

## Subject: Human Resource Management

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Paper 05: Research Methodology  
Module 04: Research Design



ज्ञान-विज्ञान विमुक्तये



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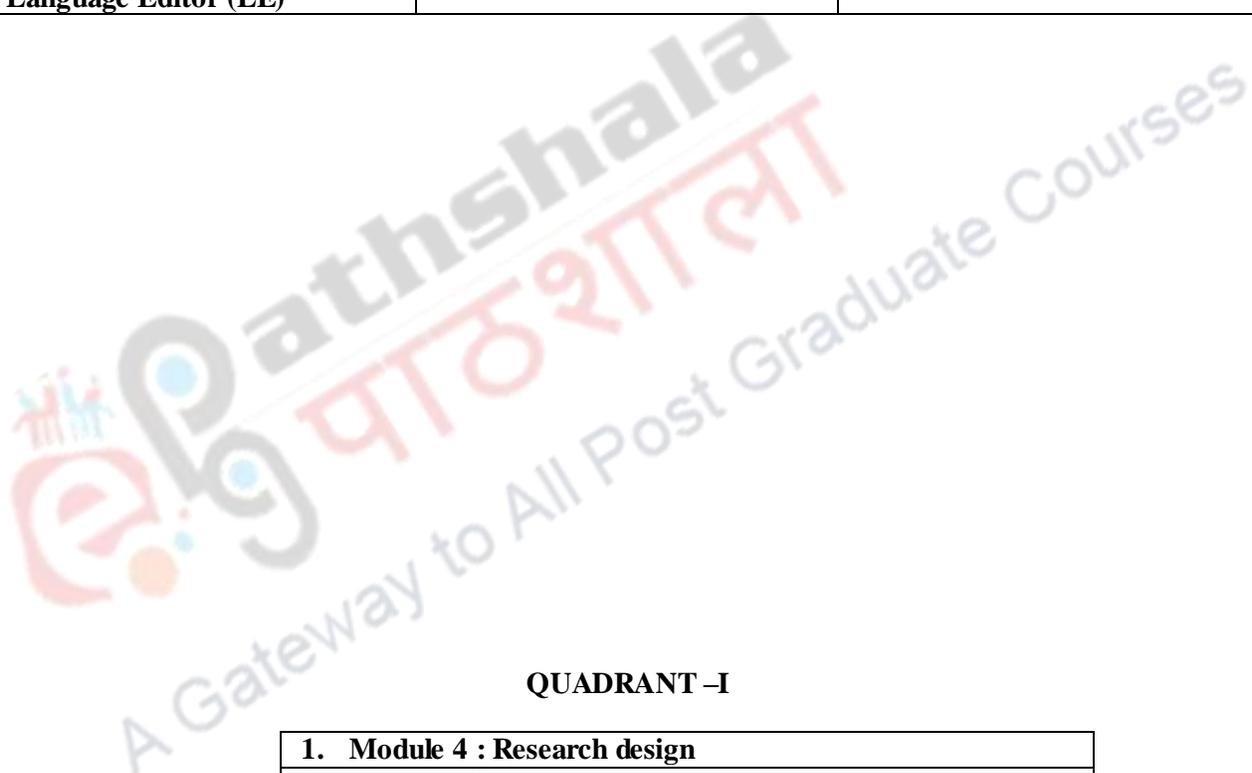
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Items	Description of Module
<b>Subject Name</b>	Management
<b>Paper Name</b>	Research Methodology
<b>Module Title</b>	RESEARCH DESIGN
<b>Module ID</b>	Module 4
<b>Pre-Requisites</b>	Understanding the concepts of research design
<b>Objectives</b>	To study the development of research design
<b>Keywords</b>	Research design, Exploratory, Descriptive, Conclusive, Interview,

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### QUADRANT –I

<b>1. Module 4 : Research design</b>
<b>2. Learning Outcomes</b>
<b>3. Nature of research design</b>
<b>4. Purposes of research design</b>
<b>5. Types of research design</b>
<b>6. Summary</b>

#### 1. Module 4: Research design

#### 2. Learning outcomes

- Understand the nature of research design
- Know the purposes of research design
- Comprehend types of research design

### 3. Introduction

A researcher shall be concerned with the problem of how the various phases of research can be brought under control. Designing the research can tackle this problem. Research design involves determining the course of action, framework and action plan of enquiry visualized so as to receive answers to research questions and to restrict the variance. In fact, it is the conceptual framework within which the research is performed. The research design prepares an outline for data collection, measuring and analyzing data and provides a direction for activities commencing from identification of the problem to the development of hypothesis to collection of data to data analysis, final results and to implications of research. The research makes available the answers to various questions like:

What is the design of research – Exploratory or Conclusive?

