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State of Art Study on Steps for Formulating Research Problem

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ABSTRACT

This paper describes vital steps of a formulating research problem. Formulating research problem is like the foundation of building to be constructed. i.e. Formulating research problem is the base of any research. The choice of formulation of a suitable problem is one of the most difficult task for researcher. The formulating of problem can be said to be most important and main stage in the research activity. Without the formulation of problem research activity will be futile and will not even produce any result. A researcher must find the problem and formulate it so that it becomes susceptible to research. To solve a problem someone has to know about the problem. In each field or area of education, several problems exist which may have reference to pure, applied or action research. With the formulation of research problem also the reader become aware of the result and objective to be conveyed in a study.

Keywords— Area of interest, Research Topic, Research Question

1. INTRODUCTION

As well said by George Springer “It is really important to do the right research as well as to do the research right. You need to do ‘wow’ research, research that is compelling, not just interesting”. Stating and defining a research problem is an important, but difficult task in the process of research. Formulation of research problem means to state the problem in a way that is researchable. It means to shape the research topic in a manner that it becomes ready for scientific investigation. A research problem is simply the research topic. This is called formulation of the research problem which involves narrowing down a broader research area into a specific research topic and devising the objectives.

In research process, after selection and formulation of research problem, the deviation of hypothesis is next and most important step. This step establishes the problem and the logic underlying the research study. The formulation of research problem and hypothesis is typically determined with the help of implications of the related literature and deductive logic of the problem under investigation. For this, a researcher should familiarise with the steps involved in selection, definition and evaluation of research problem, and also with the concept of hypothesis along with its various types, the features of usable hypothesis and its importance.

When you formulate a research problem, you should take into account some key factors which will help you to ensure that your research study would be measurable and that you will remain motivated. These considerations are (a) interest, (b) Magnitude, (c) Measurement of concepts, (d) Depth of expertise, (e) Relevancy of the study, (f) Data source, (g) Ethical issues.

What is the most essential part of your research project? It is obviously the formulating of a research problem or selecting your research topic. This is because the quality or relevance of your research work completely depend on it. The process of formulating a research problem requires a series of steps. If you do not know what specific research topic, ideas, questions or issue you want to research (which is not uncommon among student), first we will go to the following 7 steps as shown in figure 1.

Flowchart

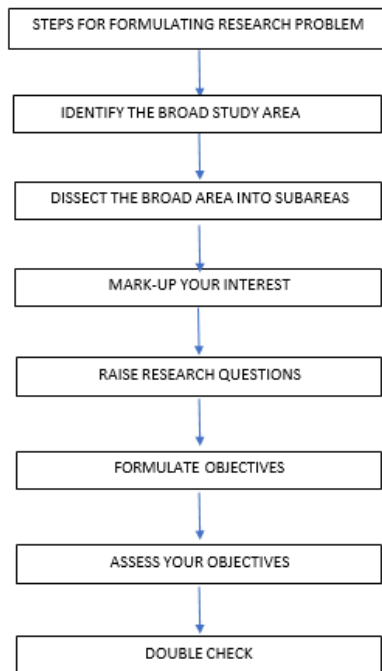


Figure 1: Steps for formulating research problem

2. STEPS FOR FORMULATING RESEARCH PROBLEM

The formulation of research problem is the most crucial part of the research journey as the quality and relevance of your research project entirely depends upon it. The process of formulating research problem consists number of steps. Working through these steps presupposes a reasonable level of knowledge in a broad subject area within which the study is to be undertaken and the research methodology itself.

2.1 Identify the broad study area

Identify the broad study area is great idea to thinking about the subject area of your interest. You should identify the field in which you would like to work a long time after your academic study or Graduation. For example: If you do graduation in civil engineering, you must decide study area in civil engineering. The first and foremost task of a researcher is to identify a subject area in the broad field of study. (Manu Mathew, 2010). Also (Sivakumar and Szalinski) Suggested 3 ways to pick up aresearch area a) Read scientific literature b) Attend conference, seminars disseminating your researcharea c) Brainstorm ideas with peers. There are two types of research problem, those which relate to states of nature and those which relate to relationship between variable. At very outset the researcher must single out the problem he wants to study, i.e He must decide the general area of interest. (C. R. Kothari)

2.2 Dissect the broad area into subareas

At the onset, you will realise that all the broad areas mentioned above have many aspects. Now dissect your major area of interest in subtopics and see how much you are interested in each subtopic. Also see which topics are worth studying and research. Make an exhaustive list of sub areas. An exhaustive list will help you figure out area of interest and importance for your research. Finding an area of interest is usually no problem, but discovering a specific topic within that area can be challenging. Begin with a subject that is of interest to you. If you are restricted to a specific area, you might want to do some background reading on the subject in order to have more id (J. Alderman 2014). By collected data from Laerd Dissertation, when you take this one step further, looking at the subfields within your chosen fields, a number of possible topic routes starts to emerge. At this stage, would recommend adopting any of two approaches, a) Approach 1: choose a single subfield and then explore the possible main journal articles that emerge from this single subfield. b) Approach 2: Choose a number of subfields, narrowing down the list of possible main journal articles that will emerge.

You will realise that all the broad areas have many aspects. In preparing the list of subareas you should also consult others who have knowledge of the area and literature in your subject area. Once you have developed an exhaustive list of the subareas from various sources, you proceed to the next stage where you select what will become the basis of your enquiry. (Fiza, Shaheed Zulfikar Ali Bhutto Institute of Science and Technology). The subject area of your interest will be broad and you need to dissect it into small areas. In this way you will be able to select one of your experience person in this regard. (Rhinson Padilla, December 9, 2013)

2.3 Mark-up your interest

The most important criteria is selecting the Research Problem. The whole research process is normally time consuming and a lot of hard work is needed. If you choose a topic which does not great interest you, it would become difficult to keep up the motivation to write. It is almost impossible to study all subareas. That's why you must identify your area of interest. You should select issues about which you are passionate. Your interest must be the important determinant of your research study. Once you selected your research study of interest, you should delete other subareas in which you do not feel interested. Keep in mind that if you lose interest in your research study it won't bring any results eventually.

