Chapter one: Foundation of Research

1. Meaning and nature of Social inquiry

Social Inquiry refers to the search for an answer for different human and natural experiences; since ancient time human being has been searching for explanations for natural phenomena like drought, earth quack, disease, famine, flood, the fluctuation of light and darkness as well as the nature of life and death. The journey of human knowledge from the first sedentary society through the emergence of religion up to the modern Era is a journey of social inquiry from the darkest era to the era of science technology. Thus, social inquiry is to be understood as the phenomenological development of the method of knowing human and natural experiences.

1.1.Sources of Social Inquiry

Based on the justification for the acceptability of a given mode of inquiry social inquiry can be categorized in to four major typologies.

1.1.1. Time-Based Knowing: Traditional Knowledge

Knowledge accumulated and experience tested through cross-generational inheritance is one source of inquiry and knowledge. Every society before the advancement of scientific knowledge passes through this source of knowledge that serves as the bases for the emergence and advancement of scientific knowledge. Although often misjudged as traditional and backward, however, other than lack of complete measurement, rationality and explanation to actions prescribed by time-based knowledge, it has pragmatic effectiveness. At times time-based knowledge happens to be more effective than scientific one and serve as entry point for scientific knowledge advancement. Yet, there are dark corners to it that may cause harm to society. A case in point is the knowledge of indigenous or traditional medicine, despites its uncommon excellence that sometimes overwhelms scientific medicine, due to lack of proper dose determination and antidote happens to cause harm to users. Moreover, some time-based knowledge among others patriarchy, female genital mutilation, culture of violence and religious oppression etc, are to be considered to Harmful Traditional Practices which require change. The careful and selective application of this source of inquiry is of practical and theoretical development of knowledge. Therefore, with proper caution, it can be considered as viable source of scientific inquiry.

1.1.2. Credential-Based Knowing: Authoritative Knowledge

This source of knowledge based on proven professional competence or accredited individuals who assumed to be dependable source of scientific research. Certification of life and death by medical doctors, forensic (crime investigator) doctors, engineers and educators as well as various experts is few among instances of authoritative knowledge. This is based on the assumption that accredited sources are unbiased, rational and accountable to make personalized and unverified

information. However, this does not mean that they are immune from abuse and biases that, in undertaking research care must be taken to filter errors from the authenticity of information gathered from authoritative sources.

More Risky Knowledge Sources: Common Sense and Intuition

This category of source of knowledge is based on commonsense and institution that lacks both rational verification and time based knowledge. Most people depend on this source of knowledge in their day to day personal life, social and institutional affairs. Pseudo-believes, magic tricks, fortune telling, interpretation of bad and good omens are few among numerous examples of this category of sources of inquiry. Hence, it is most risky and unreliable source of scientific inquiry. However, as to why such views develop and their implications for society can be subject of scientific investigation.

Science as a Trustworthy Way of Knowing

Science is the systematic collection, analyses and interpretation information to draw rational, verifiable and dependable conclusions about ranges of phenomena. It is based on evidence, proof, correlation and causality the validity, dependability and consistency of which is the measurement of the quality of outcomes of science based inquiry. It is the most trustworthy source for scientific research inquiry provided the unique characterizing requirements are qualified. However, care must be taken not to confuse and apply science as trustworthy source of inquiry for everything; because there are some categories like religion and mysticism unverifiable with whatsoever scientific method and others like the secret of the unexplored realm of UFOs (Unknown Flying Objects which religion calls them spirits) and other solar systems are dark corners of science that using science as the most trustworthy source of inquiry too requires careful application.

1.2.**Meaning and characteristics of research**

In this section of the first unit you will be introduced with what research is all about. You might have some clue about what research is because it is a term that is often used by people especially in academic institutions. As an organized & systematic scientific inquiry research has some common characteristics features across different professions. This part is also committed to acquaint you with some common features of research in addition to defining it.

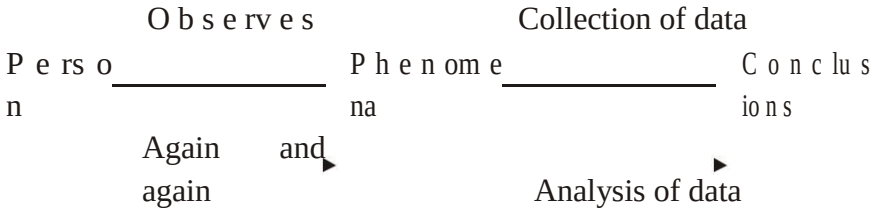
Dear students, research activities are conducted in almost all professions. As you might know, all professions have pre-existing constructed knowledge based on which their students specialize. However, the search for knowledge is an unending process and that is why people in different professions engage themselves in scientific inquiries and search answers for them. The main purpose of scientific inquiry is to understand, explain & critically examining observed realities, seeking solutions to problems, construction of new theories and testing hypothesis. These all activities are related in one or another way with searching for truth and new facts.

At times we might involve in searching for truths and facts in our daily lives but does it mean we are conducting research in its actual scientific meaning?. The response to this question may help us to differentiate between the inquiries that we made in our daily lives and the procedures followed to obtain answers to them, and scientific inquires & investigations.

The term 'Research' consists of two words:

Research = Re + Search

'Re' means again and again and 'Search' means to find out something, the following is the process:



The research is a process of which a person observes the phenomena again and again and collects the data and on the basis of data he draws some conclusions. Research is oriented towards the discovery of relationship that exists among phenomena of the world in which we live. The fundamental assumption is that invariant relationship exists between certain antecedents and certain consequents so that under a specific set of conditions a certain consequents can be expected to follow the introduction of a given antecedent.