What type of data is required?

What are the measures and scales used?

What is the form of data collection such as questionnaire, schedule or interview?

What is the size of sample and sampling procedure?

What are the techniques of data analysis?

### 4. The Nature of Research Design

The research design is an outcome of decisions taken and put in a sequence in respect of the study and the types of data needed, the rationale for the study being made, the sources of data required, the study area, the time available for study, the material and the number of cases needed, the procedure of selection of the sample, the techniques of data collection, the analysis of data and the decisions articulated in a manner that the purpose of research purpose is achieved with economy in money time and energy.

Selltiz, Jahoda, Deutsch and Cook state emphasized that a research design arranges for data collection and analyzing it so that it is relevant to the research purpose with economical in procedure

Green et al. (2008) defines research design as ‘the description of specific methods and the operational framework of the project anticipating the information to be gathered and the sources of information as well as the procedures of data collection. A good research design ensures that the information gathered is relevant, objective and economical.

Kerlinger (1995) gave one of the most comprehensive and holistic definition of research design as a plan, framework and action plan of research envisaged as to obtain answers to research questions and to monitor variance.

Thus, the research design must assure three basic principles:

- a. Transform the research question and the stated assumptions /hypotheses into operational variables capable of being measured
- b. Clearly mention the process to be followed to accomplish the task in economical and quick manner.
- c. Clearly state the control mechanisms used to ensure that the effects of other variables impacting the outcome of the study have been controlled.

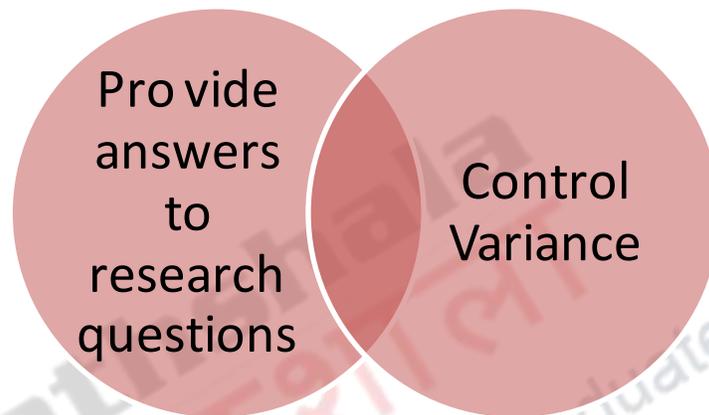
The important consideration is that all of the assumptions must be addressed succinctly and adequately in the design for it to be able to lead on to the methods to be used for collecting the problem specific information. Thus it follows that the problem definition stage precedes the data collection stage. However, this is not an irreversible step. Sometimes when the researcher is operationally defining the variables for study, it might emerge that the research question needs to be restructured and consequently the approach for data collection also might change from the quantitative to the qualitative research or vice versa.

At this point, one needs to understand the distinction between research design and research method. While the research design seeks answers to the research questions, the research method is the technique to collect the information required to answer the research problem, given the created framework.

Thus research designs play an important role in providing direction to the research process. The research design refers to the detailed information regarding the execution of the research question.

### 5. Purposes of Research Design

There are two basic purposes of research design:



**Figure 1 Purposes of Research Design**

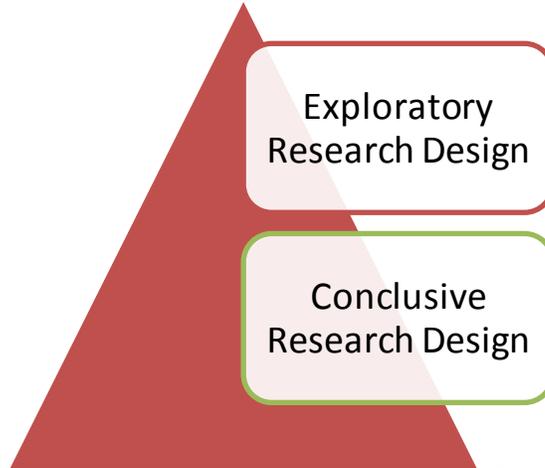
(1) To provide answers to research questions, and (2) to control variance. The research design instrumental in assisting the researcher get answers to the questions of research as well as monitor the variances problem under study.

