Step 1 Formulating a Research Problem

IT 3204N – RESEARCH METHODS IN COMPUTING

Topics

Reviewing the literature

Formulating a research problem

Identifying variables

Constructing hypotheses

Formulating a research problem

Research Problem

Any question that you want answered.

Any assumption or assertion that you want to challenge or investigate.

Not all questions can be transformed into research problems.

Some may prove to be extremely difficult to study.

Importance

The research problem serves as the foundation of a research study: if it is well formulated, you can expect a good study to follow.

The way you formulate a problem determines almost every step that follows:

- the type of study design that can be used;
- the type of sampling strategy that can be employed;
- the research instrument that can be used or developed; and
- the type of analysis that can be undertaken.

Sources

People
- Attitude, behavior, responses

Problems
- Issues, difficulties, situations, complications

Programmes
- Interventions, plans, initiatives, schemes

Phenomena
- Facts, observations, occurrences, events, circumstances

Aspects of a research problem

Aspects of a study	About	Study of	
Study population	People	Individuals, organisations, groups, communities	They provide you with the required information or you collect information from or about them
Subject area	Problem	Issues, situations, associations, needs, population composition, profiles, etc.	Information that you need to collect to find answers to your service research questions
	Programme	Contents, structure, outcomes, attributes, satisfaction, consumers, providers, etc.	
	Phenomenon	Cause and effect, relationships, the study of a phenomenon itself, etc.	

Considerations

Interest – Most important consideration since its time consuming, involves hard work and possibly unforeseen problems.

Magnitude – Narrow the topic down to something manageable, specific and clear.

Measurement of concepts – Make sure its indicators and their measurement are clear.

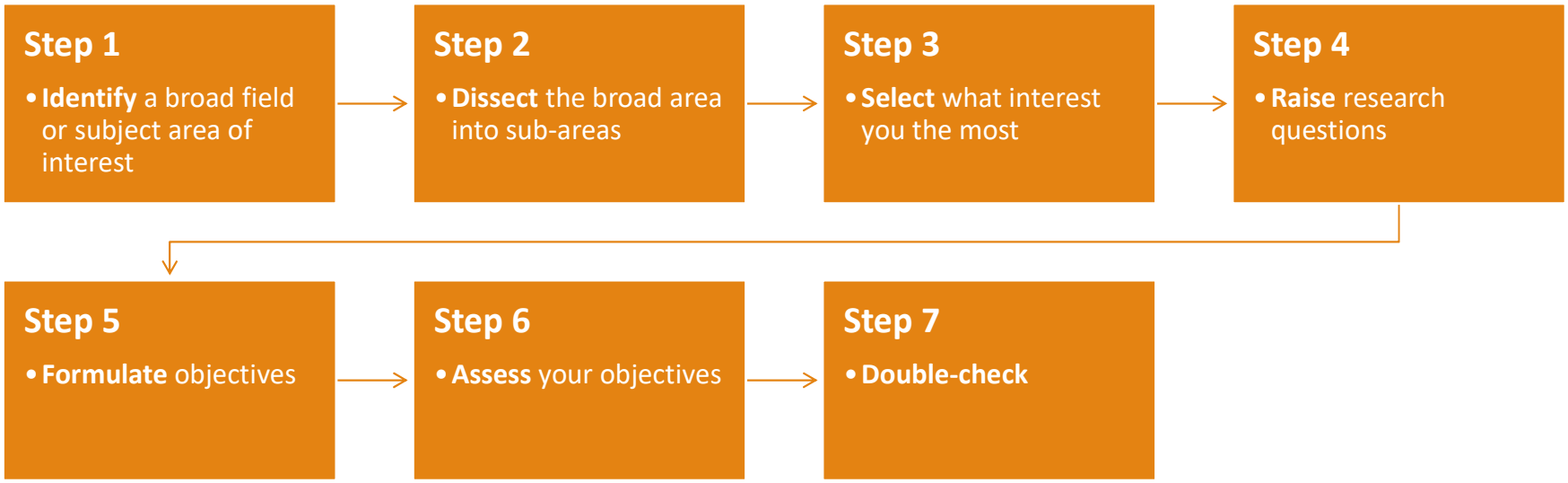
Level of expertise – Make sure you have an adequate level of expertise do most of the work yourself.

Relevance – Adds to the existing body of knowledge, bridges current gaps or is useful in policy formulation.

Availability of data – Make sure that this data is available and in the format you want.

Ethical issues – How ethical issues can affect the study population and how ethical problems can be overcome should be thoroughly examined at the problem-formulation stage.