According to Rusk

"Research is a point of view, an attitude of inquiry or a frame of mind. It asks questions which have hitherto not been asked, and it seeks to answer them by following a fairly definite procedure. It is not a mere theorising, but rather an attempt to elicit facts and to face them once they have been assembled. Research is likewise not an attempt to bolster up pre-conceived opinions, and it implies a readiness to accept the conclusions to which an inquiry

leads, no matter how unwelcome they may prove. When successful, research adds to the scientific knowledge of the subject.

According to George J. Mouly

He defines research as, "The systematic and scholarly application of the scientific method interpreted in its broader sense, to the solution of social studiesal problems; conversely, any systematic study designed to promote the development of social studies as a science can be considered research."

According to Francis G. Cornell

"To be sure the best research is that which is reliable verifiable and exhaustive, so that it provides information in which we have confidence. The main point here is that research is, literally speaking, a kind of human behaviour, an activity in which people engage. By this definition all intelligent human behaviour involves some research."

"In social studies, teachers, administrators, or others engage in 'Research' when they systematically and purposefully assemble information about schools, school children, the social matrix in which a school or school system is determined, the characteristic of the learner or the interaction between the school and pupil."

According to Clifford Woody of the University of Michigan

He writes that in an article in the Journal of Social Studies Research (1927), research is a carefully inquiry or examination in seeking facts or principles; a diligent investigation to ascertain something, according to Webster's New International Dictionary. This definition makes clear the fact that research is not merely a search for truth, but a prolonged, intensive, purposeful search. In the last analysis, research constitutes a method for the discovery of truth which is really a method of critical thinking. It comprises defining and redefining problems; formulating hypotheses or suggested solutions; collecting, organising and evaluating data; making deductions and reaching conclusions; and at last, carefully testing the conclusions to determine whether they fit the formulating hypotheses.

According to C.C. Crawford

He writes that "Research is simply a systematic and refined technique of thinking, employing specialised tools, instruments, and procedures in order to obtain a more adequate solution of a problem than would be possible under ordinary means. It starts with a problem, collects data or facts, analysis these critically and reaches decisions based on the actual evidence. It evolves original work instead of mere exercise of personal. It evolves from a genuine desire to know rather than a desire to prove something. It is quantitative, seeking to know not only what but how much, and measurement is therefore, a central feature of it."

John W. Best thinks, “Research is considered to be the more formal, systematic, intensive process of carrying on the scientific methods of analysis. It involves a more systematic structure of investigation, usually resulting in some sort of formal record of procedures and a report of results or conclusions.”

“Research is but diligent search which enjoys the high flavour or primitive hunting.”– *James Harvey Robinson*

“Research is the manipulation of things concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge, whether that knowledge aids in the practice of an art.”– *Encyclopaedia of Social Science*

“Research is a systematized effort to gain new knowledge.”– *V. Redman and A.V.H. Mory*

According to C. Francies Rummel

“Research is an endeavour to discover, develop and verify knowledge. It is an intellectual process that has developed over hundreds of years, ever changing in purpose and form and always searching for truth.”

The term research is composed of two other terms ‘re’ and ‘search’. The dictionary meaning for “re” is “again”, “a new” or “over again”, and for that of “search” is; ‘examine closely’ and carefully’, ‘to test and try’ or ‘to probe’. Combined together it gives the meaning a careful, systematic, patient study and investigation in some field of knowledge, undertaken to establish facts or principles. (Kumar, 2005)

Scientific research is not an abrupt or accidental situation rather it is an organized, systematic and logical process of inquiry that uses empirical observation to resolve problems and test hypothesis. Therefore, there is great difference between research and non-research activity in searching for truth & facts, or finding answers to questions. The process must meet certain requirements to be called research. It should go through certain conventional procedures that have been used before & tested for their reliability. (Punch, 2006; Kumar, 2005)

This is why most scholars emphasize on the application of scientific procedures and the search for new facts in defining what research is. Let us see how some prominent scholars defined it;

According to Perlinger (n.d) research is ‘‘a systematic, controlled, empirical and critical investigation of propositions about the presumed relationships among natural phenomena.’’ This implies that, there could be simply observed phenomena that has to be tested scientifically than simply assuming some unverified facts about it.

On the other hand to Helmstadter (n.d) ‘‘Research is the activity of solving problems that leads to new knowledge using methods of inquiry which are currently accepted as adequate by scholars in the field.’’ The above two definitions generally imply that, research is a structured inquiry that utilizes acceptable scientific methodology to solve problems and create new applicable knowledge.

Very simply stated, research could be conceived as the collection of information needed to answer a question that can help you solve a problem. But it is a formal, systematic and intensive data collection accompanied with employing scientific analysis of the raw obtained data. The systematic collection and analysis of data may finally result in the development of generalizations, principles, theories, predictions and generally new knowledge & solution to problems.

Dear students, by now you may have differentiated between ordinary inquiries in your daily life and scientific inquires. Think of a situation where you have lost your office key and started to investigate about it. You recited back all the places that you were and finally the small pub by the side of your house came to your mind. You may go to the pub and find your key there. Does this mean that you are making a scientific inquiry? Have you used scientifically proved and accepted sequences of procedures? What would this contribute to the already existing knowledge?