Research design enables the researcher to answer research questions in a valid, objective, accurate, and economical way. A research plan is deliberately and specifically envisaged and executed to present empirical evidence on the research problem. Research problems often are stated in the form of hypotheses to enable empirical testing. Research designs are worked out with care to yield reliable and valid answers to the research questions embodied in the hypotheses. Adequately planned and executed design assists greatly in allowing us to rely on both observations and inferences. Research design places in position the structure for acceptable tests of the association among variables. Design minutely works out observations to be made, the manner to make them, and the analysis of the quantitative information to be carried out. A design reveals the type of statistical analysis to draw conclusions to be drawn.

### 6. Types of Research Design

There are a number of research designs available to a researcher for investigating the research objectives. There are various typologies that can be adopted for classifying them. A universally practiced and easily comprehensible classification is the one based upon the objectives or the purposes of the study. Thus, the two types of research are- exploratory and conclusive as separate design option, with subcategories of each.

The division between the designs in practice is not so clear. Where the research objective is diffused and requires refinement, the exploratory design might lead to the slightly more concrete, structured and controlled causal research design.



**Figure 2 Types of Research Design**

### **6.1 Exploratory research design**

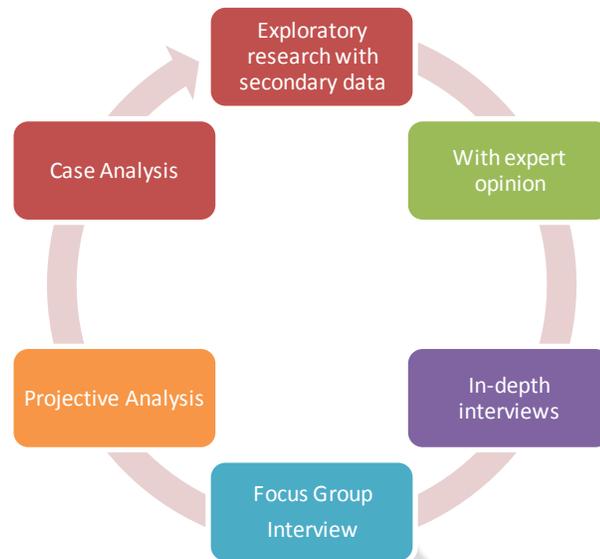
The aim of exploratory research is to inquire into the research questions and does not contemplate to offer ultimate and decisive answers to existing problems.

This type of research design is conducted to determine the nature of the problem, acquire a better understanding of the problem explores the research topic with varying degrees of depth. At the time of doing exploratory research, the researcher should be ready to change his/her direction due to disclosure of new data and new insights.

Thus, the exploratory research is the beginning of research, which prepares forms the platform for more conclusive research. It helps in establishing the research design, sampling procedures and determining data collection method. Exploratory research inclines to handle new problems on which little no previous research has been conducted. The unstructured interview is the most popular primary data collection method with exploratory research.

Exploratory research can be of two big forms: a new topic or a new angle. A new topic is often not anticipated and may be startling in its findings. New angles emerge when we look at things from a new angle, either from a theoretical perspective or a new way of measuring something.

Since the purpose of exploratory research is to identify new hypotheses exploratory research study is more flexible and creative. So, formal design is difficult to find in this research and much relies on the creative ability of the researcher. He could conduct A study using secondary sources of information could be conducted.



**Figure 3 Types of Exploratory Research Design**

### **6.1.1 Exploratory research with secondary data**

Many companies constant conduct research studies and maintain a record of research results. A researcher may have quick and economic access to this source of information. While formulating hypotheses, a researcher could discuss basic research findings reported in professional journal. Public libraries, newspapers, government report, trade journals, general books can be a rich source of secondary data. Computerized data base and quick search systems made this sort of research in to a more organized and exhaustive form. At the same time the researcher is also encountered with information overload. However, research is the single means to generate solutions from relevant information to obtain insights for the management decision-making.

