



Republic of the Philippines
Department of Education
REGION VII, CENTRAL VISAYAS
Division of Cebu Province



SELF-LEARNING HOME TASK (SLHT) # 4

Subject: **Inquiries, Investigation and Immersion**

Grade Level: 12

Quarter: 4 Week: 3

Competency: Gathers and analyzes data with intellectual honesty using suitable techniques:
Interpret the given data in qualitative research of their choice relevant to one's
field of study.

Competency Code:

Name _____ Section _____ Date _____

School: Dalaguete National High School District: Dalaguete 1

Readings/Discussions

What is data analysis?

Definition of research in data analysis:

According to *LeCompte* and *Schensul*, research data analysis is a process used by researchers for reducing data to a story and interpreting it to derive insights. The data analysis process helps in reducing a large chunk of data into smaller fragments, which makes sense.

Three essential things take place during the data analysis process — the first data organization. Summarization and categorization together contribute to becoming the second known method used for data reduction. It helps in finding patterns and themes in the data for easy identification and linking. Third and the last way is data analysis – researchers do it in both top-down or bottom-up fashion.

Marshall and Rossman, on the other hand, describe data analysis as a messy, ambiguous, and time-consuming, but a creative and fascinating process through which a mass of collected data is being brought to order, structure and meaning.

We can say that “the data analysis and interpretation is a process representing the application of deductive and inductive logic to the research and data analysis.” **Why analyze data in research?**

Researchers rely heavily on data as they have a story to tell or problems to solve. It starts with a question, and data is nothing but an answer to that question. But, what if there is no question to ask? Well! It is possible to explore data even without a problem

– we call it ‘*Data Mining*’ which often reveal some interesting patterns within the data that are worth exploring.

Irrelevant to the type of data, researchers explore, their mission, and audiences’ vision guide them to find the patterns to shape the story they want to tell. One of the essential things expected from researchers while

analyzing data is to stay open and remain unbiased towards unexpected patterns, expressions, and results. Remember, sometimes, data analysis tells the most unforeseen yet exciting stories that were not expected at the time of initiating data analysis. Therefore, rely on the data you have at hand and enjoy the journey of exploratory research.

Every kind of data has a rare quality of describing things after assigning a specific value to it. For analysis, you need to organize these values, processed and presented in a given context, to make it useful.

Qualitative data: When the data presented has words and descriptions, then we call it qualitative data. Although you can observe this data, it is subjective and harder to analyze data in research, especially for comparison.

Example: Quality data represents everything describing taste, experience, texture, or an opinion that is considered quality data. This type of data is usually collected through focus groups, personal interviews, or using open-ended questions in surveys.

Data analysis in qualitative research

Data analysis and qualitative data research work a little differently from the numerical data as the quality data is made up of words, descriptions, images, objects, and sometimes symbols. Getting insight from such complicated information is a complicated process. Hence it is typically used for exploratory research and data analysis.

Terms used in Qualitative data analysis

Theory: A set of interrelated concepts, definitions and propositions that presents a systematic view of events or situations by specifying relations among variables
Themes: idea categories that emerge from grouping of lower-level data points
Characteristic: a single item or event in a text, similar to an individual response to a variable or indicator in a quantitative research. It is the smallest unit of analysis
Coding: the process of attaching labels to lines of text so that the researcher can group and compare similar or related pieces of information

Coding sorts: compilation of similarly coded blocks of text from different sources in to a single file or report

Indexing: process that generates a word list comprising all the substantive words and their location within the texts entered in to a program

Principles of Qualitative data analysis

1. People differ in their experience and understanding of reality (constructivist-many meanings)
2. A social phenomenon can't be understood outside its own context (Context-bound i.e. book is in the pen)
3. Qualitative research can be used to describe phenomenon or

generate theory grounded on data

4. Understanding human behaviour emerges slowly and non-linearly

5. Exceptional cases may yield insights into a problem or new idea for further inquiry

Features of Qualitative data analysis

- Analysis is circular and non-linear
- Iterative and progressive
- Close interaction with the data
- Data collection and analysis is simultaneous
- Level of analysis varies
- Uses inflection i.e. “this was good”
- Can be sorted in many ways
- Qualitative data by itself has meaning, i.e. “banana”