Scientific investigation or research follows some logical steps. This makes the process a well thought and planned activity than abrupt and accidental. For an investigation to quality a scientific inquiry it has to go through:

1. Recognition or awareness of a problem
2. state a research question/s
3. systematic collection of reliable and dependable data
4. Systematic organization of the data
5. logical and scientific analysis of the data obtained
6. interpretation of data
7. Report writing

In this regard the collection of an already available data may not be considered as research because it adds very little to the already existing stock of knowledge. Using an already available data or information to a new end can be considered as a research activity. Research is thus an

original contribution to the existing stock of knowledge making for its advancement. In short it searches for knowledge by employing objective and systematic method.

Dear students, what basic characteristics features do you know about research?

- Research can be considered as a chain of reasoning beginning at problem formulation proceeding through investigation & ending with findings. The whole process involves scientific methods and procedures.
- Research is aimed at solving problem. No research is conducted without identifying a problem. Therefore all good research is aimed at solving some type of problem. If a problem is already investigated and sufficient answer is available to it currently there is no need to conduct research on it. Conducting research becomes necessary when;
    - There is no data to investigate on a research problem
    - There may be some data but in sufficient
    - There may be some data but incorrect & less reliable
- A good research adds new knowledge on the already available knowledge & it enables to make generalizations. The dissemination of an already existing knowledge could not be considered as research. Therefore, research has to fill gap in the existing knowledge.
- It is a rigorous process whereby the procedures followed to find answers to questions are relevant, appropriate & justified. Therefore, it should follow carefully designed procedures.
- It is a systematic process whereby the procedures used to make an investigation should follow a certain logical sequence. It should start at some point, go through logical steps & end somewhere.
- It is valid and verifiable in that whatever is concluded based on one's own findings has to be correct and can be verified by other people following the same procedure.
- It is empirical in that research is based on observable experience and findings should be based on hard evidence in real life experience. Therefore it requires collection of original data from primary sources or the use of existing data to a new aim.
- Objectivity and un-biasdness: research requires precise observation and description of observed facts. The prevalence of subjectivity or biasedness critically degrades the outcome of a research study and reduces its applicability to real life situation.

A purpose of social Science research serves many purposes. Three of the most common and useful purposes, however, are exploration, description, and explanation. Many studies can and

often do have more than one of these purposes, however each have different implications for other aspects of research design.

1.2.1. Methodological approaches in Social science research

Dear students, in the previous part you grasped some clues on how to define research & its basic characteristics features. In this part you will go through the philosophical approaches followed in social sciences to conduct research study.

We have different methodological and philosophical approach in conducting social science research. These approaches have their own assumptions on how to study human behavior. Among this the positivist approach is originated from the physical sciences and mainly emphasizes numerical analysis to study social behavior, on the other hand there are also the interpretive and critical approach holding their own philosophical assumptions.

A. Positivist approach

The positivist approach has its origin from the physical sciences and later extended in to the social sciences. Two earlier social scientists; the French scholar Augusta Comte (1789-1857) and Emile Durkheim (1858-1917) encouraged the use of positivist approach in social science research to study social behavior.

The main intent of a positivist approach is that social sciences should adopt the methods used in physical sciences to study social behavior. This approach requires social researchers to treat and analyze social facts objectively as the physical scientists treat numbers and data. For this approach social facts have their own patterns or regularities in societies and they can be studied by means of numbers and statistics. For instance the rate at which rape is committed, the rate at which people become addicted to drugs, rate of suicide committed etc… Therefore, numbers and the tools that are used to analyze them got much attention in this approach than analyzing social phenomena in their underlying subjective reality.

For positivists science refers to "an objective, logical and systematic method of analysis of phenomena, devised to permit the accumulation or reliable knowledge." Therefore, an objective approach is necessary to minimize bias, to promote impersonality and opinions. Systematic approach must be organized that makes use of statistical analysis. They try to understand overall patterns of human activity in its objective setting and mathematical precision has greater value. Subjective interpretation of social realities and individual perceptions are of little value to positivists.

For them research should be value free. Researchers should avoid their personal values and perceptions a side to reduce their influence on the final outcome. Positivists mainly use experiments, surveys and secondary data as a research design and they give much place to numerical analysis then verbal descriptions.

Criticisms.

a. Purely value free research is unattainable researchers can not totally avoid their expectations and biases to influence the research outcomes.
b. The positivists neglect the fact that individuals may perceive similar things in different way, since they recommend objective interpretation of social realities. But the social world can be alternatively explored from its subjective dimension.

B. The interpretive approach

Unlike the positivist the interpretive approach emphasizes on the importance of subjective interpretation that individuals give to their action and to the actions and reactions of others. This approach recommends researchers to imagine how individuals perceive social actions, how do they feel? What meaning do they attach to particular events? etc… Therefore, their emphasis is not on the objective study of social patterns but on how individuals perceive social actions.

It also examines how people make sense of their lives & how they define their situation because they are influenced by how they see themselves and how others see them. This implies that, for this approach values are relative or subjective based on specific social experiences & socialization. The definition that we give to social actions varies across societies and time, which means we cannot give objective judgments.

Researchers in this approach mainly rely on field studies like participant observation, in depth interviews and case studies. They focus on few cases and their detailed description. After conducting research results are communicated through verbal description rather than numerical analysis.

? Dear student, if you are asked how do you criticize this approach?

