

# BT 623: Research Methodology

## Lecture 2:



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## Lecture 2

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# Objectives of Research

The purpose of research is to discover answers to questions through the application of scientific procedures.

Though each research study has its own specific purpose, we may think of research objectives as falling into a number of following broad groupings:

1. To gain familiarity with a phenomenon or to achieve new insights into it (studies with this object in view are termed as exploratory or formulative research studies).
2. To portray accurately the characteristics of a particular individual, situation or a group (studies with this object in view are known as descriptive research studies).

3. To determine the frequency with which something occurs or with which it is associated with something else (studies with this object in view are known as diagnostic research studies).
4. To test a hypothesis of a causal relationship between variables (such studies are known as hypothesis-testing research studies).

## **Purpose of research**

The purpose of research is to discover answers to questions through the application of scientific procedures.

## **Aim of research**

The main aim of research is to find out the truth which is hidden and which has not been discovered as yet.

## **Aims and Objectives of Research**

Aim is what one hope to achieve.

Objectives are the action(s) one will take in order to achieve the aim.

**Aims are statements of intent.**

They are usually written in broad terms.

They set out what you hope to achieve at the end of the project.

**Objectives, are specific statements** that define measurable outcomes, e.g. what steps will be taken to achieve the desired outcome.

## **Aims and Objectives of Research Methodology**

- To gain familiarity with a phenomenon or to achieve new insights into it (exploratory or formulative research studies).
- To portray accurately the characteristics of a particular individual, situation or a group (descriptive research studies).



## **Aims and Objectives of Research Methodology (Contd)**

- To determine the frequency with which something occurs or with which it is associated with something else (diagnostic research studies);
- To test a hypothesis of a causal relationship between variables (hypothesis-testing research studies).

## **Research objectives helps to:**

- Define the focus of your study
- Clearly identify variables to be measured

## **Research objectives helps to (contd):**

- Indicate the various steps to be involved,
- Establish the limits of the study,
- Avoid collection of any data that is not strictly necessary.

Research objectives should be stated using action verbs that are specific enough to be measured, for example:

- to compare,
- to calculate,
- to assess,
- to determine,
- to verify,
- to calculate,
- to describe,
- to explain, etc.

The use of vague non-active verbs such as:  
to appreciate,  
to understand,  
to believe, to study, etc.,

should be avoided as it is difficult to evaluate whether  
they have been achieved .

## **S.M.A.R.T. Objectives:**

Research objectives should be **SMART**:

**Specific** – be precise about what you are going to do.

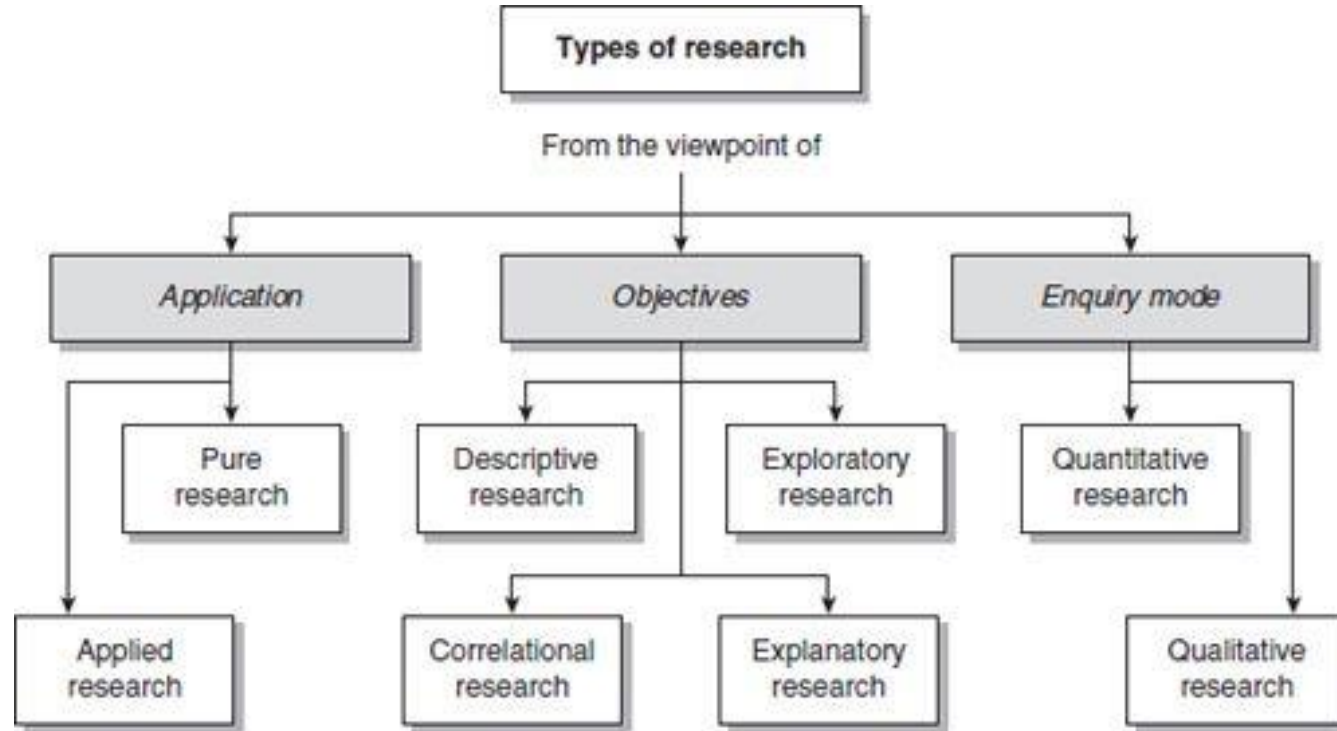
**Measureable** –you will know when you have reached your goal.

