

- * Research: searching or studying things to learn more about them.
- re-doing something again and again
- Search - looking for or finding
- a way to find new info, facts & knowledge using a scientific approach
- a careful investigation or inquiry specially through search for new facts in any branch of knowledge
- actually a voyage of discovery

* Objectives of Research

- To gain familiarity with a phenomenon or to achieve new insights into it.
- To portray accurately the characteristics of a particular individual.
- To determine the frequency with which something occurs or with which it is associated with something else.
- To test a hypothesis of causal relationship between variables (such studies are known as hypothesis-testing research studies)
- Generating new knowledge i.e. uncovering new facts or phenomena or establishing new relationship of various variables.
- Improving Understanding
- Application testing
- Comparing best practices
- Helping with decision making

Applied

1) Research generally conducted to solve the problem of the org setting.

2) more concerned with knowledge that has immediate application and would be useful in making

Fundamental

1) conducted to develop some new theories.

2) concerned with the development, examination, verification & refinement of research methods, procedures, techniques

decisions & formulating policies. & tools that form the body of re-metho
 3) deductive in nature i.e. it keeps some theories as its base while conducting research.
 3) inductive in nature i.e. it comes with new theory discoveries.

- | | |
|---|---|
| 4) also called action research. | 4) basicl pure research. |
| 5) quantitative in nature. | 5) qualitative in nature. |
| 6) The managers generally carry out applied research works and it is used in day-to-day life. | 6) The professors generally carry out this research and it is used for future benefits. |

→ Research concerning natural phenomenon, pure mathematics, human behavior carried with view to make generalisations are f.r.

→ Research aimed at certain conclusions, identify social, economic or political trends, marketing research, evaluation research are a.r.

→ A.R aims to discover a solⁿ for pressing practical problem whereas F.R is directed towards finding info that has a broad base of applications & thus adds to the already existing organized body of scientific knowledge.

* Quantitative Research:

- all about numbers & data
- focuses on collecting & analyzing numerical info to identify patterns, trends and relⁿships
- aims to answer specific questions & test hypotheses using measurable data

* Qualitative Research

- more about understanding people's experiences, perspectives & behaviors
- involves collecting & analyzing non-numerical data (interviews, observations, responses) phenomena
- seeks to uncover insights & gain a deeper understanding of complex

* Scientific Research

- Systematic, Controlled, empirical & critical investigation of hypothetical propositions about the presumed rel's among natural phenomena
- for solving the problems, analyses all the dimensions of the problem systematically, & finds out the real causes of the problems, collects & interprets the data and finds out the sol'n of the problem.
- not undertaken based on intuition, experience & estimation but it remains always purposive & comprehensive.

* Features of scientific research:

- Rigorous
- Purposeful
- Replicability
- Objective
- Testability
- Precision
- Operational definitions
- Generalizability

* Scientific Research Process

- 1) Identify the Research Question / Problem
- 2) Conduct a literature review
- 3) Formulating hypothesis
- 4) Preparing the research design
- 5) Determining the sample size.
- 6) Collecting the data
- 7) Analysis of data
- 8) Hypothesis testing
- 9) Generalization & Interpretation
- 10) Report Writing

* Management Research

- we study diff aspects of org issues & find practical ways to handle them using managerial tools & techniques
- goal is to improve how org work & make better decisions.
- systematic & objective process of gathering, recording & analyzing data for aid in making business decisions.
- research conducted to identify & analyze the problem & develop managerial tools to take decisions for solving managerial problems.

* Nature of M.R

- Problem solving orientation
- Scientific approach
- Tailored to specific needs
- Time-bound
- Interdisciplinary nature
- focus on decision making
- Theory development
- Practical implications

* Action Research

- involves a continuous gathering and analyzing of research data during the normal on-going operations of an org.
- designed to identify effective ways of dealing with problems in the real world.
- concerned more with the execution of specific mng program.
- a task oriented form of study designed to provide continuous feedback regarding the performance of mng activity and to improve that performance through direct form of investigation

* Features of A.R

- Addresses practical problems

- generates new knowledge
- enacts change
- is participatory
- relies on cyclical process

Eg: A marketing team for an e-commerce company notices a decline in website traffic & sales over the past few months. To address this issue, they decide to conduct A.R.

