

SELF-LEARNING HOME TASK (SLHT)

Subject: Practical Research 2 Grade Level: 12 Quarter: 2 Week: 4

MELC: Collects data using appropriate instruments

Competency Code: CS_RS12-III-d-g-1

Name _____ Section _____ Date _____

School _____ District _____

A. Readings

Data Collection

Collecting data is the first step you need to perform before you proceed in writing your data analysis and interpretation. **Data Collection** involves obtaining relevant information regarding the specified research questions or objectives. This can be done by utilizing research instruments that are either developed or adopted. In collecting the data, the researcher must decide on the following questions: (1) Which data to collect? (2) How to collect the data? (3) Who will collect the data? (4) When to collect the data? (Barrot, 2018, p138).

Quantitative research instruments comprise questionnaires, interviews, tests, and observation. On the other hand, data collection approaches for **qualitative research** usually involve: (a) direct interaction with individuals on a one to one basis, (b) and or direct interaction with individuals in a group setting.

When developing and utilizing a research instrument, the following steps are to be considered:

1. Be clear with your research questions.
2. Plan how you will conduct the data collection.
3. Use appropriate research instruments.
4. Collect, tabulate, tally, and analyze the data.
5. Verify the validity and reliability of the collected data.
6. Present your findings.

Research Instruments

Questionnaires. It consists of a series of questions about a research topic to gather data from the participants. It consists of indicators that are aligned to the research questions. Gathering of information can be carried out in the following methods: face to face, by telephone, or through e-mail, messenger, social media post, or using computer programs or forms (Barrot, 2018, p 138).

In quantitative research, questionnaires use the following approaches: (1) scale (usually Likert scale); and (2) conversion of responses into numerical values, e.g. strongly as 5, agree as 4, neutral as 3, disagree as 2, and strongly disagree as 1.

The terms survey and questionnaire have different meanings. A questionnaire is an instrument used to collect data while a survey is a process of collecting, recording, and analyzing data. Questionnaires can be structured, semi-structured, or unstructured.

The first, **structured questionnaires** employ closed-ended questions. **Unstructured questionnaires**, on the other hand, use open-ended questions in which the research participants can freely answer and put his thoughts into it. Lastly, **semi-structured questionnaires** are combinations of both the structured and unstructured ones. Structured type is commonly used in quantitative studies because it is easier to code, interpret objectively, and, most of all, easier to standardize.

Advantages of Using Questionnaire

1. Data can be quickly gathered from a big number of participants.
2. The participants are encouraged to open-up to the researchers since their identity can be made anonymous.

Disadvantages of Using Questionnaire

1. The questions can be interpreted differently by the participants.
2. Some participants will not be able to complete the required responses.
3. Some questionnaires will not be returned on time.
4. Some questionnaires will be lost.
5. The answers from participants may lack depth.

Guidelines in Using Questionnaires for Data Collection

1. Choose the method of administering the questionnaire.
 - a. Face-to-face Method. Use this when you need to capture the emotions, behavior, and non-verbal cues of the participants

- b. Online Method. Use this when behavior and non-verbal cues need not be taken
2. Divide your questionnaire into two or three parts.
 - a. Personal information. This section which contains background information of the participants. (Names are optional)
 - b. Main section. This lists the specific questions or indicators.
 - c. Open-ended question section. This contains additional information that might be needed. (This applied only for quantitative research)
3. Make sure to craft questions and choices that are aligned with specific research questions or objectives.
4. Provide specific and clear directions for respondents in answering the questionnaire.
5. Use routing (directing) technique if there is a need to skip some items in the questionnaire.
6. Begin with the general questions first followed by the specific ones.
7. Prefer to have brief, clear, and concise questionnaire. Use simple terms.
8. Predetermined responses or choices should match the nature of the questions.
 - a. If the content is about belief, use agreement (strongly agree , agree, neutral, disagree, strongly disagree)
 - b. If the questionnaire is about behavior, use extent (very great extent, great extent, moderate extent, small extent, none at all)
 - c. If questions are about frequency, use frequency (always, frequently, sometimes, seldom, never)
 - d. If the content is about quality, use quality (excellent, very good, good, poor)

Later, these responses will be translated into numerical values (e.g. five-point Likert scale)

9. Avoid negative statements unless necessary.
10. Avoid leading and biased, double-barreled, and very sensitive questions.
11. Do not split the questions or choices over two pages.
12. If possible, schedule an appointment before distributing the questionnaires.
13. Attach a cover letter to the questionnaire especially for agency connected respondents.
14. Make a follow-up on the participants who did not return the questionnaire.
15. Tally and encode the data immediately once you have collected them and archived them digitally.

