SES'S L.S.RAHEJA COLLEGE OF ARTS AND COMMERCE		
Course: Business Research Methods	Unit: 1	Prepared by: Ms. Suvarna Raikar

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➢ **RESEARCH.**

Research is a scientific and systematic search for pertinent information on a specific topic. It is a careful investigation or enquiry especially through search for knowledge. It is a movement from known to unknown. To find solutions to problems.

➢ **OBJECTIVES OF RESEARCH.**

To find solutions to problems	To predict events
To verify and test existing laws or theories	To analyze inter-relationships
To obtain information	To develop new tools and concepts
To extend knowledge	To develop new principles and theories
To establish generalizations and general laws	To develop innovative ideas

➢ **TYPES OF RESEARCH**

Basic/Pure Research: Pure research is undertaken for the sake of knowledge without any intention to apply it in practice. It is also known as basic of fundamental research.
Ex: Einstein's theory of relativity, Newton's contribution, Galileo's contribution

Applied Research: Is carried on to find solution to a real life problem requiring an action or policy decision. It is thus problem oriented and action directed.
Ex: Improve agricultural crop production, Treat or cure a specific disease.

Empirical Research: The word empirical means information gained by experience, observation or experiment. Empirical research is defined as "research based on experimentation or observation".
Ex: Measuring the amount of lead found in the drinking water of a small town.

Scientific Research: Scientific research is a systematic process undertaken to study the research problem and to arrive at conclusions. It relies on the application of scientific method.
Ex: What happens to seeds if they are kept at different temperatures before they are planted?

Social Science Research: Social science research deals with the behaviour of people in their different roles, such as consumers, employees, producers, consultants, trainers, learners, parents, artists etc.
Ex: A research study that looks at how people learn to lie more effectively, research about workplace schedules and health of employees.

Historical Research: It is defined as "a process of critical inquiry into past events, in order to produce an accurate description and interpretation of those events". Historical research can show patterns that occurred in the past and over time which can help us to see where we came from and what kinds of solutions we have used in the past.

Exploratory Research: This research is conducted to explore information about the nature or causes of research problem. It is conducted when the causes of the research problem are not known to the researcher.

Descriptive Research: Descriptive research, also known as"Statistical research". Descriptive research refers to research that provides an accurate portrayal of characteristics of a particular individual, situation, or group.

Casual Research: Casual research investigates cause-effect relationship between two or more variables. Causal Research explores the effect of one thing on another and more specifically, the effect of one variable on another.

➢ **VARIABLES.**

A variable is an entity that takes on different values. Anything that can vary can be considered as a variable. Ex: age, weight, income etc. The researcher assigns a numerical value to the variable for the purpose of data analysis.

➢ **QUANTITATIVE RESEARCH AND QUALITATIVE RESEARCH.**

Quantitative research: It is based on the measurement of quantity or amount. It is applicable to phenomena that can be measured in terms of quantity. It involves generation of data in quantitative form. Focus in this research is concise and narrow. Quantitative research is conclusive.

It deals with what, when, where and when to research. It is basically the study of numbers and statistics.

Qualitative research: It is also called descriptive research. It is concerned with subjective assessment of attitudes, opinions and behaviour. It is the research concerned with qualitative phenomenon relating to quality or kind. It's about what people think and not how many.

Focus in this research is complex and broad. Qualitative research is exploratory in nature.

➢ **STAGES OF RESEARCH PROCESS.**

Research process consist of series of action or steps necessary to effectively carry out research and desired sequencing of these steps.

1) Selecting a topic
2) Defining the Research Problem
3) Objective of Research
4) Literature survey
5) Development of working hypothesis
6) Preparing a Research Design
7) Sample Design
8) Collection of data
9) Execution of Project
10) Analysis of data
11) Hypothesis testing
12) Generalization
13) Preparation of research report

➢ **CHARACTERISTICS OF A GOOD RESEARCH.**

Scientific method	Pilot study
Objective and logical	Good Research design
Empirical	Selection of right techniques
Generalization	Ease in implementation

➢ **HYPOTHESIS.**

• Hypothesis testing refers to statistically analyzing data from a sample in order to make assumptions about a population.

