LESSON 1- THE MEANING OF RESEARCH

"If we knew what we were doing, it wouldn't be called research, would it?"

Albert Einstein

MEANING OF RESEARCH

- Research in common words refers to ***a search for knowledge.***
- Some people consider research as a movement, *a movement from the known to the unknown*. It is actually a journey of discovery.
- Research is an academic activity and as such the term should be used in a technical sense.
- According to Clifford Woody research is made up of the following activities:

1. Defining and redefining problems,
2. Formulating hypothesis or suggested solutions;
3. Collecting, organising and evaluating data;
4. Making interpretations and reaching conclusions; and at last,
5. Carefully testing the conclusions to determine whether they fit the formulated hypothesis.

- Research is, thus, ***an original contribution to the existing stock of knowledge*** making for its advancement.
- It is the pursuit of truth with the help of study, observation, comparison and experiment.
- As such the term **'research'** refers to the **systematic method** of :

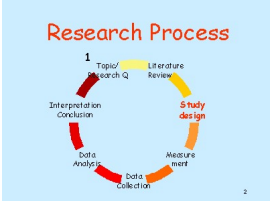
1. Defining and redefining problems,
2. Formulating hypothesis or suggested solutions;
3. Collecting, organising and evaluating data;
4. Making interpretations and reaching conclusions; and at last,
5. Carefully testing the conclusions to determine whether they fit the formulated hypothesis.

Purposes/Objectives of Research

- The main aim of research is to find out the truth which is hidden and which has not been discovered as yet.
- Although ***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 about a topic**/subject or to achieve new insights into it.
2. To **portray accurately the characteristics** of a particular individual, situation or a group.
3. To **determine the frequency with which something occurs** or with which it is associated with something else.
4. To test a hypothesis of a *causal* relationship between variables.

The RESEARCH CYCLE-i.e. 'Six' Phases of Research



N/B: If the activity you are undertaking is not made up of all the 6 phases mentioned here, then IT IS NOT considered as Research; it is only an aspect of research!

1. Problem definition
2. Literature review.
3. Selection of research design, subjects, and data collection techniques.
4. Data gathering.
5. Data processing and analysis.
6. Implications, Conclusions, and Recommendations.

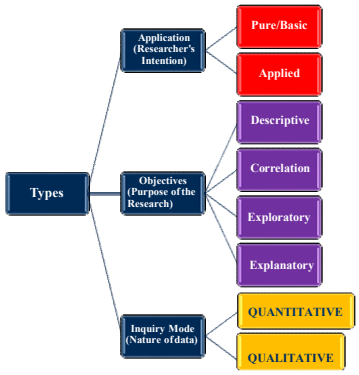
Characteristics of Research

1. **Empirical** – based on the observation and experiences of the researcher.
2. **Logical** - based on valid procedures and principles.
3. **Cyclical** - It starts with a problem and ends with a problem. Directed towards the solution of a problem.
4. **Analytical** - research utilizes proven procedures in gathering data, whether historical, descriptive, experimental, and case study.

Characteristics of Research

5. **Replicability** - research design and procedures are repeated to enable the researcher to arrive at valid and conclusive results.
6. **Critical** - Research exhibits careful and precise judgment.
7. **Methodical** – research is conducted in a methodical manner without bias using systematic method and procedures.

TYPES OF RESEARCH



Classification by Application

1. **BASIC RESEARCH / PURE RESEARCH** - a scientific investigation that involves the pursuit of *"Knowledge for knowledge's sake."*

- **PURPOSE:** to generate and refine theory and build constructs thus, the findings may not be directly useful in practice.

Example: How did medieval communities choose their leaders?

Classification by Application…cont

2. **APPLIED RESEARCH / PRACTICAL RESEARCH** - seeking new applications of scientific knowledge to the situation of a problem.

- PURPOSE:
  - to solve a problem.
  - to make a decision.
  - to develop a new program, product, method or procedure.

Example: What is the most efficient and effective vaccine against COVID-19?

Classification by Objectives

1. **Descriptive**- Attempts to systematically describe a situation, problem or phenomenon.
2. **Correlational** – attempts to discover or establish the existence of a **relationship/association/inter-dependence** between two or more variables e.g. what is the relationship between **technology** and **unemployment**.
3. **Explanatory** – Attempts to clarify why and how there's a relationship between two aspects in a situation
4. **Exploratory** – Used where the researcher has little information concerning an area or to investigate the possibilities of undertaking a particular study (*feasibility*)

Classification by Inquiry Mode

Quantitative research

- Quantitative research is based on the **measurement** of **quantity** or amount. It is applicable to occurrences that can be expressed in terms of quantity. *e.g. ICT research dealing with estimation of the **number** of internet users*

Qualitative research

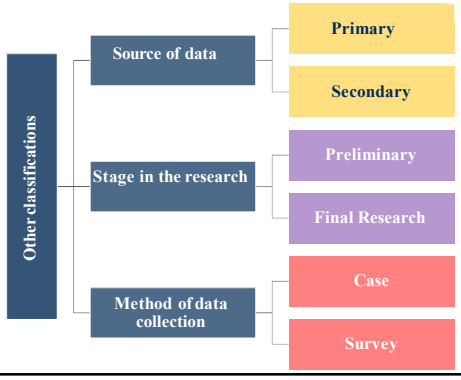
- Qualitative research, on the other hand, is concerned with qualitative things, i.e., phenomena relating to or involving quality or kind.
- For instance, when we are interested in investigating the reasons for human behaviour (i.e., *why people think or do certain things*),we quite often talk of 'Motivation Research', an important type of qualitative research.
- Qualitative research ***aims at discovering the underlying motives and desires***, using in depth interviews for the purpose.

