Unit:1

❖ Introduction, definition & characteristics of Research

The word "research" is derived from the middle French and the literal meaning is
"to investigate thoroughly". Research is the careful search and inquiry into any subject or matter. **It is the process of searching the answers to the questions again and again.** Research is defined as the scientific investigation of phenomena
which includes collection, presentation, analysis and interpretation of facts. Hence, Research is an active, diligent and systematic process of inquiry in order to discover, interpret or revise facts, events, behaviours or theories. Social research makes scientific study of sociology or social aspects of society. It has very old history. If research means to **discover some hidden facts**, social research
discovers some facts hidden in a social phenomenon and some social law.
According to P. V. Young, "Social research or social science research is a systematic method of exploring, analyzing and conceptualizing social facts." Social research aims to find out the causes of problem in a society and solve them. If an events occur in society, social research studies why that event occurred. Was there class struggle, religious or ethnic conflict? It is scientific study of a social life and culture.
According to Sekaran, " Scientific research is a step by step logical, organized and rigorous method to identify problems, gather data, analyses that data and draw valid conclusions there from."

❖ Rigor and Relevance in Research:

Rigor allows the researcher to establish consistency in the methods used over time. It provides an accurate representation of the population studied. There are mainly four criteria of rigor: **Credibility, Dependability, Confirmability and Transferability.** Rigor is a way to establish trust or confidence in the findings of a research study. It is student's deeply understanding complex ideas. Rigor solves problem. It constructs meaning and applies new situations. It is relevant and challenging. There are mainly three rules of rigor:

1) **Conceptual understanding**
2) **Procedural skill &**
3) **Fluency and application**

However, rigor in research refers to the analysis of the topic thoroughly and with robustness. It means research process can be rigorous by strong observation. Rigor involves following categories:

a) **Methodological rigor:** it means research method should be valid, well designed and reliable.
b) **Data rigor:** it means data should be collected accurately and analyzed systematically.
c) **Ethical rigor:** it means the confidential issues of the participants should be ensured.

Relevance in research refers to the significance and applicability of the research. It helps to ensure that programs, projects and activities are designed and implemented in a way that meets the needs of their intended beneficiaries and achieves their intended outcomes. There are mainly four types of relevance: **Direct, Indirect, Contextual, and Comparative.** They play different roles in reasoning, making a conclusive argument, deriving a rich understanding or performing a task. Hence, research should be relevant by addressing the following factors:

1) **Importance:** A good research should state important questions and its significance.
2) **Practicality:** The research finding should have the practical applications.
3) **Timelines:** A good research should address current issues.
4) **Impacts :** A good research should face real world challenges and provide useful knowledge.

However, Rigor implies going beyond description to create scientific theories, while relevance is about exploring topics and insights that matter to impact organizations and managers.

- **The 6Ps of Research (Purpose, Products, Process, Participants, Paradigm, Presentation):**

  The aspects of research can be categorized as the 6P's: Purpose, Products, Process, Participants, Paradigm, and Presentation. They are as follows:

  1. **Purpose:** any research without purpose is unlikely to be good research. Purpose views the reason for doing the research, about the topic of interest and why it is important to study, about the research questions asked and the objectives set.
  2. **Products:** gives outcomes of research, especially our contribution to knowledge about our subject area. Our contribution can be an answer

to our original research questions but can also include unexpected findings. For example, our thesis, dissertation, conference paper or journal article is also a product of our research.

3. **Process:** the sequence of activities undertaken in any research project. The process involves identifying one or more research topics, establishing a conceptual framework, the selection and use of research strategy and data generation methods, the analysis of data and the drawing of conclusions.
4. **Participants:** these include those whom we directly involve in our research, for example by interviewing them or observing them, and also those who are indirectly involved, such as the editors to whom we submit a research paper.
5. **Paradigm:** it is a pattern or model or shared way of thinking. Managers sometimes talk of the need for a 'paradigm shift' to mean that a new way of thinking is required.
6. **Presentation:** the means by which the research is disseminated and explained to others. The presentation should carried out professionally**.**

❖ **Reasons for doing research (purpose):**

a) Research helps to address specific problems and investigates solution.
b) Good research gives new information about any phenomena.
c) It tries to establish relationship between various human activities.
d) Research provides strong evidence for supporting field work.
e) Conducting research can improve critical thinking and ability to analyze information.
f) Research suggests to solve social issues such as inequality, pollution, diseases etc.
g) Research can lead to economic growth.
h) Research is important for academic and professional growth.
i) Social science research involves the use of scientific methodology. It implies the development of new scientific tools concepts and theories, which would facilitate reliable and valid study of human behavior.
j) It helps in understanding the evolution of new theories.
k) It discovers new facts and verifier old facts.
l) Social research deals with the social phenomena, human behaviors,
m) Economic, political, educational and administrative aspects of society.

❖ **Possible products (outcome of research):**

The outcomes of research refer to the study of determinants and processes that influence the life-course patterns of chronic conditions. The outcomes of research can lead to a wide range of possible products:

1. **Social program:** social research can inform the development of social programs and interventions to address issues like poverty, education and healthcare.
2. **Policy recommendations:** policy research can produce reports and recommendations that influence government policies and regulations.
3. **Educational materials:** educational research produces textbooks, e-learning platforms, and other instructional materials to support learning.
4. **Software Applications:** research in computer science can lead to the creation of software applications, including mobile apps, operating systems and cyber security tools etc.
5. **Scientific discoveries:** research in various scientific fields can lead to new theories, principles and laws that expand our understanding of the natural world.
6. **Environmental solutions:** research in environmental science can lead to products and technologies for sustainable agriculture, clean energy, and pollution control.

