

**Subject: Human Resource Management**

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**Paper 05: Research Methodology**  
**Module 05: Data Collection Methods**



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Items	Description of Module
<b>Subject Name</b>	Management
<b>Paper Name</b>	Research Methodology
<b>Module Title</b>	DATA COLLECTION METHODS
<b>Module ID</b>	Module 5
<b>Pre-Requisites</b>	Understanding the methods of data collection
<b>Objectives</b>	To study the nature and types of data collection methods
<b>Keywords</b>	Descriptive, Exploratory, Conclusive, Ex-post facto research

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#### QUADRANT –I

1. Module 5 : Data collection methods
2. Learning Outcome
3. Classification of data
4. Data collection procedure for primary data
5. Limitations of primary data collection
6. Types of study through primary data
7. Summary

#### 1. Module: An Introduction to Business Research

#### 2. LEARNING OUTCOME:

After studying this module, you shall be able to

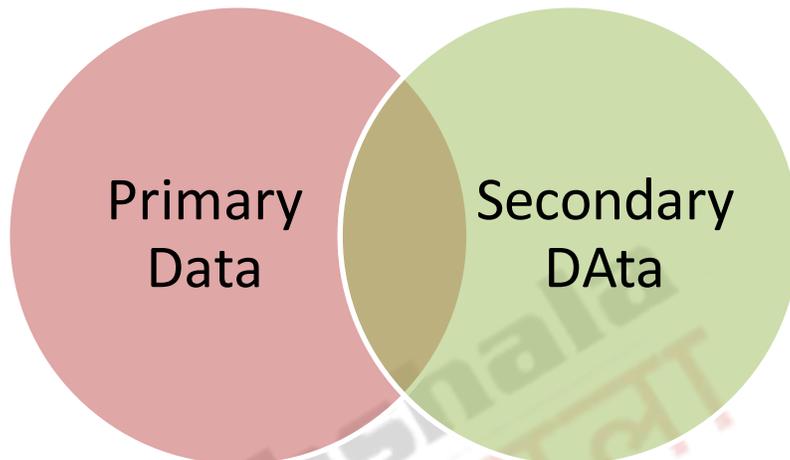
- Know the nature of data collection
- Understand the classification of data
- Comprehend the data collection procedure for primary data
- Understand the limitations of primary data collection
- Become aware of the types of study through primary data

### 3. Introduction

A variety of methods and techniques are available for collecting the specific information required for a study. The researcher needs to be cognizant of the resources available for the study and the level of accuracy required. The sources of data could either be primary or secondary in nature

### 4. Classification of Data

The sources of data are broadly classified into primary and secondary.



**Figure 1 Classification of Data**

#### 4.1 Primary data

The researcher identifies the needs for the primary data. The primary data generates the first time, is problem or project specific and is gathered with the specific purposes. The genuineness and the pertinence is logically high. The resource implications of and the monetary involvement are quite high. At occasions a researcher might not possess the resources or the time or both to proceed with primary data. In such cases the researcher may search for other thrifty and genuine options data so that the study may be carried further.



