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Research Methodology (M1)
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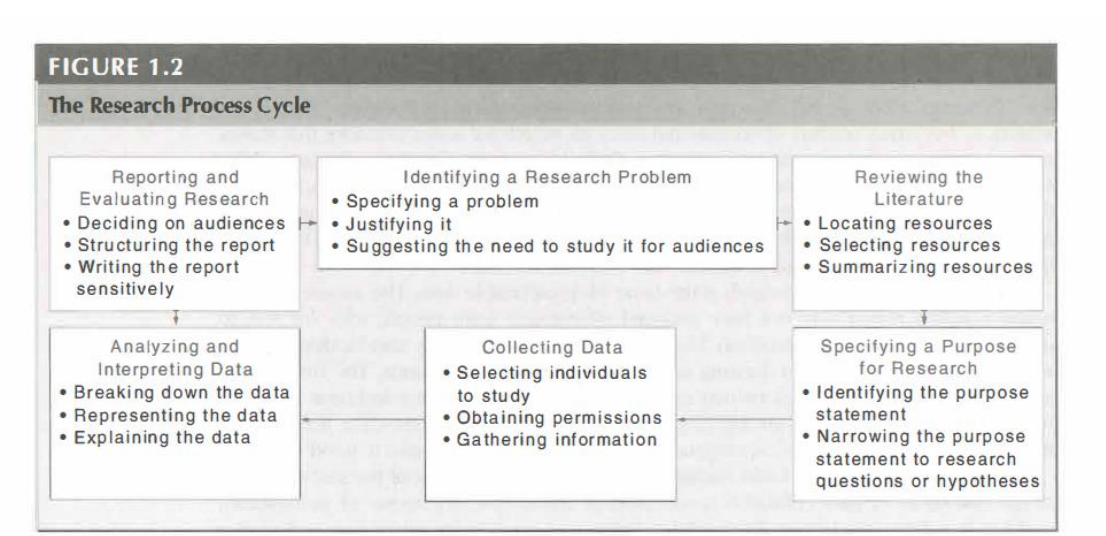
Lecture 2: Identifying the Research Problem and the Purpose Statement

Introduction

Research process consists of a series of linked activities moving from a beginning to an end. These steps are: (1) Identifying the research problem (2) Extensive literature review. (3) Developing the Research Hypothesis (4) Preparing the Research Design (5) Determining the Research Design (6) Collecting the Research Data (7) Execution of the Project (8) Analysis of Data (9) Hypothesis Testing (10) Generalization and Interpretation (11) Preparing of the Report or Presentation of the Result.



Cresswell 2015

1. What is a Research Problem?

A research problem is a statement that describes the issue or the problem that research attempting to address. It is a vital step in the entire research process. In fact, without knowing the research problem, readers do not know why the study is important and why they should read the study, and the researcher cannot make his research without

identifying and recognizing the research problem. According to Shoket (2014, p. 512), a research problem is "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". For Johnson and Christensen (2012), a research problem is "An education issue or problem within a broad topic area", and for Creswell (2015) a research problem "represents the problem addressed in the study". Another definition presented by Shoket (2014, p. 513), "It is the topic we would like to address, investigate, or study, whether descriptively or experimentally. It is the topic we would like to address, investigate, or study, whether descriptively or experimentally. It is the focus or reason for engaging in our research".

Kothari (2004) states that a research problem is an issue or a difficulty which a researcher experiences in the context of either a theoretical or practical situation and wants to obtain a solution for it. Usually we say that a research problem does exist if the following conditions are met with:

(i)There must be an individual or a group which has some difficulty or the problem.
(ii) There must be some objective(s) to be attained at. If one wants nothing, one cannot have a problem.
(iii) There must be alternative means (or the courses of action) for obtaining the objective(s) one wishes to attain. This means that there must be at least two means available to a researcher for if he has no choice of means, he cannot have a problem.
(iv)There must remain some doubt in the mind of a researcher with regard to the selection of alternatives. This means that the research must answer the question concerning the relative efficiency of the possible alternatives.
(v) There must be some environment(s) to which the difficulty pertains.

A common error is stating research problems as the purpose of the study or as the research question. The following examples show how you might reshape a purpose or a research question as a research problem.

Poor model: The researcher intends to identify the research problem but instead presents it as a *purpose statement:* The purpose of this study is to examine the education of women in Third World countries.

Improved model: A revision of it as a *research problem:* Women in Third World countries are restricted from attending universities and colleges because of the culturally oriented, patriarchal norms of their societies.

Poor model: A researcher intends to write about the research problem but instead identifies the *research question:* The research question in this study is "W hat factors influence homesickness in college students?"

Improved model: An improved version as a *research problem:* Homesickness is a major issue on college campuses today. W hen students get homesick, they leave school or start missing classes, leading to student attrition or poor achievement in classes during their first semester of college.

As you design and conduct a study, make sure that you are clear about the distinctions among these parts of research and that your written material differentiates among a topic, the research problem, the purpose, and your research questions.