Tests are used for assessing various skills and types of behavior as well as for describing some characteristics. There are two types of tests used in quantitative research: Standardized test and Non-standardized test.

Standardized test is scored uniformly across different areas and groups. It is usually administered by institutions to assess a wide range of groups such as students and test-takers. It is considered more reliable and valid. Examples are Achievement test, University Entrance Exam, Personality Tests, and the likes.

Non-standardized test may not be scored uniformly. It is administered to a certain set of people.

Types of Test Questions

1. Recall Questions. It requires participants to retrieve information from memory (e.g. fill-in-the blank test, identification test, enumeration test, etc.)
2. Recognition Questions. It provides respondents with given choices to select from as the best or correct choice (e.g. multiple-choice test, true or false test, yes or no test, etc.)
3. Open-ended Questions. It allows the respondents more freedom in their responses, expressing their thoughts and insights (e.g. essay writing tests and other performance-based tests.)

The following table shows the types of test and examples

Type	Subtype	What the Participants will Do	Example
Recall	Cloze test	Supply words or phrases that have been deleted/removed from a test.	Questionnaires can be structured, semi-structured, or _____.
	Identification	Provide an answer to the given question using pure recall.	What type of questionnaire employs close-ended questions?
	Enumeration	List down the answers, whether chronologically or not.	List the steps in conducting quantitative research.

Recognition	Multiple Choice	Choose the best/ correct answer from three to five options.	Which of the following does NOT belong to the group? A. Collecting data B. Tabulating data C. Interpreting data D. Differing data
	Matching	Match the items in Column A with the items in Column B.	Match the terminologies in Column A with their synonyms in Column B. Column A Column B __1. Data A. Participants __2. Respondents B. Representative __3. Sample C. Information

	Dichotomous	Choose an answer from two options either True or False or Modified True or False.	Write TRUE on the space before each number if the statement is correct and FALSE if it is incorrect. _____1. Data collection is the first step in conducting quantitative research.
Open-Ended	Nonperformance based	Provide a lengthy answer in writing or orally.	Explain the process of obtaining the sample size from the population.
	Performance based	Perform a task where they are expected to prepare a presentation or written work.	Present a role play about conducting an interview on study habits among students.

Source: (Barrot, 2018, p 146)

Interview. A **quantitative interview** is a method of collecting data about an individual's behaviors, opinions, values, emotions, and demographic characteristics using numerical data.

Difference between Quantitative and Qualitative Interviews

Quantitative Interviews	Qualitative Interviews
It uses closed-ended questions.	It uses open-ended questions.
It contains a rating scale or rubric.	No rating scale or rubric needed.

Responses are numerical.	Responses are non-numerical.
A large sample size is used.	Small sample size is used.
Structured type is used to minimize “interviewer effect”, which means that the responses of the participants may be affected by the behavior displayed by the researcher on the manner that the questions are presented.	Unstructured, semi-structured, informal interviews, and focus group discussions (FGD) are used.

The questionnaire and quantitative interview are both highly structured, but here is a distinction between the two:

Quantitative Interviews	Questionnaires
Items are read to the participants.	Participants answer on their own.
Researchers may ask follow-up questions.	Researchers may not ask follow-up questions.
Useful when the target participants can not answer a printed or encoded questionnaire (blind or uneducated).	Not applicable for blind and uneducated (no read, no write) participants.

Observation is another method of collecting data that is frequently used in qualitative research. However, it can be used in quantitative research when the observable characteristics are quantitative in nature (e.g. length, width, height, weight, volume, area, temperature, cost, level, age, time, and speed)

Observation allows the researcher to observe the actual event or phenomenon. It has greater flexibility in the observation method. However, observation may lack participant validity and may be prone to the Hawthorne effect phenomenon. Furthermore, it is more exhausting and time-consuming especially when observations need to be conducted for many years).

Forms of Observation

1. **Controlled Observation.** It is usually used in experimental research and is done under a standard procedure. It provides more reliable data (obtained through structured and well-defined process). The procedure can be replicated, and the data are easier to analyze. Lastly, the observer performs a non-participant role (i.e. does not interact with the participants).
2. **Natural Observation.** It is carried out in a non-controlled setting. It has greater ecological validity (i.e. flexibility of the findings to be generalized to real-life contexts). It also responds to other areas of inquiry not initially intended by the researcher. Its major limitation is its strength to establish a causal relationship

due to the presence of extraneous variables which can affect the behavior of the participants .

3. **Participant Observation.** It allows the observer to become a member of the group or community that the participants belong to. It can be performed **covertly** (i.e. participants are not aware of the purpose behind the observation. It can be done also **overtly**, wherein participants know the intention or objectives of the observation.