### **6.1.2 Exploratory research with expert opinion**



**Figure 4 Experts' Opinion**

Experts can provide valuable insights of the experts can also be obtained into a problem as they have substantial experience with the problem under study, are in a position to act as an observer and share ideas on the subject.

An exploratory research applying a combination of collaborative and creative individual and persons selected on random basis is a practical solution. To enable the respondents to get new ideas should be provided entire freedom. Different research methods have been developed to know consumer's beliefs, values, attitudes, feelings influencing consumer behavior. Such techniques are further divided into in depth interviews and focus group interviews:

#### **6.1.2.1 In-depth interviews**



**Figure 5 In-depth interview**

There are one-to-one interviews as many buyers do not clearly understand the reasons for making specific purchase decisions. Persons usually do not reveal their decisions and motives that are socially unacceptable. Researcher leads and examines the topic to obtain additional information. The respondents are not accessed with a pre-determined group of questions but the researcher has a design in mind. The same way is not followed in two interviews as takes place in a structured questionnaire interview. The researcher enjoys the free space to investigate into simple reasons. This is both merit as well as demerit in the sense that the comparison of results becomes difficult. The skill of the researcher is totally relied upon causing it uneconomical to employ knowledgeable people. Depth interviews were discredited after being in limelight earlier time but now are making a return for knowing the consumer better.

The useful information is rarely obtained through asking direction questions to respondents about their attitudes and motives. The comparative importance of different types of reasons is not measures through direct questions. In fact many people will not react favorably to the events considered socially unacceptable.

The interviewer, in depth interviews, attempt to produce effects on respondents to talk frankly about the subject of interest, to put respondents comfortably to state his ideas on the subject. If an issue of interest passes quickly, the interviewer may look for more information by examining the respondents for better responses. The in depth interviews provide information that would not be elicited in a normal interview. Since two interviewers will not proceed in exactly the same way, it is not easy to compare the results.

#### **6.1.2.2 Focus Group Interviews**



**Figure 6 Focus Group Interview**

If the management desires to get a real sensation of answers of the respondents on its variables, a researcher can change a focus group into a moderator. The discussion moves from the generic product category to the specific product category and to the particular brand being study. The interviews are often recorded in order to avoid loss of information during the discussion. Reports on the basis of focus groups conventionally may consist of straight excerpts derived from the interview session which can be very helpful and inspiring to individuals. The assisting principle in choosing samples for focus groups is not to apply single focus group but to have continuous groups till the investigator stops to receive additional information. Persons for a focus group are chosen on the basis of quota. A trained modulator is very important to the accomplishment of focus groups. However, the results received and the creative ideas of the researcher are almost similar.

#### **6.1.2.3 Projective techniques**

The projective techniques require the respondents to project themselves into a specific situation and express different images they may have to brands involving competition of a given product. A respondent may be asked to link a brand and the image of a person or required to reverse the roles. The projective techniques are employed for making the respondents reveal more responses than appear to be revealing their feelings.

If brand X were a scooter, what would it be?

If brand Y were a television, which one might it be?

A respondent's personality determines the responses. Every person has some individual traits known as ground personality characterized by stability and hard to change. These personality traits are the outcome of an individual's biological structure. A moderator should keep in mind that the personality is not the only predictor of a person's buying behavior. Knowing the product or segment the market intends at the target group with major personality traits.

#### **6.1.2.4 Case Analysis**

Case analysis is basically of non-scientific nature and has drawn certain doubts. However, it is coming back including the inclusive study in one of a few particular situations and

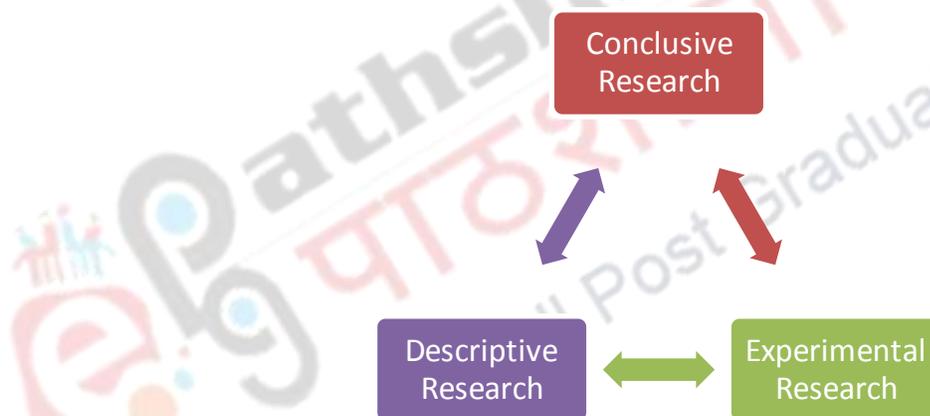
especially the study of complex situations where reciprocal relations of different persons are decisive.