Steps in formulating a research problem



Research objectives

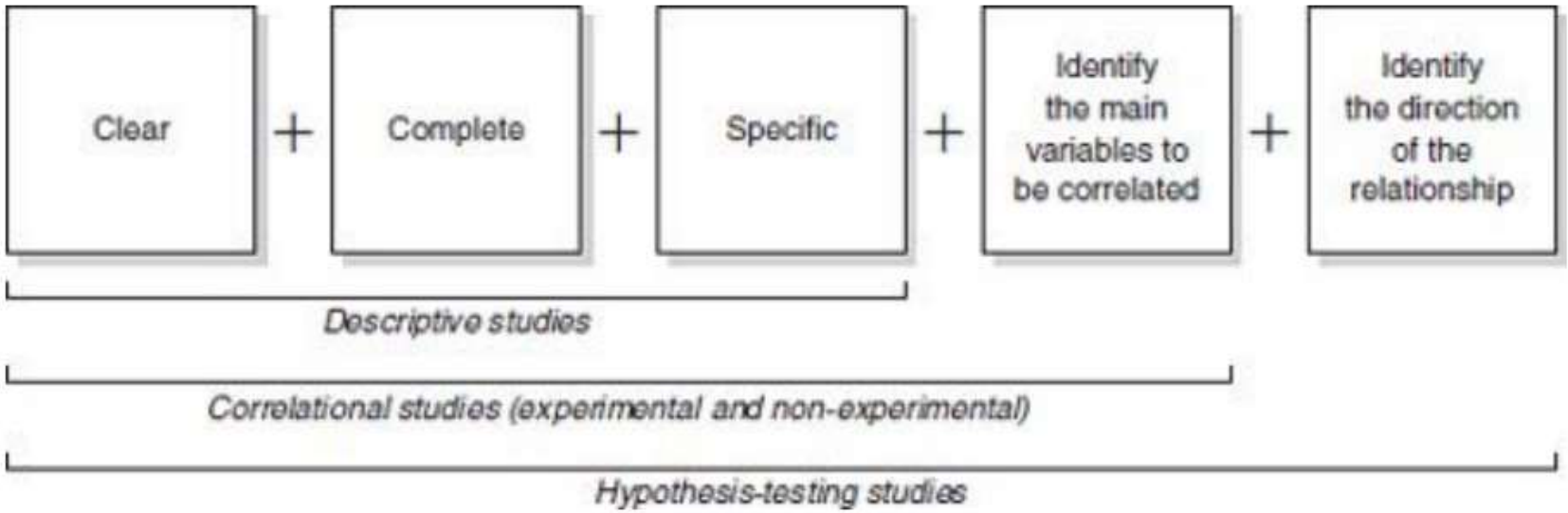
Main objective

- It is an overall statement of the thrust of your study that declares the main associations and relationships that you seek to discover or establish.

Subobjectives

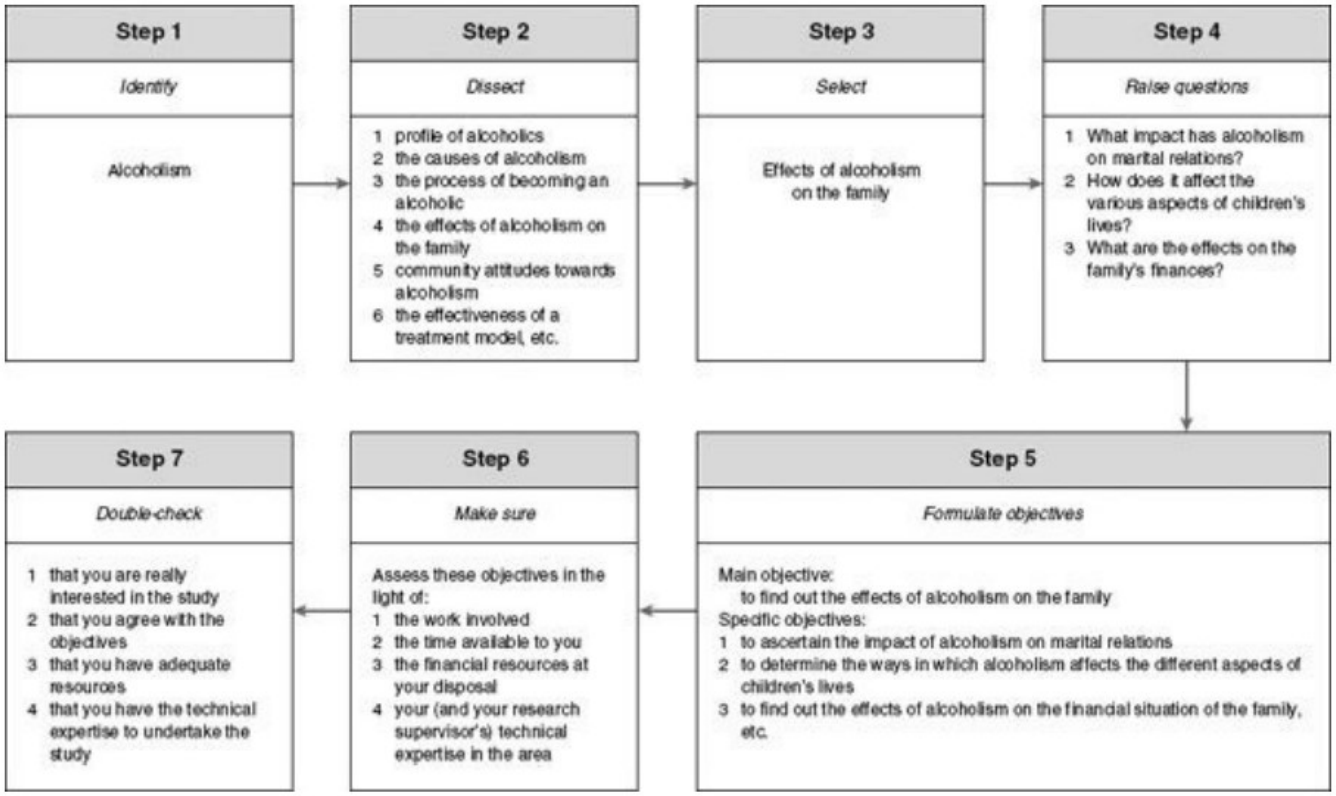
- These are the specific aspects of the topic that you want to investigate within the main framework of your study.
- It should be numerically listed and should be worded clearly and unambiguously.