- **Sources of Research ideas:** a research ideas/problems is the main organizing principle guiding the analysis of our research paper. It is a statement about an area of concern, a condition to be improved, a difficulty to be eliminated, or a troubling question that exists in scholarly literature, in theory, or in practice that points to the need for meaningful understanding and deliberate investigation. However, research ideas can come from a variety of sources:

  a) **Interview:** it is important sources of research ideas or problems. We can easily gather facts of research.
  b) **Observations:** everyday observations around us can spark research ideas.
  c) **Personal experience:** our everyday experiences are a good source of research problem.
  d) **Current events:** it can provide relevant research topics.
  e) **Surveys:** conducting survey can generate superb research ideas.
  f) **Questionnaires:** it is important sources for gathering primary data.
  g) **Social Media & online communities:** participating in online forums, social media groups, or discussion boards related to our field can expose us to conversations and issues that may inspire research.

- **Evaluating the purpose and products of research:**

Evaluation of research purpose:

Significance: we must evaluate the significance of the research purpose. It should be clear, catchy & meaningful.

Originality: the originality of research depends on problem of statement. Actually our research should address a new problems not a proved questions.

Relevance: the purpose of the research should be clearly stated and relevant to the research question which is being addressed.

Ethics: we must ensure that the research purpose aligns with ethical principles and guidelines or not.

Evaluation of research products:

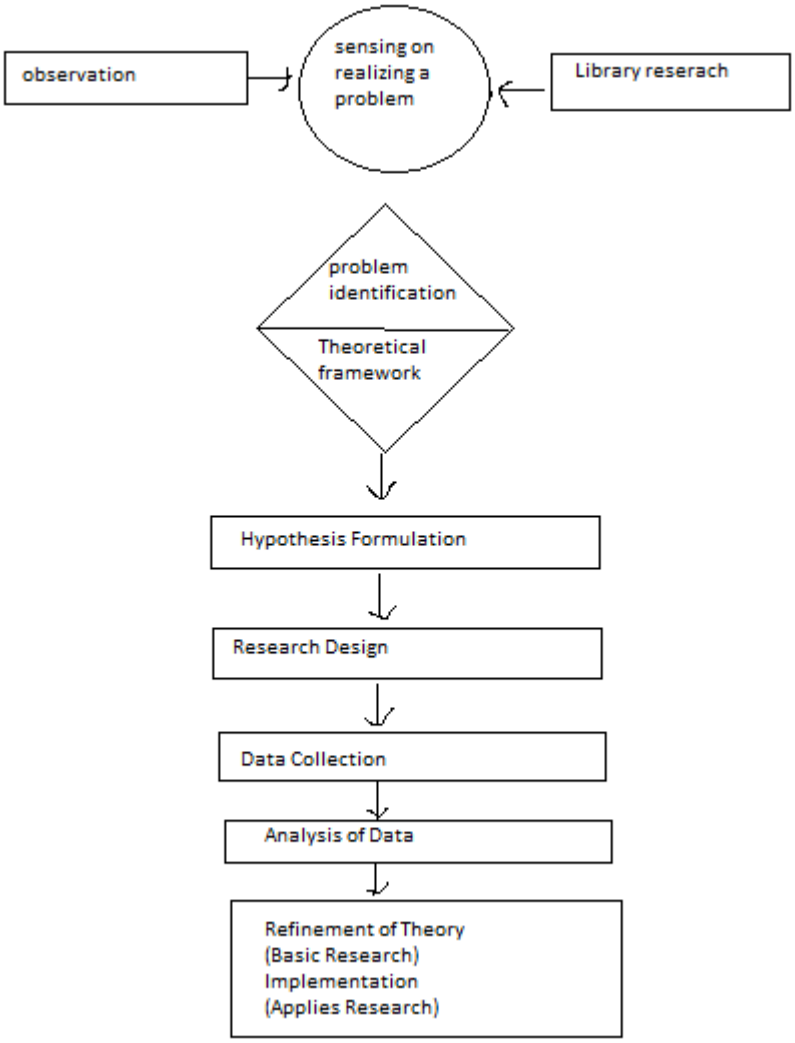
Methodology of research: we must evaluate that our selection of methodology is related to topic and problems or not.

Appropriate Data of research: the collected data should be reliable for true and bias less conclusions.
Analysis of data: interpret and analyse the data after collection. We should try to find out whether our data is supported by evidence or not.
Ethical Consideration: must evaluate whether the research was conducted in an ethically responsible manner or not for the well being of participants.

- **Process, Model or steps of research:**

There are eight steps in scientific method. These eight steps cover the total spectrum of a research end Endeavour, starting from problem formulation thorough to refinement of theory or practice.

The diagram of scientific research steps are as follows:



1. Sensing or Realizing Problem: There are many sources of research idea (observing the situation or sensing the problem) New Problems keep on emerging in the environment. We somehow sense these development occurring in the environment. At this stage, we may not know exactly what is happening but we can definitely sense that things are not going on as smoothly as they should be.

2. Problem Identification : In this step, we try to identify what exactly are the problems or issues in the situations. There is a saying in the research that " a problem well defined is a problem half solved". If the

research problem is unclear and poorly designed , the result could be a lot of time and resource wasted gathering potentially useless information and data.

3. Theoretical framework: In this step, we make an attempt to integrate the information logically so that the reason for the problem can be conceptualized.The critical variables are examined and the association among them is identified. Putting all the variables and their association together, a theoretical framework is developed.

4. Hypothesis formulation: In the fourth step of scientific research, hypothesis are formulated.

5. Research Design : The fifth step is designing the plan for the research. Once we have narrowed own research hypothesis , we must next decide on a plan of attack for our research. The research design is thus, a strategy for conducting of research. It describes the general framework for collecting , analyzing and evaluating data after identifying :(a) what the researcher wants to know and(b) what has to be dealt within order to obtain required information .

6. Collection of data: Data collection is also known as fieldwork. At this stage, the researcher has to administer the research instruments (questionnaire, interview schedules, observation schedule etc) to gather data.

7. Data Analysis: After collected data , we must summarize and analyze them.Data analysis means the statistical analysis of data that have been edited ,coded and tabulated .

8. Generalization : (Refinement of Theory) The final step involves interpretation and generalization of the findings into the larger body of knowledge about the phenomenon . Scientific research helps researchers to state their findings more accurately and with confidence.

