Inquiries, Investigation and Immersion
Quarter 1- Module 4: Understanding Ways to Collect Data
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What I Need to Know

The 3 I’s: Inquiry, Investigation and Immersion module is a way of realizations that come along their life such as the different issues which surrounds 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.

This module has five (5) lessons:
- Lesson 1 - Research Design
- Lesson 2 – Research Setting
- Lesson 3 - Respondents and Sampling Procedure
- Lesson 4 – Research Instrument
- Lesson 5 – Treatment of Data

Learning Objectives:

1. The learner describes adequately research design (either quantitative or qualitative), sample, instrument used in quantitative research, data collection and analysis procedures.
2. Presents written research methodology.

How to learn from this module?

To achieve the objectives of this module, do the following:
- Take your time reading the lessons
- Follow the directions and/or instructions in the activity exercises diligently
- Answer all the given tests and exercises
- Familiarize yourself with following terms in the next page;
<table>
<thead>
<tr>
<th>Design</th>
<th>Population</th>
<th>Sample</th>
<th>Procedure</th>
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<td>- The overall plan for collecting the data in a research study</td>
<td>- A complete set of persons or objects that possess some common characteristic of interest to the researcher.</td>
<td>- A subset of the population that is chosen to represent the population.</td>
<td>- It is the collection process of gathering and measuring information on variables of interest in a systematic way that enables one to answer stated research questions, test hypotheses, and evaluate outcomes.</td>
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### What I Know

Multiple Choice. Encircle the letter of the best answer.

1. A plan of how the study will be conducted.
   A. Research Plan  
   B. Descriptive Design  
   C. Experimental Design  
   D. Research Design

2. Which design of research that 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. The researcher periodically observes or measures the subject.
   A. One shot case study  
   B. Time series design  
   C. Posttest only control group  
   D. Solomon four group design

5. A design in which subjects in the experimental and comparison groups are given a posttest after the experimental group receives the study treatment.
   A. One shot case study  
   B. Time series design  
   C. Posttest only control group  
   D. Solomon four group design

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. Ethnomology  
   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 period of time.
   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. Questionnaire is to data-collection instrument; observation is to data-collection _______.
    A. Method  
    B. Process  
    C. analysis  
    D. results

    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 carefully in order to gain information.
    A. Questionnaire  
    B. Interview  
    C. Observation  
    D. Instrument

Key to answer on page __

WHAT’S IN?

What is Research?

Research is a process of systematic inquiry that entails collection of data; documentation of critical information; and analysis and interpretation of that data/information, in accordance with suitable methodologies set by specific professional fields and academic disciplines.
Research Design

The research design states to the whole approach that you decide on to add the different components of the study in a coherent and logical way, 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.

What is It

To unlock the challenges, would you be interested in choosing which design?

1. Quantitative / Qualitative Research
   a. Quantitative Research: Methods that give emphasis to objective measurements and the statistical, mathematical, or numerical analysis of data collected through samples, questionnaires, and surveys, or by employing pre-existing statistical data using computational techniques. Quantitative research concentrates on collecting numerical data and simplifying it across groups of people or to explain a particular phenomenon.
b. 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.

c. Quantitative research are: c.1. Survey research uses interviews, questionnaires, and sampling polls to get a sense of behavior with intense precision. c.2. Correlational research tests for the relationships between two variables. C.3. Causal-comparative research looks to uncover a cause and effect relationship. This research is not conducted between the two groups on each other. c.4. Experimental research is guided specifically by a hypothesis.

d. Qualitative research are: d.1. Ethnography, you immerse yourself in the target participants’ environment to understand the goals, cultures, challenges, motivations, and themes that emerge. d.2. Narrative approach weaves together a sequence of events, usually from just one or two individuals to form a cohesive story. d.3. Phenomenological study is an appropriate qualitative method when you want to describe an event, activity, or phenomenon. d.4. Case study a way of explaining an organization, entity, company, or event which involves a deep understanding through multiple types of data sources.

To come up with the chosen design whether quantitative or qualitative research, think of which best suites in the given title or topic to explore the collective ideas and picture out to reveal better understanding. Abstract is allowed to envision the young minds. Make your own chapter 3 specifically the research design on the space provided.

What’s More

CHAPTER 3
RESEARCH METHODOLOGY

This chapter presented the research design, research setting, respondents and sampling procedure, research instrument, data gathering procedure and statistical technique. 

Research Design

This study utilized the descriptive-qualitative method in order to achieve the purpose of this study - which is to determine and describe the experiences of women with breast cancer from Thrive Breast Cancer Support Group in Cagayan de Oro City. It is descriptive in a sense that the data obtained was analyzed and describe. Specifically use the phenomenological type that describes the actual experiences of the women diagnosed with breast cancer.

The researchers used an interview guide questionnaire as instrument. Based on the result of the survey tool conducted, researcher was able to determine the details of experiences of women
1. Guide Questions:
   a. What design did you choose?
   b. Describe the design and relate the use of which in your particular study.
   c. Which specific type of the research design is being used in your study?
   d. Why did you choose such type?

