



# **HOW TO IDENTIFY A RESEARCH TOPIC & HOW TO FORMULATE GOOD PROBLEM STATEMENTS**

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# INTRODUCTION

**RESEARCH TOPIC IS VERY IMPORTANT.**

**WHY??**

**It sets the direction of the research.**

**Engaging...**

**Focus...**

**Guide Literature review & Data collection...**

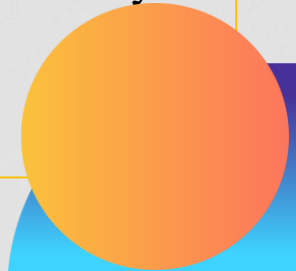
**OUTCOME OF A GOOD TOPIC**

**Awaited Solutions to Impending Problems**

**Good Publications**

# HOW to identify RESEARCH TOPIC?

- CHOOSE TOPIC FROM AREA OF YOUR OWN INTEREST and PASSION
- AREA OF SUPERVISOR'S INTEREST or SUPERVISOR'S AREA OF EXPERTISE ( RELEVANT TO YOUR FIELD)
- SUB-TOPIC OF A MAIN RESEARCH GRANT
- GAPS IDENTIFIED FROM EXISTING LITERATURE  
**AI Applications** – (e.g., **Elicit**, **Research Rabbit**, **Scite.ai**) help identify research gaps quickly from literature reviews
- **Feasibility and availability of data**



# S1: Own interest

**PASSIONATE, DRIVEN BY PERSONAL MOTIVATION TO RESERCH ON THE TOPIC**

**CHALLENGES**

**choosing a topic is a challenging task under the following scenarios:**

- 1) When you do not have any idea what to do**
- 2) You cannot decide on one topic from too many options**
- 3) Pressured by time to come out with a research topic**

## **S2: AREA OF SUPERVISOR'S INTEREST or SUPERVISOR'S AREA OF EXPERTISE**

**This is the case when you have chosen the “person” to be your main supervisor**

### **Sharing Personal Experience**

- **Driven by strong desire to study and learn under a certain scholar to obtain his/her wisdom and knowledge**
- **You have followed his or her work/ publications / success stories and wanting to be apart of those achievements**
- **Willing and committed to manage own weaknesses to be accepted as his/her student**

# S3: SUB-TOPIC OF A MAIN RESEARCH GRANT(S3)

You become a GRA and at the same time a PhD output from this Research

Your PhD topic is generated /related from this research.

- A Quick Win.
- Fulfilling two objectives concurrently – Income from being a GRA ; A PhD within or shortly after the end of the research grant
- **Most Challenging and stressful. Self-discipline and endurance are very important under this arrangement**
- **But it is feasible.**

# S4: TOPIC from GAPS IDENTIFIED FROM LITERATURE

## Read, Read and Read in the area of interest

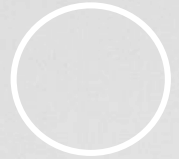
- Use Google scholar, key in key words
- Read the abstracts
- Refer to the citations or references from the articles
- AI can help
- Refer to completed thesis in similar area to get a bigger picture

## Challenges

- Very time consuming which may drag your PhD time but very essential efforts Thus, need to have a good Literature Review template, set time limit and
- guidance from Supervisors
- Remember to determine the scope of your study and search within the scope

# AREAS OF CONCERN IN CHOOSING A TOPIC

- 1) IS THE TOPIC OUTDATED? CURRENT ?  
FUTURISTIC?
- 2) ARE THERE ANY FOUNDING ISSUES WITH  
POSSIBILITY OF SOLUTIONS?
- 3) CAN THE DATA BE EASILY OBTAINED?
- 4) WILL THE TOPIC HAVE NEW CONTRIBUTION  
/SOLUTIONS TO THE PROBLEMS FACED?
- 5) CAN I FINISH DOING THIS TOPIC IN TIME?







## **SOURCES OF RESEARCH IDEAS :**

- Reviewing existing literature**
  - Identifying gaps in previous studies**
  - Practical challenges in industry/society**
  - Discussions with experts and peers**
  - Emerging trends and policy changes**
- 
- AI Application: AI-powered databases (e.g., Semantic Scholar, Connected Papers) suggest related research papers and trending topics.**



## **Narrowing Down a Research Topic**

- Start with a broad area of interest
- Conduct a preliminary literature review
- Define specific aspects (e.g., population, variables, industry)
- Use frameworks like:

**SMART** (Specific, Measurable, Achievable, Relevant, Time-bound)

# WHAT IS A GOOD PROBLEM STATEMENT?

- 1) A STATEMENT WHICH YOU CAN SEE A PROBLEM IN IT. **Example....**
- 2) WHAT IS A RESEARCH PROBLEM which can lead to TO PROBLEM STATEMENT?

