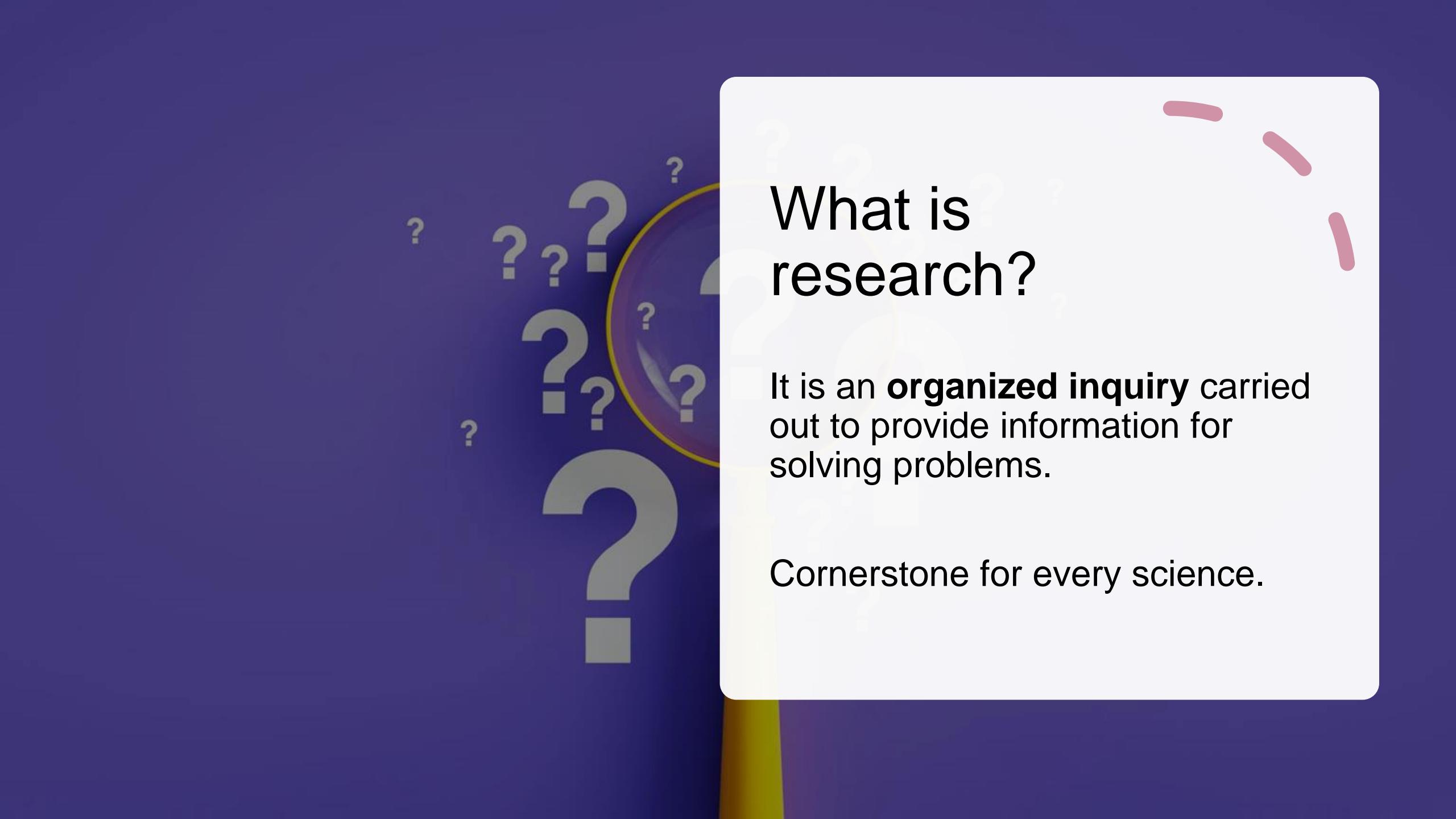


# Introduction to Research

**Dr Rubaba Azim**

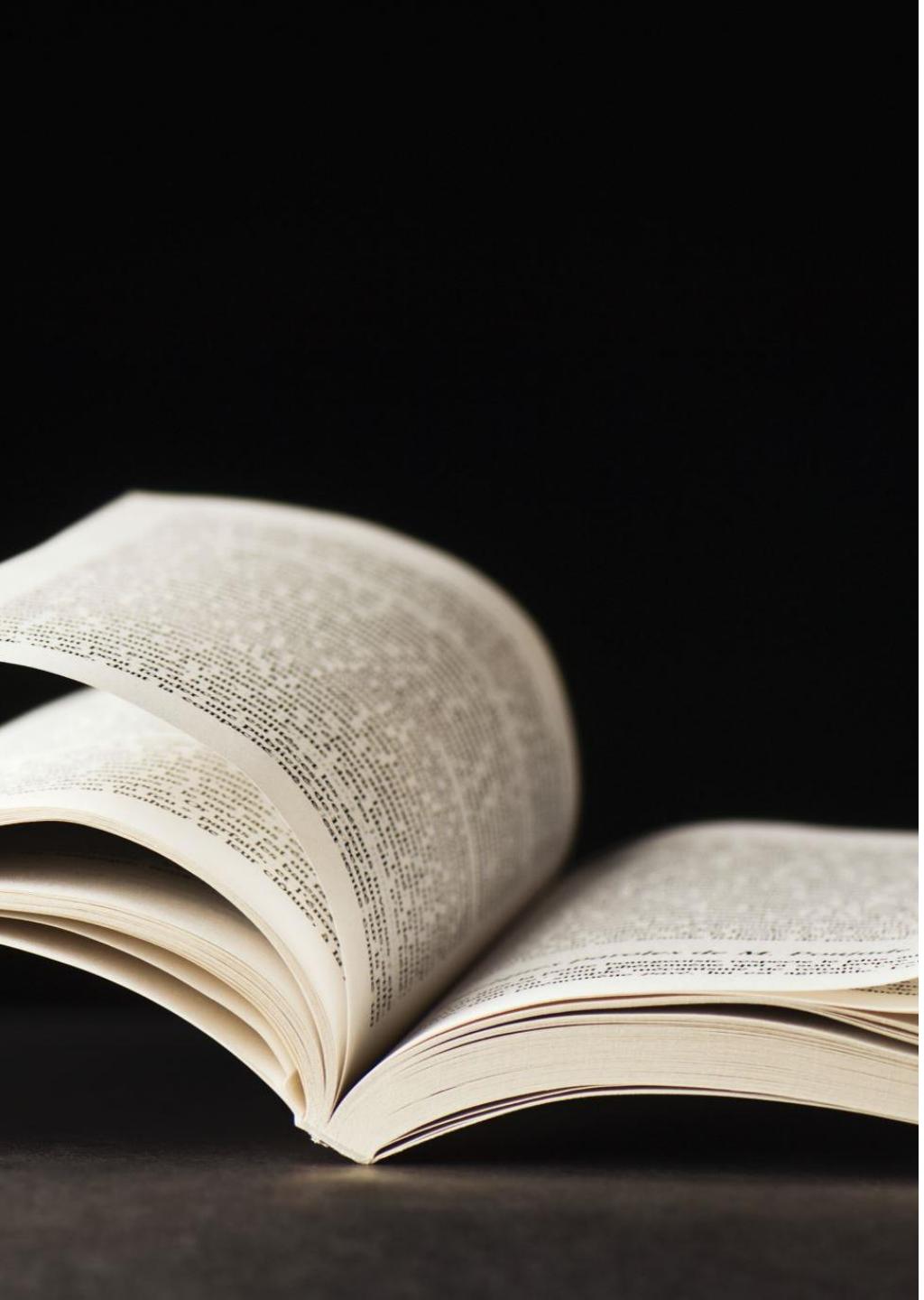
**Dr Nooreen Adnan**



# What is research?

It is an **organized inquiry** carried out to provide information for solving problems.

Cornerstone for every science.



# Dictionary definition

Webster's Collegiate Dictionary defines research as

"studious inquiry or examination; esp: investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws".

# What is Research?

- Systematic process of collecting, analyzing, and interpreting data.
- Aimed at discovering new facts, revising old theories, or applying knowledge practically.
- Involves critical thinking, curiosity, and a structured approach.
- "A movement from the known to the unknown."

# What is research?



Research is an original contribution to the existing stock of knowledge making for its advancement.



It is the pursuit of truth with the help of study, observation, comparison and experiment.



The search for knowledge through objective and systematic method of finding solution to a problem is research.

# What is Research ?

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Research comprises of:

WHAT (facts and conclusions)

And HOW (scientific , critical components)

Iterative process which eventually seeks to explain or solve an identified problem

# Why do we conduct research?

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To satisfy curiosity and build on existing knowledge.

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To solve practical problems.

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To inform decision-making.

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To contribute to societal development.

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To support policy formulation and academic learning.

# Key Features of Research

- Systematic: Follows a sequence of steps.
- Objective: Free from personal bias.
- Replicable: Can be repeated.
- Empirical: Based on observations and evidence.
- Analytical: Involves data interpretation.

# Research as a Voyage of discovery



Curiosity and inquisitiveness  
as the driving force.



Begins with a question and  
leads to knowledge.



Encourages exploration,  
observation, and reflection.

# Research Objectives

- To uncover hidden truths.
- To solve new or existing problems.
- To explore and develop theories.
- To inform practice or policy.

## Research Significance for Undergraduates

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Develops critical thinking  
and problem-solving skills.

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Enhances academic and  
professional growth.

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Prepares students for  
advanced studies.

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Encourages contribution  
to society.