• Hypothesis is an unproved theory, proposition, supposition, tentatively accepted to explain certain facts or to provide basis for further investigation, argument etc.

• The hypothesis is an uncertain statement that involves the proposed answer to the problem.

➢ **SIGNIFICANCE OF HYPOTHESIS.**

Provides definite focus	Suggests the type of research
Specific sources of data	Technique of analysis
Determines data needs	Development of theory

➢ **SOURCES OF HYPOTHESIS.**

Intuition	Theory
Research studies	Observation
Consultations	Analogies
Culture	Continuity of research

➢ **RESEARCH DESIGN.**
- Decisions regarding what, where, when, how much, by what means concerning an inquiry or a research study constitute a 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.

➢ **NEED AND IMPORTANCE OF RESEARCH DESIGN.**

Guidelines to the Researcher	Objectives of research
Organizing resources	Monitoring of expenditure
Directions to the research staff	Execution of research work
Selection of techniques	Motivation to the staff
Collection of relevant data	Improvement in decision making

➢ **ESSENTIALS OF A GOOD RESEARCH DESIGN.**

Focus on objectives	Simplicity
Flexibility	Cost-effective
Pilot study	Ease in implementation
Acceptance	Training to the Research staff
Suitability	Selection of right techniques/methods

➢ **SCOPE/AREAS OF RESEARCH DESIGN.**

Sources of data collection	Need for qualified staff
Methods of data collection	Time allotted
Methods of data analysis	Population for research
Data collection specific	Decision on sample size
Availability of physical resources	

➢ **SAMPLING AND SAMPLE**
Sampling: Sampling is defined as "those individuals chosen from the population of interest as subjects in an experiment or to be the respondents to a survey."   *Donald & Dell*
Sampling is the process of selection of certain percentage of a whole group of items as per predetermined plan. It refers to a selected number of individuals chosen from the whole group/population with a view to obtaining information and drawing conclusions.
Sample: Sample size refers to the number of items to be selected from the universe to constitute a sample. This is the sub-population to be studied in order to make an inference to a reference population(A broader population to which the findings from a study are to be generalized).

➢ **PROBABILITY SAMPLING AND NON PROBABILITY SAMPLING.**
Probability Sampling: A probability sampling scheme is one in which every unit in the population has a chance (greater than zero) of being selected in the sample, and this probability can be accurately determined.

Non-Probability Sampling: Any sampling method where some elements of population have no chance of selection (also called as 'out of coverage'/'undercovered'), or where the probability of selection can't be accurately determined. It involves the selection of elements based on assumptions regarding the population of interest, which forms the criteria for selection.

➢ **PROBABILITY SAMPLING METHODS**

Simple Random: A sampling procedure in which every element in the population has a known and equal chance of being selected as a subject (e.g., drawing names out of a hat).

Systematic: Systematic sampling is the selection of samples from a population according to a set schedule or plan. Type of sampling which selects samples by following some rules set by the researcher which involves selecting the 'Kth' member where the random start is determined.

Stratified: Also called as Proportional random sampling. Population is divided on the basis of characteristic of interest in the population e.g. male and female may have different consumption patterns.

Cluster: Clusters of population units are selected at random by dividing the population into clusters (usually along geographic boundaries) and then all or some randomly chosen units in the selected clusters are studied. In cluster sampling the population is divided into subgroups, called "cluster". Ex: classrooms, schools, countries, city blocks.

Multistage sampling: Complex form of cluster sampling in which two or more levels of units are embedded one in the other. First stage, random number of districts chosen in all states. Followed by random number of talukas, villages. Then third stage units will be houses. All ultimate units (houses, for instance) selected at last step are surveyed.

➢ **NON-PROBABILITY METHODS**

Purposive/Deliberate: This sampling implies deliberate selection of sample units as per some pre-determined criteria. It involves selection of sample units which is judged as the most appropriate for the given research study.

Convenient: A type of non-probability sampling which involves the sample being drawn from that part of the population which is close to hand. That is, readily available and convenient. Also called as accidental sampling, grab or opportunity sampling or haphazard sampling.