The Process of Qualitative data analysis

Step 1: Organize the data

- Transcribe the data (you can use hyper TRANSCRIBE software)
- Translate the data (You can use language translation software like SYSTRAN)
- Data cleaning
- Label the data – Structuring – Familiarizing

Step 2: Identify a Framework

- Read, Read, Read...
- Identify a Framework – Explanatory – Guided by the research question-Exploratory-Guided by the data
- Framework will structure, label and define data
- Framework=Coding plan

Step 3: Sort data in to Framework

- Code the data
- Modify the Framework
- Data entry if use computer packages

Step 4: Use Framework in descriptive analysis

- Descriptive analysis
 - Range of responses in categories
 - Identify recurrent

themes Stop here if

exploratory research **Step**

5: Second order analysis

- Identify recurrent themes
- Notice patterns in the data
- Identify respondent clusters
 - Search for causality
 - Identify related themes
- Build sequence of events
- Search data to answer research questions

- Develop hypothesis and test

Types of qualitative analysis Content analysis

- Content analysis is the procedure for the categorization of verbal or behavioural data for the purpose of classification, summarization and tabulation
- The content can be analyzed on two levels
 - Descriptive: What is the data?
 - Interpretative: what was meant by the data?

Narrative analysis

- Narratives are transcribed experiences
- Every interview/observation has narrative aspect-the researcher has to sort-out and reflect up on them, enhance them, and present them in a revised shape to the reader
- The core activity in narrative analysis is to reformulate stories presented by people in different contexts and based on their different experiences.

Discourse analysis

- A method of analyzing a naturally occurring talk (spoken interaction) and all types of written texts
- Focus on ordinary people method of producing and making sense of everyday social life: How language is used in everyday situations?
 - Sometimes people express themselves in a simple and straightforward way
 - Sometimes people express themselves vaguely and indirectly
 - Analyst must refer to the context when interpreting the message as the same phenomenon can be described in a number of different ways depending on context

Framework Analysis

- Familiarization: Transcribing & reading the data
- Identifying a thematic framework: Initial coding framework which is developed both from a priori issues and from emergent issues
- Coding: Using numerical or textual codes to identify specific piece of data which correspond to different themes
- Charting: Charts created using headings from thematic framework (can be thematic or by case)
- Mapping and interpretation: Searching for patterns, associations, concepts and explanations in the data

Grounded Theory

- Analytic induction
 - Starts with an examination of a single case from a 'pre-defined' population in order to formulate a general statement about a population, a concept or a hypothesis

- Then the analyst examines another case to see whether it fits the statement
- If it does, a further case is selected
- If it doesn't fit there are two options
- Either the statement is changed to fit both case or the definition of the population is changed in such a way that the case is no longer a member of the newly defined population
 - Then another case is selected and the process continues
 - In such a way one should be able to arrive at a statement that fits all cases of a population-as-defined – This method is only for limited set of analytic problems: those that can be solved with some general overall statement

Strategies for analyzing observations

- Chronology: describe what was observed chronologically overtime, to tell the story from the beginning to the end
- Key events: describing critical incidents or major events, not necessarily in order of occurrence but in order of importance
- Various settings: describe various places, sites, settings, or locations in which events/behaviors of interest happen
- People: describing individuals or groups involved in the events
- Process: describing important processes (e.g. Control, recruitment, decision-making, socialization, communication)
- Issues: Illuminating key issues – how did participants change

Here is an example of a transcribed result of an interview conducted in Bulua National High School to displaced learners during the Marawi Siege. They were able to come up with varied theme depending on the questions asked. This is a result based on one on one interview.