- Some scholars argue that, all values could not be equally valid as argued by the interpretive approach.
- Their emphasis on specific cases & field studies do not enable these researchers to make clear generalizations to other similar cases.

- Since they emphasize on individual cases they could not analyze social patterns. For instance, we can not generalize on interactions among social groups by studying individuals.
- Emphasis on individual cases leads to knowing more about lesser/narrower events.

C. The critical approach

For these theorists certain values are correct while others are not. So their judgment towards values is absolute. This simply means that values can be out rightly judged as good or bad giving little consideration to individual and cultural differences.

They also believe that human beings are composed of groups where by powerful groups impose their interests over less powerful one. For instance males' dominance over females. They argue that, human interactions are characterized by conflicts. Based on this they recommend that research out comes by social scientists should result in bringing social justice and their research directed more towards social problems. The fundamental goal of this approach therefore, is to bring about social justice and equality.

In their methodology since they are interested in inter group interactions they usually use historical materials, pay particular attention to comparative studies and analyses of secondary data. Research outcomes and explanations are judged as valid if they could improve life condition of humanity and encourage social justice and equality. This implies that this approach has strong practical orientation.

? Dear students which approach is correct & results in good research outcome based on your own judgment?

We cannot say that one of these approaches is best & leads to best research outcome. Each approach plays its own role to increase our understanding of human behavior. We cannot disregard or reject any of them for each is valuable in adding more knowledge to us about human behavior.

Philosophical Paradigm and Interpretive Frameworks

Every research brings their own worldviews, paradigms, or sets of beliefs to the research project, and these inform the conduct and writing of the quantitative, qualitative, qualitative or mixed study. This carries five philosophical assumptions lead to an individual's choice of research

design: ontology, epistemology, axiology, rhetorical, and methodological assumptions. This includes answering the following questions**:**

- What philosophical assumptions are being implicitly acknowledged?
- What alternative paradigm stances are they likely to use?
- What interpretive or theoretical frameworks are they likely to use?
- In the practice of designing or conducting research, how are assumptions, paradigms, and interpretive and/or theoretical frameworks used?

Philosophical Assumptions

In the choice of a research design, inquirers make certain assumptions. These philosophical assumptions consist of a stance toward the nature of reality (ontology), how the researcher knows what she or he knows (epistemology), the role of values in the research (axiology), the language of research (rhetoric), and the methods used in the process (methodology) (Creswell, 2003). These are summarized in the table below.

Table 1.1 Philosophical Assumptions With implications for practice

Assumption	*Question*	*Characteristics*	*Implications for practice(Examples)*
Ontological	What is the nature of reality?	Reality is subjective and multiple, As seen by Participants in the study	Researcher uses Quotes and themes in worlds of participants and provides evidence of different perspective
Epistemological	What is the relationship between the researcher and that being researched?	Researcher attempts to lessen distance between himself or herself and that being researched	Researcher Collaborates, spends Time in field with Participants, and becomes an "insider"
Axiological	What is the role of values?	Researcher acknowledges that research is value laden. And that bases are present	Researcher openly discusses values that shape the narrative and include his or her own interpretation in conjunction with the interpretations of participants

Rhetorical	What is the language of research?	Researcher writes in a literary, informal style using the personal voice and use qualitative terms and limited definitions	Researcher uses an engaging style of narrative, may use first-person pronoun, and employs the language of qualitative research
Methodological	What is the process of research?	Researcher uses inductive logic, studies the topic within its context, and uses an emerging design	Researcher works with particulars(details) before generalizations, describes in detail the context of the study, and continually revises questions from experiences in the field

The three Dimensions of Scientific Inquiry

Different philosophical assumptions about the nature of reality, epistemology, values, the rhetoric (speech or writing to influence others which is not honest and sincere) of research and methodology (Creswell, 1994) affect nature of research. Several developments in the last decade have caused a reexamination of this stance.

- To include only quantitative and qualitative methods falls short of the major approaches being used today in the social and human sciences. Mixed methods research has come of age.
- Although philosophical ideas remain largely "hidden" in research they still influence the practice of research and need to be identified.
- The situation today is less quantitative versus qualitative and more how research practices lie somewhere on a continuum between the two (e.g., Newman and Benz, 1998). The best that can be said is that studies tend to be more quantitative or qualitative in nature. Yet, the typical scenarios of quantitative, qualitative, and mixed methods research has to be equally considered.
- Finally, the practice of research (such as writing a proposal) involves much more than philosophical assumptions. Philosophical ideas must be combined with broad approaches to research (Strategies) and implemented with specific procedure (methods). Thus, a

framework is needed that combines the elements of philosophical ideas, strategies, and method into the three approaches to research.

In crafting the framework of combination in designing a research proposal, the following four questions has to be considered:

1. What epistemology --- theory of knowledge embedded in the theoretical perspective --- informs the research (e.g., objectivism, subjectivism, etc.)?
2. What theoretical perspective –--- philosophical stance-lies behind the methodology in questions (e.g., objectivism, subjectivism. etc)?
3. What methodology -- strategy or plan of action that links methods to outcomes --- governs our choice and use of methods) e.g., experimental research, survey research, ethnography, etc.)?
4. What methods -- techniques and procedures --- do we propose to use (e.g., questionnaire, interview, focus group, etc).

These four questions show the interrelated levels of decisions that go into the process of designing research. Moreover, these are aspects that inform a choice of approach, ranging from the broad assumptions that are brought to a project to the more practical decisions made about how to collect and analyze data.