Judgment: The researcher chooses the sample based on who they think would be appropriate for the study. This is used primarily when there is a limited number of people that have expertise in the area being researched.

Quota: Quota sampling is a method for selecting survey participants. Here, a population is first segmented into mutually exclusive sub-groups, just as in stratified sampling. Then judgment is used to select the subjects or units from each segment based on a specified proportion.

Snowball sampling: This type of sampling is used when the research is focused on participants with very specific characteristics. It involves using a network of like-minded or like situated individuals. Used to sample from low incidence or rare populations. Ex: people who have been subject to domestic violence, drug users, homeless persons, practicing criminals, commercials prostitutes, gang leaders, drug dealers.

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➢ **TYPES OF DATA**
Primary Data: Data that has been collected from first-hand-experience is known as primary data. Primary data has not been published yet and is more reliable, authentic and objective.
Secondary Data: Data collected from a source that has already been published in any form is called as secondary data. The review of literature in any research is based on secondary data. Mostly from books, journals and periodicals.

➢ **MERITS & DEMERITS OF PRIMARY DATA**

Merits	Demerits
Provide first-hand information	Costly
Availability of detailed information	Time consuming
Accurate & reliable data	Supervision & Control
Availability of specific data	Bias of Interviewers or others
Act as supplement to secondary data	Poor response
Improves the quality of research work	Inadequate manpower

➢ **MERITS & DEMERITS OF SECONDARY DATA**

Merits	Demerits
Easy, quick and economical	Data available may be outdated
Economy of time	Data may be defective
Supplement to primary data	Absence of reliability
Comparing & interpreting primary data	May not be relevant
	May not be accurate
	Data may not be sufficient

➢ **DIFFERENCE BETWEEN PRIMARY DATA & SECONDARY DATA**

Primary Data	Secondary Data
Real time data	Past data
Sure about sources of data	Not sure about of sources of data
Help to give results/ finding	Helps in refining the problem
Costly and time consuming process	Cheap and no time consuming process
Avoid biasness of response data	Cannot know if data biasness or not
More flexible	Less flexible

➢ **METHODS OF PRIMARY DATA.**
   o Observation Method
   o Experimental method
   o Interview method
   o Survey method

➢ **OBSERVATION.**
  ▪ Perceiving data through the senses: sight, hearing, taste, smell and touch is called Observation method. It's the most direct way used in studying individual behaviour.
  ▪ Observations can be done while letting the observing person know that he is being observed or without letting him know.
  ▪ Observations can also be made in natural settings as well as in artificially created environment.

Merits	Demerits
Accuracy	Certain elements are missed
Factual Information available	Human errors possible
Records event as they occur	Secrecy of participant not observed
Economical	Observer's bias
Accuracy in mechanical devices	Limited application

➢ **TYPES OF OBSERVATION**
  Direct observation: observing behaviour as it occurs. It is simple, easy and direct method of observation.
  Indirect observation: observing the effects or results of the behavior rather than the behavior itself. Archives (written records) Physical traces (erosion or accumulation/accretion).
  Nonparticipant observation: Researcher is not part of the activity taking place, but simply observes. May be identified as observer/research.
  Participant observer: Researcher takes part in community, organization, or activity. Researcher attempts to learn what it is like to be part of the community, organization, or participate in the activity.
  Structured observation: researcher identifies beforehand which behaviours are to observed and recorded
  Unstructured observation: No restriction is placed on what the observer would note: all behavior in the episode under study is monitored
  Human/manual observation: person or persons observe behavior (person hired by the researcher, clients, or perhaps the observer is the researcher)
  Mechanical observation: human observer is replaced with some form of static observing device(audio and or visual recording)
  Disguised observation: subject is unaware that he or she is being observed (also called Covert observation).

➢ **EXPERIMENTAL METHOD AND ITS TYPES.**
  The experimental method involves manipulating one variable to determine if changes in one variable cause changes in another variable. The same can be done conducting through field method and laboratory method. Field method where in the data collection aims to observe, interact and understand people while they are in a natural environment. Laboratory method is a method of data collection by conducting various experiments in a laboratory and analysing the results.

