

CHAPTER- III. TYPES OF RESEARCH

INTRODUCTION:

Research can be classified into many different ways on the basis of the methodology of research, the knowledge it creates, the user group and the research problem it investigates;

A. Pure Research:

Pure research is defined as a type of scientific research, mainly aimed to improve scientific theories for improved understanding or prediction of natural or other phenomena for the benefit of human being. It is also called as basic research or fundamental research.

Example: Understanding the *tridosha* or *panchamahabhoota siddhanta*.

Characteristics:

1. The main motivation here is to expand man's knowledge, not to create or invent something.
2. This research is conducted largely for the enhancement of knowledge and which does not have immediate commercial potential. Such a research is time and cost intensive. Example: An experimental research that may not be or will be helpful in the human progress.

B. Applied Research:

Applied research is defined as a type of research, which uses scientific theories to develop technology or techniques to intervene and alter natural or other phenomena.

Characteristics:

1. Applied research is designed to solve practical problems of the modern world, rather than acquire knowledge for knowledge's sake.
2. The goal of applied research is to improve the human condition.
3. It focuses on analysis and solving social and real life problems.

4. This research is generally conducted on a large scale basis and is expensive. As such, it is often conducted with the support of some financing agency like the National government, Public corporation, World Bank, UNICEF, UGC, Etc.
5. *Applied research is an investigation for ways of using scientific knowledge to solve practical problems. For example: Treat or cure a specific disease, and suggests new line of treatment for the problem.*

Applied research can be further classified as;

- a. Problem oriented research.
 - b. Problem solving research.
- a. **Problem oriented research:** This type of research is done by industry apex body or organization for sorting out problems faced by all the companies or organizations.

Importance:

- i. Problem identifying researches are undertaken to know the exact nature of problem that is required to be solved.
- ii. Here, when we use the term 'Problem', it is not a problem in true sense. It is usually a decision making dilemma or it is a need to tackle a particular business situation.
- iii. It could be a difficulty or an opportunity.

Example: Failure in results of treatment may be assessed by means of any one of the following:

- Not so thoroughly examined the patient or medicine.
 - Poor quality of the product.
 - Lack of continuous follow up and availability of medicine.
 - High price of medicine and line of treatment.
- b. **Problem solving research:** This type of research is done by an individual company or organization or institute for the problem faced by it. In short, the main aim of problem solving research is to discover some solution for some urgent practical problem.

Difference between Pure and Applied research:

S.N.	Pure research	Applied research
1.	Basic research develops and establishes <i>information</i> to predict phenomena and perhaps to understand nature.	Applied science uses portions of <i>basic science</i> to develop <i>interventions</i> via technology or technique to alter events or outcomes.
2.	Basic research played a key role in the development of the innovations.	Applied research plays a key role in developing the practical aspects of theories.
3.	Basic research generates new ideas, principles, and theories, which may not be immediately utilized but however form the basis of progress and development in different fields.	Applied research generates the information or results may be used for immediate benefits.
4.	Basic research rarely helps practitioners directly with their everyday concerns.	Applied research directly helps practitioner.

C. Quantitative Research:

Quantitative research is defined as a type of scientific research, which mainly based upon the numbers that are used for measurement of the facts or characters.

Examples:

Height in centimeters, inches, feet etc, weight in grams, kilogram, pulse rate in number /min. Blood pressure in mmHg and Temperature in °f or °c etc.

Characteristic features:

1. Quantitative research aims to measure the quantity or amount and compares it with past records and tries to project for future period.
2. The objective of quantitative research is to develop and employ mathematical models, theories or hypothesis pertaining to phenomena.
3. It provides fundamental connection between empirical observation and mathematical expression of quantitative relationships.

D. Qualitative Research:

Qualitative research is defined as type of scientific research in which it deals with the non-quantifiable data or variables or information or quality or kind of information collected from the subjects or people.

Example: Intensity of pain is expressed in terms of quality such as mild, moderate, severe, etc.

Characteristics features:

1. It presents non-quantitative type of analysis.
2. Qualitative research is collecting, analyzing and interpreting data by observing what people do and say.
3. Qualitative research refers to the meanings, definitions, characteristics, symbols, and description of things.
4. Qualitative research is much more subjective and uses very different methods of collecting information, mainly individual, in-depth interviews and focus groups.

Qualitative research can be further classified into the following type.

- i. **Phenomenology:** A form of research, in which the researcher attempts to understand how one or more individuals experience a phenomenon. Eg: We might interview 20 victims of Bhopal tragedy.
- ii. **Ethnography:** This type of research focuses on describing the culture of a group of people and its effect on health is called as Ethnography. Here culture is the shared attributes, values, norms, practices and language of a group of people. For example: The researcher might decide to go and live with the tribal in Andaman island and study the culture and the educational practices.
- iii. **Case study:** It is a form of qualitative research that focuses on providing a detailed account of one or more cases. For example: Detail examination of the patient to evaluate the *cause of disease, fix dosage, duration and line of treatment.*
- iv. **Historical research:** It allows one to discuss past and present

events in the context of the present condition and allows one to reflect possible answers to current issues and problems.

For example: Past history of present illness, family history of present illness.

Sl. No.	Quantitative Research	Qualitative Research:
1.	Quantitative research is based on the measurement of quantity or amount.	Qualitative research is concerned with qualitative phenomenon, i.e., phenomena relating to or involving quality.
2.	It is applicable to phenomena that can be expressed in terms of quantity.	This type of research aims at discovering the underlying motives and desires, using in depth interviews for the purpose.