- Identify the problem
- Research & info gathering
- Develop an action plan
- Implementation
- Data collection during implementation
- Analysis & reflection
- Refinement & further action
- Continuous cycle

* Evaluation Research

- "the process of determining the value or worth of something"
- oriented toward formal & objective measurement of the extent which a given action, activity, or program has achieved its original objective.
- closely related with policy research in which policies, objectives, strategies & programs are examined.
- helps mng to determine how far have the programs initiated by it been successful & also analyses the underlying causes of failure, if any.
- types: formative & summative evaluation
- Formative Evaluation (process) progress evaluation)
 - Timing ◦ focus ◦ Purpose ◦ Nature

Eg: Surveys, interviews, observations, focus groups & pilot testing are common methods used in P.E

* Summative Evaluation (Outcome / Impact evaluation)

Eg: Tests, assessments, surveys & outcome measurements

* Managerial Research

- related to the specific problem of limited scope for which mng has need of add'l info on which to base a decision
- focused on particular activity, scheme or project launched by the management.
- When analysis is not going as planned, MR may be required to explain why something went wrong with the project.
- Egs: include those concerning the market potential for a new product, or best approach for the implementation of new MIS system.
- it concerns the seeking of sol's as to what should be done to solve a given problem ~~Or~~ how to implement the sol'.

* Meaning of Project Work

- P.W is an integral part of the graduate and post gra programs in many unis.
- required to undergo fieldwork or project work on the approved topic or area, and spent a few weeks in the field to gather info on the assigned topic using relevant instruments.
- the data thus gathered has to be tabulated, analyzed, synthesized & presented in the prescribed form.
- after data analysis, project work report is written & submitted for evaluation.



* Objective/Purpose of project work:

- Exposure to business or social reality
- Promote student centered learning
- Provide oppur to work ~~to~~ ^{on problems} of particular interest
- Develop interpersonal & communication skills
- " data-processing & report writing skills

* Methods of P.W

• Exploratory Studies

- a preliminary step in which the main focus is on achieving a clear view of the subject under the investigation.
- taken when we don't know much about the situation
- aims to investigate a subject or phenomenon in order to gain initial insights, generate hypotheses & identify potential research
- = ^{and} when researcher seeks to explore & understand the sub more directions
- flexible in nature & can involve various research methods to gather preliminary info

• Descriptive Study

- focused on providing an accurate and detailed depiction of a phenomenon or situation
- primary goal is to describe the characteristics, behaviors, patterns & attributes of the subject under investigation.
- don't involve manipulating variables or establishing cause-& effect relationships; instead aim to create a comprehensive overview of the subject.
- undertaken to describe the diff aspects of a situation.

- helps to
- understand the features & aspects in the situation ^{under} study
 - offer ideas for further investigation & research
 - identify problems & make certain simple decisions

* Case Study.

- most appropriate method of P.W
- a study unit is selected & a detailed study, by using diff research method
- covers the relevant aspects related to the unit under study.
- an intensive investigation & description of the study unit.
- gain a thorough understanding of the subject & its complexities by exploring its various aspects, dynamics & interactions.
- commonly used in social sciences, business, medicine, education, psychology & other fields to provide insights, generate hypotheses, and contribute to a deeper understanding of a real-world phenomenon.
- similar to survey but instead of gathering data for large no. of study units, the investigator, in c.s., makes an intensive study of limited no. of units.
- narrower in scope but more exhaustive & qualitative than survey.

* Feasibility Study:

- to assess the potential of new scheme or ideas & provides a base for an investment decision feasibility.
- define & analyze the critical elements that relate to operational aspects, technical aspects, markets, legal implications & cost benefit analysis of the given scheme or idea together with alternative approaches to such scheme or idea.
- may be conducted within an org or in a field.

↳ Key components of F.S

↳ Market feasibility
(Technical)

Financial

Operational

Legal & Regulatory

Environmental & Social

2)

When a particular research area has been identified, research problem defined & the related literature in the area have been reviewed, the next step is to construct the research design.

* Research design

- an overall plan for the activities to be undertaken during the course of a research study
- serves as a framework for the study, guiding the collection & analysis of the data, the research instruments to be utilized & the sampling plan to be followed
- a structured plan or blueprint that outlines how a research study will be conducted
- roadmap for the researchers to guide the entire research process, from defining the research problem & objectives to collecting & analyzing data, drawing conclusions & presenting findings.