"There are some Factors a researcher needs to consider when selecting a research area. The most important factors are his Profession & Personal interest, Professional interest, should be made the First Priority because one's research area should relate to his future career Path & Potentially contribute to the achievement of his career objective Personal interest is also very important Because conducting a study requires one to get himself involved in it for months or sometimes over full year. (Parlindungan Pardede, 2018). It is neither advisable nor feasible to study all subareas. Out of the list you make, select issues or subareas about which you are passionate. This is because your interest should be the most important determinant for selection, even though there are other considerations which have been discussed in the previous section, 'consideration is selecting a research problem'. One way to decide what interests you most is to start with the process elimination.

2.4 Raise Research Question

After selecting a specific sub-area, the researcher has to think about what needs to be explored about this sub-area. In other words, the researcher has to raise questions related to the chosen sub- area which need to be answered through the research. Many research questions can be raised by the researcher, however, only the most important and relevant questions should be selected. The total number of questions (to be selected) depends on the nature of the topic which would also ultimately determine the overall length (or size) of the research thesis. At this step ask yourself, 'What is it I want to find out about in this subarea?' Make a list whatever question come to your mind relating to your chosen subarea and if you think there are too many to be manageable, go through the process of elimination. (Imene Chiboub.). In this step in formulating a research problem, you would point out your research questions under the area of interest as you decided in the previous stage. If you select unemployment as your study area, your questions might be "how unemployment impacts individual social status?" "How it affects social stability?" "How it creates frustration on individuals?" Define what research problem or question you are going to study? The more you study the research problem it will be just as relevant and fruitful to solve the problem indeed.

"The most successful research topics are narrowly focused and carefully defined but are important parts of a broad-ranging, complex problem." A good RQs an asset as it: a) Details the problem statement b) Further describes and refines the issue under study. (Simmi K. Ratan, Tanu Anand, John Ratan 2018).

2.5 Formulate Objectives

After selecting a specific sub-area, the researcher has to think about what needs to be explored about this sub-area. In other words, the researcher has to raise questions related to the chosen sub- area which need to be answered through the research. Many research questions can be raised by the researcher, however, only the most important and relevant questions should be selected. The total number of questions (to be selected) depends on the nature of the topic which would also ultimately determine the overall length (or size) of the research thesis. Set out conspicuously your research root objectives & sub-objectives. Objectives essentially Come Research From research questions. Then set out explore what would you like do address.

Both our main objectives & our sub-objectives now need to be formulation, which grow out of our research questions. The main difference between objectives & research questions is the way in which they are written. Research question are obviously that questions. Objectives transform these questions into behavioural aims & by using action- oriented words such as to find out to determine to ascertain & to examine. Some researchers prefer to reverse the process that is they Start from objectives & formulate research questions from them. Some researchers are stratified only with research questions & do not formulate objectives at all. are If we prefer to have only research questions or only objectives, this is fine but we should keep in mind the requirements of our institutions of research proposals. (Girish Kumar K.). In my opinion, if we want to know objectives type of method of research we have to Focus on meaning & definitions of research. Really, there have main objective of research in meaning & definitions of research Nevertheless the research presented distinctly objectives of research. From research methodology literatures. The Purpose of research answers is to discover answers to questions through the application of scientific procedure. (Md. Sirajul Islam, Sofian Samsudin 2020). Research objectives link the theoretical relationship presumed in the hypotheses to the analytical and methodological orientation required for conducting the research. Research questions describe the ideas contained in the research objectives. Research questions emerge after the research objectives. (Manu Mathew, 2020).

2.6 Asses your Objectives

Now, you should evaluate your objectives to make sure of the possibility of attaining them through your research study. Assess your objectives in terms of time, budget, resources, and technical expertise at your hand. You should also assess your research questions in light of reality. Determine what outcome will bring your study. If you can assess accurately the purpose of the research study it will bring significant results in the long run. In fact, research objectives determine the value of the study you are going to work out. Now examine your objectives to ascertain the feasibility of achieving them through your research endeavour, consider them in the light of the time, resources (Financial and human) & technical expertise at your disposal. (Imene Chiboub, 2020).

By collected data from slideplayer, Assess these objectives in the light of a) the work involved b) the time available to you c) the financial resources at your disposal d) Your (& your research supervisor's) technical expertise in area.

2.7 Check Back

Before you go on research work you should review all steps in formulating a research problem and all the things that you have done till now for the purpose of your research study. Then, ask yourself about your enthusiasm. Do you have enough resources to step up? If you are quite satisfied, then you forward to undertake your research work. You can change any of your plans in the light of reality if requires.

Go back and give final consideration to whether or not you are sufficiently interested in the study, and have adequate resources to undertake it. Ask yourself, "Am I really enthusiastic about this study?" and "Do I really have enough resources to undertake it? Answer these questions thoughtfully and realistically. If your answer to one of them is 'no', reassess your objectives. (Imene Chiboub, 2020). Are you really sure that you can do it within your availability? (stocic MH 2021)

3. CONCLUSIONS

After performing a detail literature survey it can be summarized that research problem is clearly defining the problematic situation which highlight the issue that are to be addressed. Also it is quite possible that researcher will generate a variety of research problem from same situation which means many research issues can arise out of general problem situation, hence one should follow the required steps for formulating research problem. This paper clearly defines the most important steps required for Framing research problem which includes the opinions given by different authors/researchers.

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