Different Roles of a Researcher during a Participant Observation

Observational Role	Description
Complete observer	Observe the spontaneous natural behavior of the participants with as few external factors affecting it as possible. The observer is neither seen nor noticed by the participants. The participants are less prone to the Hawthorne effect.
Observer as participant	Researcher does not prioritize recording spontaneous or natural behavior with as few external factors affecting it as possible. The observer is known and recognized by the participants as part of their group or community but has limited interaction with them.
Participant as observer	Researcher does not primarily aim to capture spontaneous or natural behavior. The observer is considered a researcher and not a member of the group or community which is being investigated. However, the observer is fully engaged with the participants.
Complete participant	Researcher is to observe the spontaneity or natural behavior of the participant with as few external factors affecting it as possible. Taking this role raises ethical issues about possible deception. He acts like an “undercover” member of the community. He fully involved with the participants who are unaware that they are being observed.

B. Exercises

Exercise 1

Direction: Look at the questionnaire below. Answer the questions that follow by checking the box that best describes you.

A Questionnaire to Review Your Study Habits					
Constructs	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. I study where there is a good lighting.					
2. I study in a room where the temperature is cool.					
3. The desk where I study is always clear from distractions.					
4. I use earplugs to minimize distracting sounds.					
5. I study facing a wall.					
6. I don't do other things while I am studying.					
7. I prepare ahead of time all the materials that I will need for studying.					
8. I avoid wasting my times on Facebook, etc. in between my study time.					
9. I review my notes after class and use it for review.					
10. I take breaks from time to time during study time.					

Exercise 2

Direction: Directions: Interview five (5) families in your barangay or other possible options may be presented depending on the current situation in your community. Create three (3) interview questions regarding their situation during the COVID-19 pandemic crisis. Make sure that the responses of your interview questions are **quantifiable**.

Question 1: _____

Responses:

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

Question 2: _____

Responses:

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

Question 3: _____

Responses:

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

C. Assessment/Application/Outputs (Please refer to DepEd Order No. 31, s. 2020)

Test I. Direction: Which of the following can be considered as quantitative interview questions? Put a check (✓) on the space provided before the number if the following questions illustrate quantitative nature and mark it with X if it is not.

- ___ 1. How often do you buy mobile accessories for social acceptance purposes?
- ___ 2. How regularly do you go to malls in a week?
- ___ 3. How much would you be willing to pay for a mobile app for dating?
- ___ 4. What are the differences in attitude towards shopping between men and women?
- ___ 5. What is the difference in the number of telephone calls made between men and women?
- ___ 6. What is the relationship between a grade in math and level of class participation among Grade 7 students?
- ___ 7. What is the relationship between the number of COVID-19 cases and travel exposure?
- ___ 8. What is the relationship between job satisfaction and salary among public school teachers?
- ___ 9. Can you describe how you first became aware of the COVID-19 crisis?
- ___ 10. Can you talk about your thoughts on how the COVID_19 pandemic affects a person, a family, a school, or a community?
- ___ 11. How do you see yourself today, in terms of the “new normal”?
- ___ 12. How does your family view your gender crisis?

- ___ 13. What does your school or community do to educate you about the COVID-19 pandemic crisis?
- ___ 14. Can you talk about whether you feel safe or not in your school or community after the enhanced community quarantine was lifted?
- ___ 15. Which factors mostly distort the approval rating of the president?

Test II. Direction: What type of observation is illustrated in the following observation notes? Write the letter of your choice on the space provided before the number. Choose from the choices below:

- A. complete observer
- B. observer as participant
- C. participant as observer
- D. complete participant

- ___ 1. A doctor watching a patient's reaction to a medication.
- ___ 2. Pilots watching their monitors for airplane movements and locations.
- ___ 3. A biology teacher recording the daily data on bacteria growth at the Bio laboratory.
- ___ 4. A guidance counselor watching a friend's reaction to her *barkada's* confession.
- ___ 5. An adviser watching her students work during independent work time.
- ___ 6. An online tutorial company manager observing the conversation of the interviewer and the applicant to determine the quality of their performance.
- ___ 7. A principal observing a math teacher giving a lesson to her class to evaluate her performance as an educator.
- ___ 8. A parent is watching her children interact with other children on the playground.
- ___ 9. An actress is watching her movie premier unfold on the big screen.
- ___ 10. A group of Grade 12 students went to BFAR to perform certain duties the workers are doing.

D. Suggested Enrichment/Reinforcement Activity/ies

Direction. Perform the following tasks. You may write or encode your answer in a long bond paper. Submit your output to your teacher for checking.

Tasks:

- 1. Decide what type of data collection instrument will you use for your current study.
- 2. Explain why you will use this specific type of data collection.
- 3. Create your own research instrument as basis for your data gathering. Make sure that your questions are aligned to your research questions.

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