That sounds nice! Do you want to continue?

2. RESEARCH SETTING

What is research setting? = The area where the investigator conducts the study.

Behind mnemonic idea/s about the issues in their chosen field is a great realization to describe at different angles.

**EXAMPLE:**

**Research Setting**

The study was conducted in Macasandig, Cagayan de Oro City, one of the respondents’ house. The house has a big room where they usually held the group gathering. It can accommodate up to 50 persons. The respondents were comfortable in sharing their experiences at this place. The time frame for the study was from November 2016 - October 2017.

Construct a research setting on the space provided:

A good description of the place and specific details where the study took place is of utmost important.
3. POPULATION (Respondents)

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

4. SAMPLING PROCEDURE

Sampling Methods:
   a. Random sampling is a technique which 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 which 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, here the samples are selected based on the availability.
   d. Purposive sampling: This is based on the intention or the purpose of study.
   e. Quota sampling: This type of sampling depends of some pre-set standard. It selects the representative sample from the population.
   f. Referral/ Snowball sampling: This technique is used in the situations where the population is completely unknown and rare.

Example below:

**Respondents and Sampling Procedure**

The respondents of the study comprised of twelve (12) women who experienced breast cancer in Thrive Breast Cancer Support group in Cagayan de Oro city. The sampling design that the researchers utilized was purposive sampling. The respondents who participated in the study were women who are breast cancer survivors. The said respondents chose because the said women were the only respondents who are willing and available to share their experiences in breast cancer.

Create your own Example:
5. DATA COLLECTION PROCEDURE

The process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes. Methods are: the use of survey tool, questionnaire, interviews, observation, instruments, and recorded data or resources.

Example

Data Gathering Procedure

Upon the approval of the proposal by the research committee, the researchers secured a permit to conduct this study from the Dean of College of Nursing. During the visit, the date of the collections of the data from the respondents was set.

The researchers gave an informed consent before the start of the interview. The researchers used an interview guide questionnaires themselves to ask questions to the respondents. The answers made by the respondents recorded and written on the interview guide questionnaire as the data for this study. After gathering the data, the researchers collected and made transcriptions of the gathered responses. After that, the researchers analyzed and interpreted the data.

Statistical Techniques

The analysis interpretation of the gathered data was facilitating by used of the following statistical measure.

1. The frequency and percentage counts used to describe the tabulated data for respondent profile.
   a. Percentage distribution
      Percentage % = f/n
      Where % - percentage symbol
      f - number of frequency responses
      n - number of respondents

WHAT I HAVE LEARNED?

1. Research design is a systematic way of collecting data.
2. Research setting refers to the place where you are going to conduct your study.
3. Respondents are the persons involved in your study.
4. Sampling is part of the population.
5. Data gathering procedure is how you are going to gather your data.
DATA COLLECTION PROCEDURE
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WHAT I CAN DO
Orderly arrange the steps of preparing a research design using A-D.

________ Decide for design
________ Describe the design
________ Specific type of design
________ Describe

Key to Answers at the page __

ASSESSMENT

1. Which one is an example of pre-experimental research?
   A. One shot case study
   B. Time series design
   C. Posttest only control group
   D. Solomon four group design

2. An experimental research in which the researcher manipulates the variable.
   A. True Experimental Research
   B. Pre Experimental Design
   C. Posttest only control group
   D. Solomon four group design

3. A type of experimental design in which the researcher has little control over the research situation
   A. One shot case study
   B. Time series design
   C. Posttest only control group
   D. Solomon four group design

4. A design that minimizes threats to internal and external validity
   A. One shot case study
   B. Time series design
   C. Posttest only control group
   D. Solomon four group design

5. A type of experimental design in which there is either no comparison group or no random assignment of subjects to groups.
   A. Quasi-Experimental design
   B. Time series design
   C. Posttest only control group
   D. Solomon four group design

6. A self-directing instruments structured with questions & indicators.
   A. Questionnaire
   B. Interview
   C. Observation
   D. Instrument
7. The generic 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. A constructive research which solve 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       C. Methodological Study
    B. Comparative Studies              D. Correlational Study

11. In data gathering on qualitative search for life, it __________________.
    A. Abounds with words, and visuals C. Query on numbers and calculations
    B. Talks about statistics           D. None

12. Which one is the study on how people understand their experiences meaningful?
    A. Case Study                        C. Ethnomology
    B. Phenomenology                     D. Historical analysis

13. A process or record of research in which detailed consideration is given to the development of a particular person, group, or situation over a period of time.
    A. Feasibility study               C. Content Analysis
    B. Case Study                      D. Problem-Solving

14. Homogenous strata, ensure representative proportions, wherein the researcher includes the specified number of samples like 5 samples only.
    A. Convenience Sampling           C. Purposive Sampling
    B. Quota Sampling                 D. Snowball Sampling

15. Sampling method that is handpicked by the researcher based on qualities for purposes of study.
    C. Convenience Sampling           C. Purposive Sampling
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