

Definition of Qualitative and Quantitative Research Designs

1. Qualitative Research Design

- A research approach that focuses on exploring and understanding human experiences, behaviors, and social phenomena in-depth. It relies on non-numeric data such as interviews, observations, and text analysis.
- Example: Studying teachers' perceptions of online learning.

2. Quantitative Research Design

- A research approach that focuses on measuring and analyzing numerical data to identify patterns, relationships, and cause-effect connections. It uses structured tools like surveys, experiments, and statistical analysis.
 - Example: Measuring the effect of a new teaching method on students' test scores.
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1. Qualitative Research Example

Research Topic: *Teachers' Experiences with Online Learning*

- **Objective:** To explore how teachers perceive and adapt to online learning.
- **Method:** Conduct in-depth interviews with 10 teachers.
- **Data Collection:** Open-ended questions about challenges, benefits, and opinions on online teaching.
- **Analysis:** Thematic analysis to identify common patterns, such as "lack of student engagement" or "difficulty in using technology."
- **Outcome:** A detailed understanding of teachers' feelings, attitudes, and strategies for online teaching.

2. Quantitative Research Example

Research Topic: *Effect of Online Learning on Students' Exam Performance*

- **Objective:** To measure the impact of online learning on student grades.
- **Method:** Conduct a survey and collect test scores from 200 students.
- **Data Collection:** Compare students' average scores before and after adopting online learning.
- **Analysis:** Use statistical methods (e.g., mean, t-test) to determine if there is a significant change.
- **Outcome:** A numerical result showing whether online learning improves or worsens exam performance.