- **Alternative model of the research process:**

Research area: first of all, we should identify the research area of interest with appropriate topic of research.

Initial research proposal: develop an initial research proposal outlining the research questions, objectives, and a rough plan for the study.

Literature review: we should conduct a comprehensive literature review to understand the existing knowledge, theories, and findings related to our research area.

Research Design: design of research should be included methodology, techniques of data and sampling.

Data collection: we should gather data according to the topic. It may be primary , secondary or both.

Data analysis: analyze the collected data, applying appropriate statistical or qualitative analysis techniques.

Refinement: interpret the results and find how it is related to the problems. Refine it too.

Recommendations:

- **Evaluating the research process: <u>evaluating</u>** the research process includes two aspects of research: 1. Understanding the research issues &

  2. Ability of taking them into action.

  <u>Understanding the research issues</u> involves the following points:

  a) Checking whether data collection is consistent or not.
  b) Understanding about the research content.
  c) Understanding the issues of quality, accuracy, relevance, and so on.
  d) Finding how information is evaluated and published.
  e) Knowing the importance of citation.

  <u>The ability of taking research evaluation process into action</u> involves the following points:

  a) Reading literature critically and identifying keypoints and arguments.
  b) Categorizing different information resources.
  c) Assessing the quality, accuracy, relevance and creadibility of the resources found.
  d) Choosing suitable material on the research topic and relating information.
  e) Critically evaluating the findings.

Unit :2 Fundamental Concept on Research

According to Kerlinger, "Research hypothesis is a conjectural statement of the relationship between two or more variables."

The research hypothesis states the expectations of the researcher in positive terms. It identifies the variables for conditions, which in causal relationship, will be advanced, to account for results and often derived from theory.

Characteristics:

1. A research hypothesis must be conceptually clear.
2. A research hypothesis should be empirically verifiable.
3. A research hypothesis must be specific.
4. A research hypothesis should have an if….then statement.
5. A research hypothesis should be related to available technique.
6. A research hypothesis should be simple, specific and conceptually clear.
7. A research hypothesis should be logically consistent.
8. A good hypothesis offers a valid explanation for some outcome.

Functions:

a. It consists adequate explanation of all the facts connected with the hypothesis.
b. It helps to collect necessary evidence in order to discover the order of nature.
c. It leads to the discovery of laws. It explains facts and laws and thus seeks to verify knowledge.
d. Hypothesis limits the scopes of inquiry to a manageable area because, instead of random collection of data, it enables us to search only for relevant facts. Therefore, it leads to economy of time and money as well as significant conclusion for the advancement of knowledge.

Types of Hypothesis:

1. **Simple hypothesis**: It is that one in which there exists relationship between two variables one is called independent variable on cause and other is dependent variable or effect. For example_(i) Smoking leads to cancer.

   (ii)The higher ratio of unemployment leads to crimes.

2. **Complex hypothesis:** It is that one in which some relationship among variables exists.
3. **Empirical hypothesis:** It is that one which is applied to a field. During the formulation it is an assumption only but when it is put to a test, it becomes an empirical or working hypothesis.
4. **Null hypothesis**: It is contrary to the positive statement of a working hypothesis. According to Null hypothesis there is no relationship between dependent and independent variable. It is denoted by "Ho".
5. **Alternative hypothesis:** Firstly many hypothesis are selected then among them select one which is more workable and most efficient. That hypothesis is introduced later and due to changes in the old formulated hypothesis. It is denoted by "H1 or Ha".
6. **Logical hypothesis:** It is that type in which hypothesis is verified logically. J. S. Mill has given four cannons of these hypothesis. For example agreement, disagreement, difference and residue.
7. **Statistical hypothesis:** A hypothesis which can be verified statistically called statistical hypothesis. The statement would be logical or illogical but it statistical verifies it, will be statistical hypothesis.

❖ Sampling, its characteristics, types, benefits and problems

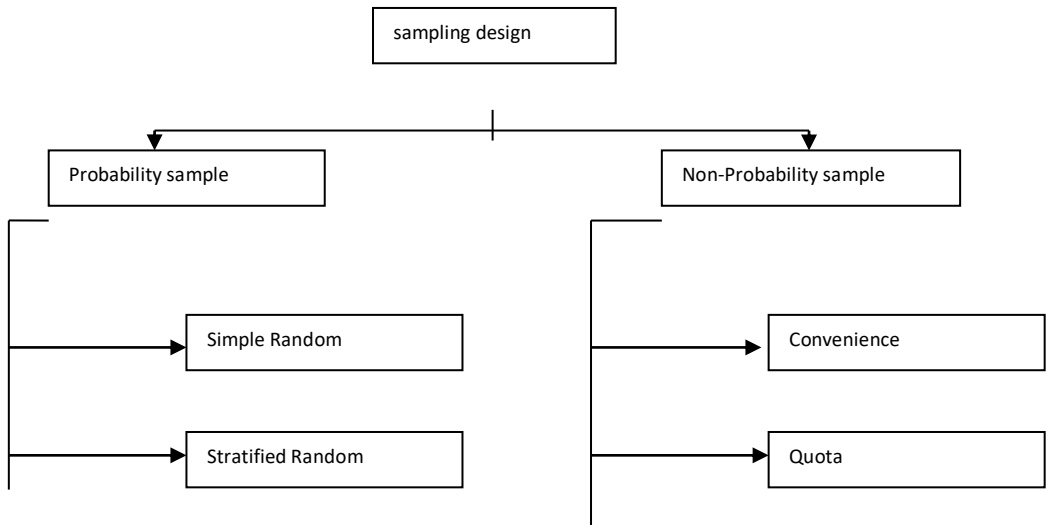
The sampling technique is a procedure for the selection of a sample from the given population. Sampling is an essential part of any research investigation. The researches normally cannot survey everyone in the population, but through sampling techniques, they can be confident that only a small part of the total population can fairly represent the total population. So, sampling is a technique that saves the time and trouble of questioning 100 percent of the population.

