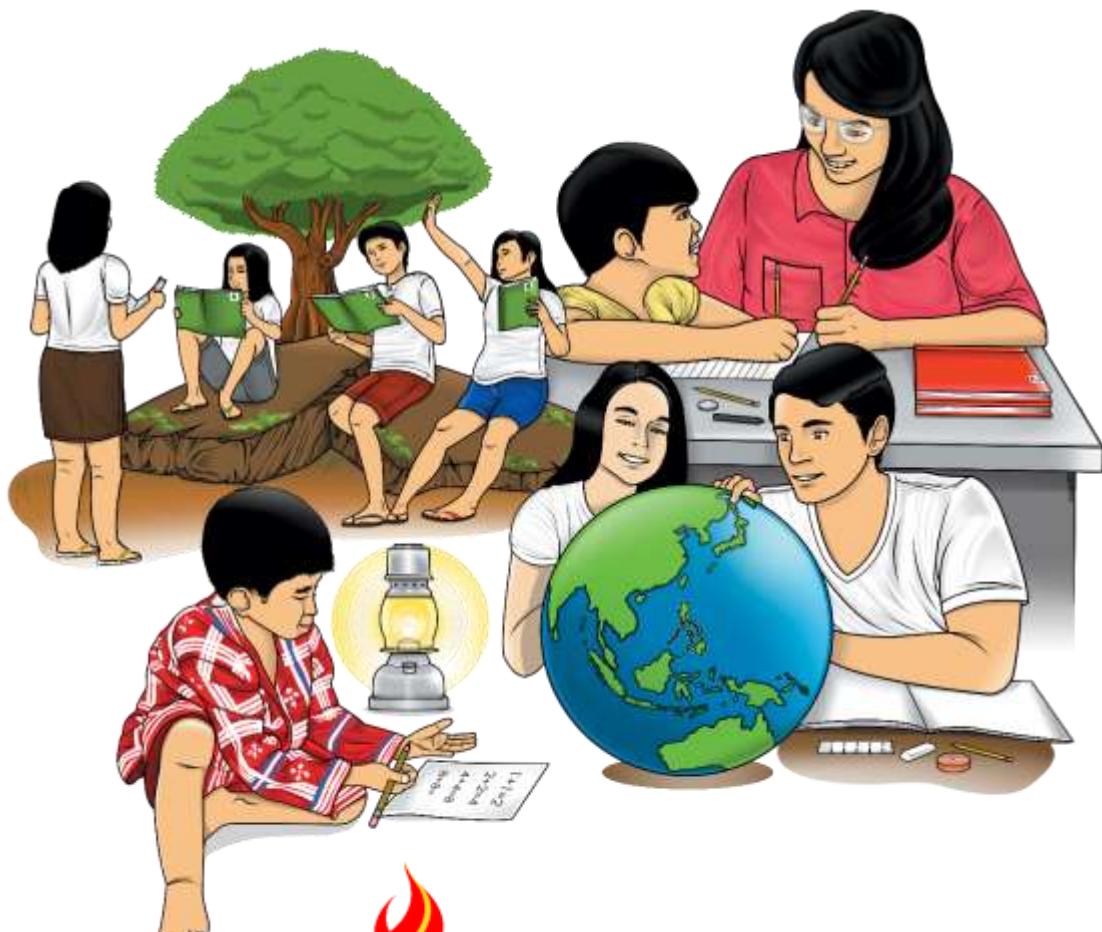


Inquiries, Investigation and Immersion

Quarter 1 – Module 4: Understanding Ways to Collect Data



Inquiries, Investigation and Immersion
Alternative Delivery Mode
Quarter 1 – Module 4: Understanding Ways to Collect Data
Second Edition, 2021

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Development Team of the Module

| | | |
|-------------------------|----------------------------------------------------------------------|-----------------------------|
| Writers: | Marjorie B. Yosores | Emily A. Tabamo |
| | Rudilyn F. Zambrano | Cheryll M. Sabaldana |
| | Jungie G. Palma | Cathrine B. Pielago |
| | Christy C. Gabule-Dablo, DScN | |
| | Maria Conception Sione E. Alpore | |
| Evaluators: | Maria Cecilia N. Gabas | |
| | Annarose J. Catian | |
| Illustrator: | Jungie Palma | |
| Layout: | Princess C. Tingcang | |
| Management Team: | Dr. Arturo B. Bayocot, CESO III , Regional Director | |
| | Dr. Victor G. De Gracia Jr., CESO V , Asst. Regional Director | |
| | Mala Apra B. Magnaong , CES, CLMD | |
| | Bienvenido U. Tagolimot, Jr., PhD. , Regional ADM Coordinator | |
| | Marie Emerald A. Cabigas, PhD , EPS, LRMS | |
| | Elson C. Jamero , EPS-Designate-TLE | |
| | Erlinda G. Dael, PhD. , CESE, CID Chief | |
| | Celieto B. Magsayo , Div. LR Supervisor | |
| | Andrian S. Tecson , Div. ADM Coordinator | |

