysis procedures used.

3. Assumptions Underlying Quantitative Methods

- Reality is objective, "out there," and independent of the researcher. Therefore, reality is something that can be studied objectively.
- The researcher should remain distant and independent of what is being researched.
- The values of the researcher do not interfere with, or become part of, the research (research is value-free.)

-Research is based primarily on deductive forms of logic and theories and hypotheses are tested in a cause-effect order.

-The goal is to develop generalizations that contribute to theory that enable the researcher to predict, explain, and understand some phenomenon.

4. Assumptions Underlying Qualitative Methods

-Multiple realities exist in any given situation (the researcher's, those of the individuals being investigated, and the reader or audience interpreting the results.)

-These multiple perspectives, or voices, of informants (i.e., subjects) are included in the study.

-The researcher interacts with those he studies and actively works to minimize the distance between the researcher and those being researched.

-The researcher explicitly recognizes and acknowledges the value-laden nature of the research.

-Research is context-bound.

-Research is based on inductive forms of logic.

-Categories of interest emerge from informants (subjects), rather than being identified a priori by the researcher.

-The goal is to uncover and discover patterns or theories that help explain a phenomenon of interest.

and determinations of accuracy involve verifying the information with informants or "triangulating" among different sources of information (e.g., collecting information from different sources).

5. Why is the distinction between quantitative and qualitative research important?

It is important to be able to identify and understand the research approach underlying any given study because the selection of a research approach influences the questions asked, the methods chosen, the statistical analyses used, the inferences made, and the ultimate goal of the research. When critically reviewing scientific research, the questions asked, and the answers given, will differ depending upon whether the research is quantitative or qualitative.