Alternative knowledge Claims

Setting a knowledge claim means that researchers start a project with certain assumptions about how they will learn and what they will learn during their inquiry. These claims might be called paradigms (Lincoln and Guba, 2000; Martens, 1998); or broadly conceived research methodologies (Neuman, 2000). Philosophically, researchers make claims about what is knowledge (ontology), how we know it (epistemology), what values go into it (axiology), how we write about it (rhetoric), and the processes for studying it (methodology) (Creswell, 1994). The summary is provided in the table below

Philo. Assumptions	***Alternative knowledge Claims and Designs***					
	Quantitative		Qualitative		Mixed (Triangulation)	
	Posetivsm	**Post**	**Social cons**	**Advocacy**	**Pragmatism**	**Interpretation**

		poset.				
Ontology	objective	less/more obje	Subjective	Subjective	Subjective	Subjective
Epistemology	Impersonal	Less Impersonal	Personal	V. Personal	Conditional	Conditional
Axiology	Value free	Relatively VF	Value Laden	Value Laden	Conditional	Conditional
Theoretical	Objective	Relatively Obv	Subjective	Subjective	Conditional	Subjective
Methodology	Deductive	Deductive	Inductive	Inductive	Conditional	Inductive
Method	Expt or Survey Qntv Qnr	Expt or Survey Qntv Qnr	Ethnography, Qltv interview FGD, Observn	Qltv interview FGD, Observn	Conditional	Document analyses, Qltv interview FGD, Observn
Rhetoric	Formal	Formal	Literary	Literary	Conditional	Literary

1.3.**Important distinctions about research**

Dear students, in the previous section you learn about the different philosophical approach used in social sciences to study human behavior. We hope you were interested & did all the exercises properly. In this part you will be introduced with another important title that is how we can classify research studies and the basis for their classification. For instance, based on the mode of inquiry and how data analysis is conducted a research study can be classified as qualitative or quantitative on the other hand based on its function or application it can be classified as basic (pure) and applied research. Moreover, based on the objectives that the research tries to achieve it can be further classified as Descriptive and Exploratory, and correctional & explanatory. In this part you will be introduced with these all classifications. Note that these categories are not exhaustive since other classifications might exist like ethnographic, historical, evaluative etc…However; the above categories are much more relevant to your discipline.

1.3.1. Qualitative versus quantitative research

The qualitative and quantitative types differ from each other mainly in terms of the process a researcher adopted to find answers to his questions. The difference lies on the degree to which the research study is analyzed by converting observations in to numbers. The two types also

differ based on the type of questions asked, the type of data (evidence) used and the method used to process (analyze) the data.

Based on this quantitative research is a type of research that usually applies the use of numbers to quantify the variation in a phenomenon, situation, problem or issue. It emphasizes precise measurement and the testing of hypotheses based on statistical and numerical analysis of data. Usually quantitative researches are much more structured in terms of the instruments used & the questions to be asked than qualitative researches. In the later case the field situation may determine how to collect data or what by type of questions are to be asked. In this case, the quantitative researcher attempts to describe relationship among variables mathematically. Data is also usually gathered by using structured research instruments like questionnaire. The analysis of data is usually conducted by means of numerical application & mathematical formulas. Therefore, great variety of statistical procedures are available to a quantitative research and it is important to learn which procedure is more applicable to which research problem. Therefore generally in quantitative research;. Data is available in the form of numbers. Data is gathered by using structured instruments. The researcher is objective that giving less attention to behavior, attitudes & motivation of its respondents.

On the other hand qualitative research has more focus on describing a situation, phenomenon, problem or event than quantifying it. It is concerned with verbal description and explanation of human behavior. Instead of quantifying situations or events it emphasizes on detailed descriptions of how people understand and explain their own world. So it gives due attention to behavior, motivation & attitude of people. The tools that are used to collect data may not be well structured. It uses tools like an in depth interview, participant observation or an in depth analysis of individual case. Data analysis do not require statistical procedures or in depth mathematical analysis. Rather findings are typically expressed by quoting interviews from respondents or describing what the researcher experienced during field observation. More subjectivity may be reflected in qualitative research since the judgment of the researcher matters in collecting and analyzing data with less application of structured instruments and mathematical methods.

? Dear students, which type of research ensures good research out come? *Qualitative or quantitative?*

Both qualitative and quantitative researches have their own advantages and disadvantages. It is recommended that nobody has to simply attach to one of these methods. Since neither are

superior to the other. Even many studies require combining both methods. Generally the research problem should determine whether the study is carried out by quantitative or qualitative methods.

1.3.2. Applied versus basic research

Researches can also be classified based on the functions that they are going to serve or their mode of application to practical situations on the ground.

The main aim of basic or pure research is the development and testing of theories & hypotheses that could be intellectually very much important but with less practical application currently or in the future. It is a systematic and creative research conducted with the basic aim of increasing scientific knowledge. Therefore, it deals with very abstract and specialized concepts having lesser applicability. For instance developing an instrument for the best way of measuring people's attitude, developing a new sampling technique to conduct a specific type of research, studying monkey's behavior in its relation with humans etc. can be categorized as basic research.