**Figure 2 Primary data collection (Adapted from dir.indiamart.com)**

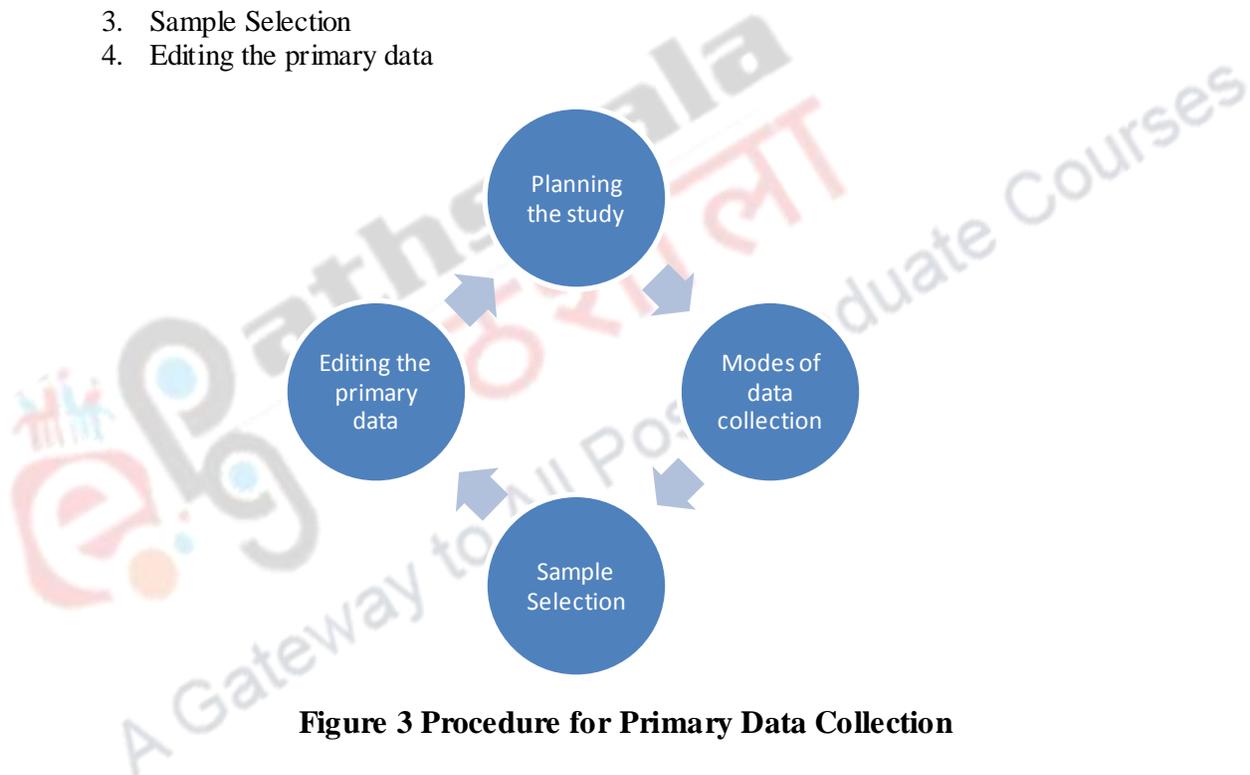
#### 4.2. Secondary data

The information which is not topic or research specific and is gathered and documented by some other researcher or research agency is known as secondary data. This information is maintained and given publicly in a format with an explicitly defined structure, is accessible soon and managed. Secondly, in many cases, if it not a data product, it is not very economical to collect. For example, the data to track consumer preferences is readily available for the researcher to use and draw quick conclusions. If compared to the original research specific data, secondary data can be thrifty and collected in less time. Also the information collected is contextual. The primary and original data for one researcher may be secondary and historical for some other researcher.

#### 5. Procedure for Primary Data Collection

The primary data collection procedure involves a number of steps:

1. Planning the study
2. Modes of data collection
3. Sample Selection
4. Editing the primary data



**Figure 3 Procedure for Primary Data Collection**

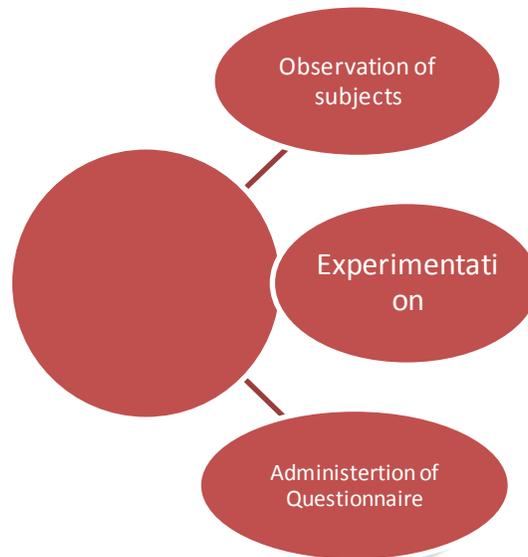
##### 5.1 Planning the Study

As the extent of quality of conclusion attained from statistical data depends upon the attribute of collected information, it is of great significance that a standard investigation process is established to assure that the data is representative and unbiased. This needs a high level of skill and also certain precautionary measures may have to be adopted.

##### 5.2 Modes of Primary data collection

Three commonly utilized methods for gathering of primary data are:

- Observation of subjects
- Experimentation
- Administration of Questionnaire



**Figure 4 Modes of Primary Data Collection**

### **5.2.1 Observation**

The researcher or the persons hired by him collect the information by observing the work process. For example, the researcher may go a service station, pose as a customer and observe. What is the best location in super market in the shelf? This method eliminates the response bias. The observation can be applied to investigate techniques of selling, movements and responses of customers etc. But the customer's/ consumers' mental state, motives for buying decisions, their product images are not laid open to view. The information regarding their income and education is not evident. It is also time-taking for the researcher to wait for specific sections to occur.