**Achievable** – Don't attempt too much – a less ambitious but completed objective is better than an over-ambitious one that you cannot possibly achieve.

## **S.M.A.R.T. Objectives:**

**Realistic** – do you have the necessary resources to achieve the objective – time, money, skills, etc.

**Time** constrained – determine when each stage needs to be completed. Is there time in your schedule to allow for unexpected delays.





**Research Methodology is the way to find answers to questions by a defined process:**

**Research process include collecting, analyzing and interpreting data to answer questions.**

**Research adheres strictly to the following three criteria:-**

- it is undertaken within a framework of a set of philosophies;**
- uses procedures, methods and techniques that have been tested for their validity and reliability;**
- is designed to be unbiased and objective.**

**Philosophical** orientation may stem from one of the several paradigms and approaches in research

- positivist, interpretive, phenomenology, action or participatory, feminist, qualitative, quantitative
- and the academic discipline in which a person is trained.

**'Validity'** ensures that in a research study correct procedures have been applied to find answers to a question.

**'Reliability'** refers to the quality of a measurement procedure that provides repeatability and accuracy.

### **‘Unbiased and objective’**

-Each step of a research procedure is performed in an unbiased manner and each conclusion is to the best of ones ability and without introducing his or her own vested interest.

## **Bias and subjectivity.**

**Subjectivity** is an integral part of your way of thinking that is 'conditioned' by your educational background, discipline, philosophy, experience and skills. For example, a psychologist may look at a piece of information differently from the way in which an anthropologist or a historian looks at it.

**Bias**, on the other hand, is a deliberate attempt to either conceal or highlight something.

## **Characteristics and requirements of a research process:**

To qualify as research, the process must as far as possible,

- be controlled,

- rigorous and systematic,

- valid and verifiable,

- empirical and critical.

In a study of cause-and-effect relationships it is important to be able to link the effect(s) with the cause(s) and vice versa.

In the study of causation, the establishment of this linkage is essential; however, in practice, particularly in the social sciences, it is extremely difficult – and often impossible – to make the link.

**Control** implies that, in exploring causality in relation to two variables, study is set up in a way that minimizes the effects of other factors affecting the relationship.

This can be achieved to a large extent in the physical sciences, as most of the research is done in a laboratory.



However, in the social sciences it is extremely difficult as research is carried out on issues relating to human beings living in society, where such controls are impossible.

Therefore, in the social sciences, as external factors cannot be controlled, the investigator attempt to quantify their impact.

**Rigorous** – Investigator must be scrupulous in ensuring that the procedures followed to find answers to questions are relevant, appropriate and justified. The degree of rigour varies markedly between the physical and the social sciences and within the social sciences.

**Systematic** –The procedures adopted to undertake an investigation follow a certain logical sequence. The different steps cannot be taken in a haphazard way. Some procedures must follow others.

**Valid and verifiable** – This conclusions on the basis of research findings should be correct and can be verified by others.

**Empirical** – This means that any conclusions drawn are based upon hard evidence gathered from information collected from real-life experiences or observations.

**Critical** – Critical scrutiny of the procedures used and the methods employed is crucial to a research enquiry. The process of investigation must be foolproof and free from any drawbacks. The process adopted and the procedures used must be able to withstand critical scrutiny.

Thankyou