Characteristics of objectives



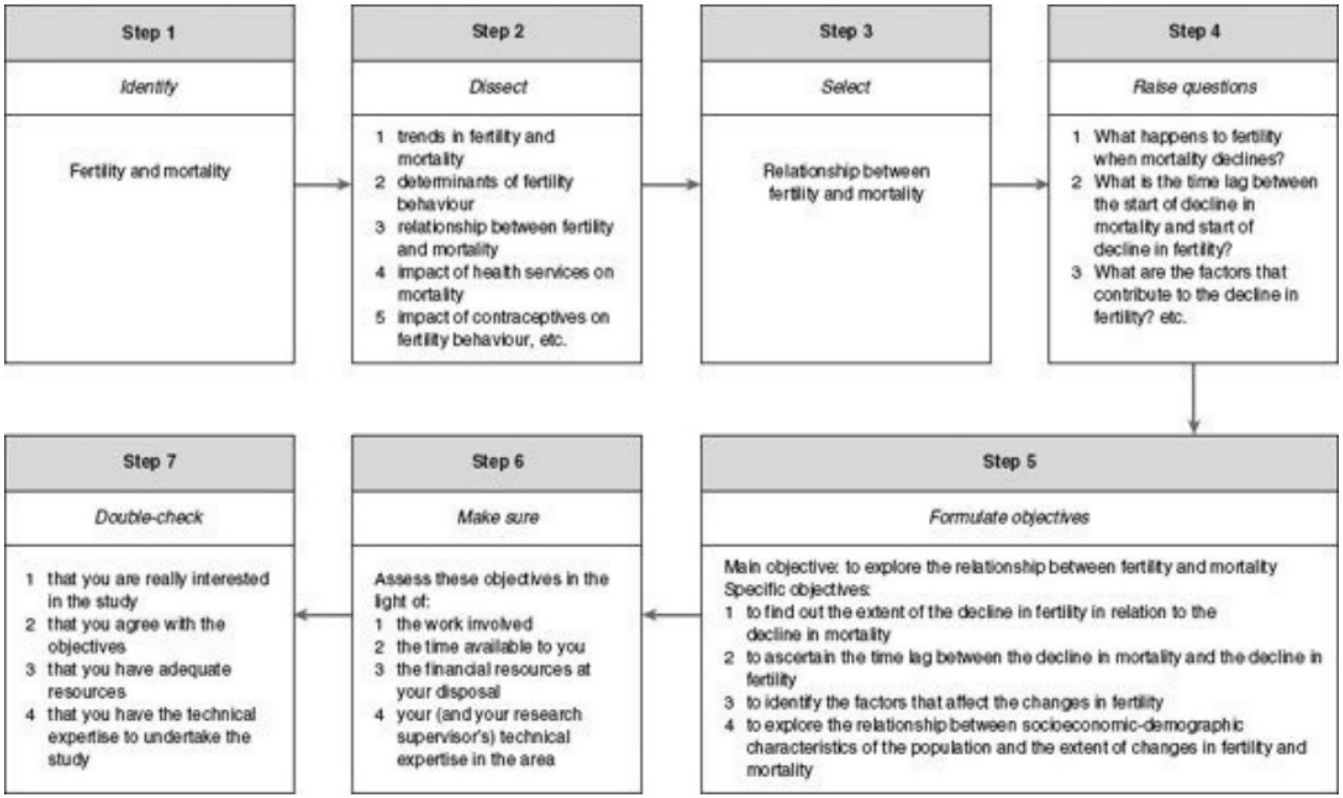
Example #1

A study in the area of alcoholism



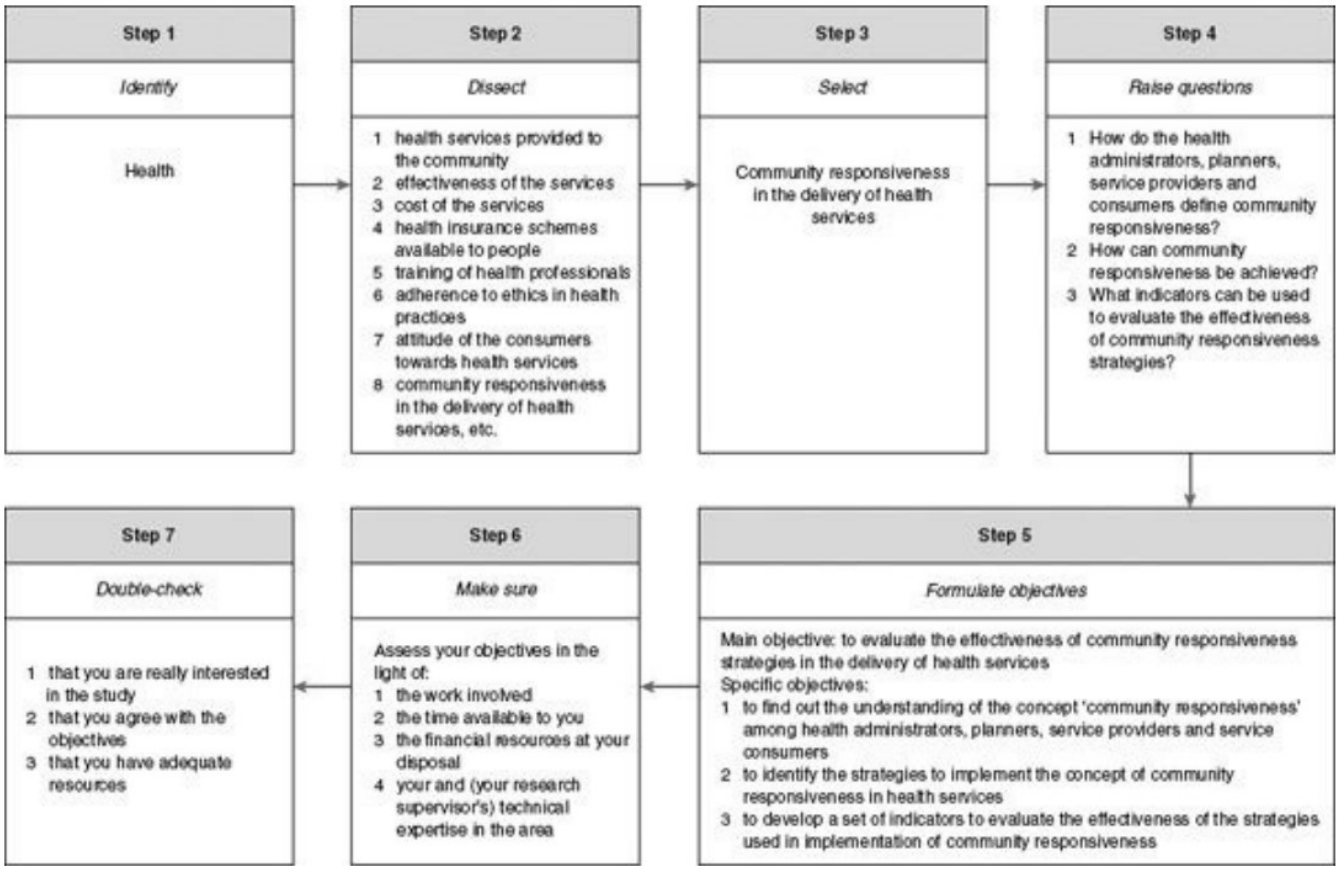
Example #2

A study on the relationship between fertility and mortality



Example #3

A study in the area of health



Task #3 (Group Work)

Following the steps in formulating a research problem, present the step-by-step process up to step 5 for your targeted project. Kindly present them as shown in the 3 examples. All members of the group are expected to contribute.

Instructions:

1. Save your document (Objectives) in PDF and use filename format:
   - Objectives – Group No. Surnames

2. Submit the PDF thru email with email subject : [IT 3204] Task #3

3. It must be emailed on or before 9:00 am on Monday, February 6, 2020.

4. Each group will be given time to 5-7 minutes to present the objectives during our class. Questions will be answered by each member.