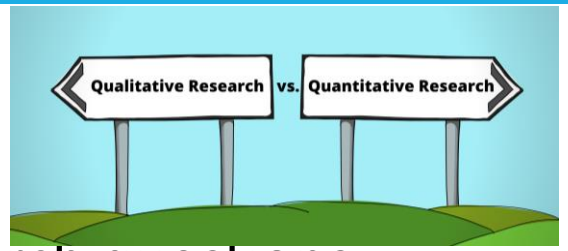
RESEARCH DESIGN

Survey Analysis

The Research Design

- Where plans are formulated in terms of sampling design, method of data collection and data analysis procedure for the research
- The “structural” framework of research methods and techniques chosen by a researcher to conduct a study.
- A strategy for answering your research question using empirical data. Creating a research design means making decisions about:
  - Your overall research objectives and approach
  - The type of research design you’ll use
  - Your sampling methods or criteria for selecting subjects
  - Your data collection methods
  - The procedures you’ll follow to collect data
  - Your data analysis methods

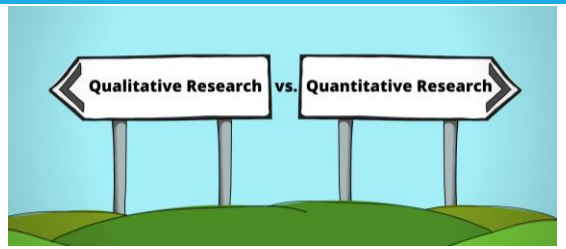
Approaches in Research Design



- The decision of which approach to use in order to answer your research questions

Qualitative Approach	Quantitative Approach
• Understand subjective experiences, beliefs, and concepts • Concentrate in developing a theory or hypothesis • Gain in-depth knowledge of a specific context or culture • Explore under-researched problems and generate new ideas • Mostly represented with words • Only a few people are required to answer • Open-ended inquiries	• Test hypotheses about relationships between variables • Statistical analysis were used to examine the situation: measure variables and describe frequencies, averages, and correlations • Numbers, graphs and tables are the most common forms of expression • Test the effectiveness of a new treatment, program or product • Needs large number of people to participate • Closed-ended questions

Approaches in Research Design



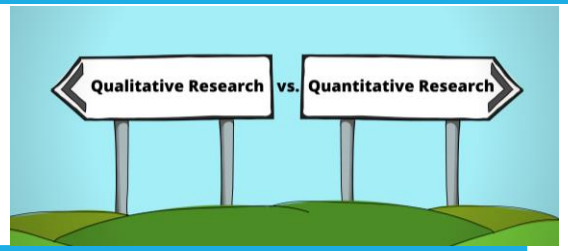
Mixed Method

There are different types of mixed methods research designs. The differences between them relate to the aim of the research, the timing of the data collection, and the importance given to each data type.

1. Convergent parallel

In a convergent parallel design, you collect quantitative and qualitative data at the same time and analyze them separately. After both analyses are complete, compare your results to draw overall conclusions.

Approaches in Research Design



Mixed Method

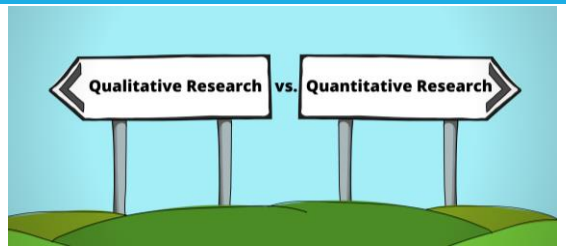
2. Embedded

Quantitative and qualitative data are collected and analyzed at the same time, but within a larger quantitative or qualitative design. One type of data is secondary to the other. This is a good approach to take if you have limited time or resources. You can use an embedded design to strengthen or supplement your conclusions from the primary type of research design.

3. Explanatory sequential

Quantitative data collection and analysis occurs first, followed by qualitative data collection and analysis. This is used when qualitative data will explain and contextualize your quantitative findings.