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Office Address: Zone 1, Upper Balulang, Cagayan de Oro City 9000

Telefax: (088) 880-7071, (088) 880-7072

E-mail Address: region10@deped.gov.ph

Inquiries, Investigation and Immersion

Quarter 1 – Module 4: Understanding Ways to Collect Data

Introductory Message

The purpose of this module is to guide the teacher as to what to do in dealing the students. This is an interactive way to test and evaluate the students' learning process. The writer simplifies the instruction of every activity to be understood well. The importance of the module is to explore the literacy of the students. Motivating the students to use module is a great help to adapt the education for all programs.

To our dearest students let yourself be free in exploring the module made for your literacy and learning process. This module is designed to test your skills in understanding and comprehending the different activities. This module involves logical flow of ideas to spread essential context regarding the learning process. The purpose refines completely new approach in selecting topic which inclined the interests of the learners. Additional insights might investigate the implications in identifying new problems and re-conceptualize.

1. What I Need to Do – the part used to introduce the learning objectives in this module.
2. What I Know – this is an assessment as to your level of knowledge to the subject matter at hand, meant specifically to gauge previous knowledge.
3. What's In – the part used to connect your previous learning with the new lesson.
4. What's New – the part used to introduce new lesson through a story, an activity, a poem, song, situation or activity.
5. What is It – the part that will help you discover and understand the lesson.
6. What's More – the part that will help enrich your learnings of the lesson.
7. What I Have Learned – the part that will help you process what you have learned in the lesson.
8. What I Can Do – the part that allows you to apply what you have learned into real life situations.
9. Assessment – the part that evaluates your level of mastery in achieving the learning objectives.
10. Additional Activities – the part that enhances your learning and improves your mastery of the lesson.



What I Need to Know

The 3 I's: Inquiries, Investigations, and Immersion module is a way of realizations that come along their life such as the different issues which surround them. This query is the act of understanding ways to collect data using explicit processes or techniques used to recognize, choose, process and analyze data about an issue.

What you are expected to learn?

After going completed this module, you are able to describe adequately research design (either quantitative or qualitative), data gathering instrument, sample, data collection and analysis procedures, prepares data gathering instrument.

How to learn this module?

- Take your time reading the lessons carefully.
- Follow the directions and/or instructions in the activities and exercise diligently.
- Answer all the given tests and exercises.
- Familiarize yourself with the following terms.
- Understand and follow the instructions carefully.
- Accomplish the pre-test to identify your preparedness about the lessons in this module.
- Refer your answers to the given answer key.
- Read each lesson and do activities provided for you.
- Demonstrate the activities to guide you in comprehending the lessons.
- Take the self-test after each lesson to assess your understanding of the topics.
- Answer the post-test to measure how much you have gained from the topics.



What I Know

As an initial activity, you will be assessed on your prior knowledge about finding the answers to the research questions. This is to find out what are the things you need to learn more about the subject matter.

Multiple Choice. Write the letter of the best answer on a separate sheet of paper.

1. A plan on how the study will be conducted.
 - a. Research Plan
 - b. Descriptive Design
 - c. Experimental Design
 - d. Research Design
 2. Which design of research would evaluate effects, look into the cause and effect, and relationship or difference between or among factors?
 - a. Research Plan
 - b. Descriptive Design
 - c. Experimental Design
 - d. Research Design
 3. Gathers information about the present existing conditions, that finds the answer to questions who, what, when, where, and how.
 - a. Research Plan
 - b. Descriptive Design
 - c. Experimental Design
 - d. Research Design
 4. _____ research tests for the relationships of variables
 - a. One-shot case
 - b. Correlational
 - c. Causal-comparative
 - d. Survey
 5. A study that seeks to uncover a cause-and-effect relationship.
 - a. Causal-comparative
 - b. Time series
 - c. Survey
 - d. Correlational
 6. In data gathering on qualitative search for life, it _____.
 - a. Abounds with words, and visuals
 - b. Talks about statistics
 - c. Query on numbers and calculations
 - d. None
 7. Which one is the study on how people understand their experiences meaningful?
 - a. Case Study
 - b. Phenomenology
 - c. Ethnomethodology
 - d. Historical analysis
 8. An analysis of how successfully a project can be completed, accounting for factors such as economic, technological, legal, and scheduling factors.
 - a. Feasibility Study
 - b. Case Study
 - c. Content Analysis
 - d. Problem-Solving