# Steps in Research process

1. Identifying the research problem
2. Reviewing literature
3. Formulating hypotheses or objectives
4. Designing methodology
5. Data collection
6. Data analysis and interpretation
7. Drawing conclusions
8. Reporting findings

# Research Process

Publish  
Findings

Interpret  
Findings

Review the Available  
Literature

Formulate a  
Question

Select an Appropriate  
Research Design

Collect *Relevant*  
Data

## Types of Research Objectives

### Exploratory/ Formulative:

Gain familiarity or new insights.

### Example:

Investigating new teaching methods in classrooms

# **Descriptive:**

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Portray characteristics of individuals or groups.

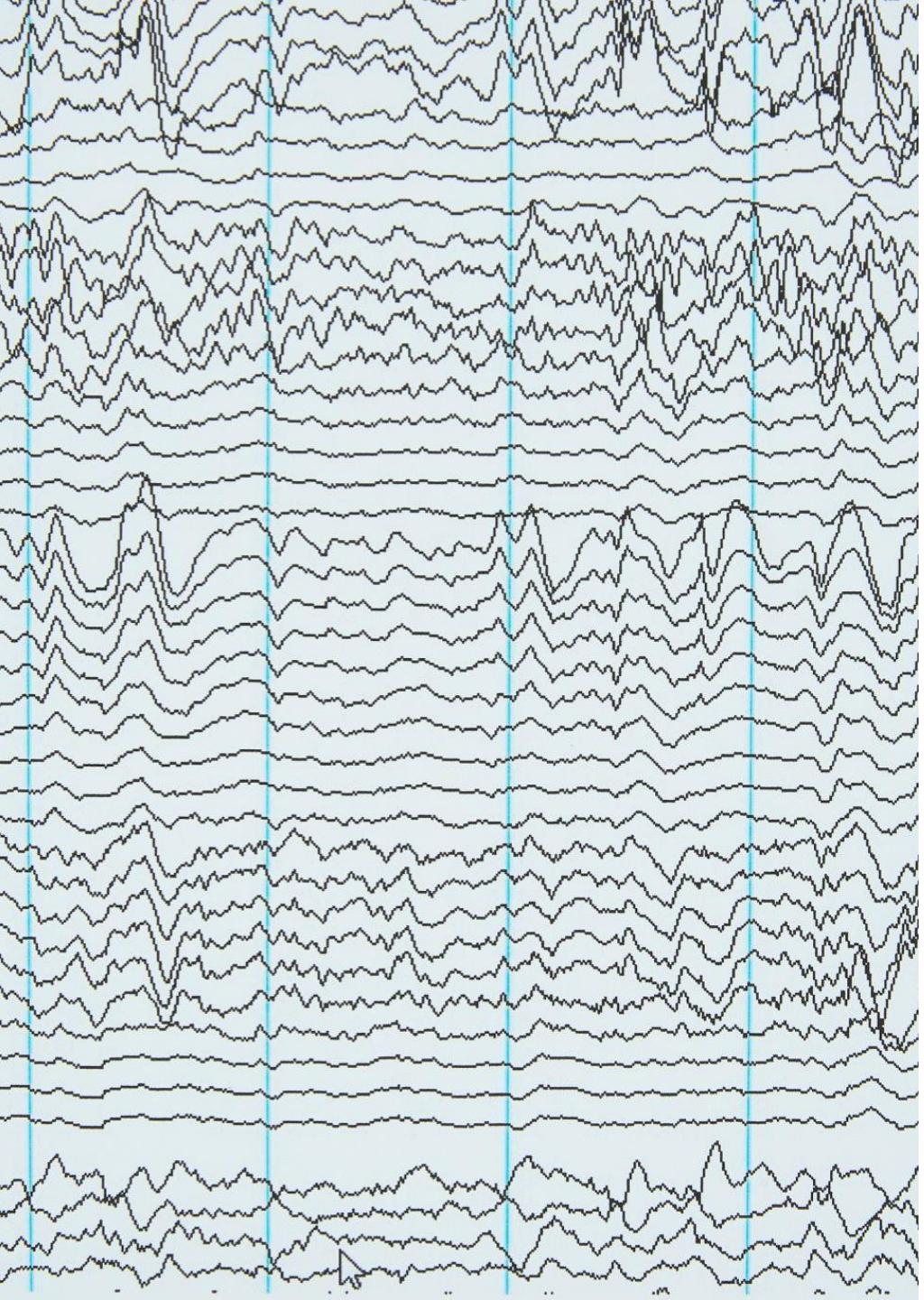
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## **Example:**

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Studying the demographics of university students.





# Diagnostic

Determine frequency or associations

## Example:

Finding links between screen time and sleep patterns.

# Hypothesis-Testing

Test causal relationships between variables.

## Example:

Testing if study hours affect exam performance.

## Summary



- Research is systematic, objective, and essential for knowledge advancement.
- Multiple objectives: exploratory, descriptive, diagnostic, hypothesis-testing.
- A vital academic activity and tool for progress.

Thank you