➢ **INTERVIEW.**

It is a sense of an oral questionnaire. Instead of writing the response, the interviewee gives the needed information orally and face-to-face. Interview is a face-to-face conversation with the respondent.

Merits	Demerits
Flexibility	Costly
Better co-operation from respondents	Time consuming
Benefit of longer duration interview	Lack of accuracy
Detailed information	Supervision required
Reliable	Manpower required

➤ TYPES OF OBSERVATION

Fully structured interview: Has predetermined questions with fixed wording, usually in a pre-set order. The interview is taken as per the questionnaire prepared. Limited choice is given to respondents while answering questions.

Semi-structured interview: Has predetermined questions, but the order can be modified based upon the interviewer's perception of what seems most appropriate. Question wording can be changed and explanations given; particular questions which seem inappropriate with a particular interviewee can be omitted, or additional ones included. The interviewer has to use his skill while conducting semi-structured interview.

Unstructured interviews: The interviewer has a general area of interest and concern, but lets the conversation develop within this area. It can be completely informal. In this interview detailed questionnaire is not used for reference. Here the interviewer and the respondents are given adequate freedom.

Focus Group Interview: A focus group is where people from similar backgrounds or experiences that get together to discuss specific topics of interest to the researcher. The group participants are guided by the moderator or facilitator, who introduces topics for discussion and helps the group participate in a lively and natural manner amongst themselves. The respondents are given an opportunity to express their views freely but on limited number of questions/points.

In-depth Interview: An in depth interview is a discussion between a respondent and an interviewer that follows a set of brief interview guidelines written ahead of time. The interview contains many open-ended questions and does not necessarily follow a rigid form and sequence of questions.

➤ SURVEY METHODS

Telephonic survey: The interview method in which phoning a sample of respondents and asking them a series of questions either through traditional telephonic method or computer assisted telephone method.

Mail: In this method a questionnaire is drafted with a series of questions and sent to respondents via postal services. This is one of the traditional survey methods.

E-mail: It is similar to mailing method but the questionnaire is sent to respondents using technology i.e. through e-mail.

Internet survey: This is the modern method of sending questionnaire to respondents over the internet using technology.

Social media listening: It is a software used that monitors and analyses online conversations about specific topics, objects or products or anything else that is relevant to research problem. It pulls in mentions of specified keywords and helps researcher analyse these mentions.

➤ QUESTIONNAIRE.

A questionnaire is a research instrument consisting of a series of question and other prompts for the purpose of gathering information from respondent. Questionnaires are a list of questions either an open-ended or close -ended for which the respondent give answers. Questionnaire can be conducted via telephone, mail, live in a public area, or in an institute, through electronic mail or through fax and other methods.

➢ **TYPES OF QUESTIONS IN QUESTIONNAIRE.**
Open-ended Questions – They are used in qualitative interviews where the respondent is made to explain why certain things is done.

Closed-ended Questions – have definite options and they are easy to respond
- **Multiple Choices** – It is the most commonly used type of questioning. It is a list of a number of answers provided for every question.
- **Fill in the blanks** – These are questions, which require specific response that is analysed statistically.
- **Dichotomous Question** – There are only two possible answers to the questions like the Yes – No type.
- **Ranking Scale Questions** – The respondents are given a range of categories in which to express their feelings or opinions.
- **Rating Scale Questions** – This refers to an opinion question where the respondent is asked to rank comparatively the items listed either in ascending or descending order.

➢ **LIKERT SCALING TECHNIQUE.**
- It is a type of summated scale developed by Rensis Likert. A summated scale consists of a series of statements to which the respondents are asked to express either their favorableness or unfavorableness towards it.
- In other words they are asked to agree or disagree with the statements and the degree thereof with each item. Likert scale is most frequently used in social science research.
- With the Likert scale, the respondents indicate their own attitudes by checking how strongly they agree or disagree with carefully worded statements that range from very positive to very negative towards the attitudinal object.
- Respondents generally choose from five alternatives (say strongly agree, agree, neither agree nor disagree, disagree, strongly disagree). Each response is given a numerical value corresponding to its favorableness or unfavorableness. The scores may be summated to measure the participant's overall attitude.