2. How do we write a Statement of the Problem?

According to Creswell (2015), the statement of the problem section includes the actual research problem in addition to (1) the topic, (2) A justification of the importance of the problem as found in the past research and in Practice, (4) the deficiencies in our existing knowledge about the problem (5) the audiences that will benefit from a study of the problem

Crewell (2015) identifies two types of research problems,

Identify a broad problem area

As you discuss and read about your topic, look for under-explored aspects and areas of concern, conflict or controversy. Your goal is to find a gap that your research project can fill.

Practical research problems

If you are doing practical research, you can identify a problem by reading reports, following up on previous research, and talking to people who work in the relevant field or organization. You might look for:

- Issues with performance or efficiency in an organization
- Processes that could be improved in an institution
- Areas of concern among practitioners in a field
- Difficulties faced by specific groups of people in society

If your research is connected to a job or internship, you will need to find a research problem that has practical relevance for the organization.

Examples of practical research problems

- Voter turnout in region X has been decreasing, in contrast to the rest of the country.
- Department A of Company B has a high staff turnover rate, affecting productivity and team cohesion.

Theoretical research problems

Theoretical research focuses on expanding knowledge and understanding rather than directly contributing to change. You can identify a research problem by reading recent research, theory and debates on your topic to find a gap in what is currently known about it. You might look for:

- A phenomenon or context that has not been closely studied
- A contradiction between two or more perspectives
- A situation or relationship that is not well understood
- A troubling question that has yet to be resolved

Theoretical problems often have practical consequences, but they are not focused on solving an immediate issue in a specific place (though you might take a case study approach to the research).

Examples of theoretical research problems

The effects of long-term Vitamin D deficiency on cardiovascular health are not well understood.

The relationship between gender, race and income inequality has yet to be closely studied in the context of the millennial gig economy.

Historians of Scottish nationalism disagree about the role of the British Empire in the development of Scotland's national identity.

Selecting the problem:

The following points may be observed by a researcher in selecting a research problem or a subject for research:

(i) Subject which is overdone should not be normally chosen, for it will be a difficult task to throw any new light in such a case.

(ii) (ii) Controversial subject should not become the choice of an average researcher.

(iii) (iii) Too narrow or too vague problems should be avoided.(iv) The subject selected for research should be familiar and feasible so that the related research material or sources of research are within one's reach.

(iv) (v) The importance of the subject, the qualifications and the training of a researcher, the costs involved, the time factor are few other criteria that must also be considered in selecting a problem.

(v) (vi) The selection of a problem must be preceded by a preliminary study. This may not be necessary when the problem requires the conduct of a research closely similar to one that has already been done. But when the field of inquiry is relatively new and does not have available a set of well developed techniques, a brief feasibility study must always be undertaken.

Necessity of Defining the problem:

Quite often we all hear that a problem clearly stated is a problem half solved. This statement signifies the need for defining a research problem. The problem to be investigated must be defined unambiguously for that will help to discriminate relevant data from the irrelevant ones. A proper definition of research problem will enable the researcher to be on the track whereas an ill-defined problem may create hurdles. Questions like: What data are to be collected?

What characteristics of data are relevant and need to be studied?

What relations are to be explored?

What techniques are to be used for the purpose? And similar other questions crop up in the mind of the researcher who can well plan his strategy and find answers to all such questions only when the research problem has been well defined.

Techniques involved in defining the problem:

The research problem should be defined in a systematic manner, giving due weightage to all relating points. The technique for the purpose involves the undertaking of the following steps generally one after the other:

(i) statement of the problem in a general way;

(ii) (ii) understanding the nature of the problem;

(iii) (iii) surveying the available literature

(iv) (iv) developing the ideas through discussions; and

(v) (v) rephrasing the research problem into a working proposition.

A brief description of all these points will be helpful.

(i) **Statement of the problem in a general way:** First of all the problem should be stated in a **broad general** way, keeping in view either some practical concern or some scientific or intellectual interest.

(ii) Understanding the nature of the problem: The next step in defining the problem is to understand its origin and nature clearly. The best way of understanding the problem is to discuss it with those who first raised it in order to find out how the problem originally came about and with what objectives in view. If the researcher has stated the problem himself, he should consider once again all those points that induced him to make a general statement concerning the problem.

(iii) Surveying the available literature: All available literature concerning the problem at hand must necessarily be surveyed and examined before a definition of the research problem is given. This means that the researcher must be well-conversant with relevant theories in the field, reports and records as also all other relevant literature.

(iv) Developing the ideas through discussions: Discussion concerning a problem often produces useful information. Various new ideas can be developed through such an exercise. Hence, a researcher must discuss his problem with his colleagues and others who have enough experience in the same area or in working on similar problems. This is quite often known as an experience survey. People with rich experience are in a position to enlighten the researcher on different aspects of his proposed study and their advice and comments are usually invaluable to the researcher.