Figure 5 Observation (Adapted from Reference.com)

### 5.2.2 Experimentation

Many of the important decisions facing the marketing executive cannot be resolved by secondary research by observing or by surveying the attitudes of customers or experts. Experimental method may be used in many circumstances like opting the best method for training and remuneration plan for salesmen, the appropriate shelf arrangement for displaying a product, determining the effectiveness of a point-of-purchase display, the most effective media. In a marketing experiment the experimental units may be consumers, stores, sales territories, etc. Variables, which the researcher can control, which can be studied are price, packaging, display, sales incentive plan, flavor, color, shape etc. The results of a marketing experiment will be in the form of sales, attitudes or behavior.

### 5.2.3 Questionnaire

Survey method involves direct interview of the potential consumers. The interviewer contacts the consumers and asks the extent to which they would be ready to buy a product at different prices. Consumers' survey may either be the complete enumeration, sample survey or end-use of the product. In the population survey, each and every consumer of the product are enquired to lay bare their plans of purchasing the product in the future. The surveys of consumers' plans can also provide helpful data for demand forecasting. Unlike the complete enumeration method, under the sample survey method, only a few potential consumers from the relevant market selected through an appropriate sampling method, are interviewed. The survey may be conducted either through direct-interview or mailed questionnaire to the sample consumers.

Even the most carefully designed surveys that are not able to forecast accurate consumer demand. In certain cases, the information with the respondents is not sufficient to decide if they would procure a product. Sometimes the response may reflect a desire either consciously or unconsciously in order to get approval from the surveyor. Due to these restrictions, the results of consumer surveys are not ever relied upon for forecasts purposes.

## 6. Limitations of Primary Data Collection

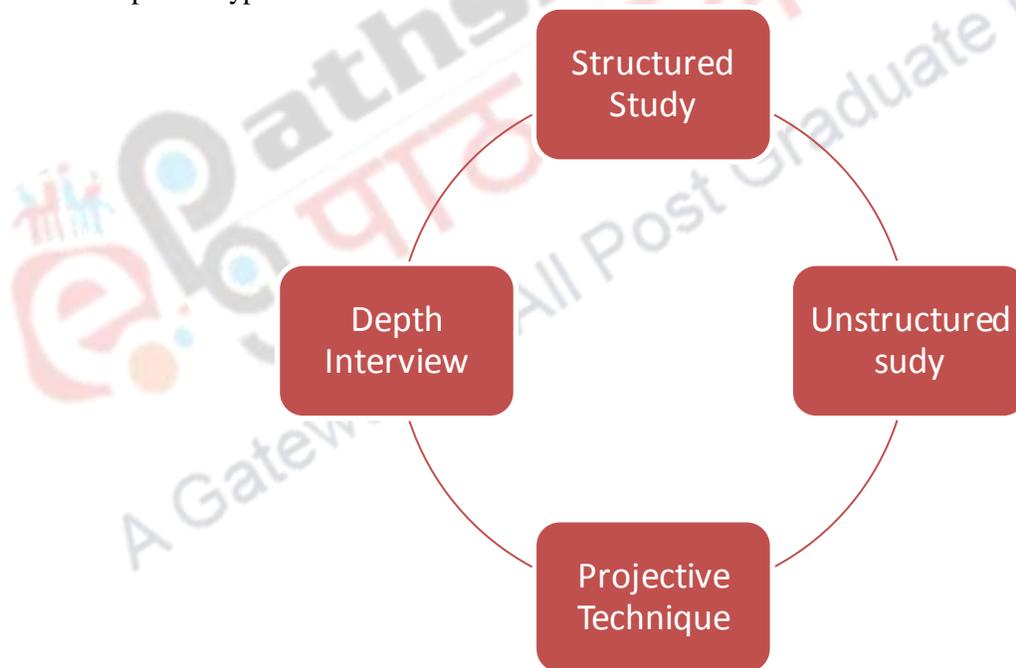
The primary data collection suffers from a number of limitations.

1. This primary data collection needs great skills in the interviewer as the respondents may not be willing to furnish information. Therefore, the interviewer has to assure respondents that the information will remain confidential.
2. The lack of knowledge, memory or inability to find out their motives may be the possible reasons for the inability of the respondents to provide information
3. There are also semantic difficulties due to which respondents are unable to provide exact information. It is often difficult to articulate a question in such a manner that it communicates accurately the same sense to all respondents. Similarly two different words of a single question may often produce different results.