➢ **SEMANTIC DIFFERENTIAL SCALING TECHNIQUE.**
- Developed by Charles E.Osgood, G.J.Suci and P.H.Tannenbaum (1975).
- It is an attempt to measure the psychological meaning s of an object to an individual.
- This is a seven point rating scale with end points associated with bipolar labels (such as good and bad, complex and simple) that have semantic meaning. It can be used to find whether a respondent has a positive or negative attitude towards an object.

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➢ **DATA PROCESSING**

Any operation or set of operations performed upon data, whether or not by automatic means, such as collection, recording, organization, storage, adaptation or alteration to convert it into useful information.

➢ **STEPS IN DATA PROCESSING**
- Editing of Data
- Coding of Data
- Classification of Data
- Tabulation of Data

➢ **EDITING & ITS TYPES**

Editing is the process of checking and adjusting data for omissions, consistency, and legibility. So, the editor's task is to check for errors and omissions on questionnaires or other data collection forms. The types of editing are field editing and central editing.

Field Editing: Field supervisors often are responsible for conducting preliminary field editing on the same day as the interview. Preliminary editing by a field supervisor on the same day as the interview to catch technical omissions, check legibility of handwriting, and clarify responses that are logically or conceptually inconsistent.

Central editing: Also known as In-house editing rigorously investigates the results of data collection. Central editing is carried out when all the forms of schedules have been completed and returned to the headquarters. The research supplier or research department normally has a centralized office staff perform the editing and coding function. The editor may correct the obvious errors, such as entry in a wrong place etc.

➢ **ESSENTIALS OF EDITING**

Accuracy	Training to editors
Avoid bias	Reliability
Consistency	Uniformity
Completeness	Economical

➢ **CODING**
- The process of identifying and classifying each answer with a numerical score or other character symbol.
- The numerical score or symbol is called a **code**, and serves as a rule for interpreting, classifying, and recording data.
- Identifying responses with codes is necessary if data is to be processed by computer
- Coded data is often stored electronically in the form of a **data matrix** - a rectangular arrangement of the data into rows (representing cases) and columns (representing variables)

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➢ **CLASSIFICATION**

Raw data must be reduced into homogeneous groups. This fact necessitates classification of data which is the process of arranging data in groups or classes on the basis of common characteristics. Data having a common characteristics are placed in one class and in this way the entire data get divided into a number of groups or classes.

➢ **TABULATION**

- Tabulation is the procedure to arrange the mass data collected in some kind of concise and logical order.
- Tabulation is the process of summarizing raw data and displaying the same in compact form for further analysis.
- In other words, tabulation is an orderly arrangement of data in columns and rows.

METHODS OF TABULATION:

Manual Tabulation: When the tabulation is done manually without the help of computers, it is called manual tabulation. It is possible when the number of variables is few and sample size is limited.

Mechanical Tabulation: When tabulation is done with the help of computers, it is called mechanical tabulation. It is necessary when the number of variables is large and also the sample size is large.

➢ **ANALYSIS OF DATA**

The analysis of data is the most skilled task in the research process. Analysis means a critical examination of the collected and grouped data for studying the characteristics of the object under study. Also helps determining the patterns of relationships among the variables relating to it. Both quantitative and qualitative methods are used.

➢ **PURPOSE OF ANALYSIS OF DATA**

- It summaries large mass of data into understandable and meaningful form.
- Data analysis makes exact descriptions possible.
- Data analysis facilitates identification of the factors underlying complex phenomenon.
- Data analysis aids the drawing of reliable inferences from observational data.
- It helps in making estimations or generalization from the results of sample surveys.
- It is useful for assessing the significance of specific sample results under assumed population conditions.

➢ **TYPES OF ANALYSIS OF DATA**

Descriptive Analysis: It is a largely a study of one or more variable. The study provides with profiles of a business group, work group, persons or other subjects on any of a multitude of characteristics such as size, composition, efficiency, preferences etc. Various measures that show the size and shape of distribution alongwith the study of measuring the relationship between two or more variables are available from this analysis.

