

RESEARCH VS. INQUIRY

- WHAT IS **RESEARCH**?

- is a **scientific, experimental, or inductive manner of thinking**. Starting from **particular to complex ideas**, you execute varied thinking acts that range from lower-order to higher-order thinking strategies reflected by these research activities: identifying the **topic or problem, gathering data, making theories, formulating hypotheses, analyzing data, and drawing conclusions**.

- WHAT IS **INQUIRY**?

- a term that is synonymous with the word 'investigation,' is the answer to this question. When you inquire or investigate, you tend to ask questions to probe or examine something.

- **QUANTITATIVE RESEARCH**

- Quantitative research makes you focus your mind on specific things by means of statistics that involve collection and study of numerical number data.

- **WHY DO PEOPLE CONDUCT RESEARCH?**

1. **Knowledge production.**
2. **To find solutions to a problem.**
3. **Research precedes progress**
4. **Make the world better**

- **Importance of Quantitative Research and its Benefits to Different Fields of Specialization**

- The production of research results greatly has big impact on the importance of quantitative research. It is also a reflection of the specified

specialization. The precise measurement and an in-depth analysis of data will also give effectiveness of the product.

- **CHARACTERISTICS OF QUANTITATIVE RESEARCH**

1. **It is objective NOT subjective-**

Precision and accuracy of measurement and analysis is the target of the concepts. Furthermore, Intuitions and guesses is not practice or used in developing conclusions or solution to a problem.

2. **Research questions are clearly define -**

Familiarity of the topic of the research have to be more focus so that it will be clear to the readers and researcher have to be advance in what he is looking for. Research questions have to be precise and clear for which objective answers are sought.

3. **Research instrument is clearly structured-**

The instrument of well-organized and plan, and with different dimensions and scales. It is a structured research tools like questionnaires or checklist.

4. **Numerical presentations of data-**

Data are organized and presented in the form of tables, charts graphs and figures that consolidate large number of data to show trends, relationships, or differences among variables.

5. **Large Sample Size-**

The greater the sample sizes the more reliable data analysis. This is to avoid biases in interpreting the results. It also requires normal population distribution can be used as respondents of research.

6. Replicated but not duplicated-

Reliable quantitative studies can be replicated or repeated but not duplicated to verify or confirm the correctness of the results in another setting. Validity of the findings may be eliminating the possibility of spurious conclusions.

7. Data can be used to predict future outcomes or forecast-

Through complex mathematical calculations and with the aid of computers and formulated formulas scenarios can be predicting future results.

8. Data can be used to verify existing facts and develop new concepts- A research can validate an existing fact. In some cases, research can be used to develop new ideas needed to make life more comfortable.

• STRENGTHS OF QUANTITATIVE RESEARCH

- 1. Since it is objective and provides numerical data**, it can't be easily misinterpreted.
- Statistical techniques was used to facilitate sophisticated analyses and allows you to comprehend a huge amount of vital characteristics of data.
- 3. The data in quantitative research can be analyzed in a quick and easy way.** With the use of statistically valid random models, findings can be generalized to the population about which information is necessary.
- 4. Replicable.** This research can be replicated but with different areas of concern and location. Dimensions can be also an additive factor to improve the previous research.

5. By using questionnaire, checklist, tests, or standardized instrument the data can be gathered in a quick and easy way.

• Weaknesses OF QUANTITATIVE RESEARCH

- It **requires a large number of respondents.** The larger sample size, the more or better the statistical findings are.
 - It is **costly.** Due to every large sample, the expenses will be greater in reaching out to these people and in reproducing the questionnaires.
 - 3. Elaboration on contextual is not factors that can help the results or to explain variations.** In quantitative research there is no need elaborate or have sharing of thoughts for further information. It is a straight forward answer unlike in qualitative.
 - If the made questionnaire was not done seriously and correctly the data will be invalid and inaccurate.
 - Researchers must be watchful on respondents who are just guessing in answering the research instrument as some of them may not reveal the real response due to ethical issues.
 - Research instruments preparation and validation may take time if no standardized tools are available.
- #### **• Types Of Quantitative Research**
- 1. Non experimental**
 - Descriptive
 - Correlational
 - Positive correlation

- Negative correlation
- No correlation

2. Experimental

- True-Experimental
- Quasi-Experimental

- **The Nature of Variables**

- **VARIABLES**

- A variable is the **heart or central concept** in research.

- It is primarily measurable characteristic that **changes in value**.

- It may be different from characteristic to another characteristic, one group to another group, one person to another person or even with the same person over time.

- A variable can be anything that may assume different numerical or categorical values.

- **INDEPENDENT VARIABLE**

- The **independent variable is the cause** or the factor that influences the outcome.

- are those that **cause** changes in the subject.

- **DEPENDENT VARIABLE**

- A **Dependent Variable (DV)** is the variable that is **measured or observed** in a study. It changes because of the independent variable.

- are those that bear or manifest the **effects** caused by the independent variables.

MEASUREMENT SCALES

- RATIO VARIABLES
- INTERVAL VARIABLES
- ORDINAL VARIABLES
- NOMINAL VARIABLES