- **OPERATIONAL RESEARCH** - aims to discuss and study a recurring problem in an organization which may involve a study of concretization of the organization's mission, vision, philosophy and goals.
- **ACTION RESEARCH** - undertaken to address a recurring problem in an organization immediately, usually a part of a major problem is addressed in this type of research.

Other Categories Of Research

1. **ACCORDING TO TIME ELEMENT:**
   - ***HISTORICAL*** research means ***"what was"***
   - **DESCRIPTIVE** research refers to ***"what is"***
   - **EXPERIMENTAL** research describes as ***"what will"*** when certain variables are carefully controlled and manipulated.

Other Classifications



2. BY SOURCE OF DATA

- **Primary research** is one that ***involves the gathering of fresh data***, i.e. when data about a particular subject is collected for the first time, then the research is known as primary one.
- **Secondary research** is a research method which ***involves the use of data, already collected*** through primary research.

- ***The main difference*** between primary and secondary research lies in the fact whether the data has been freshly collected or not.

Advantages of Primary Research

1) **Targeted Issues are addressed.** The organization asking for the research has the complete control on the process and the research is streamlined as far as its objectives and scope is concerned. The researcher can be asked to concentrate their efforts to find data regarding specific market rather than concentration on mass market.
2) **Data interpretation is better.** The collected data can be examined and interpreted by the researchers depending on their needs rather than relying on the interpretation made by collectors of secondary data.
3) **Data is Recent:** Usually secondary data is not so recent and it may not be specific to the place or situation the researcher is targeting. The researcher can use the irrelevant seeming information for knowing trends or may be able to find some relation with the current scenario. Thus primary data becomes a more accurate tool since we can use data which is useful for us.
4) **Proprietary Issues**. Collector of primary data is the owner of that information and he need not share it with other companies and competitors. This gives an edge over competitors replying on secondary data.

Disadvantages of Primary Research

1) **High Cost.** Collecting data using primary research is a costly proposition as the researcher has to be involved throughout and has to design everything.
2) **Time Consuming.** Because of the tiring nature of the exercise, the time required to do research accurately is very long as compared to secondary data, which can be collected in much lesser time duration.
3) **Inaccurate Feedback:** In case the research involves taking feedback from the targeted audience, there are high chances that the feedback given is not correct. Feedback by their basic nature is usually biased or given just for the sake of it.
4) **More resources are required:** Leaving aside cost and time, other resources like human resources and materials too are needed in larger quantity to do surveys and data collection.

Secondary Research: Advantages and Disadvantages

Advantages	Limitations
• Cost effective – the research needed might have been done already • Accessible – wide range of sources available so a range of material can be gathered • Not necessary to employ an agency – sources can be searched by non-researchers • Information gathered might indicate a range of possibilities not considered previously	• Needs some expertise to ensure that appropriate sources are consulted • Need to be aware of possible bias (e.g. who commissioned the research?) • Need to be aware of scope of research – how representative, reliable and valid is the information? • The data may be out of date • Some sources may be time consuming or difficult to track down • May be difficult to make an accurate synthesis of all the data • Will not give the depth, breadth and insight that primary research would. • If recommending social media as a secondary source need to ensure ethical practice when using such information

3. BY STAGE OF RESEARCH

- **Preliminary research(pilot study)**-is done to generate information to be used in another study.
- **Final stage research**-prepared on the basis of an information generated from a preliminary study

4. BY DATA COLLECTION METHOD

- **Case study**-***data is collected from mainly one study unit only*** e.g. a study in which a students in a particular class are asked questions to find out their family background where the researcher wants to gather in-depth knowledge
- **Survey**-occurs when ***data is collected from many/several study units*** (can be a census survey or sample survey)

The Seven 'P values' ofResearch to Man

P Values	Type of use	Definition
Perceptual value	Conceptual use	The importance of research to change the perception, conceptualization, and knowledge of people about the world.
Political value	Strategic use	The worthiness of research for policy making. The level of acceptability of the findings is an important determinant of this value.
Practical value	Instrumental use	The significance of research for practice. Practice may be what individuals do (behaviour), or how they do things (procedure).
Proforma value	Symbolic use	The tactical use of research to support pre-determined positions, decisions, and actions.

P Values	Type of use	Definition
Proficiency value	Educational use	The usefulness of research to improve analytical (research) skills of individuals.
Placement value	Economical use	The importance of research to create job opportunities and income for 'educated' people.
Prestige value	Discriminatory use	The use of research experience to create disparity in the 'status' and 'reputation' among individuals.