



ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY PALKULAM BUSINESS RESEARCH METHODS

UNIT – II RESEARCH DESIGN AND MEASUREMENT

RESEARCH DESIGN

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. In fact the research design is the conceptual structure within which research is conducted. It constitutes the blueprint for the collection, measurement and analysis of data. In keeping with the above stated design decisions one may split the overall research design into the following parts;

1. The sampling design : Which deals with the method of selecting items to be observed for the given study.
2. The above observational design : which relates to the conditions under which the observations are to be made.
3. The statistical Design : which concerns with the question of how many items are to be observed and how the information and data gathered are to be analysed.
4. The operational design : which deals with the techniques by which the procedures specified in the sampling , statistical and observational design can be carried out.

FEATURES OF THE RESEARCH DESIGN:

1. It is a plan that specifies the source and types of information relevant to the research problem.
2. It is an outline that specifies the objectives of the study and the hypothesis
3. relevant to the research questions.
4. It is an blueprint specifying the methods to be adopted for gathering and analyzing data.
5. It is a scheme defining the domain of generalisability.

IMPORTANT ELEMENTS OF A RESEARCH PLAN:

After making decisions on the above questions a formal research plan incorporating is drafted. The format may vary depending on the purpose for which the study is undertaken.

Introduction:

The introduction of a research plan or proposal should place the research problem in its historical perspective. It must state the need for studying it. And the research's precise interest in studying the problem.

Statement Of the problem :

The research problem should be defined pointing out its core nature and its importance. The issue relating to the problem may also be stated. This statement gives direction to the research process.

Review Of previous studies:

There may be previous studies on the selected theme. A review of available literature will bring out information on them. The primary aspects of those studies may be briefly described and the gaps pointed out.

Scope of the study :

A complete study of any problem is well high non- manageable, since it would entail an overwhelming mountain of data. Therefore the scope and dimension of the study should be delimited with reference to the topical scope- breath and depth , geographical area to be covered , reference period , the type of institution

Objective Of the study :

The specific objectives of the study should be stated clearly. These refer to the questions to which the researcher proposes to seek answers through the study.

Conceptual model :

This section is the heart of the research plan. This is where the researcher formulates and develops the structure of relationship among the variables he is investigating.

Hypothesis :

These are logically deduced from the theoretical framework above. They refer to the anticipated outcome or possible answers to the research questions. they should be conceptually clear , specific and simple.

Operational definition OF concepts:

The major concepts used in the title of the study , its objectives , the investigative questions and the hypothesis should be identified. Each of them should be defined in operational terms pertinent to the measurement criteria or operations.

The significance Of the study :

It is important to point out the relevance and significance of the investigation. A careful statement of the value of the study and the possible applications of its findings helps to justify its importance and social relevance.

Geographical area to be covered :

The territorial area to be covered by the study should be decided and specified in the plan. The area to be chosen depends on the purpose of the study and time and other resources.

Reference: Period :

This depends on the nature of the study and availability of data. The period should be longer- say five or 10 years – if the study aims to make a trend analysis of an activity like production or sale or profitability.

Methodology:

In this section the overall topology of the design – experimental , descriptive , survey , case study or historical study – is specified. Further the method or methods to be adopted for the collection of data- observation ,interviewing or mailing – are specified.

Sampling Plan :

If the study requires collecting primary data from the field the universe must be deliberated , and the methods of sampling to be used for drawing the sample from the universe and the sample size must be stated.

Tools for gathering data;

In this section the tools to be used for gathering data- interview schedule /guide , questionnaire or check list etc. are listed and each of them described. the tools chosen should be appropriate to the methods to be adopted for gathering data.

Plan Of Analysis: The statistical techniques proposed for data collection and analysis should be explained clearly with its suitability in the research.

Chapter Scheme: The chapter scheme of the report to be prepared for communicating the findings of the study to the academic community and users should be outlined and the purpose of each chapter stated.

Time budget:

The time period required for each stage of work and the total time duration of the study are specified .

Financial Budget:

The should include an estimate of the expected costs of the project under major categories like salary, printing and stationary , postages , travel expenses , computation , secretarial & typing.

Types Of Research Design:

Exploratory Studies:

The major purpose of exploratory studies are : the identification of problems , the more precise formulation of problems and the formulation of new alternative courses of action. The design of exploratory studies is characteristics by great flexibility and ad-hoc versatility. By definition the researcher is involved in investigating an area or subject about which he or she is not sufficiently knowledgeable to have formulated detailed research questions and /or to state hypothesis about it. In short the researcher seeks to gain familiarity and /or achieve new insights into the problems situation. For a given problem the results of an exploratory study may indicate that further research can be reduced and /or certain aspects of the larger study can be eliminated. An exploratory study is conducted in the following situations;

1. To design a problem for investigation & to formulate hypothesis
2. To determine the priorities for further research.
3. To gather data about the practical problems of carrying out research on particular conjectural statements.
4. To increase the analyst's interest in the problems.
5. To explain basic concepts.

While applying this design three different methods are followed.Survey Of related literature:

By studying intensively the past studies and contributions related to the field of study the research problem could be easily formulated.Conducting Experience survey – This refers to undertaking

collection of details and discussion with the experienced people in the chosen field of research. This would help the researcher to determine the extent to which he is original and can avoid duplication. Analysis Of insight –stimulating examples is yet another method in which depending upon the study on hand. In this method the experience of people would be used as a guide to develop of formulate a hypothesis.

Descriptive Studies:

Descriptive research design is concerned with the research studies with a focus on the portrayal of the characteristics of a group or individual or a situation. The main objective of such studies is to acquire knowledge. For example to identify the use of a product to various groups a research study may be undertaken to question whether the use varies with income, age, sex, or any other characteristics of population. Similarly such studies are used to examine the characteristics of the corporate sector or consumer behaviour etc.

Descriptive research is a marked by the prior formulation of specific research question. The investigator already knows a substantial amount about the research problem, perhaps as a result of an exploratory study before the project is initiated. Thus the investigator should be able to define clearly what it is that he or she wants to measure and to set up appropriate and specific means for measuring it.

A researcher does a descriptive study in the following situations;

1. During the analysis of characteristics of certain groups , e.g users of a product of different ages ,sexes ,education etc.
2. To identify the proportion of people in a specified population who behave in a certain way e.g shoppers who buy from a particular shop.
3. To forecast future trends e.g sales of a company 's product in each of the next five years.
4. To study whether certain variables are associated e.g income & use of a product.

Casual Relationship/ experimental research Design:

This research studies are mainly focused on finding out the cause & effect relationship of the phenomenon under study. Actually when observation is arranged and controlled, it becomes experimental research. An experiment is a test or trail or an act or operation for the purpose of discovering something unknown or of testing a principle , supposition etc. It is a unconfused fashion.

There are different types of experiments such as methodology , pilot study, heuristic, fact finding , boundary , simulation, theoretical , illustrative etc.