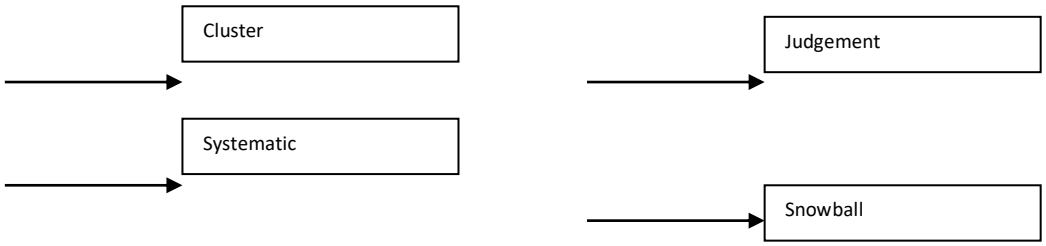
According to Milder Porton," Sampling method is the process or the method of drawing a definite number of the individuals, cases or the observations from a particular universe, selecting part of a total group for investigation."

Characteristics:

1. A sample should be representative.
2. A sample should be scientific in nature.
3. The sampling technique saves time.
4. It should be very suitable for carrying out different surveys.
5. It should be based on practical experiences.
6. It should be cheaper and reliable.

Types: Sampling methods are classified or either probability on non-probability.





1. **Probability Sampling:** In probability samples, each member of the population has a known non-zero probability of being selected. Probability methods include following points:

a) **Simple Random Sampling (SRS):** In this method every member (unit) of the population has known and equal chance of being selected. In this method a researcher develops an accurate sampling frame. It selects the required number of sampling units using a lottery method. The lottery can be used with replacement or without replacement.

b) **Stratified Random Sampling:** It is commonly used probability method that is superior to random sampling because it reduces sampling error. Under stratified sampling, the population is stratified under different heads such as caste/tribe, age, sex, education, profession, economic status etc and thereafter the representational samples are selected for study. In this sampling, the population is divided into sub-group or strata. For example, suppose you have to select 300 students form a campus for your study. You have to stratify the student population of the campus into two strata by their sex. You thus have two strata of the student population (male and female) from which you select your sampling using random sampling method.

c) **Cluster Sampling:** It refers to the method of dividing the population into groups called clusters and drawing a sample of clusters to represent the population. This sampling method is widely used in conducting "area surveys" or "opinion surveys". This method is also known as multistage sampling technique. For example, suppose you want to study the problem of industrial indiscipline in Nepal. The first step would be to obtain a list of all

factories. This will constitute your sampling frame. But the number of factories and employees in too large. You might then restrict yourself to eastern and western regions, which constitute the secondary sampling frame. And finally you would select individual factories and employees from each of these regions.

d) Systematic Sampling: It is often used instead of random sampling. It is also called an Nth name selection technique. After the required sample size has been calculated, every Nth record is selected from a list of population members.

To select the systematic sample of items, we need to first calculate the sampling interval defined as:

$K = \frac{\text{Size of Population}}{\text{Size of sample required}} = \frac{\text{N}}{\text{n}}$ {k= total population size divided by size of the desired sample}

For example, suppose you want to select 40 employees for interview from the roll-sheet of about 450 employees for a company.

2. Non-Probability Sampling: In non-probability sampling, numbers are selected from the population in same nonrandom manner. These includes convenience sampling, Quota sampling, Judgment sampling and Snowball sampling.

a) **Convenience Sampling:** It refers to samples selected not by judgment or probability techniques but because the elements in a fraction of the population can be reached conveniently. Selection of sampling units is totally based on the convenience of the researcher. When both time and money are seriously limited, convenience samples are widely used. Hence, the samples selected are unlikely to be representative. For example, you probably use convenience sampling. You stand up in a corner of a street and interview the desired number of passers, by?

b) **Quota Sampling:** The main purpose of this sampling process is to develop a sample that is a replica of the population of interest. In this method, the population is divided into a selects a quota of sample items from each segment.

Example of Quota sampling: Suppose you want to study student's attitudes towards the new curriculum by seeking their views, faculty by faculty. If you want to interview only 50 students of the campus, then you select the quota of your sample on the basis of the enrollment ratio in different departments. However, if some departments are too small in terms of enrollment, a higher percentage of students should be selected as samples.

c) **Judgment Sampling (or Purposive Sampling):** Judgmental samples are selected from the population through researcher's intuition. The selection of the sample is deliberate and purposive, it is not random. For example, if you want to study the issue of corruption in Nepalese society, you select a sample of twenty of the senior professors of TU to give thir opinion on the subject. Certainly the judgment of these professors is much superior to a convenience sample that might arbitrarily be limited to the opinion of twenty people in your neighborhood.

d) **Snowball Sampling:** The "snowball" gathers subjects as it rolls along. This sampling is particularly used to study drug cultures, teenage gang activities, insider trading and other applications where respondents are difficult to identify and making initial contact. The main problem in this sampling is making initial contacts. Once we have done this, these cases identify further cases. Thus, populations that are difficult to identify, snowball sampling may provide the only possibility.

Benefits or Advantage of Sampling:

1. It saves time and money.

2. It provides accuracy of results.
3. It provides possibilities of intensive study.
4. It makes administrative activity comfortable.
5. It has high suitability ratio towards the different surveys.

Disadvantage of Sampling:

1. It may not be accurate.
2. There is difficulty in selecting representative sample.
3. There might be change in unit's characters.
4. There are possibilities of prejudice and bias.
5. There can be more need of special knowledge.
6. It is impossible to select good samples.
7. Untrained manpower can create problems.

❖ Field Work

Field work as a technique of educational and behavioral research was developed in the late 19^{th} and early 20^{th} century and then it was adopted in social science research including sociology and anthropology.

According to Kerlinger, " Field studies are scientific inquiries aimed at discovering the relations and interaction among sociological, psychological and educational variables in real social structures".