The framework of a research project consist the plan that connects the data to the potential conclusions.

The identification of the similarities and dissimilarities in order to get the answers is the basis of this method. Case research is employed to enhance understanding rather than being merely a quantitative exercise. It asks for a rare mix of judgment for selecting cases and insight for analyzing and interpreting them. Holistic orientation and real life situation are the strong points of case analysis. However, this procedure is time consuming and relies heavily on investigators. The non availability of customary data collection techniques presents commonplace and random information that may be useless.

## 6.2 Conclusive Research

The conclusive research supplies the manager information useful to assess different alternative courses of action and select the most appropriate from them. The conclusive research furnishes a rational basis for a manager's decisions. The alternatives may be well defined or vague. Formal research procedures are the major characteristics of conclusive research. The research objectives and the information needs are exactly explained. Descriptive or experimental are the two categories of conclusive research.



**Figure 7 Types of conclusive research**

### 6.2.1 Descriptive Research

Descriptive research normally depicts the features of respondents, viz., demographic, socioeconomic, geographic, psychographic etc. The buyer perceptions of brand can be presented through descriptive studies describing purchasing power of respondents, presence of distributors, consumption patterns, price sensitivity of consumers and the market share. Descriptive research includes just a few sample studies out of several studies. Though the descriptive research stress on descriptive, yet it cannot be concluded the studies are merely information collecting tasks.

They are also useful for prediction of a marketing event. An association among variables can also be predicted. A statement of the research problem, objectives of research and need of detailed information needs are the major characteristics of an effective descriptive research. The research design must required an appropriate structure. The survey research design is often used in descriptive research including a cross-sectional research design collecting information on particular factors from different cases at a time. It often requires skilled and

competent researchers to conduct the research effectively. Descriptive research focuses on categories, average, percentages, dispersion and other sophisticated procedures rather than on individual cases.

### **6.2.2 Experimental or Causal research designs**

Causal methods answer questions such as why do events happen under certain circumstances. In ex-post facto research design a researcher interviews respondents or observes the event occurring or events that have occurred. This research design has the potential for discovering causality. The experimental research design permits the researcher to change systematically the variables of interest and observe the changes taking place.

Experimental studies involve the intervention of researcher beyond mere measurement. The common intervention of the research consists in manipulating a variable and then observing the effects on the subjects under study.

The independent or explanatory variable is controlled and then the effect of the intervention is observed. In a casual relationship, there is at least one explanatory variable and the other a dependent variable. Beyond association of independent and dependent variables, the sequence of the occurrence of variables has to be considered. The dependent variable follows the independent variable. Though, they may occur simultaneously. The independent variable takes place before the dependent variable. Researchers have to be sure that dependent variable is not influenced by the extraneous variables. In order confirm that these other variables do not influence the dependent variable, researcher controls the other variables. While such controls are important, more precautions are needed to enable the obtained results indicate the influence of the independent variable on the dependent variable.

### **Summary**

Research design involves determining the course of action, framework and action plan of enquiry visualized so as to receive answers to research questions and to restrict the variance. The research design is an outcome of decisions taken and put in a sequence in respect of the study and the types of data needed, the rationale for the study being made, the sources of data required, the study area, the time available for study, the material and the number of cases needed, the procedure of selection of the sample, the techniques of data collection, the analysis of data and the decisions articulated in a manner that the purpose of research purpose is achieved with economy in money time and energy.

There are two basic purposes of research design: (1) To provide answers to research questions, and (2) to control variance. There are a number of research designs available a research for investigating the research objectives. Exploratory research aims to explore the research questions and does not intend to offer final and conclusive solutions to existing problems. Exploratory research can be conducted using secondary sources of information or using expert opinion. Qualitative research techniques are divided into in depth interviews and focus group interviews, Projective techniques and case analysis. Conclusive Research can be descriptive in nature and causal research