Informant 1		
Verbatim	Translation	Theme
<p>I: Paano ka naka recover sa nangyari sa Marawi?</p> <p>P: Para sa akin, naka recover nako sa nangyari sa Marawi. Magmula nung tumira kami dito sa Auntie ko. Mas napalapit kami sa isa't isa at nasanay din ako sa pamumuhay dito.</p>	<p>I: How did you recover after the Marawi siege?</p> <p>P: For me, I have recovered from what happened in Marawi ever since we started to live in my Auntie because we became closer and we started to get used to the way of living here</p>	RECOVERED
<p>I: May nagbago bas a pamilya ninyo magmula nung nangyari yun?</p>	<p>I: Is there any changes in your family ever since that happened?</p>	SEPARATION

P: Oo, kasi nagkahiwa hiwalay kaming pamilya nang dahil doon	P: Yes, my family got separated because of what happened	
I: Na apektohan ba ang culture ng mga Maranao?	I: Did it affect the cultural practice of the Maranaos?	
P: Oo, kasi unti-unti nang nagagaya ng mga Maranao yung Gawain ng mga Chrisitan tulad ng pakipagrelasyon at hindi narin pagsuot ng kumbong	P: Yes, because the Maranaos are starting to adopt the things that Christian did like getting in a relationship and not wearing a veil.	GETTING INFLUENCED BY CHRISTIAN

Finding patterns in the qualitative data

Although there are several ways to find patterns in the textual information, a word-based method is the most relied and widely used global technique for research and data analysis. Notably, the data analysis process in qualitative research is manual. Here the researchers usually read the available data and find repetitive or commonly used words.

For example, while studying data collected from African countries to understand the most pressing issues people face, researchers might find “*food*” and “*hunger*” are the most commonly used words and will highlight them for further analysis.

The keyword context is another widely used word-based technique. In this method, the researcher tries to understand the concept by analyzing the context in which the participants use a particular keyword.

For example, researchers conducting research and data analysis for studying the concept of ‘*diabetes*’ amongst respondents might analyze the context of when and how the respondent has used or referred to the word ‘diabetes.’

The scrutiny-based technique is also one of the highly recommended text analysis methods used to identify a quality data pattern. Compare and contrast is the widely used method under this technique to differentiate how a specific text is similar or different from each other.

For example: To find out the “importance of resident doctor in a company,” the collected data is divided into people who think it is necessary to hire a resident doctor and those who think it is unnecessary. Compare and contrast is the best method that can be used to analyze the polls having single answer questions types.

Metaphors can be used to reduce the data pile and find patterns in it so that it becomes easier to connect data with theory.

Variable Partitioning is another technique used to split variables

so that researchers can find more coherent descriptions and explanations from the enormous data.

Sample interpretation of data using the extracted table from the unpublished research paper of Ms. Cristy G. Dablo, entitled, “TEENAGE PREGNANCY AND ITS INTERVENTIONS: MINIMIZING FUTURE RISKS AMONG HIGH SCHOOL STUDENTS.”

Table 1. Experiences knowing that you are pregnant

R1	<p>“Kanang nahadlok ko kay basin dili ko panagutan sa akong uyab, pero mas nahadlok ko nga basin dili madawat sa akong ginikanan samot na nga dili sila ganahan sa akong uyab”</p> <p>(I’m afraid that my boyfriend won’t carry the responsibility, but I am more afraid of my parents not accepting me for they don’t like my boyfriend)</p>
R2	<p>“Nahadlok kog ayo nga to the point nga nag plano ko nga ipalaglag ang bata nga naa sa ako tiyan kay wala nay ginikanan na akong maduolan sa akong pagburos og nag plano pod ko maghikog nalang”</p> <p>(I am so afraid and reach to the point aborting the baby’s life inside my tummy, since I don’t have the parents to turn to. With that, I planned to commit suicide)</p>
R3	<p>“Kada gabii ko maghilak kay gahunahuna kung unsaon nako pagsulbad ani nga problema. Gusto nako ipalaglag ang bata kay dili pa ko ready nga mahimong inahan”</p> <p>(I cried every night, thinking on how to solve the problem. I wanted to abort the child for I am not ready to become a mother)</p>
R4	<p>“Pagkahibalo nako naburos mura kog na down og ayo tungod kay ga overthink kog ayo sa mga possible nga mahitabo og wala pod ko kabalo unsa akong buhaton. Mas samot ko nahadlok unsoan pag atubang sa problema nga naburos ko sayo nga pangidad”</p> <p>(As soon as I know that I’m pregnant, I felt so down because I overthink of possibilities and do not know what to do)</p>
R5	<p>“Nahadlok ko.. kay maulawan akong pamilya. Naghunahuna ko nga dili padayn ang akong gidala. Ug siguromagpalayo nalang, mu undang ug eskwela. Nawad-an kog paglaum sa akong kinabuhi tungod ani nga bata”</p> <p>(I’m afraid.. because I put to shame on my family. I thought of aborting my baby inside my tummy. I want to stay away from them. I want to stop schooling. I lost hope in my life because of the baby)</p>