Types of Filed Work: It is of two type

i. Explorative field work: A kind of filed work in which cause and effects relationship of variables are explored. The main purpose of the explorative field studies can be mentioned:
   - To discover significant in the filed situation.
   - To discover relations among variables.

- To lay the ground work for more significant and rigorous testing of hypothesis.

ii. Hypothesis resting filed work: A kind of filed work in which relation of the variables on the result is presumed and the filed work is conducted.

Steps of Field Works: Following steps are considered essential in the conduct of a field work:

1. Preliminary Planning: It is batten to start a field study with a tentative plan covering the scope of the study, its broad objectives and time schedule.
2. The scouting expedition: This phase of study involves an informal and free investigation in which the field workers try to get a thorough understanding of the important forcer in the situation.
3. Formulation of the research design: on the basic of the result of the scouting exploration the design of the final study can be formulated.
4. Pretesting of instrument and procedures: the interview schedule and behavioral scale and other types of data forms required for the study should be constructed and protested.
5. Field operation: the task for the field workers are more varied and often more difficult than for a interview in a survey.
6. Analysis of materials: data from observation and interview responses in afield study lend themselves to correlation analysis. Correlation coefficients show the nature of relationship between variables. By holding factor constant, the relationship and studied.

Qualities of field workers:

a) Honesty: the essential quality is the honesty i.e, the interviewer should do what he/she is/was instructed to do.
b) Tactfulness: the field worker should be tactful. He must know how to deal with the responders.

c) Personality: interviewer's personality should be neither over aggressive nor over social.
d) Interest in work: the interviewer should be interested to the work entrusted to him/her.
e) Adaptability: the interviewed should be able to adopt on varying circumstances in his/her field work.

Advantages of field work:

i. It provides opportunities for direct observation of social interaction and relationship.
ii. It is usually carried out in a realistic situation like a school, college, factory, community etc. So, it avoids the artificiality of laboratory experiments.
iii. In filed research the timing of certain variables may be ascertained.

Disadvantage of filed work:

i. Generally, filed situation where the field studies are carried out are very complex.
ii. In filed study, there are larger number of variables which can not the fully controlled as in experimental method which causes lower internal validity.
iii. It suffers from lack of practicality.
iv. It cannot be applied when absolute value or result is required .

- There are two major characteristics of scale measurement_(a) Validity and (b) Reliability.

a) **Validity**: It results from careful planning of questionnaire or interview questions item. Data are considered to be valid when they major the items. It is concerned with systematic error. There are three types of validity.

i. **Contents Validity:**It estimates systematic error. The researchers major the representative which may be valid for the whole or may not be valid.

ii. **Construct Validity:** It is concerned with knowing more than the measuring instruments works. It is concerned with the differences that lies in measurement score and create more variables.

iii. **Criterion related Validity:** it is established when the measurement creates difference on criteria. The obtained score may be used to estimate future understanding of the researcher.

b) Reliability: It is quite different from validity data are considered to be reliable when they give certainty that they are close to truth. Reliability results from taking longer sample of respondents. To be reliable the sampling should match with the total research. Reliability may be achieved by these methods:

i. **Test-Rests Reliability:** It means repeating the measurement using some method in other conditions.

ii. **Alternative-From Reliability:** It means getting some result by applying two method for some subject.

iii. **Split-Half Reliability:** It means dividing the total numbers of items like odd or even numbers and getting same result.

❖ Unit : 3 Research Design

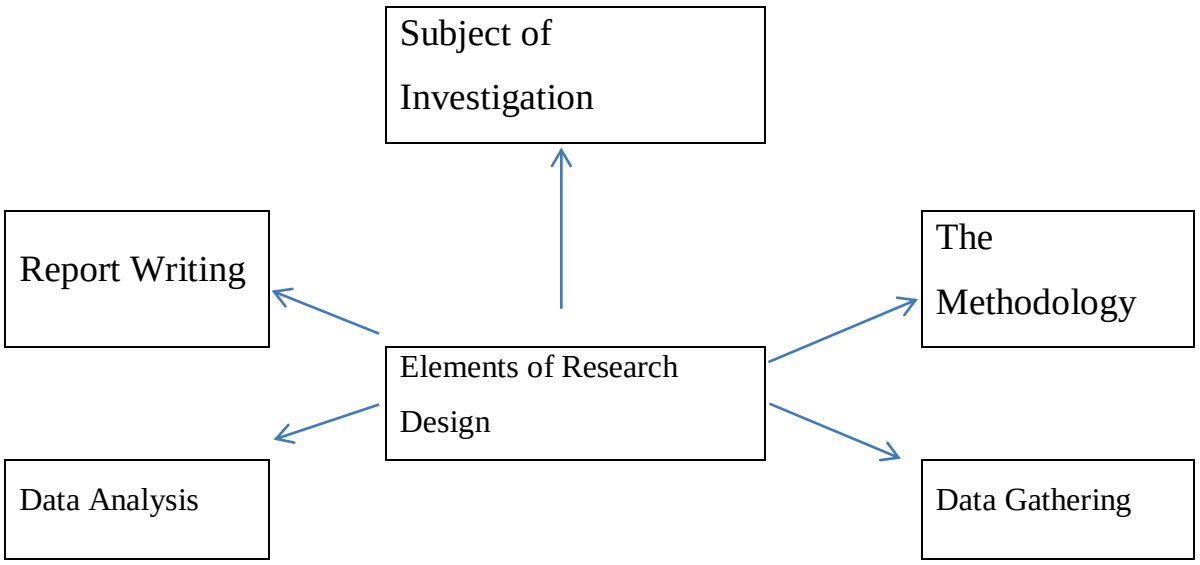
Introduction, Objectives & Features of good research design.

A research design id a procedural plan that is adopted by the researcher to answer question validity, objectivity, accurately and economically. A research design is a blueprint plan that shows how a researcher intends to fulfill the goods of a purposed study.