* Elements of Research Design:

- Research Questions or Objectives • Validity & Reliability
- Hypotheses or Propositions • Presentation of Results
- Variables & Constructs
- Sampling Strategy
- Data Collection Methods
- Data Analysis Methods
- Research Design Structure
- Time frame
- Ethical Consideration
- Limitations & Delimitations
- Research Approach
- Instrumentation
- Pilot Study

* Types of Research Design:

- Historical Research Design
 - concerned with past phenomena, defined as "the systematic & objective location, evaluation, and synthesis of evidence in order to establish facts & draw conclusions about past events"
 - process of collecting, evaluating, verifying & synthesizing past evidence systematically & objectively to reach a conclusion.
 - attempts to determine trends in the past & reconstruct the origin & development of those events.
 - main purpose is to show the relevance of past events to the present.
 - arrive at an accurate account of the past so as to gain a clearer perspective of the present.
 - primary & secondary sources

• Descriptive Research Design

- fact finding operation searching for adequate info.
- generally conducted to access the opinions, behaviors or char of a given population & to describe the situation & events occurring at present.
- process of accumulating facts, doesn't necessarily seek to explain rel.ships, test hypotheses, make predictions or get at meanings & implications of a study.
- extension of an exploratory research, usually formal & rigid
- can be either qualitative or quantitative

②

* Developmental Research Design

- conducted for the purpose of predicting future trends.
- concentrates on the study of variables, their rates of change, directions, sequences & other inter-related factors over a period of time.

- Longitudinal Study
 - Panel, Trend & Cohort Study
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- Cross-Sectional Study
 - Sample Survey
- ↳ longitudinal Study (quantitative)
- research where phenomena are studied over time either continuously or repeatedly.
 - measures the nature & rate of change in a sample at different stages of dev
 - when the data are collected at 2 or more points in time from same group.
 - because data are collected at 2 diff times, it is not cross section or one-shot study, but study carried longitudinally across a period of time
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■ Trend Study

- most common L.S. when the data are collected at intervals spread over a period of time.
- samples diff groups of people at diff points of time from the same population.
- designed to establish the patterns of change in the past to predict future conditions.
- A trend thus provide info about net changes at an aggregate lvl, establish a pattern over time to detect shifts & changes in some event.
- Eg. Marketing firms compile T.S. that chart fluctuations in consumption lvl for a certain product.
- Regression analysis is used

• Cohort Study

- cohort = group of people who share a common char or experience within a defined period. Thus, the study of a specific group, is the cohort study.
- this group then form a birth/kindergarten cohort. A graduating group of students. Many cohorts (disease, education, employment, housing, family, etc).
- the sample is then studied at diff points of time. A CS is thus a systematic follow up of a group of people for a defined period of time or until a specified event. To form
- so form CS, data are compiled for the same popu over time
- rare, difficulty in maintaining contact with the mems of cohort

• Panel Study

- panel: group of individuals who have agreed to provide info to a researcher over a period of time.
- take the same people & study their attitudes towards a particular phenomenon over time.
- most useful when studying change, allow the researchers to find out why the changes are occurring in the population.
- Unlike T.S, P.S can reveal both net & gross change in dependent variable. Additionally, P.S can reveal shifting attitudes & patterns of behavior.
- panel data are used to predict long-term or cumulative effects which are diff to analyze in a cross-sectional study.
- Eg: int general attitude towards single parenthood (interested), take a group of people & interview them at periodic intervals on the same subject & over a no. of years.

• Cross-Sectional Study

- involves observation of some item of the population at all the same time.

- measures the rate of changes by drawing samples from a cross-section of society.
- comp focuses on comparing & describing groups
- data are gathered once over a period of time, in order to answer the research question. (One-shot studies)
- often employ the survey strategy.

The diff bet' cross-sectional & longitudinal study is that C.S. study takes place at a single point of time & L.S. involves a series of measurements taken over period of time.

* Case Study

- important approach to study the topics in social science & mng.
- written summaries or synthesis of real-life cases based upon data & research.
- Rather than using samples to examine a limited no. of variables, C.S. involve in-depth, longitudinal examination of a single instance or event (case).
- the study phenomenon can be person, family, social group, community or culture. The investigator gather prominent data about the present status, past experiences & env forces that contribute to the individuality & behavior of the unit as it is in society.
- after analysis of the sequences & inter-rel'ships of these facts, he/she conducts a comprehensive study of the social unit as it is in society.
- both comprehensive & systematic

* Correlational Research

- used to obtain descriptions of phenomena, ascertain the extent to which two variables are related in a correlational rel'ship but

the proper tests have not been conducted to show that either variable actually influences the other.

