**2.** **Identifying, prioritizing and stating the problem of research**

1. **Identifying**

Research is a systematic investigative process employed to increase or revise current knowledge by discovering new facts. It can be divided into two general categories: (1) Basic research, which is inquiry aimed at increasing scientific knowledge, and (2) Applied research, which is effort aimed at using basic research for solving problems or developing new processes, products, or techniques.

**Where do research ideas come from?**

Ideas for research problems or topics can arise from a range of sources such as

* personal or professional experience,
* a theory,
* the media, or other research studies.

**Personal or professional experience**

Everyday personal or professional experience may lead us to identify a problem for which we would like a solution. Alternatively, we may encounter a question or questions that we would like to try and answer.

For example, on a personal level, you may prefer the taste of organically produced vegetables and thus wonder if people in general prefer the taste of organically produced vegetables to those produced non-organically.

The research topic is a study into taste preferences and the question 'do people in general prefer the taste of organically produced vegetables to those produced non-organically?'

Alternatively, for example, as a professional nature reserve warden you may want to encourage the establishment and spread of a particular plant species because you know it is a food source for a rare butterfly. The research problem may be, 'how do I encourage the spread of the plant species of interest?'

**Theory**

Theories are ideas about how things relate to each other. Theories may be general, commonly held beliefs (such as, domestic cats are the cause of a decline in bird numbers in gardens) or more technical ideas (for example, that global warming is causing a change to the timing of the seasonal responses of the flowering tree.

There are many ways of expressing theories, some are very formal, others are informal. Here are some examples:

* The idea that distance learners have different needs than on-campus students is a theory.
* An idea that crossing two particular strains of maize will produce a more variety is a theory.
* The assumption that every species has a fundamental role, is a theory.

Theories may be useful in suggesting interesting questions and generally guiding fieldwork, but should not restrict us from exploring alternative explanations. The end result of the research process is knowledge.

**Literature and the media**

There are many sources of literature, such as books, journal articles, and newspapers. When searching and reading literature it is possible to encounter gaps in information and knowledge, and problems for which there is currently no solution. These may provide a good basis for research. We are also flooded with information presented by the media, such as television, which again might give rise to research ideas.

**Statement of the problem**

The first and most important step in any research is to identify and delineate the research problem: that is, what the researcher wants to solve and what questions he/she wishes to answer.

**A research problem may be defined as an area of concern, a gap in the existing knowledge, or a deviation in the norm or standard that points to the need for further understanding and investigation.**

Although many problems turn out to have several solutions (the means to close the gap or correct the deviation), difficulties arise where such means are either not obvious or are not immediately available. This then necessitates some research to reach a viable solution.

A statement of the problem is used in research work as a claim that outlines the problem addressed by a study. The statement of the problem briefly addresses the question: What is the problem that the research will address?

**What are the goals of a statement of the problem?**

The ultimate goal of a statement of the problem is to transform a generalized problem (something that bothers you; a perceived lack) into a **targeted**, **well-defined problem**; one that can be **resolved through focused research** and **careful decision-making.**

Writing a statement of the problem should help you **clearly identify the purpose of the research project** you will propose. Often, the statement of the problem will also serve as the **basis for the introductory section of your final proposal**, **directing your reader’s attention** quickly to the issues that your proposed project will address and providing the reader with a **concise statement of the proposed project** itself.

A statement of problem need not be long and elaborate: one page is more than enough for a good statement of problem.

**What are the key characteristics of a statement of the problem?**

A good research problem should have the following characteristics:

* It should address a gap in knowledge.
* It should be significant enough to contribute to the existing body of research
* It should lead to further research
* The problem should render itself to investigation through collection of data
* It should be of interest to the researcher and suit his/her skills, time, and resources
* The approach towards solving the problem should be ethical.

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

A persuasive statement of problem is usually written in three parts:

1. The ideal: Describes a desired goal or ideal situation; explains how things should be.
2. The reality: Describes a condition that prevents the goal, state, or value in
3. The consequences: Identifies the way you propose to improve the current situation and move it closer to the goal or ideal.

**B. Prioritization**

Prioritization is generally a group process whereby issues are ordered by perceived significance or importance. Prioritizing issues is an important process, in that it assists an organization in identifying the issues on which it should focus its limited resources.

**Prioritization criteria:**

Potential impact (based on prevalence of condition, burden of disease, variability in outcomes, and costs of care)

Potential to evaluate comparative effectiveness in diverse populations and patient subpopulations.

Uncertainty within the clinical and public health communities regarding management decisions.

**How do you prioritize health problems?**

Weigh and rank multiple criteria for prioritization with numeric values to determine health needs with high importance. Build consensus around priority needs – If you select priorities that vary from community recommendations, justify the reasons for making those choices.