Approaches in Research Design



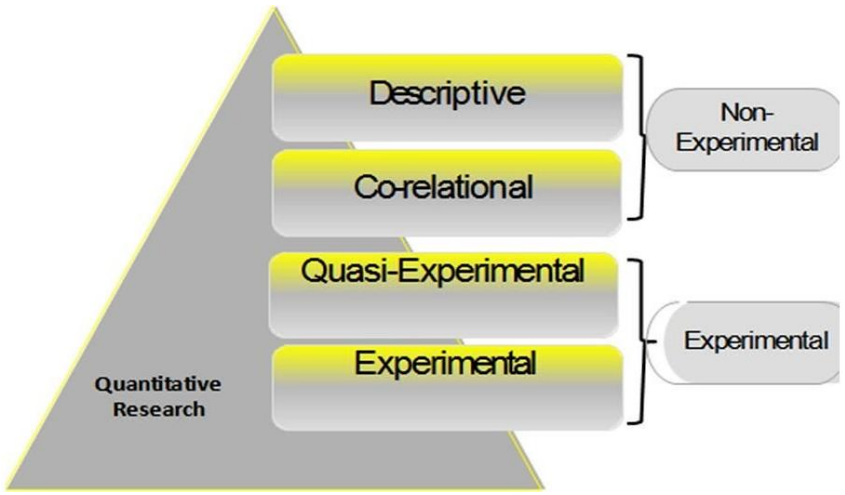
Mixed Method

4. Exploratory sequential

Qualitative data collection and analysis occurs first, followed by quantitative data collection and analysis. This is to first explore initial questions and develop hypotheses. Then you can use the quantitative data to test or confirm your qualitative findings.

Types of Research Design

- Types of Quantitative Research Designs:
  a. Descriptive – used to describe a certain condition or phenomenon in a given sample using quantifiable descriptors such as frequency count, percentages, *likert* scale, mean and standard deviation



  b. Correlational – used to seek significant association between identified variables.
  c. Experimental – considers randomization, manipulation, intervention and controlled environment
  d. Quasi-experimental - Similar to experimental design, but without random assignment; often involves comparing the outcomes of pre-existing groups; often conducted in a natural environment

Types of Research Design

- Types of Qualitative Research Designs:
  a. Case study - Detailed study of a specific subject (e.g. a place, event, organization, etc); focuses on gaining a holistic understanding of the case.
  b. Ethnography - Detailed study of the culture (or norm) of a specific community or group; data is collected by extended immersion and close observation; focuses on describing and interpreting beliefs, conventions, social dynamics, etc.
  c. Grounded theory - Aims to develop a theory inductively by systematically analyzing qualitative data.

Types of Research Design

- Types of Qualitative Research Designs:
  d. Phenomenology - Aims to understand a phenomenon or event by describing participants' lived experiences.
  e. Action Research - Using quantitative and qualitative data for individuals to study problems that they face in their setting
  f. Historical studies – systematic collection and objective evaluation of data related to past occurrences

Research Design Types by Grouping

- Cohort study - A cohort study is a sort of longitudinal research that takes a cross-section of a cohort (a group of people who have a common trait) at predetermined time intervals. It's a form of panel research in which all of the people in the group have something in common.
- Cross-sectional study - In social science, medical research, and biology, a cross-sectional study is prevalent. This study approach examines data from a population or a representative sample of the population at a specific point in time.
- Longitudinal study - A longitudinal study is a type of study in which the same variables are observed repeatedly over a short or long period of time. It's usually observational research, although it can also take the form of a long-term randomized experiment.
- Cross-sequential study - Cross-sequential research design combines longitudinal and cross-sectional research methods, with the goal of compensating for some of the flaws inherent in both.

Qualities of a Good Research Design

1. Population and samples are specifically identified
2. Valid statistical techniques.
3. Methods of data collection is clearly discussed.
4. In-line with the general objectives of the research.
5. Specified measurements of variables to be considered.

References

1. Philippine Statistical Research and Training Institute (PSRTI) Training Module on Research and Basic Statistics
2. Bersales, Lisa Grace (2003). Research: Definition, Principles, Classifications. First Research-based Regional Training Course UNSIAP
3. https://www.questionpro.com/blog/research-design/
4. https://www.scribbr.com/methodology/research-design/
5. https://leverageedu.com/blog/research-design/
6. https://www.scribbr.com/methodology/mixed-methods-research/

Thank you

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