- the researcher's main interest is to determine whether 2 or more variables covary & if so, to establish the direction, magnitude & form of the observed relationships.
- magnitude of correlation → extent to what a variable is increased in value when accompanied by increase in the other.
- Eg: "Smoking" & "Lung Disease".

• Causal-Comparative Research

- studies that establish causal relationships betⁿ variables
- investigates the possible cause affecting a particular situation by observing existing consequences & searching for the possible factors leading to those results.
- = emphasis thus on studying a situation or problem to explain the relationships betⁿ vars.
- researcher takes 1 or more dependent vars & examines the data by going back through time, seeking out causes, relationships & their meanings.
- also treated as a type of descriptive research since it describes cond's that already exist, attempts to determine reasons or causes for the existing condⁿ.
- Eg: study the effect of socio-economic vars such as age, sex, ethnicity or income on purchasing behavior, we might identify 2 groups of customers. One group - high purchaser the other low purchaser. Then study the diff of 2 groups as related to socio-economic vars that already occurred as the reason for the diff in the purchasing behavior betⁿ the groups.

• Action Research

3)

* Sampling & its significance

- population entire collection of all observations of the interest for the research. After the selection of objects, it is very costly and time consuming for the study of entire population. Thus, to make it easier for the study, representative portion of the popn" is selected known as sample. The process of selecting the sample (individual, group etc) based on nature & necessity of research is known as sampling.

• Significance

- lowers cost
- provides greater accuracy
- helps to greater speed of data collection
- inaccessible population

* Sampling process

- 1) Define the populn'
- 2) Specify the sampling frame
- 3) Sampling unit
- 4) Determination of sample size
- 5) Preparation of plan for sampling
- 6) Select the sample

* Types of Sampling

- 1) Probability Sampling
 - where every element in the population has equal chance of being selected as sample unit
 - Selection of element depends on incident.
 - researcher can't estimate the selection of element & be biased with his/her opinion

* Types of probability sampling

a) Simple random:-

- every element in the poplⁿ has equal chance of being selected as a sample
- samples are selected using lottery method, no. order method, random number test, etc, (computerized lottery)
- used when sampling frame can be developed & researchers need to generalize the findings of research in poplⁿ.

Eg: satisfaction lvl of banking employees in Nepal, consider the employees of banking sector as population & select the sample using r.l.s

b) Systematic sampling:

- involves the random selection of first item from the systematically ordered poplⁿ & then the selection of sample for items at every kth interval.
- to select the sample items in systematic sampling, we need to calc sample interval (k) = $\frac{\text{Size of popl}^n (N)}{\text{Size of sample}(n)}$

Eg: 400 people as poplⁿ & intends to take 10% i.e 40 persons as sample
 → the 1st selection of one item i.e from 1 to 400. Suppose 1st no selected is 5 then k value is 10 ($400/40$), so the sampling units are $5+10=15$, $15+10=25$, $25+10=35$ & so on.

c) Stratified sampling:

- strata: overlapping homogenous groups in the poplⁿ
- every group should be incorporated in the sample to represent the poplⁿ
 So, S.S is the method which represents the sample in proportionate ratio from the diff group of poplⁿ. known
 - represents diff section of poplⁿ (male/female, education, employed/un)
 - proportionate refers to the act of selecting sample from each group in same proportion.
 - disproportionate: if the selection is made in less & more no when the poplⁿ of sub-group is highly diff

Eg: If the manager wants to know the motivation of employees

| Job level | No. in group | Proportionate S.S. | Disproportionate S.S. |
|------------|--------------|--------------------|-----------------------|
| Higher lvl | 20 | 2 | 5 |
| Middle lvl | 40 | 4 | 2 |
| Lower lvl | 50 | 5 | 4 |
| | 110 | 11 | 11 |

d) Cluster Sampling:

- heterogenous group that is in the popⁿ → cluster.
- identify clusters that are internally homo, every cluster contains many element into the single element so, it is considered as small popⁿ Employees grouped in branch office, customers at each supermarket branch
- where a group of is selected as having all elements of the popⁿ
- random sampling while selecting clusters.
- Eg suitable in the absence of suitable sampling frames needed for the selected cluster only & it reduces the cost of dev frame)

Eg: If manager wants to know reason of resignation, 1st develop the group on basis of work level (position), prepare the list of employees of those groups. On the basis of random sampling, cluster is selected as sample.

