QUALITATIVE AND QUANTITATIVE RESEARCH METHODS

Qualitative and Quantitative Research

Quantitative Research

- A type of educational research in which the researcher decides what to study.

Qualitative Research

- A type of educational research in which the researcher relies on the views of the participants.

Qualitative and Quantitative Research

Quantitative Research

- Quantitative research looks at patterns in numeric data.
- Quantitative research gathers data in numerical form which can be put into categories or measured in units of measurement.
- This type of data can be used to construct graphs and tables.

Qualitative Research

- Qualitative research gathers information that is not in numerical form.
- Qualitative data is typically descriptive data.
- When you think of qualitative data, Think of the word 'quality' - because in qualitative analysis we are taking a deep quality look at a phenomenon.

Qualitative and Quantitative Research

Quantitative Research Examples

- Application forms
- Closed ended Questionnaires
- IQ Tests
- Measurements

Qualitative Research Examples

- Diary accounts
- Document review
- Open ended Questionnaires
- Unstructured interviews
- Unstructured observations

Qualitative versus Quantitative

Purpose

Quali: To understand & interpret social interactions.

Quanti: To test hypotheses, look at cause & effect, & make predictions.

Qualitative versus Quantitative

Group Studied

Quali : Smaller & not randomly selected.

Quanti : Larger & randomly selected.

Qualitative versus Quantitative

V a r i a b l e s

Q u a l i : Study of the whole, not variables.

Q u a n t i : Specific variables studied.

Qualitative versus Quantitative

Type of Data Collected

Quali: Words, images, or objects.

Quanti: Numbers and statistics.

Qualitative versus Quantitative

Forms of Data Collected

Quali: Qualitative data such as open-ended responses, interviews, participant observations, field notes, & reflections.

Quanti: Quantitative data based on precise measurements using structured & validated data-collection instruments.

Qualitative versus Quantitative

Role of the Researcher

Quali: Researcher & their biases may be known to participants in the study, & participant characteristics may be known to the researcher.

Quanti: Researcher & their biases are not known to participants in the study, & participant characteristics are deliberately hidden from the researcher (double blind studies).

Qualitative versus Quantitative

Results

Quali: Particular or specialized findings that is less generalizable.

Quanti: Generalizable findings that can be applied to other populations.

Qualitative versus Quantitative

Final Report

Quali: Narrative report with contextual description & direct quotations from research participants.

Quanti: Statistical report with correlations, comparisons of means, & statistical significance of findings.

Qualitative versus Quantitative

What is to be observed?

Quali: ¤ Qualities ¤ Behavior ¤ Complexities

Quanti: ¤ Quantities ¤ Scales ¤ Trends

Qualitative versus Quantitative

What are the type of questions asked?

Quali : ¤ Why? ¤ How?

Quanti : ¤ How many? ¤ What?

Qualitative versus Quantitative

How are the questions are put (methods)?

Quali: ¤ Document review ¤ Participant observations ¤ Interviews ¤ Focus group ¤ Workshops

Quanti: ¤ Application forms ¤ Questionnaires ¤ IQ Tests ¤ Measurements

Qualitative versus Quantitative

How the results are interpreted (analysis)?

Quali: ¤ Explore, explain, understand ¤ Narrative ¤ Particular ¤ Mainly inductive reasoning: conclusions can be drawn from the evidence no matter how incomplete

Quanti: ¤ Describe, measure, predict ¤ Statistical tables and chart ¤ Universal ¤ Mainly deductive reasoning: everything is known before conclusions can be drawn

What are the characteristics of each?

Quantitative Research

- Ask specific narrow Qs.
- Collects data from participants generally in numerical form.
- Analyzes numbers using statistics.
- Conducts the inquiry in unbiased, objective manner.

Qualitative Research

- Ask broad, general Qs.
- Collects data consisting largely of words (text) or image (picture).
- Descriptions and analysis of words for themes.
- Conducts inquiry in subjective, biased manner.

What are the differences between the two in Various Research steps?

Identifying a research problem.

Quantitative Research

- Description of trends or an explanation of variables' relationships.

Qualitative Research

- An exploration in which little is known about the problem.
- A detailed understanding of a central phenomenon.

Reviewing the literature

Quantitative Research

- Major role through suggesting the RQ to be asked.
- Justifying the R problem and the need for the direction of the study.

Qualitative Research

- Minor role in suggesting SRQ to be asked.
- Justify the importance of studying the research problem.

Specifying a purpose for the research

Quantitative Research

- Be specific and narrow.
- Seek measurable, observable data on variables.

Qualitative Research

- Be general and broad.
- Seek to understand the participants' experiences.

Collecting data

Quantitative Research

- Collecting data using instruments with preset Qs and Res.
- Collecting info from a large number of individuals.

Qualitative Research

- Collecting data using forms with general, emerging Qs to permit the participant to generate responses.
- Gathering word(text) or image(picture) data.
- Collecting info from a small number of individuals or sites.

Analyzing and Interpreting data

Quantitative Research

- Data analysis tends to consist of statistical analysis.
- Describing trends, comparing group differences, relating variables.
- Interpretation tends to consist of comparing results with prior predictions and past research.

Qualitative Research

- Text analysis.
- A description of themes.
- Stating the larger meaning of findings.

Reporting and Evaluating research

Quantitative Research

- Tend to use standard fixed structure and evaluation criteria.
- Take an objective and unbiased approach.

Qualitative Research

- A flexible, emerging structure and evaluative criteria.
- Take a subjective and biased approach.

Thank you for the attention