

A bright yellow sticky note is placed on the left side of the slide, partially overlapping the white title card. It is rectangular with slightly irregular edges, suggesting it was stuck to the surface.

Introduction to Research Methodology

Lecture 2:
The Research Problem
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Objectives

- At the end of the theme, you should be able to:
 - Introduce the **concept at the heart of any research project- the research problem;**
 - Describe **how a research problem is selected;** and
 - Discuss **how a research problem is delimited, and evaluated.**

Content

1. What is a Research Problem?
2. Selecting a Research Problem
3. Sources of the Problem
4. Defining a Problem
5. Statement of Problem
6. Delimiting a Problem
7. Evaluating a Problem

1. What is a Research Problem?

- o A **research problem**, in general, refers to **some difficulty** which a **researcher experiences** in the context of either a **theoretical or practical situation** and wants to **obtain a solution** for it.
- o Thus, a **research problem** is one which **requires a researcher to find out the best solution** which is used to attain the objective in the context of a given environment.

1. What is a Research Problem?

o Walliman (2001) suggests a **list of features** that one should follow in order to **obtain a research problem**:

- The research problem should be a **great interest to you**.
- The research problem should be **significant**.
- The research problem should be **well defined**.
- The researcher should be able to **obtain the information required**.
- The researcher should be able to **draw conclusions related to the problem**.
- The researcher should be able to **state the problem clearly and concisely**

2. Selecting a Research Problem

- The **factors** which need to be considered in the selection of a research problem are both **external** and **internal** criteria.
 - **External criteria** have to do with matters, such as **novelty/uniqueness**, and **importance for the field**.
 - **Internal criteria**, on the other side, involve considerations as **interest, training, cost, and time**

2. Selecting a Research Problem

- A set of questions may be raised for this purpose:
 - Is the problem **really important**?
 - Is the problem **interesting to others**?
 - Is the chosen problem a **real problem**?
 - **Am I able to state hypotheses** from the problem?
 - **Do I understand something new** from this problem?
 - Will I be able to **select a sample from which I can target the population**?
 - Will my **proposed data-gathering instruments actually give the information** which I want?
 - Is the **study**, including the **application of its results**, **practical**?

3. Sources of the Problem

- To select a research problem, a researcher can consider the following sources:
 - **Personal experience** of the researcher in the field.
 - **Literature review** on a research topic.
 - New **innovations, changes,** and **developments** in a given research area.
 - **Research contacts** with experts in a given research area.

4. Defining a Problem

- **Problem definition is the initial step in a research process**
- **The definition of a problem serves the following purposes:**
 - **sets the direction of the study.**
 - **reveals the methodology or procedure of the study.**
 - **helps the researcher to control subjectivity.**
 - **suggests and specifies the variables to be taken up into the investigation of a problem**

4. Defining a Problem

- o The following **precautions** should be taken into consideration for identifying a problem:
 - The **words** used for defining a problem should have a **single meaning**.
 - The **statement** of the problem must be **brief** but **comprehensive**.
 - The **assumptions** are to be **recognized** for the study
 - The **problem** should have **practical importance** **in the field**.

5. Statement of Problem

- After selecting a problem, it should be **stated carefully**
- *Kerling* has identified **three criteria of a good problem statement**:
 - A problem should be concerned with relation **between two or more variables**.
 - It should be stated '**clearly and unambiguously in right form**'.
 - It should be **open to testing**.

6. Delimiting a problem

- o Delimiting a problem is very important. A study should be **delimited/ bordered by the following aspects:**
- A study should be **delimited to certain variables** that should be mentioned clearly in the problem.
 - The study should be **delimited to a size of sample** considering **time, energy, money**; but, it **should be representative.**
 - The study should be **delimited to the research approach, strategies, and tools.**

7. Evaluating a problem

- o Before the research problem can be considered appropriate, several searching questions should be raised to evaluate the problem:
 - **Is the problem significant?**
 - Would the **solution make any difference** as far as this study is concerned?
 - Is the **answer to the main question already available?**
 - Is the **problem feasible?**
 - ❖ This simply means **will the researcher be able to carry out the research?** and
 - ❖ will s/he be **able to reach successful conclusions?**

7. Evaluating a problem

- Are **pertinent data accessible**?
- Does the **researcher have enough time to carry out the research**?
- Does the researcher **have courage and determination to overcome the difficulties** s/he will encounter in his/her research?

7. Evaluating a problem

- o There is an associated **checklist** for creating a problem statement:
 - o **Research statement** written clearly.
 - o Problem stated in **grammatically complete sentences**.
 - o Problem **has clearly stated limitations**.
 - o Statement has **potential for leading to important results**.
 - o The statement will **lead to the analysis of data**.
 - o The problem is **focused enough to lead to an answer with reasonable effort**.
 - o Problem **has been reviewed by someone else** who provided feedback.

Stating the problem—Famous First Words

- o The current study investigates the relationship between . .
- o The focus of this study will be on . . .
- o The main purpose of this study is . . .
- o The objective of this research is to determine . . .
- o The present study is designed to examine . . .
- o The primary goal of this study is . . .
- o The primary concern of this research is . . .
- o The principal objective of this study is . . .
- o The purpose of this study is to address the problem of . . .
- o The purpose of the present study is . . .
- o The purpose of this study is to advance understanding of . . .
- o The purpose of this study is to determine . . .

Stating the problem—Famous First Words

- o The purpose of this study is to develop a conceptual model .
- o The purpose of this study is to evaluate . . .
- o The purpose of this study is to explore the . . .
- o The purpose of this study is to examine and better understand the effects of . . .
- o The purpose of this study is twofold. First, this study will assess the . . .
- o This research concentrates on . . .
- o The research problem for this study is to describe the . . .
- o This thesis explores the idea . . .
- o This thesis will deal with . . .
- o This investigation will explore . . .
- o This investigation represents an attempt to address several . . .
- o This paper is concerned with . . .
- o This paper will focus on . . .

What is the format for writing a statement of the problem?

- A persuasive statement of problem is usually written in three parts:
 - **Part A (The ideal):**
 - Describes a **desired goal or ideal situation**;
 - Explains **how things should be**.
 - **Part B (The reality):**
 - Describes a **condition that prevents the goal, state, or value** in **Part A** from being achieved or realized at this time;
 - Explains **how the current situation falls short of the goal or ideal**.
 - **Part C (The consequences):**
 - Identifies **the way you propose to improve the current situation and move it closer to the goal or ideal**.

Example

o **Part A (The Ideal):** According to the **XY university mission statement**, the university seeks to provide students with a **safe, healthy learning environment**. **Dormitories** are one important aspect of that learning environment, since **55% of XY students live in campus dorms** and most of these students **spend a significant amount of time working in their dorm rooms**.

o **However,**

Example

o **Part B (The Reality):** Students living in **dorms A B C, and D** currently **do not have air conditioning units**, and during the hot seasons, it is common for **room temperatures to exceed 80 degrees F**. Many students report that they are **unable to do homework in their dorm rooms**. Others report **having problems sleeping** because of the humidity and temperature. The rooms are not only unhealthy, but they **inhibit student productivity and academic achievement**.

Example

o **Part C (The Consequences):** In response to this problem, our study proposes to investigate several options for making the dorms more hospitable. We plan to carry out an all-inclusive participatory investigation into **options for purchasing air conditioners** (university-funded; student-subsidized) and different types of air conditioning systems. We will also **consider less expensive ways to mitigate some or all of the problems noted above** (such as creating climate-controlled dorm lounges and equipping them with better study areas and computing space).

Exercise

○ Write a problem statement for the research question you identified in the previous lecture