2) Non-probability Sampling:

where there is no equal chance of selecting as sample to each unit & sampling mode based on pre-plan.

- findings can't be generalized because samples are selected with specific purpose of separating the area in advance
- low cost time & no generalization of finding (suitable)
- chance of biasness in selecting the sample
- types of N.P.S

a) Purposive / Judgemental:

- samples are selected by the researcher based on his/her judgment.
 - sample can fulfill the purpose but doesn't consider the convenience of the researcher.
 - should know every unit of popl^n & features for applying JS
 - diff to find out the person who has knowledge about the sub of research
- Eg: test of effectiveness of training, select sample to those who attend it

b) Quota:

- popl^n is divided into diff groups based on their nature, feature, qualities, etc
↳ the sample is selected from each group in a certain rate.
- groups are formed on basis of profession, level, caste, area, etc based on the size of popl^n like some sample from more popl^n.
- N.P.S so its findings can't be generalized.
- to know the buying behavior of diff group of people, to know the attitude of group of employees regarding the culture of their org.

c) Convenience : (Occidental sampling) (else)

- select the units as sample on basis of his/her convenience
 - Select the units that are available, nearby & willing to participate or has some rel'ship.
 - used when there is high limitation of time & resources
- Eg. facilities provided to banking employees, select those banks as sample where the relatives works or nearby banks.

d) Self-selecting

- if the researcher gives info through media to the respondent and respondents provide info on the basis of info received through media
- sample: those who provide info on the basis of info
- used to know the goodwill & evaluate the service provided by the org (generally)

- c) Snow ball sampling (Preference Sampling):
 ↳ if the poplⁿ is infinite or not fixed, the researcher selects ^{for ex} samples whose profile is fit to get the info & on the basis of reference of those sample people, other samples are selected
 - Snow ball because small sampling unit forms large sample as s.b
 - usually used by police to find out criminals and to study over the group activities, culture & relationships of society.

* Sampling Errors:

- that arises as a result of taking a sample from poplⁿ neither than using the whole poplⁿ
- ↳ Eg: measuring the height of 1000 people from a country of 1 million, the avg height of the 1000 is typically not the same as of 1 mil.
- diff betⁿ sample & poplⁿ value

* Types of S.E:

- Poplⁿ specific error: occurs when researcher doesn't understand who should be surveyed
 Eg: survey of breakfast cereal consumption, who should be surveyed family, mother or children. Mother buys the grocery but the children may influence her choice
- Sample frame error: occurs when the wrong sub-poplⁿ is used to select the sample.
 ↳ eg: if we use tel. directories as s.f for research of those people (Who don't use tel.) s.f is wrong
- Selection error: occurs when respondents self select their participation in the study - only those that are interested to respond
- Non-response: occurs when respondents are diff than those who don't respond

- either the potential respondent was not contacted or they refused response

• Error in taking samples:

- controlled by (1) careful sample designs (2) large samples & (3) multiple contacts to assure representative of response

* Methods to Minimize Sampling errors

- Increase ^{sample} size
- Cross check
- Unbiased sampling
- Appropriate sampling design
- Clear questionnaire

* Non-Sampling Errors:

- incurred from other sources than selection of sample.
- arise at the time of planning & execution of the survey & collection, processing & analysis of data.
- exists in both census & sampling study

* Types of N.S.E:

- Errors of poor sampling design
- Over & under coverage
- Misinterpretation of questions
- Processing errors
- Respondent related errors
- Errors of researchers
- Measuring Errors

* Measures to minimize N.S.E

- Checking the sampling process
- Preparation of questionnaire

- Pilot survey
- fix procedures
- Use of competent manpower
- Provide Info
- Provide training
- Use of experts
- Checking data processing & analysis

* Data: the info or facts collected through record, observation & measurement.

* Consideration while formulating plan for data collection

- Objective
- Scope
- Source of info
- Method of data coll
- Unit of data collection
- Degree of accuracy

* Types of Data

- 1) Primary & Secondary Data
- 2) Quantitative & Qualitative Data

* Primary Data

- data developed by researchers himself for the purpose of present research
- used when secondary data is not available, not sufficient to draw conclusions or to know the attitude & behavior of individual & group

* Primary Sources of Data

- Interview

- Structured: ask question & suggest a list of possible answers
- Unstructured: ask open question letting them the chance to give their view

- Questionnaire:

- formal list of questions designed to gather response from respondents on a given topic, issue or event.