According to F. N. Kerlinger, " Research design is the plan, structure and strategy of the investigation conceived so as to obtain answer to research question and to control variable."

Decision regarding what, where. When. How much, by what means concerning an enquiry or all research study constitute of research design.

Elements of Research Design: There are five elements of research design.



Types of research design: Basically there are five types of research designs.

1. **Descriptive Research Design:** The main objective of descriptive design is to acquire knowledge. There are certain areas where knowledge has not yet properly developed. In such a case, the investigation has to confine himself to descriptive design. Descriptive research studies involve the systematic collection and presentation of data to give a clear picture of a particular situation.
2. **Historical Research:** According to Kerlinger," Historical research is the critical investigation of the past and the careful weighing of the evidence of the validity of sources of information of the past and the interpretation of the weighed evidence."
3. **Experimental Research:** It is concerned with making experiments to find out the cause effect relationship of the phenomenon under study. Experimental study is also known as the study of causal relationship. Whose main purpose is to test the causal hypothesis. It is considered to be the highest stage of social research. Science tries to explain the phenomenon, or to determine its causes. This experimental method not only reduces personal bias but it also helps to draw inferences about causality.

According to R. L. Ackoff," experimentation is as activity."

4. **Exploratory or Formulative Study:** The main purpose of an exploratory study is to formulate a problem for more precise investigation or for developing hypothesis.
5. **Diagnostic Studies:** The diagnostic study is concerned with discovering and testing certain variables with respect to their associations or dissociation. It concerned with an existing social problem and its basic nature and cause. The diagnostics design is concerned with the case as well as the treatment. The main objectives of the diagnostic study is to diagnosis the problem, to accurately specify the characteristics to determine the frequencies of significant variables and to find out whether certain variables are associated.

Finding & choosing research topics: Finding and choosing research topic is a very important step is research process. If the problem is told vaguely or if the problem is defined wrongly, the whole research becomes completely useless. Therefore, to find and choose a research topic, detail literature review or investigation should be done.

- **Preparing Research Proposal :**

The pre-plan should be prepared to study or conduct about any subject or event. On the plan there must be mentioned what, where and how the things we should complete. The format of pre plan is called proposal. Without proposal , it gets too difficult to get objectives from our study. Therefore it is extremely necessity to prepare appropriate proposal that helps to complete research work successfully and objectively.

Research proposal is a detail plan which includes how any work should be started and what processes should be followed to complete the work. It includes detail processes of related studies such as introduction of programme, its working methods, time duration and expenses. Proposal provides the complete formats which should be completed.

Proposal can be classified into two types –

i) Research project proposal and

ii)Development project proposal

The proposal which takes objectives of finding new things about certain subject or problem is called research project proposal.

The proposal prepared for selected programme which takes objectives to solve particular problem certain place is called development project proposal.

Importance: The writing of a research proposal is an important aspect of research process. Any proposal offers a plan to fill a need , and the reader will evaluate our plan according to how well we have written presentation, answer questions about what we are proposing , How we plan to do it, WHEN we plan to do it and HOW MUCH it is going to cost. To do this we must ascertain the level of knowledge that our audience possesses and take the positions of all the readers into accounts.

The most basic composition of a proposal, as with any other written document, is simple; it needs a beginning (the introduction), a middle (the body of material to be presented) and an end (the conclusion/recommendation).

Format (factors or components) : The essential factors which should be contained are given below.

1. **Title :**
   a) The title of the proposal thesis must be given.
   b) The title should reflect the contents of the proposed study.
2. **Background Information :**
   a) Background of the problem should be given.
   b) Background information on the organization to be studied.
3. **Statement of the problem:**
   a) Statement of the general problem, which is being investigated**.**
4. **Theoretical Framework :**
   a) A brief survey of the related literature is to be presented.
   b) The variables considered relevant to the study should be identified.
5. **Statement of Hypotheses / objectives:**
   a) Statement of the research hypothesis, which the thesis will try to test.
   b) In the case of exploratory or descriptive studies, the specific objectives of the study should be presented.
6. **Definition of Terms used :**
   a) If the study uses any term which does not have well-accepted definition, it should be defined.
7. **Research Methods:**
   a) A brief mention about the research design to be followed has to be made.
   b) The population of the study, organizational details , sample size and sampling methods need to be explained.
8. **References:**
   a) The published sources of information and literature consulted in the course of proposal preparation should be alphabetically listed.

Unit-4

❖ Data Collection

Meaning of Data Collection: Data collection, the most important in research, is also known as field work. Without data collection, research may be incomplete. At this stage, the researcher has to administer the research in instruments such as questionnaire, interview, schedules, observations etc. After collecting data, the researcher should process it and then should analysis it. It is the process of gathering and measuring information on targeted variables in an established systematic fashion, which then enables one to answer relevant questions and evaluate outcomes. The goal for all data collection is to capture quality evidence that then translates to rich data analysis and allows the building of a convincing and credible answer to questions that have been posed. With the use of different statistical techniques the hypothesis are tested.

There are two methods of data collection:

i) Self-completed (for example, Personal interviews)

ii) Other methods (for example, Internet, mail surveys etc)

4.2 Importance: Collecting data is the connecting link to the world of reality for the researcher. The data collection activity consists of taking ordered information from reality and transferring it into some recording system so that it can later be examined and analyzed for patterns. Regardless of the field of study or preference for defining data (quantitative or qualitative), accurate data collection is essential to maintaining the integrity of research. The data collection component of research is common to all fields of study including physical and social sciences, humanities and business. It help scientists and analyst to collect the main points as gathered information. Research as a media can be interpreted as having a content of data and a process of methodology. Without the data, methodology cannot be utilized to bring us to the conclusion, which the hypotheses suggest.

Types of data(Subjective vs objective data source, qualitative vs quantitative, secondary vs primary data source)

1. Subjective data: subjective data are information from the client's point of view ("symptoms"), including feelings, perceptions and concerns obtained through interviews.