**SOCIAL PROBLEM** – financial exclusion, poverty, behavior

**PRODUCTION PROBLEM**–Efficiency, Performance, Risk, System

**REGULATORY PROBLEM** –Impact of regulation/policies, compliance

**ETHICAL PROBLEM** – values, shariah, corruption

## **ADDRESSING THE GAPS**

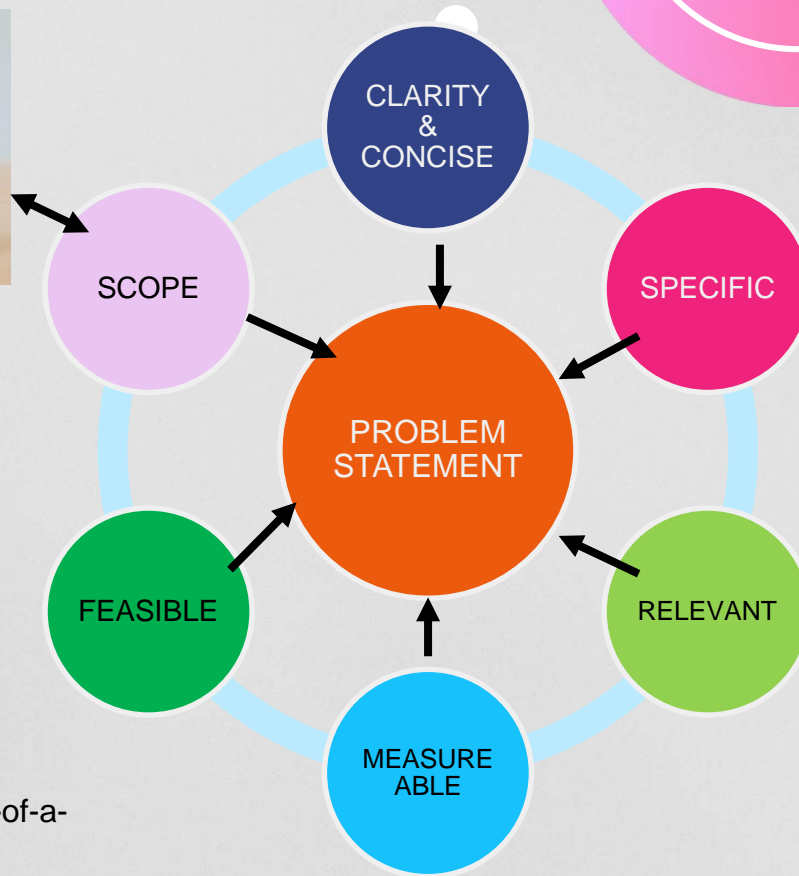
- 3) A GOOD PROBLEM STATEMENT CAN GENERATE CLEAR RESEARCH QUESTIONS AND RESEARCH OBJECTIVES

**AI Application:** AI-powered writing assistants (e.g., **Grammarly, Jasper**) help structure and refine problem statements.

## WHAT **characteristics** should GOOD PROBLEM STATEMENTS have?



Defining the scope and context of the problem to study is important for you to manage your thesis.



# Components of a Strong Problem Statement :



## **Context & Background:**

Briefly describe the broader topic

**Problem Definition:** Clearly state the specific issue

## **Evidence & Justification:**

Use statistics or literature to show why the problem matters

## **Impact & Need for Research (Justification)**

Explain what happens if the problem remains unsolved



## **Example of a Weak vs. Strong Problem Statement**

**Weak: "Many students struggle with online learning."**

**Strong: "Despite the rise of online education, recent studies indicate that student engagement in virtual classrooms has declined by 30% (Smith, 2023). There is lack of research on the key factors affecting student engagement on online education (Abdullah, 2023)."**

# Common Mistakes in Problem Statements

- Being too broad or too vague
- Lacking evidence or justification
- Not addressing research gaps
- Using subjective language without clarity...better to use active English than passive English

# conclusion

**RESEARCH TOPIC IS RELATED TO PROBLEM STATEMENT, RESEARCH OBJECTIVES, METHODOLOGY, HYPOTHESES, NEW DISCOVERIES.....**

**THEREFORE, IT IS APPROPRIATE TO SPEND CONSIDERABLE TIME TO SEARCH FOR THE TOPIC which is SUITABLE TO YOUR INTEREST, YOUR MOTVATION AND YOUR OWN CAPABILITIES.**

## **GOOD PROBLEM STATEMENTS**

**RESEARCH TITLE WILL REFLECT YOUR RESEARCH TOPIC AND ITS CONTENT**



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**Thank You &  
Best Wishes!**