However, these limitations can be managed to a limited extent by cautious phrasing of questions, deploying specially trained investigators and careful interpretation by a clear recognition of the limitations of the data and an understanding of what exactly the data represent.

## 7. Types of study through Primary Data

Different types of studies may be conducted through the collection of primary data. Some important types of studies are discussed below:



**Figure 6 Types of study through primary data**

### 7.1 Structured Study

If a car manufacturer wanted to know how many own a car, what is the make of it, when they purchased the car, the respondents would be asked a number of questions in a particular sequence.

Do you have a car?  
(if yes )

Yes/No

What s the make of it?  
When did you purchase it?

Make \_\_\_\_\_  
Date \_\_\_\_\_

This constitutes an example of structured and non disguised study.

### 7.2 Non-Structured Study

The marketing personnel want to understand the reasons people buy or refuse to buy their products more than anything else.

Reasons for their buying a product can be categorized as:

- ❖ Reasons for individual's own purposes or attitudes.
- ❖ Reasons for outside influences such as advertising
- ❖ Those reasons based on characteristics of product itself

This approach is still far from being satisfactory. Many will not report base or socially unacceptable motives. To overpower these difficulties, psychoanalysts have developed several techniques

### 7.3 Projective Technique

In project technique a respondent is asked to explain an ambiguous situation posed to him. A projection shows the personality and attitudes of the respondents in the situation described. Several projective techniques are used, but word-association, sentence- completion and storytelling are widely used techniques. In word-companionship a series of words is told one at a time to the respondent. After each word, the respondent states the thing that emerges in his mind. The sentence-completion needs the respondent to complete a portion of the sentence. In story telling the respondent visualizes a picture or reads a description and asked to tell a story about it.



Figure 7 Depth Interview

#### 7.4 Depth Interview

The interviewer makes an attempt to get the respondent to talk openly on subject of interest instead of approaching the respondent with a questionnaire. The interviewer hopes the respondent to be at ease and then encourages him to tell the ideas he has concerning the subject. If an idea of interest passes over quickly, the interviewer may examine for detailed information. For example, he may make a comment, 'that is interesting. What is the reason you feel this way?' This inspires confidence in the respondent for more discussion of the idea. Various probes can be used as needed to get the respondent explain in more detail about an idea. In an interview of this kind, a formal questionnaire is not used but the interviewer has an outline in his mind. If the respondent shows no particular interest in the subject, the interviewer adds questions addressing these topics. The objective of these interviews is to get deep insight into the reasons for specific decisions.

#### 8. Major Steps in Conducting a Survey

Conducting a survey involves the following steps:



**Figure 8 Steps in conducting a survey**

### **8.1 Determining the objectives of research**

The objectives of research should be described in specific terms. Surveys in particular can take different direction. Objective should be developed in written form in a clear and informational manner, if possible, to prevent that all kind of questions are not asked.

### **8.2. Methods of Data Collection**

A number of methods are in use for collection of data such as questionnaire, telephone enquiry, mail questionnaire, personal interview, panel research, group interview technique and special survey method. Each of these methods has its own advantages and disadvantages.

### **8.3 Construction of a Questionnaire**

A usual form of questionnaire is designed when data is to be collected by asking questions to people in possession of the needed data. The questionnaire is a set of questions asked from respondents and provides the space to record the responses. Each question is Wording of the each question should be accurate and the questions are arranged in a particular sequence.

## **9 Methods for Secondary Data Collection**

There are various sources of secondary data. Secondary data may be both published and unpublished data:

- Publications of the governments at every level
- Publications of international organization and their subsidiaries
- Trade associations' technical journals and publications
- Newspapers, magazines and books
- Business and industrial reports and publications
- Reports of research scholars, universities, economists in different fields

### **9.1. Unpublished data**

The sources of unpublished data may consist of unpublished biographies of celebrities, diaries written by distinguished persons, letters, and autobiographies also may serve the purposes of research scholars, trade associations, labor offices and various other organizations.

## **9.2 Secondary Data –Internal**

Useful secondary information is also available from organization's internal records or published records. At occasions this information may be sufficient enough to furnish the desired outcome. However, this initial information is helpful in formulating the overall research strategy. Therefore, this information must be used before anticipation of further research. For a manufacturing industry the internal records maintained in a proper manner can assist in a big way even for formulating companies' strategies.

### **9.2.1 Company records**

This would entail all the data about the inception, the owners and the mission and vision statements, infrastructure and other details including the process, manufacturing and sales, as well as a historical timeline of the events. Policy documents, minutes of meetings and legal papers would come under this head. The access to some part of this data might be available on the public demand. However, there might be certain documents like corporate plans for the next year which might not be available.