(v) Rephrasing the research problem: Finally, the researcher must sit to rephrase the research problem into a working proposition. Once the nature of the problem has been clearly understood, the environment (within which the problem has got to be studied) has been defined, discussions over the problem have taken place and the available literature has been surveyed and examined, rephrasing the problem into analytical or operational terms is not a difficult task. Through rephrasing, the researcher puts the research problem in as specific terms as possible so that it may become operationally viable and may help in the development of working hypotheses.

An illustration, The technique of defining a problem outlined above can be illustrated for better understanding by taking an example as under: Let us suppose that

a research problem in a broad general way is as follows: “Why is productivity in Japan so much higher than in India”? In this form the question has a number of ambiguities such as: What sort of productivity is being referred to? With what industries the same is related? With what period of time the productivity is being talked about? In view of all such ambiguities the given statement or the question is much too general to be amenable to analysis. Rethinking and discussions about the problem may result in narrowing down the question to: “What factors were responsible for the higher labour productivity of Japan’s manufacturing industries during the decade to 1980 relative to India’s manufacturing industries?” This latter version of the problem is definitely an improvement over its earlier version for the various ambiguities have been removed to the extent possible. Further rethinking and rephrasing might place the problem on a still better operational basis as shown below: “To what extent did labour productivity in 1971 to 1980 in Japan exceed that of India in respect of 15 selected manufacturing industries? What factors were responsible for the productivity differentials between the two countries by industries?”

References

Shoket, M. (2014). Research Problem: Identification and Formulation. International Journal of Research (IJR) 1(4), 512- 518.

The **purpose statement** is a statement that advances the overall direction or focus for the study. Researchers describe the purpose of a study in one or more succinctly formed sentences. It is used in both quantitative and qualitative research and is typically found in the "**statement of the problem**" section. It often appears as the last sentence of an introduction. You can recognize it because researchers typically state it beginning with the phrase "**The purpose of this study is ..."** A *quantitative* version of this purpose statement addressing teacher-parent communications and student achievement follows: (Creswell, 2015 p. 110)

> **Example 1-** The purpose of this study is to examine the relationship between use of Internet communication between teachers and parents in a midwestern school district and student achievement on tests in high school social studies.

The purpose statement in a quantitative study is a declarative statement that identifies the type of relationship investigated between a set of variables. This relationship could be causal or descriptive. For example, if you wanted to investigate the causal connection that might exist between a treatment for a learning disability and spelling proficiency, your purpose statement could be written as follows:

> **Example 2** The purpose of this study is to investigate the effect that treatment for a learning disability has on the spelling proficiency of children with a learning disability.

However, if the intent of your study is to describe the relationship between spelling proficiency and the extent of a person's learning disability, your purpose statement could be written as follows:

> **Example 3** The purpose of this study is to describe the degree of relationship that exists between spelling proficiency and the extent of a person's learning disability.

Both of these statements of purpose have identified the intent of the study and the variables being investigated. The difference is that one study attempts to determine whether treatment for learning disability is causally related to academic achievement, whereas the other attempts to describe the relationship that exists between these two variables. These two illustrate the basic and essential characteristics that should exist in a statement of purpose: Both identify the variables being investigated and the intent of the study or the way in which these variables will be investigated.

Statement of Purpose in a Qualitative Study

The statement of purpose in a qualitative study should indicate that the intent of the study is to explore or understand some phenomenon experienced by certain individuals at a specific research site. This means that a qualitative study's statement of purpose should do the following:

- Convey a sense of an emerging design by stating that the purpose of the study is to describe, understand, develop, or discover something.
- State and define the central idea that you want to describe, understand, or discover.
- State the method by which you plan to collect and analyze the data by specifying whether you are conducting an ethnographic study, grounded theory study, case study, or phenomenological study.
- State the unit of analysis and/or the research site (e.g., fourth-grade students participating in a specific program).

For example, N. Drew (1986) stated the following purpose of her study as follows:

The focus of the present study was to explore distressing and nurturing encounters of patients with caregivers and to ascertain the meanings that are engendered by such encounters. The study was conducted on one of the surgical units and the obstetrical/gynecological unit of a 374-bed community hospital.

(p. 40)

This purpose statement contains several of the essential ingredients characterizing a qualitative study. It conveys the sense of an emerging design and defines the central idea by stating that the researcher intended to "explore distressing and nurturing encounters." It also states that the research site will be a specific unit in a community hospital. Although this statement of purpose does not explicitly state the method used to collect and analyze the data, it does contain most of the elements of a statement of purpose for a qualitative study. This example also demonstrates that not every statement of purpose will contain all the fundamental characteristics of a good, qualitative purpose statement. However, good purpose statements will contain most of these characteristics.

A *qualitative* version might be as follows:

> The purpose of this study is to explore parent stories regarding Internet communications with teachers about their students in one midwestern school district.

Bibliography:

Creswell, John. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches.* Sage: California. 2014.

Dawson, Catherine. *Practical Research Methods: A user-friendly guide to measuring research.* How To Books: London. 2002.