**C. Stating the research problem**

A research problem is a statement about an area of concern, a condition to be improved, a difficulty to be eliminated, or a troubling question that exists in scholarly literature, in theory, or in practice that points to the need for meaningful understanding and deliberate investigation.

**How to write a problem statement**

Put the problem in context (what do we already know?)

Describe the precise issue that the research will address (what do we need to know?)

Show the relevance of the problem (why do we need to know it?)

Set the objectives of the research (what will you do to find out?)

In academic research, writing a problem statement can help you contextualize and understand the significance of your research problem. A problem statement can be several paragraphs long and serve as the basis for your [research proposal](https://www.scribbr.com/dissertation/research-proposal/), or it can be condensed into just a few sentences in the [introduction](https://www.scribbr.com/dissertation/introduction-structure/) of your paper or thesis.

The problem statement will look different depending on whether you’re dealing with a practical real-world problem or a theoretical scientific issue. But all problem statements follow a similar process.

**Step 1: Contextualize the problem**

The problem statement should frame your research problem in its particular context and give some background on what is already known about it.

**Practical research problems**

For practical research, focus on the concrete details of the situation:

* Where and when does the problem arise?
* Who does the problem affect?
* What attempts have been made to solve the problem?

**Example**

Voter turnout in region X has been decreasing steadily over the past ten years, in contrast to other areas of the country. According to surveys conducted by organization Y, turnout is lowest among under-25s and people on low incomes. There have been some effective attempts at engaging these groups in other regions, and in the last two elections parties A and B increased their campaigning efforts in region X, but these interventions have yet to have any significant effect on turnout.

**Theoretical research problems**

For theoretical research, think about the scientific, social, geographical and/or historical background:

* What is already known about the problem?
* Is the problem limited to a certain time period or geographical area?
* How has the problem been defined and debated in the scholarly literature?

**Example**

In the past ten years, the “gig economy” has become an increasingly important segment of the labour market. Under-30s are more likely to engage in freelance, contracted or zero-hour work arrangements instead of traditional full-time jobs. Research on the reasons for and consequences of this shift has focused on objective measures of income, working hours and employment conditions, but there has been little work exploring young people’s subjective experiences of the gig economy.

**Step 2: Show why it matters**

The problem statement should also address the relevance of the research: why is it important that the problem is solved?

This doesn’t mean you have to do something ground breaking or world-changing. It’s more important that the problem is **researchable**, **feasible**, and **clearly addresses a relevant issue** in your field.

**Practical research problems**

Practical research is directly relevant to a specific problem that affects an organization, institution, social group, or society more broadly. To make it clear why your research problem matters, you can ask yourself:

* What will happen if the problem is not solved?
* Who will feel the consequences?
* Does the problem have wider relevance (e.g. are similar issues found in other contexts)?

**Example**

Low voter turnout has been shown to have negative associations with social cohesion and civic engagement, and is becoming an area of increasing concern in many European democracies. When specific groups of citizens lack political representation, they are likely to become more excluded over time, leading to an erosion of trust in democratic institutions. Addressing this problem will have practical benefits for region X and contribute to understanding of this widespread phenomenon.

**Theoretical research problems**

Sometimes theoretical issues have clear practical consequences, but sometimes their relevance is less immediately obvious. To identify why the problem matters, ask:

* How will resolving the problem advance understanding of the topic?
* What benefits will it have for future research?
* Does the problem have direct or indirect consequences for society?

**Example**

In the literature on the gig economy, these new forms of employment are sometimes characterized as a flexible active choice and sometimes as an exploitative last resort. To gain a fuller understanding of why young people engage in the gig economy, in-depth qualitative research is required. Focusing on workers’ experiences can help develop more robust theories of flexibility and precarity in contemporary employment, as well as potentially informing future policy objectives.

**Step 3: Set your aims and objectives**

Finally, the problem statement should frame how you intend to address the problem. Your goal should not be to find a conclusive solution, but to seek out the reasons behind the problem and propose more effective approaches to tackling or understanding it.

The aim is the overall purpose of your research. It is generally written in the infinitive form:

* The aim of this study is to determine…
* This project aims to explore…
* I aim to investigate…

The objectives are the concrete steps you will take to achieve the aim:

* Qualitative methods will be used to identify…
* I will use surveys to collect…
* Using statistical analysis, the research will measure…

**Practical research aims and objectives**

The aim of this research is to investigate effective engagement strategies to increase voter turnout in region X. It will identify the most significant factors in non-voting through surveys and interviews, and conduct experiments to measure the effectiveness of different strategies.

**Theoretical research aims and objectives**

This project aims to better understand young people’s experiences in the gig economy. Qualitative methods will be used to gain in-depth insight into the motivations and perceptions of under-30s engaged in freelance and zero-hour work across various industries. This data will be contextualized with a review of recent literature on the gig economy and statistical analysis of demographic changes in the workforce.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*