In applied (field) research the main aim is to find a solution to a specific research problem/question. It is also aimed at increasing scientific and technological knowledge, but with the primary aim of applying it to the real world situation and resolving practically existing problems on the ground. In this case, basic research searches knowledge for the sake of knowledge where as applied research wishes to have an impact on some specific issues or problems on the ground. The information gathered & the outcome of the research is used in many other ways like policy formulation, administration, changing real world situation like teaching methodology, method of production etc…

1.3.3. Descriptive versus co-relational research

Mainly the distinction between these two types is done based on the objective that research aspires to attain. For instance if the research is designed to simply describe a situation problem, phenomena, an organization, a certain region etc… the research is classified as descriptive. Descriptive research has the primary concern of accurately describing a certain phenomena or situation as it is available in its real world situation. For instance, describing the functions of Jimma University, what is its administrative structure, how many programmes are opened in distance education, how many academic staff does the University have etc… tells simple description of facts about a certain organization.

However, on the other hand co-relational research is conducted to identify the existence of relationships, association, and interdependence between two or more aspects of a situation. For instance, if some body asks what is the influence of academic staff composition of Jimma University over the quality of distance education, what is the relationship between the

organizational structure of Jimma University & the services provided to distance students, how does advertisement influences the sale of a product etc… could serve as examples of co-relational research.

There is also another category which is called as explanatory research. This type of research focuses on why and how there is a relationship between two aspects of a situation or phenomenon. For instance why staff composition of Jimma University affects the quality of distance education, why smoking causes lung cancer, how parental behavior affects children behavior etc… are examples of explanatory research.

Finally there is also a type of research which is called as exploratory. The main objective of such type of research is to explore an area which is known very little by the researcher and other people. It is also used to investigate an area to decide whether research study can be conducted in that area or not. Therefore, it is a kind of feasibility study before launching a full scale research study. As the name itself indicate its main task is to explore and make a small scale study before going in to the main task of conducting a full scale research

1.4.The successive stages in conducting research (the research process)

Dear students in the previous section you learnt about classification of research based on their application, objectives and mode of inquiry. This section focuses on introducing you the research process or what successive stages you need to follow if you are going to conduct a research study. It is these successive stages that will be discussed in the coming units and the sections under them. However at this stage you will learn the overall sequences you may pass through in doing research, from problem identification to report writing. Be attentive and try to critically examine why each step is necessary.

A research process consists of a series of actions or steps necessary to effectively carry out research and the desired sequencing of these steps. In conducting a research you may need to decide on two basic issues. One is what you would like to study about or which problem do you like to deal with, and the other is how to go about to study the problem and come up with findings. The first step tell you about your research problem & the questions that you raised where as the second is what methods to follow in addressing the inquiry. To accomplish this you should go through other detailed activities which are parts of the research process. These steps are not as such mutually exclusive or one may overlap over the other. The sequence of these steps is not also absolute. They may not necessarily follow from each other in any specific order

since the researcher anticipates the subsequent stages while conducting the earlier one. Anyways a researcher may follow the following steps;

Dear students what do you think is the first step in conducting research?

1. **Problem identification**

The first step in initiating a social research is to perceive a problem. It is a researcher's perception or recognition of a problem that motivates research. A researcher should decide what he/she wants to find out about because; the direction of where the research is going is mainly determined by the research problem. The other aspects of the research process like the study design, the sampling strategy, the style of writing and others are influenced by the research problem. If a problem is clear and specific it would be simple to deal with.

2. **Formulating a research design**

The very crucial step in conducting a research is to determine the appropriate method to come up with reliable findings. The strength of what the researcher finds significantly depends on how it was found. Therefore, clear explanation has to be given on the closest appropriate method identified. At this stage a researcher decides on the study design, the method of data collection, the sampling strategy, the method of analysis and others. Ill-designed research would not enable to come up with reliable & valid findings (findings based on empirical data that are collected using appropriate methods and analyzed with scientific tools), which is the whole purpose of conducting a research. This shows that a researcher has to be over cautions in selecting his design.

3. **Developing instruments for data collection.**

At this stage a researcher develops what is called as 'a research tool' or 'a research instrument'. Any data collected for the purpose of a research is to be collected by using these research tools. These research tools mainly include questionnaires, interview schedules, interview guides,

observation forms and others. What kinds of instruments are more applicable depends on the type of design selected and based on the kind of data needed to address the research problem.

4. **Selecting sample.**

The first step in selecting sample is identifying the target population on which the study is to be conducted. This step also needs to consider as to what kind of sampling procedure enables to get representative amount of sample from the total population. Whether the amount of sample selected is representative of the whole population or not determines the reliability of the data collected. Therefore, the researcher still has to be very careful in selecting the sampling technique.

5. **Writing a proposal**

Before launching the actual practical task of collecting data a researcher need to put all the above stated activities in to a research plan called proposal. It gives a detailed explanation on the research problem and the methods that are designed to deal with it. Generally it is an operational plan based on which any professional verifies the validity of the methods used to address the problem. There may not be a universally agreed up on components of a research proposal since it differs from one institution to the other, across disciplines and even individual professional (advisors)

6. **Data Collection**

At this stage the research tools that were developed previously play vital role in collecting the necessary data. By making use of the instruments the researcher collects the data. The method of data collection had already been decided at the stage of research design.

7. **Data analysis**

After collecting data from the field a researcher has to process and analyze them in order to arrive at certain conclusions. The analysis may combine qualitative or quantitative or both types depending on the research problem & the method used to obtain data. The analysis could be done either manually or by using computer programs. Qualitative analysis may involve description of what has been observed in the field situation where as quantitative analysis uses various statistical methods from which the researches has to select the appropriate one.