### **9.2.2 Employee records**

All details regarding the employees would be part of employee records. This would include all the demographic information, as well as all the performance and discipline data available with reference to the individual. Performance appraisal records, satisfaction/dissatisfaction data as well as the exit interview data would also be available in the organization's annals. Sometimes, the decision maker can review the impact of certain policy change, through performance data. Also, attrition and absenteeism data could serve as indicators for primary research. For a service firm, employee records are more significant as people here are a part of the delivery process.

## **9.4 Sales Data**

This is an extremely valuable source and can be the most important part of the data collection process for a market research study. This data can be on different forms:

### **9.5 Financial records and sales report**

These reveal total sales made against projected sales data, total sales by units, comparative sales, performance across quarters, across regions, product categories, as well as subsequent to different sales promotion activities. Financial records in terms of sales, expenses, sales revenue, sales overhead costs and profits are some of the most important output data recorded by an organization that are of critical importance as there are the dependent variables in most cases in a research for which the decision maker tries to establish the causation.

### **9.6 Salespersons' call records**

This is a document to be prepared and updated every day by each individual salesperson. This can reveal very rich information about the potential customer, classification of the customer in terms of product requirement, company product purchase, as well as the popular products, the products that are hard to sell, information sought by the customer, customer's usage pattern and the demand analysis. The reports can also provide a vital lead to a product's redesign or new product development. The data is also critical for creating job descriptions and building incentives into the system for monitoring the sales force. The information needed and the presentation and negotiation required also help in designing more customized training and development initiatives.

## **9.3 Secondary Data –External**

Statistics and governments reports, publications of advertising and research agencies, trade and association directories are major external sources of data. Other major sources of secondary data include different statistical organization, army establishment and national accounts organizations.

## **10 Evaluation of Secondary Data**

Even though the data collected through other sources is valuable and critical to the research that one is undertaking, there must be certain quality checks that a researcher sometime must undertake. Thus, a set of evaluative measures can be employed before one decides to use it for the present study:

### **10.3 Methodology Check**

The first evaluative criterion is the process or design used to collect the data so that in case there has been an element of skewed respondent selection or bias, one can detect it here. The verification one needs to attempt is for the sampling considerations, methodology of data and analytical tools used and subsequent reporting and interpretation of results. The sampling consideration has to be done in terms of the defining criteria; the sampling frame; the respondent selection; response rate and the quality of data recording. Methodology of data has to be carried out in terms of quality of instrument design and nature of field work. This is critical as one might find that the variables measured are not required by the current study.

### **10.4 Accuracy Check**

The researcher must determine whether the data is accurate enough for the present study. If the study has been conducted and the findings compiled by a reputed source, the reliability of using it as a base for further research is higher. In case information is from an unreliable source, the research would do well to collect similar data from multiple sources and then collate the findings. A related problem that might occur is when different studies /sources report country findings. In such a case, a short pilot study, supported by an expert opinion survey would help achieve the right perspective. This is known as cross-check verification.

## **Summary**

- 11** A variety of methods and techniques are available for collecting the specific information required for a study. The researcher needs to be cognizant of the resources available for the study and the level of accuracy required. The sources of data could either be primary or secondary in nature. The primary data is generated the first time, is problem or project specific and is gathered with the specific purposes. The information which is not topic or research specific and is gathered and documented by some other researcher or research agency is known as secondary data. The primary data collection procedure involves a number of steps including planning the study, determining the modes of data collection, selection of sample and editing the primary data. The primary data collection suffers from a number of limitations. Different types of studies may be conducted through the collection of primary data. Some important types of studies structured study, non-structured study, projective technique and depth interview. Conducting a survey involves the steps such as determining the objectives of research, methods of data collection and the construction of a questionnaire. Secondary data may be both published and unpublished data. Various sources of secondary data may be divided into internal and external sources. Internal sources of secondary data include company records, employee records, sales data, financial records and sales report, salespersons' call records. Statistics and governments reports, publications of advertising and research agencies, trade and association directories are major external sources of data. Other major sources of secondary data include different statistical organization, army establishment and national accounts organizations. Even though the data collected through other sources is valuable and critical to the research that one is undertaking, there must be certain quality checks that a researcher sometime must undertake. Thus, a set of evaluative measures can be employed before one decides to use it for the present study. These checks include methodology check and accuracy check.



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