Objective data: objective data are observable and measurable data ("signs") obtained through observation, physical examination and laboratory and diagnostic testing. For examples, The nurse reads the patient's elevated blood pressure, which is objective. A patient says she feels like she has a fever, this is subjective.

2. **Qualitative vs Quantitative data:** quantitative data are measures of values or counts and are expressed as numbers. Quantitative data are data about numeric variables(e.g, how many, how much or how often). Qualitative data are measures of 'types' and may be represented by a name, symbol, or a number code. Ex of qualitative data: softness of your skin. The color of your eyes.(we can't measure color with numbers)

Quantitative data: it is information about quantities ,and therefore numbers, and qualitative data is descriptive , and regards phenomenon which can be observed but not measured , such as language.

3. Secondary vs Primary: It refers to those for already gathered by others. The sources of secondary data can be divided into two groups: internal and external. The internal secondary data are found within the company. Sources of such data include sales information, accounting data and internally generated research reports. External secondary data are collected from sources outside the company. Such sources may include books, periodicals, published reports, data services and computer data banks.

Primary Sources: Primary data are original data gathered by the researcher for the research project at hand. Thus, these data are collected for meeting the specific objectives of the study. Primary data can be collected through interviews, questionnaires, observations, case studies, life histories, ethnographic research, longitudinal studies & experiments etc.(For example, Consider the Dhangadi Branch of the Nepal Bank Ltd. With the responsibility for collecting the interest on its loan from the residents in its area. The Branch office may construct a database of those residents who have not paid interest

this year. Clearly for the Branch office this will be primary data, as it has collected the data for its own use. This database will then be used by the Nepal Rastra Bank to investigate income & poverty levels in the area. For the Nepal Rastra Bank, It is now a secondary source of data.

4.4 Source of Data Collection: Each research project has its own data needs and data sources. Researchers need to consider the sources on which to base and confirm their research and findings. However, the general classification of data sources has the following dimensions:

i) Secondary Sources: It refers to those for already gathered by others. The sources of secondary data can be divided into two groups: internal and external. The internal secondary data are found within the company. Sources of such data include sales information, accounting data and internally generated research reports. External secondary data are collected from sources outside the company. Such sources may include books, periodicals, published reports, data services and computer data banks.

ii) Primary Sources: Primary data are original data gathered by the researcher for the research project at hand. Thus, these data are collected for meeting the specific objectives of the study. Primary data can be collected through interviews, questionnaires, observations, case studies, life histories, ethnographic research, longitudinal studies & experiments etc.(For example, Consider the Dhangadi Branch of the Nepal Bank Ltd. With the responsibility for collecting the interest on its loan from the residents in its area. The Branch office may construct a database of those residents who have not paid interest this year. Clearly for the Branch office this will be primary data, as it has collected the data for its own use. This database will then be used by the Nepal Rastra Bank to investigate income & poverty levels in the area. For the Nepal Rastra Bank, It is now a secondary source of data._____

Unit:5 Data Collection Technique and Classification

1 SURVEY: The term 'Survey' has come from two words, 'Sur' and 'Vor', which means ' to see' a particular thing from a high place. But term is used in different ways in different sciences. In natural sciences, it is used for measuring the things and in social sciences, it indicates the investigation of social

problems, the collection of data through interview, questionnaire, library or books etc.

According to Mark Abrams, "Social survey is a process by which quantitative facts are collected about the social aspect of a community's position and activities."

The term 'Survey' means viewing and interpreting things rigorously and comprehensively. Surveys are useful in formulating hypothesis. The function of a survey depends on the purpose for which it is required and how much of information is already known about the problem. It is a technique of investigation and it refers to direct observations of a phenomenon and collection of information through personal interview, questionnaire etc. Survey provides the basis for theory construction, and the implications for social planning and reform.

Survey belongs to following groups of subject:

1. Demographic characteristics such as house-hold family and its related aspects.

2. Social environmental aspects such as income, social amenities etc.

3. Social activity aspects e.g. people's behaviors and actions.

4. Public opinion and attitude related aspects such as motives and expectations of people etc.

There are a lot of ways to conduct research and collect information, but one way that makes it really easy is by doing a survey. The term survey is often used to mean 'collect information'.

Mainly there are three specific techniques (types) of survey research:

a) **Questionnaires:** a series of written questions a participant answers. This method gathers responses to questions that are essay or agree/neutral/disagree style. Questionnaires are usually paper and pencil instruments that the respondent completes.

b) **Interviews:** Interviews are completed by the interviewer based on the respondent says. Questions posed to an individual to obtain information about

him or her. This type of survey is like a job interview, with one person asking another a load of questions.

c) **Surveys:** brief interviews and discussion with individuals about a specific topic. Yes, survey is also a specific type of survey, to make things even more confusing. A survey is quick interview, with the surveyor asking only a few questions.

Steps involved in Survey: The sequence of the tasks involved in carrying out a survey from the first stage of planning to the final stage of preparing the report is presented below:

i) Selection of a problem and its formulation,

ii) Preparation of the research design,

iii) Operationalization of concepts and construction of measuring indexes and scales,

iv) Field work and collection of data.

v) Processing of data and

vi) Reporting.

Advantages of Surveys:

1. High Representativeness: Surveys provide a high level of general capability in representing a large population.

2. Low costs: When conducting surveys , you only need to pay for the production of survey questionnaires.

3. Convenient Data Gathering: Surveys can be administered to the participants through a variety of ways. Nowadays, the online survey method has been the most popular way of gathering data from target participants.

4. Good statistical significance: Because of the high representativeness brought about by the survey method , It is often easier to find statistically significant results than other data gathering methods.

5. Little or No observer subjectivity: Surveys are ideal for scientific research studies because they provide all the participants with a standardized stimulus.

Disadvantages:

1. Survey research remains at the surface and it does not penetrate into the depth of problem being investigated.

2. It has some practical problems like time consuming, demand of a good amount of expenditure etc.

3. Although it is true that survey research is accurate, it is still a subject of sampling error.

4. It was also been observed that some technique if survey research such as survey interview makes the respondent too sensitive and hence, such a technique leaves the respondent out of his own social context.