9. A process or record of research in which detailed consideration is given to the development of a particular person, group, or situation over a while.
- a. Feasibility Study
 - b. Case Study
 - c. Content Analysis
 - d. Problem-Solving
10. Homogenous strata, ensure representative proportions, wherein the researcher includes the specified number of samples like 5 samples only.
- a. Convenience Sampling
 - b. Quota Sampling
 - c. Purposive Sampling
 - d. Snowball Sampling
11. Sampling method that is handpicked by the researcher based on qualities for purposes of study.
- a. Convenience Sampling
 - b. Quota Sampling
 - c. Purposive Sampling
 - d. Snowball Sampling
12. The questionnaire is to the data-collection instrument; observation is to data-collection _____.
- a. Method
 - b. Process
 - c. Analysis
 - d. Results
13. A self-directing instrument structured with questions and indicators.
- a. Questionnaire
 - b. Interview
 - c. Observation
 - d. Instrument
14. A conversation where questions are asked and answers are given.
- a. Questionnaire
 - b. Interview
 - c. Observation
 - d. Instrument
15. The process of observing something or someone to gain information.
- a. Questionnaire
 - b. Interview
 - c. Observation
 - d. Instrument

Lesson 1

Research Design



What's In

Vocabulary List

Research Design

- describes whether your study is qualitative or quantitative.

Qualitative Research

- makes use of first person/textual/discursive in nature.

Quantitative Research

- makes use of third person - past tense/researcher is not the one who determines the variables, but it is the subject itself.



What's New

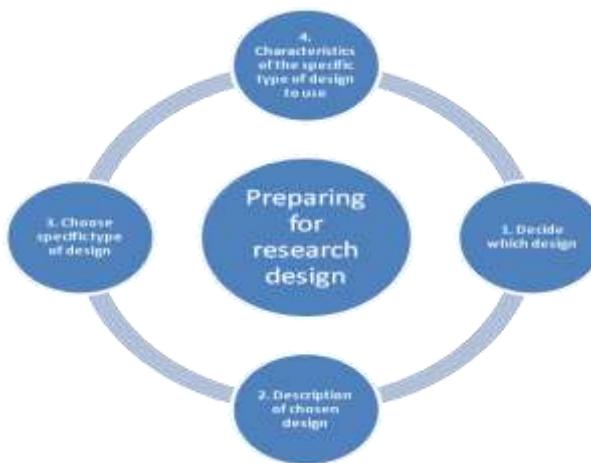
Based in your own understanding, what is the difference between qualitative and quantitative research? Write your answer in a separate sheet.



What is It

Research Design

The research design states to the whole approach that you decide on to add the different components of the study coherently and logically, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data. Note that your research problem determines the type of design you should use.



a. **Qualitative Research:** A systematic subjective approach used to describe life experiences and give them meaning. To gain insight; explore the depth, richness, and complexity inherent in the phenomenon.

Ethnography - you immerse yourself in the target participants' environment to understand the goals, cultures, challenges, motivations, and themes that emerge.

Narrative - weaves together a sequence of events, usually from just one or two individuals to form a cohesive story.

Phenomenological - is an appropriate qualitative method when you want to describe an event, activity, or phenomenon.

Case Study - a way of explaining an organization, entity, company, or event which involves a deep understanding through multiple types of data sources.

b. **Quantitative Research:** An objective, systematic empirical investigation of observable phenomena through the use of computational techniques. It highlights numerical analysis of data hoping that the numbers yield unbiased results that can be generalized to some larger population and explain a particular observation.

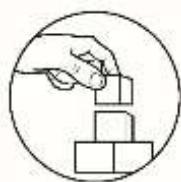
Survey Research - uses interviews, questionnaires, and sampling polls to get a sense of behavior with intense precision.

Correlational Research - tests for the relationships between two variables.

Causal-comparative - research looks to uncover a cause-and-effect relationship. This research is not conducted between the two groups on each other.

Experimental Research - is guided specifically by a hypothesis.

To come up with the chosen design whether quantitative or qualitative research, think of which best suits the given title or topic to explore the collective ideas and picture out to reveal better understanding.



What's More

Reflect your chosen research title or problem, then decide for the appropriate research design.

Research Title/Problem: _____

Research Design: _____

Lesson 2

Population and Sampling Procedure



What's In

In the previous lesson, you've learned about the research design such as qualitative and quantitative researches. You also learned about the different kinds of qualitative and quantitative research methods that entail identification of population and sampling techniques.

In this lesson, it specifically aims to describe the population of the study and determine sampling procedure.