8. **Writing the research report.**

Writing the report is the final step of conducting a research. This is the step at which a researcher communicates his findings to others. The organization of the report writing and the extent to

which it is clear determines whether other people understand what has been done in the whole process. Clarity & organization enables other people to comprehend & make use of the discovery and conclusions reached.

Dear, students all the steps that are discussed above will be further elaborated & discussed in the coming modules and the sections under them. For now be focused on the sequential steps of conducting a research and their vitality.

1.6. Selecting and Planning Research Project

1.6.1. **Defining the Research problem**

After having provided a broad introduction to the area under study, now focus on issues relating to its central theme, identifying some of the gaps in the existing body of knowledge. Identify some of the main unanswered questions. Here, some of the main research questions that you would like to answer through your study should also be raised, and a rationale (justification) for each should be provided. Knowledge gained from other studies and the literature about the issues you are proposing to investigate should be an integral part of this section. Specifically, this section should:

- Identify the issues that are the basis of your study
- Specify the various aspects of/ perspectives on these issues
- Identify the main gaps, if there is any in the existing body of knowledge
- Raise some of the main research questions that you want to answer through your study
- Identify what knowledge is available concerning your questions, specifying the difference of opinions in the literature regarding these questions if differences exist
- Develop a rationale for your study with particular reference to how your study will fill the identified gaps

A research problem is like the foundation of a building. The type and design of the building is dependent upon the foundation. If the foundation is well designed and strong you can expect the building to be also. The research problem serves as the foundation of a research study: If it is well formulated, you can expect a good study to follow.

? *What need to be considered in selecting a research problem?*

When selecting a research problem there are a number of considerations to keep in mind:

- **Interest**- interest should be the most important consideration in selecting a research problem.

- **Magnitude**- You should have sufficient knowledge about the research process to be able to visualize the work involved in completing the proposed study.
- **Measurement of concepts**- If you are using a concept in your study, make sure you are clear about its indicators and their measurement.
- **Level of expertise**-make sure you have an adequate level of expertise for the task you are proposing.
- **Relevance**- Select a topic that is of relevance to you as a professional.
- **Availability of data**-If your topic entails collection of information from secondary sources, before finalizing your topic, make sure that these data are available and in the format you want.
- **Ethical issues**-How ethical issues can affect the study population and how ethically examined at the problem formulation stage.

Research questions or research problems?

Some writers tend to focus on the research question as central. By contrast some writers tend to focus more on the 'problem behind the research', or on research problems, rather than on research questions. Thus, proposal writing includes the entire process of assessing the nature of the problem, developing solutions or programs to solve or contribute to solving the problem, and translating those into proposal format. This approach makes research questions central.

Thinking about research in terms of research questions is a more general approach, which can be used in naturalistic research (it studies the world 'as it is' with out manipulating the situation being studied), basic and applied research. A problem, as something requiring a solution, can always be phrased as questions. Likewise a question, as something requiring an answer, can always be phrased as a problem.

? *What is research question?*

The point about this section is to tell the reader what questions the research is trying to answer or what questions will initiate the inquiry in an unfolding study. This section is often what proposal readers turn to and concentrates on first, in order to get as clear picture as possible of the purpose of the research. It also applies that an emerging, unfolding type of study needs to indicate here what general questions will initiate the research, and how they might be refocused and refined as the study progress.

For example, if you are planning to conduct a research on 'factors associated with the incidence of youth suicide', you research questions would be:

- What is the relationship between family income and the incidence of youth suicide?
- What is the relationship between parental break-up and the incidence of youth suicide?

1.6.2. Selecting a Research Topic

Defining the problem is the first step and one of the most difficult in research undertaking. There is a tendency for the beginner in research to ask questions that are usually diffuse or vague. Each topic that is proposed for research has to be judged according to certain guidelines or criteria. There may be several ideas to choose from. Before deciding on a research topic, each proposed topic must be compared with all other options. The guidelines or criteria discussed on the following can help in this process:

Criteria for selecting a research topic:

• Relevance/Significance

• Avoidance of duplication

• Urgency of data needed (timeliness)

• Feasibility of study

• Applicability of results

• Interest to the researcher

• Ethical acceptability

1.6.3. Reviewing Literature

? *What is literature review?*

The literature review is an integral part of the entire research process and makes a valuable contribution to almost every operational step. It has value even before the first step; that is, when you are merely thinking about a research question that you may want to find answers to through your research journey. It is therefore part of the researcher's responsibility to deal with such questions as:

- What literature is relevant to the research?
- What is the relationship of the proposed study to its relevant literature?
- How will the proposed study deal with the literature? In particular, how will the argument in the proposal use the literature?

Reviewing literature helps you to:

- **Bring clarity and focus to your research problem**. The literature review can play an extremely important role in shaping your research problem because the process of

reviewing the literature helps you to understand the subject area better and thus helps you to conceptualize your research problem clearly and precisely.

- **Improve your methodology** – A literature review tells you if others have used procedures and methods similar to the ones that you are proposing, which procedures and methods have worked well for them, and what problems they have faced with them.
- **Broaden your knowledge base in your research area**. The most important function of the literature review is to ensure you read widely around the subject area in which you intend to conduct your research study. It also helps you to understand how the findings of your study fir into the existing body of knowledge.
- **Contextualize your findings.** Obtaining answers to your research questions is comparatively easy: the difficult part is examining how you're your findings fit into the existing body of knowledge. Placing your findings in the context of what is already known in your field of inquiry is important.