❖ Interview

In interview method the interviewer himself approaches the investigator, puts questions to him and himself records the replies, usually not bringing to the notice of the respondents. In this system there is direct contact between the respondent and the informant.

According to Kerlinger, "The interview is face-to-face inter personal situation in which one person, the interviewer asks a person being interviewed, the respondent, questions designed to obtain answers pertinent to research problems."

Good & Hatt has defined "Interview is fundamentally a process of social interaction."

Interview methods are basically of two types:

Directive or structured and non-directive or unstructured interviews.

i) Structured Interview(Directive): In a structured interview the investigator asks a predetermined set of questions, using the same wording and order of questions as specified in the interview schedule. An interview schedule is a written list of questions, open or closed-ended, prepared for use by an interviewer, in a person-to-person interaction (this may be face-to-face, by telephone or by other electronic media.) An interview schedule is a research tool/instrument for collecting data, whereas interviewing is a method of data collection.

One of the main advantages of the structured is that it provides uniform information , which assures the comparability of data. Structured interviewing requires fewer interviewing skills than does unstructured interviewing.

ii) Unstructured Interviews (Non-directive): In an unstructured interview also known as in-depth interview, the interviewer develops a framework, called an interview guide, within which to conduct the interview. Within this structure the interviewer formulates questions spontaneously during an interview. Unstructured interviews can be carried out in a one-to-one situation or collectively with a group of respondents(know as group interviews or focused group interviews).

A Non-directive Interview is also called uncontrolled, unguided interview. In this type of interview, the interviewer does not follow any list of pre-determined questions. Interviewer allows the interviewee to narrate his own experiences in the manner he will like to.

- **Questionnaire**

Questionnaire is a tool or technique of data collection. It consists of a number of questions printed or typed in a definite order on a form or a set of forms. It can be sent to a represent either personally or through mail. The respondent answers the question on his own. Questionnaires are now widely used collecting data, particularly when data are to be collected from a large number of people who are scattered over a wide area. According to Bogardus- A questionnaire is a lot of questions sent to a number of persons for them to answer. A questionnaire is a means of gathering information by having the respondents fill in answer to printed questions. Questionnaire is a device for

securing answers to questions using a form which the respondent fills in himself.

- **Advantages of questionnaire:**

  1) Questionnaire is relatively economical and inexpensive. It is possible to cover a large number of people scattered over a wide area.

  2) This method saves time. In stead of meeting people personally it is possible to approach them in a larger number through the mailed questionnaire.

  3) The respondent is free to express his views and opinion.

  4) Questionnaire can collect the information about personal and private affairs such as sex habits, marital relations, etc.

  5) Questionnaire does not much pressure on the respondent's emotionality. It provides sufficient leisure time to answer the questions in a relaxed mood.

- **Disadvantages of questionnaire:**

  1) Questionnaire method cannot be used for uneducated persons.

  2) In the case of mailed questionnaire the proportion of return is low

  3) Questionnaire is not suitable when a spontaneous answer is required.

  4) There is no way of checking misinterpretations and unintelligible replies by the respondents.

❖ Observation

Observation is taken as a major technique in social science while conducting research. It is one kind of technique which is used to study about event or subject under research.

According to **C.A.Moder**, "Observation implies the use of the eyes rather than of the ears and the voice."

Observation means to see or watch any phenomenon carefully. This technique is quite essential to study the behavior of people. Observation also plays a major role in formulating and testing hypotheses in social sciences. In scientific research work, observation is compulsory and important method which is used to collect data related to research problem. Science starts from observation. Its validity is also proved with observation itself.

Characteristics: Observation as a method of data collection has certain characteristics:

i) It is both a physical and a mental activity.

ii) It is selective because researcher does not observe anything and everything, but selects the range of things to be observed on the basis of the nature, scope and objectives, of his study.

iii) Observation captures the natural social context in which persons behavior occurs.

iv) Observation should be exact and based on standardized tools of research such as observation schedule, socio-metric scale etc.

Mainly there are three types of observations:

a) Controlled and Uncontrolled observation

b) Structured and unstructured observation

c) Participant and Non participant observation.

❖ Introduction to analysis and presentation of data

Data presentation and analysis forms an integral part of all academic studies and plays an essential role in every field. An excellent presentation can be a deal maker or deal breaker. Presentation of data requires skills and understanding of data. It is necessary to make use of collected data which is considered to be raw data which must be processed to put for any application. Data analysis helps in the interpretation of data and take a decision or answer the research question. This can be done by using data processing tools and softwares. Data analysis starts with the collection of data followed by data processing by various data processing methods and sorting it. Presenting the data includes the pictorial representation of the data by using graphs, charts, maps and other methods. These methods help in adding the visual aspect to data which makes it much more comfortable and quicker to understand.

Various methods of data presentation can be used to present data and facts.The main data presentation techniques are as follows:

1. **As text:** Raw data with proper formatting categorization, indentation is most extensively used and very effective way of presenting data. Such format is widely found in books, reports, research papers and in this article itself.

2. **In tabular form:** Tabular form is generally used to differentiate, categorise , relate different datasets. It can be simple pros and cons table , or a data with corresponding value such as annual GDP, a bank statement, monthly expenditure etc.

3. **In graphical form:** Data can further be presented in a simpler and even easier form by means of using graphical form. The input for such graphical data can be another type of data itself or some raw data. For example, a bar graph and pie chart takes tabular data as input.

❖ **Steps for presenting and analyzing data:**

1. Frame the objectives of the study and make a list of data to be collected and its format.
2. Collect/obtain data from primary or secondary sources.

3. Change the format of data, i.e, table, maps, graphs, etc. in the desired format.

4. Sort data through grouping , discarding the extra data and deciding the required form to make data comprehensible.

5. Make charts and graphs to help to add visual part and analyze trends.

6. Analyse trends and relate the information to fulfill the objectives.