



# Research Methods

## RMS 311

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# Research Methodology, Approach, and Method



# Research Methodology, Approach, and Method



## Research Methodology

Is about how a researcher systematically designs a study to ensure valid and reliable results that address the research objectives



## Research Approach

It defines the path the research will take



## Research Methods

Specific tools, procedures, and techniques employed to collect and analyze data with the chosen research approach



# Research Methodology, Approach, and Method

## Important terminologies

- **Research Methodology** – is the process of doing research
  - Is about how a researcher systematically designs a study to ensure valid and reliable results that address the research objectives.
- **Research Approach** – It is the broader concept that guides the overall design and direction of the research.
  - It defines the path the research will take
- **Research Methods** – refers to tools that researchers use to conduct research
  - Specific tools, procedures, and techniques employed to collect and analyze data with the chosen research approach.



# TYPES OF RESEARCH APPROACH

Basics types of research approaches

1. Quantitative research approach
2. Qualitative research approach
3. Mixed-methods



# TYPES OF RESEARCH APPROACH

## Quantitative Approach

- ❑ Also known as deductive approach which involves generation of data in quantitative form.
- ❑ A feature of this approach toward research is that the collection and analysis of information is conducted utilizing mathematical-based methods.
- ❑ Focuses on measuring the quantity or amount of a phenomenon
  - Example: what percentage of the population of area X has a particular problem?



# TYPES OF RESEARCH APPROACH

## Qualitative Approach

- Also known as inductive research- Is an approach that focuses on quality aspects of a phenomenon
- It studies and understands how people or groups view and make sense of a particular social or human problem.
- It involves exploring people's perspectives, beliefs, or experiences to get a clearer picture of the problem from their point of view.
- Examples
  - Why most software teams do not practice code review
  - What makes good quality mobile internet services, from a consumer perspective?



# TYPES OF RESEARCH APPROACH

## Mixed-Methods Approach

- Type of research whereby a researcher or team of researchers combine elements of qualitative and quantitative approaches (e.g., use of qualitative and quantitative)



# ASSIGNMENT

## ASSIGNMENT (Group assignment)

Show differences between the following

1. Qualitative and Quantitative
2. Descriptive and Analytical Research
3. Fundamental (Basic/Pure) and Applied Research
4. Conceptual and Empirical Research



# RESEARCH METHODS

Quantitative methods/ procedures

## 1. Survey

- Questionnaire- involves closed-ended questions
  - Example
    - Do you exercise regularly? (Yes/No)
    - How satisfied are you with our service?
      - A) Very satisfied
      - B) Satisfied
      - C) Neutral
      - D) Dissatisfied
      - E) Very dissatisfied



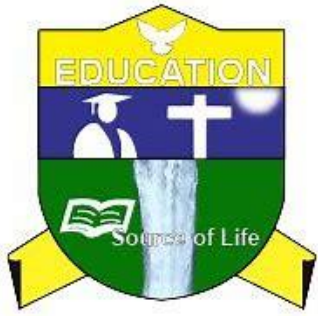
# RESEARCH METHODS

Quantitative methods/ procedures

**2. Experimental** - This involves conducting controlled experiments to test hypotheses or observe outcomes under specific conditions.

**3. Simulation** - This involves creating virtual models of real-world systems or phenomena to study their behavior without direct experimentation.

Qualitative methods/procedures



# RESEARCH METHODS

Qualitative methods/procedures

## 1. Interviews

- Open-ended interview questions
- Semi-structured interviews
- Focus group discussions

## 2. Observation

A method of collecting data by systematically watching and recording behaviors, events, or other phenomena.



# RESEARCH METHODS

Qualitative methods/ procedures

**2. Observation-** A method of collecting data by systematically watching and recording behaviors, events, or other phenomena.

- i. **Participant observation** - The researcher actively engages with the group or environment they are observing.
  - **Example:** A researcher joining a group to study its culture and practices from within.
  
- ii. **Non-participant / direct observation** - The researcher observes without interacting or interfering with the subjects.
  - **Example:** Watching students in a classroom to assess teaching methods.



# RESEARCH METHODS

Qualitative methods/ procedures

Go and study about Ethnography method



Thank you