Procedure for reviewing the Literature

? ***What are the procedures for reviewing the literature?***

If you don't have a specific research problem, you should review the literature in your broad area of interest with the aim of gradually narrowing down to what you want to find out about. After that the literature review should be focused around your research problem. There are four steps involved around in conducting a literature review:

- **Search for existing literature in your area of study.**

To effectively search for literature in your field of inquiry, it is imperative that you have in mind at least some idea of the broad subject area and of the problem you wish to investigate, in order to set parameters for your search. The main sources for identifying literature are books and journals.

- **Review the literature selected**

Now that you have identified several books and articles as useful, the next step is to start reading them critically to pull together themes and issues that are associated. A good literature review is much more than a summary of relevant literature. While summarizing literature is important, your review should go beyond mere summarizing in two main respects. First, reviewing literature requires the building of an argument. This, in turn, requires a synthesis of the literature, not merely a summary of it. Second, your review is expected to be critical, especially with respect to research literature. This means routinely examining and critiquing the methods used in

reported research, with special reference to the generalizability (quantitative) or transferability (qualitative) of research findings. In general, in reviewing literature, be careful not to:

- Quote in excess-judgment- experience and the reactions of supervisor(s) about the amount of quoting are useful, but too many direct quotes, or direct quotes that are too long, raise doubts about your mastery of the literature.
- Rely too much on secondary sources-At this level of work, you are expected, where possible, to study primary sources. Secondary sources are acceptable where the primary source is not available or accessible or where the secondary source adds significantly to the discussion.
- Give into the temptation to include and report everything you know or have read. Your review needs to be selective, on an appropriate basis.

➢ **Develop a theoretical framework**

Examining the literature can be a never-ending task, but as you have limited time it is important to set parameters by reviewing the literature in relation to some main themes pertinent to your research topic. The information obtained from different books and journals now needs to be sorted under the main themes, theories, highlighting agreements and disagreements among the authors and identifying the unanswered questions or gaps. You will also realize that the literature deals with a number of aspects that have a direct or indirect bearing on your research topic. Use these aspects as a basis for developing your theoretical framework. Your review of the literature should sort out the information within this framework. Unless you review the literature in relation to this framework, you will not be able to develop a focus in your literature search; that is, your theoretical framework provides you with a guide as you read.

➢ **Develop a conceptual framework**

The conceptual framework stems from the theoretical framework and concentrates, usually, on one section of that theoretical framework which becomes the basis of your study. The latter consists of the theories or issues in which your study is embedded, whereas the former describes the aspects you selected from the theoretical framework to become the basis of your inquiry.

1.6.4. Hypotheses, Variables, concepts, indicators, and measurement

What is hypothesis?

A hypothesis is a statement of your assumptions about the prevalence of a phenomenon or about a relationship between two variables that you plan to test within the framework of the study.

Hypothesis brings clarity, specificity and focus to a research problem, but in social science, researchers rarely use hypothesis.

There are a number of considerations to keep in mind when constructing a hypothesis, as they are important for valid verification:

- A hypothesis should be simple, specific and conceptually clear. There is no place for ambiguity in the construction of a hypothesis, as ambiguity will make the verification of your hypothesis almost impossible. For example, in the hypothesis "The average age of the male students in this class is higher than that of female students", it tells you what you are attempting to compare (average age of this class), which population groups are compared (female and male), and what you want to establish (higher average age of the male students). Hence, the above hypothesis is clear, specific and easy to test.
- A hypothesis should be capable of verification. Methods and techniques must be available for data collection and analysis.
- A hypothesis should be related to the existing body of knowledge. It is important that your hypothesis emerges from the existing body of knowledge, and that it adds to it, as this is an important function of a research.
- A hypothesis should be operationalisable. This means that it can be expressed in terms that can be measured.

Identification of Variables

? *What is Variable?*

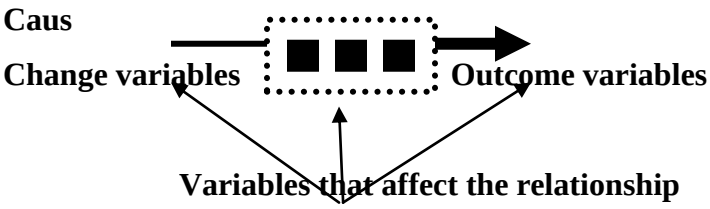
Variables refer to an image, perception, or concept that is capable of measurement, hence, capable of taking on different values. In other words, a concept that can be measured is called a variable.

? *What are types of variable?*

1. **Independent Variable**- the cause supposed to be responsible for bringing about change(s) in a phenomenon or situation.
2. **Dependent Variable**-the outcome of the change(s) brought about by introduction of an independent variable
3. **Extraneous Variable**-Several other factors operating in a real life situation may affect changes in the dependent variable
4. **Intervening Variable (confounding variable)** links the independent and dependent variables.

The following figure shows a causal relationship or association, of the four sets of variables

Figure 1 Types of variables in a causal relationship



For example, suppose you want to study the relationship between smoking and cancer. Studies have shown that there are many factors affecting this relationship, such as the number of cigarette or the amount of tobacco smoked every day; the duration of smoking; the age of the smoker; dietary habits; and the amount of exercise undertaken by the individual. All of these factors may affect the extent to which smoking might cause cancer. Thus, in the above example the extent of smoking is the independent variable, cancer is the dependent variable and all the variables that might affect this relationship, either positively or negatively, are extraneous variables.