Vocabulary List

Population

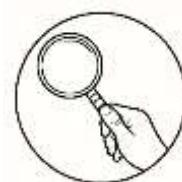
-refers to a total number of people who serve as subjects or respondents of the study.

Sampling Procedure

-method in identifying part of the respondents of the study.

Statistics

-a branch of mathematics that deals with the analysis and interpretation of numerical data in terms of samples and populations.



What Is It

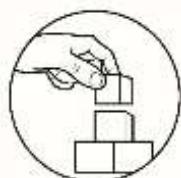
Population

Persons who have been invited to participate in a particular study and have taken part in the study.

Sampling Procedure

Sampling Methods:

- a. Random Sampling is a technique that uses randomization to make sure that every element of the population gets an equal chance to be part of the selected sample.
- b. Stratified Sampling is a technique that divides the elements of the population into small subgroups (strata) based on the similarity in such a way that the elements within the group are homogeneous and heterogeneous among the other subgroups formed.
- c. Convenience Sampling where the samples are selected based on availability.
- d. Purposive Sampling is based on the intention or the purpose of the study.
- e. Quota Sampling, this type of sampling depends on some pre-set standard. It selects the representative sample from the population.
- f. Referral/Snowball Sampling is used in situations where the population is completely unknown and rare.



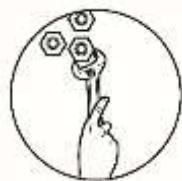
What's More

Directions: Based on the topic that you've chosen, identify the population of your study and decide on the sample procedure/sand sample of your study. Write your answers in a separate sheet.



What I Have Learned

Based on the lesson, I have realized that _____



What I Can Do

Directions: Fill in the blanks and write your answer in a separate sheet.

- 1) Research _____ is a systematic way of collecting data.
- 2) Research _____ refers to the place where you are going to conduct your study.
- 3) Respondents are the _____ involved in the study.
- 4) Sampling is part of the _____.
- 5) _____ procedure is how you are going to gather your data.



Assessment

Multiple Choice. In a separate sheet of paper write the letter of the best answer.

1. Which one is known as the process of gathering and measuring information on variables of interest?
a. Data Collection Procedure c. Sampling Procedure
b. Research Setting d. Research Design
2. Understanding ways to collect data is known as _____.
a. Research Design c. The Problem
b. Review of Related Literature d. Research Methodology
3. Which type of quantitative research that guided specifically by a hypothesis?
a. Correlational c. Experimental
b. Narrative d. Causal-comparative
4. The following are quantitative designs of research, EXCEPT:
a. Correlational c. Experimental
b. Narrative d. Causal-comparative
5. A type of research that uses interviews, questionnaires, and sampling polls to get a sense of behavior with intense precision.
a. Experimental c. Survey
b. Time-series design d. Ethnography
6. A self-directing instrument structured with questions and indicators.
a. Questionnaire c. Observation
b. Interview d. Instrument
7. The genetic term that researchers use for a measurement device.
a. Questionnaire c. Observation
b. Interview d. Instrument
8. Which one is a research technique used to make replicable and valid inferences by interpreting and coding textual material?
a. Feasibility study c. Content analysis
b. Case study d. Problem-solving
9. Constructive research that solves practical problems while producing an academically appreciated theoretical contribution.
a. Feasibility study c. Content analysis
b. Case study d. Problem-solving
10. A study that determines whether or not two variables are correlated.
a. Descriptive Normative Study
b. Comparative Studies
c. Methodological Study
d. Correlational Study
11. In data gathering on the qualitative search for life, it _____.
a. Abounds with words, and visuals
b. Talks about statistics
c. Query on numbers and calculations
d. None

12. Which one is the study on how people understand their experiences meaningful?
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Answer Key

| What I Know | |
|--------------------|-------------------|
| | Assessment |
| 1. A | 1. D |
| 2. D | 2. C |
| 3. C | 3. B |
| 4. B | 4. B |
| 5. C | 5. A |
| 6. A | 6. A |
| 7. D | 7. B |
| 8. C | 8. A |
| 9. B | 9. B |
| 10. D | 10. B |
| 11. A | 11. C |
| 12. B | 12. C |
| 13. B | 13. A |
| 14. B | 14. B |
| 15. C | 15. C |

For inquiries or feedback, please write or call:

Department of Education - Bureau of Learning Resources (DepEd-BLR)

Ground Floor, Bonifacio Bldg., DepEd Complex
Meralco Avenue, Pasig City, Philippines 1600

Telefax: (632) 8634-1072; 8634-1054; 8631-4985

Email Address: blr.lrqad@deped.gov.ph * blr.lrpd@deped.gov.ph