- Observation:

- researcher observes, analyses & interprets the events or work personally

* Secondary Data

- info gathered by someone other than the researcher associated with the current study.

* Secondary Sources of Data

1) Published Sources

- Govⁿ reports & publications
- Publication of semi-govⁿ org
- Reports & publications of international orgs
- Report Private publications

2) Unpublished Sources

3) Computerized Database

* Uses of 2ⁿdary data

- for reliability
- Supplement data
- Use for reference purpose
- for comparison
- for resolving the problem
- for collecting primary data

* Adv of 2ndary data

- Easy to generalize
- Economy
- Quick
- Helps to cross check
- Reliability

* Disadv

- 1) Determination of reliability of 2ndary data is very difficult
- 2) Chances of manipulation
- 3) Inherent limitation
- 4) Do not match of need of situation
- 5) Difficult to find rationality

5)

Research report: an oral presentation & for a written statement that has a purpose of communicating research findings, recommendation for courses of action, & other findings to sponsor management or other specific audiences

* Purpose of writing a report.

- means whereby the data, analysis and conclusions are placed in an organized form which (info) can be used for academic & application purposes.
- involvement of many managers in the project is limited to written report & the oral presentation. These managers evaluate the quality of the report & the oral presentation.
- Mng's decision to undertake business research in the future or to use the particular research supplier again will be influenced by the perceived usefulness of the report & presentation.
- 'Tangible' products of the research efforts.

* Contents & Style of Report:

- clear, logical & concise, simple with short sentences with explanation & description.
- semi-tabular presentation, tabular presentation, graphs (line graphs, area charts, pie charts, 3D charts, etc).
- statistical formulae & computations are not presented.
- avoid error spelling, agreement of subject with predicate, wrong use of articles, inconsistency in tense etc.

* Completeness:

- Accuracy
- Clarity
- Conciseness
- Objectivity
- focus to the study objectives

* Principles of report writing

- make direct & two statement
- presentation
- use of 3rd person
- use gender neutral language
(avoid emotional terms)
- label opinions
- non English terms & expressions

* Types of Reports

- formal-informal
- Written-oral
- Internal-external
- Short-long
- Informational-analytical - Technical popular

* Descriptive

- mere description of facts or opinions gathered by the student during his/her field study.
- presentation of facts in an organized way may be of real value in understanding the situation
- indicate the nature of problems facing the org under study and also indicate the reforms required to overcome problems

* Analytical

- go one step further than d.r.
- in addⁿ to presenting facts & statistics, interpret the info in relⁿ to the problem under consideration.
- focused on a single/limited area of the problem, these reports follow the processes of scientific investigation & reporting.
- These reports also recommend the actions to be taken for improvements in the situation.

* Direct quotations:

- when the words of author add force to validate the argument of the report.
- presenting the major arguments where a reference would not suffice.
- when we wish to comment upon, refute to analyze ideas expressed by the author
- when changes might cause misunderstanding of the original idea or expression. (citing of law, contracts or official govⁿ publications)
- citing mathematical & other formulas

* Short Quote (up to 3 lines)

- incorporate the quotation into a sentence or paragraphs, without disrupting the flow of text.
- use double quotation marks at the beginning & the end of quote.
-

* Long Quotation (four or more lines).

- no quotation marks at start & end of quo
- single line spacing
- indent the quotation five spaces from the left margin.

* Abbreviations:

Several Latin & English abbreviations are frequently used.

- minimize the space & tedious repetition.

* Presenting Data, Table & figures:

• Table

- write Table 5.1 instead of "table" or "following table".
- each table should be given a title.
- columns of data should be labeled clearly
- rows in a table should can be arranged without any difficulty.
- explanations needed for one or more elements in the table.
- if the source of the table is to be identified, it should be placed below the table in the same format as the footnote.
- report writer can use abbreviations if necessary

• Figures

- bar charts, pie charts, maps & programs
- to what extent does the graphic presentation contribute to overall understanding of the data?
- Can the data convey meaning to reader in a better way by using graphic presentation?
- Is the graphic easily understood?