Inferential Analysis: It is concerned with the various tests of significance for testing hypothesis in order to determine with what validity the data can indicate some conclusion or conclusions. It is also concerned with the estimation of population values. It is mainly on the basis of inferential analysis that the task of interpretation is performed.

Correlation Analysis: It studies that joint variation of two or more variables for determining the amount of correlation between two or more variables.

Casual Analysis: It is concerned with the study of how one or more variables affect changes in another variable. It is a study of functional relationship existing between two or more variables.

➤ **INTERPRETATION OF DATA**
Interpretation refers to the task of drawing inferences from the collected facts after an analytical and experimental study. It is a search for broader meaning of research findings.

➤ **ESSENTIALS OF INTERPRETATION**

Consistency	Uniformity
Reliable data	Suitability
Accuracy	Adequacy of data
Avoid bias	Proper generalization
Homogeneous data	Proper processing of data

➤ **MULTIVARIATE ANALYSIS**
With the availability of computer facilities, there is a development of multivariate analysis which means use of statistical methods which analyse more than two variable on a sample of observations. Theses include:
   - Multiple Discriminate Analysis
   - Multiple Regression Analysis
   - Multivariate Analysis of Variance (Multi-Anova)
   - Canonical Analysis

➤ chi square test
   - There are basically two types of random variables and they yield two types of data: numerical and categorical.
   - A chi square (X^2) statistic is used to investigate whether distributions of categorical variables differ from one another.
   - Basically categorical variable yield data in the categories and numerical variables yield data in numerical form.
   - Responses to such questions as "What is your major?" or Do you own a car?" are categorical because they yield data such as "biology" or "no."
   - In contrast, responses to such questions as "How tall are you?" or "What is your G.P.A.?" are numerical.
   - Numerical data can be either discrete or continuous.
   Chi Square Formula:

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

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> ## REPORT
> A report is a presentation of facts and findings, usually as a basis for recommendations; written for a specific readership, and probably intended to be kept as a record.
> - It is purely based on observation and analysis.
> - A report gives an explanation of any circumstance.
> - A report discusses a particular problem in detail.

> ## IMPORTANCE OF REPORT
> - Acts as a feedback to employees
> - Provides current and up-to-date information
> - Facilitates to solve problems
> - Facilitates planning
> - Facilitates co-ordination
> - Helps in organizing of resources

> ## FUNCTIONS OF A REPORT
> - Complete and compact document
> - Presentation of facts
> - Serves as document for future reference
> - Maintains objectivity
> - Specific to problem/topic

> ## ESSENTIALS OF A GOOD REPORT
> - Must be simple
> - Systematic
> - Communicative
> - Complete
> - Reliable
> - Accurate
> - Consistent
> - Objective
> - Relevant

> ## CONTENTS OF A REPORT
> - Preliminary Pages
>   - Title and Date
>   - Acknowledgments
>   - Table of Contents
>   - List of Tables

- Main Text
    - o Introduction
    - o Statement of Findings and Recommendations
    - o Results
    - o Implications of the Results
    - o Summary
  - End Matter
    - o Appendices
    - o Bibliography

➢ **STEPS IN WRITING A REPORT**
  - Logical analysis of the subject matter
  - Preparation of the final outline
  - Preparation of the rough draft
  - Rewriting and polishing of the rough draft
  - Writing the final draft

➢ **TYPES OF REPORTS**
Technical Report/Thesis: This is a comprehensive report of a technical research. It is primarily meant for academics or professional community such as scientists, engineers, doctors, research scholars etc. It is written in technical language. It follows a specialized pattern and consists of several sections with proper headings and paragraphs.
Popular Report/Thesis: The popular report is intended for more general audience. It is designed for executives and other non-technical users. This kind of report gives an emphasis on simplicity and attractiveness, along with practical aspects and policy implications. This type of report is meant for commercial and social research because it is meant for non-technical people, especially executives.
Interim Report/Thesis: When there is a long time gap between data collection and presentation of final report, the study may lose its importance. Therefore, the sponsor may also lose interest in the research and research report. In such situation, the researcher may present interim report.
The interim report may contain the first analysis of the problem and the final analysis of certain aspects that have been completely analysed. This type of report enables the sponsoring authority to take decisions without waiting for the full report.
Summary Report: It is generally prepared for the use of general public. This report is desirable for any study whose findings are of general interest. It is written in non-technical language. It contains a brief reference to the objectives of the research, findings and conclusions. It is a short report of two or three pages. Its size is so limited as to be suitable for publication in daily newspaper.
Research Abstract: This is a summary of technical report. Technical students like engineering, medicine etc, usually prepare it on the eve of submitting their thesis. Its copies are sent to the university, which in turn provides to the examiners or referees invited to evaluate the thesis. The research abstract enables the examiner or referee to conduct viva and award the M.Phil/PhD degree.
Research Article: This is designed for publication in a professional journal. If as study has two or more important aspects that can be discussed independently, it is advisable to write two articles rather than to include in a single article. The research article must be clearly written in concise and clear language.

