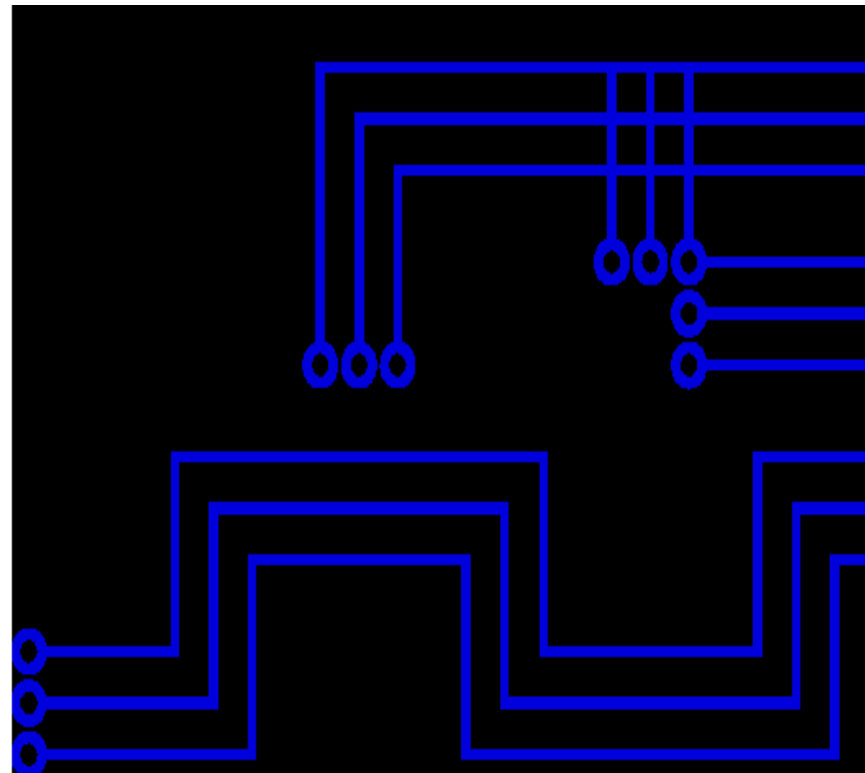


# Qualitative and Quantitative Research

© Leonard Wallezký



# 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.

# 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	Groups studied	Variables	Type of collected data
Forms of collected data	Results	Role of the researcher	Final Report
What is to be observed?	What are the type of questions asked?	How are the questions are put?	How are the results interpreted?

# Qualitative versus Quantitative

## Purpose

### Qualitative

To understand & interpret social interactions.

### Quantitative

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

# Qualitative versus Quantitative

## Group Studied

Qualitative

Smaller & not  
randomly selected.

Quantitative

Larger & randomly  
selected.

# Qualitative versus Quantitative

## Variables

Qualitative

Study of the whole,  
not variables.

Quantitative

Specific variables  
studied.



# Qualitative versus Quantitative

## Type of Data Collected

Qualitative

Words, images,  
or objects.

Quantitative

Numbers and  
statistics.

# Qualitative versus Quantitative

## Forms of Data Collected

### Qualitative

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

### Quantitative

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

# Qualitative versus Quantitative

## Role of the Researcher

### Qualitative

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

### Quantitative

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

### Qualitative

Particular or specialized findings that is less generalizable.

### Quantitative

Generalizable findings that can be applied to other populations.

# Qualitative versus Quantitative

## Final Report

### Qualitative

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

### Quantitative

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

# Qualitative versus Quantitative

What is to be observed?

Qualitative

Quantitative

Qualities

Behavior

Complexities

Quantities

Scales

Trends

# Qualitative versus Quantitative

What are the type of questions asked?

Qualitative

Quantitative

Why?

How?

How  
many?

What?

# Qualitative versus Quantitative

How are the questions are put?

Qualitative

Quantitative

Document  
review

Participant  
observations

Interviews

Focus group

Workshops

Application  
forms

Questionnaires

IQ Tests

Measurements



# Qualitative versus Quantitative

## How the results are interpreted?

### Qualitative

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

### Quantitative

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

# Identifying a research problem.

## Quantitative

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

## Qualitative

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

# Reviewing the literature

## Quantitative

- Major role through suggesting the reporting questionnaire to be asked.
- Justifying the responses problem and the need for the direction of the study.

## Qualitative

- Minor role in suggesting self regulating questionnaire (SRQ) to be asked.
- Justify the importance of studying the research problem.

# Specifying a purpose for the research

## Quantitative

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

## Qualitative

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

# Collecting data

## Quantitative

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

## Qualitative

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

# Analysing and Interpreting data

## Quantitative

- 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

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

# Reporting and Evaluating research

## Quantitative

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

## Qualitative

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

# What are the characteristics of each?

## Quantitative

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

## Qualitative

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



# Conclusion

## Qualitative and quantitative research differences

- Main aspects and features

## When to use particular methods