➢ **FOOTNOTES**

- The footnote takes the form of a superscripted number, just after a paraphrased piece of information.
- Subsequently, a cross-reference to this number is inserted at the bottom of the same page.
- Footnotes are useful, as providing helpful supplementary information and citations at the bottom of a page of text.
- The common convention is to insert a full citation, including author, year and the title of the book, followed by the page number, then surname of the author and the page number.

Examples of Footnotes:
- ✓ Mann, Rs, Social Change and Social Research, New Delhi: Concept Publishing Company, 1988, p.27.
- ✓ Government of India, India 1986: A Reference Annual, New Delhi: Publications Division, 1987, p. 127.
- ✓ Kumar Naresh, "Exploring Sea for Economic Progress", The Economic Times(Bangalore), August 7, 1989, p.5.

➢ **BIBLIOGRAPHY**
- When certain portions of the research report are based on published sources, the use of bibliography section is required to list the sources or publications which the researcher has referred.
- It contain the source of every reference used in the research report.
- It provides authenticity regarding the source of the data.
- The reader of the report can refer the article or source for additional reference, if required.
- Bibliography comprises the last section of the report.
- It comes after the appendix
- **Appendix** contains the tables, questionnaire and the other relevant material of the research.

Examples of Bibliography
- ✓ Bulmer, Martin, Socialogical Research Methods, London Macmilan, 1977.
- ✓ UNCTAD, *The Least Developed Countries:* 1984 Report, New York United Nations, 1984

➢ **ETHICAL PRINCIPLES TO BE FOLLOWED IN RESEARCH**

Honesty	Responsible Mentoring
Objectivity	Respect for Colleagues
Integrity	Social Responsibility
Carefulness	Non-Discrimination
Openness	Competence
Respect for Intellectual Property	Legality
Confidentiality	Animal Care
Responsible Publication	Human Subjects Protection
Anonymity	Confidentiality

➢ **OBJECTIVITY**

Research is quite objective in its approach and is almost free from biases, prejudices and subjectivity. Objectivity means that the researcher stands outside the phenomena they study. Data collected are free from bias.

➤ **CONFIDENTIALITY**

Confidentiality refers to a condition in which the researcher knows the identity of a research subject, but takes steps to protect that identity from being discovered by others. Confidentiality is guaranteed when the research can identify a given person's responses but promises not to do so publicly. Maintaining confidentiality is a key ethical obligation in research, which means obtaining informed consent.

➤ **ANONYMITY**

Anonymity is a condition in which the identity of individual subjects is not known to researchers. Anonymity implies that the researcher or readers of the final research report cannot identify a given response with a specific respondent. An example of anonymity is a mail survey in which no identification numbers are used to track who is responding to the survey and who is not.

➤ **PLAGIARISM**

- The most common offence under the Academic Code of Conduct is plagiarism which the code defines as "the presentation of the work of another person as one's own or without proper acknowledgement".
- This could be material copied word for word from books, journals, internet sites, professor's course notes etc.
- It could be material that is paraphrased but closely resembles the original source.
- Plagiarism does not refer to words alone- it can also refer to copying images, graphs, tables and ideas.
- It also includes oral presentations, computer assignments and artistic works.
- If you translate the work of another person into French or English and do not cite the source, this is also plagiarism.
- If you cite your own work without the correct citation, this too is plagiarism.