Interpretation for Table 1

All of the respondents’ responses were about fear, worries, and apprehensions. Table 1 showed the emotions that respondents felt knowing that they were pregnant at an early age. Three (3) directly blurted out their feeling of fear and the rest indirectly said. Fear on how the parents reacted to the shame they brought up, fear of hopelessness that the baby shuttered their future dreams, fear on how they raise the

child knowing that they are incapable of supporting themselves. The fear felt push to worry, apprehend and think of worst deed to abort the child.

According to Enyegue (2004) teenagers raised in a culture where parents are really afraid to broach the topic to their kids are at risk of early pregnancy. With this many teens worry about what their families will say when they find out that they are pregnant. So, they avoid telling their parents or someone else who might be able to help them find support. This delays their prenatal care, making the pregnancy even more risky for themselves and their baby. With that fear, abortion came to their thinking trying to solve the problem, facing the grim realities of teen pregnancy is not pleasant.

Think of this:

The researcher intensively reads or listens to materials, assimilating as much of the explicit and implicit meaning as possible

The researcher systematically working through the data, assigning coding categories or identifying meanings within the various segments/units of the text

The researcher knows about questioning or interrogating the meanings or categories that have been developed? Are there other ways of looking at the data? Do some codes mean the same thing?

The researcher finds ways in sorting through the categories. Deciding which categories are recurring and central and which are less significant or are invalid or mistaken

The researcher is open minded in making sense of the data from a wider perspective. Constructing a model or using an established theory to explicit the findings of the study.

Exercise

Given the Verbatim questions and answers from the one of the respondents. Translate the verbatim questions and answers into English language. Use thematic analysis to come up a theme. You may use this format.

Informant 1		
Verbatim	Translation	Theme
I: Unsay na sabtan nimoabout sa New Normal? P: Para nako, ang new normal kay pag protect nato sa atong health para dili matakdan sa COVID 19.	I: P:	

<p>I: Unsay imong nakat-onan niining atong sitwasyon sa pandemya?</p> <p>P: Nakat-on ko nga dapat diay mag limpyo permi saatong kamot ug maligo kay para dili ta matakdansang COVID. Kinahanglan gyud ta magtinabangay kay dili makita ang virus.</p>	<p>I:</p> <p>P:</p>	
<p>I: Unsay ikasulti nimo sa atong mga opisyal sa sugbo nga nagdumala sa Task force against COVID?</p> <p>P: Nagbuhat ra man sila sa ilang trabaho kutob sa ilang mahimo kay dili manpud sila perfecto. Dapat kitang mga Sugbuanon mo cooperate pud kay para dili pud sila mag stricto.</p>	<p>I:</p> <p>P:</p>	

Assessment

Instructions: Choose the correct answer. Use separate sheet of paper.

- What method of investigations to analyze the variables relevant to the subject under study in its own natural settings?
 - Action Research
 - Case study
 - Grounded Theory
 - Phenomenology
- Quality data represents everything describing taste, experience, texture, or an opinion. This type of data is usually collected through the following, EXCEPT?
 - Close-ended questions
 - Open-ended questions
 - Focus Group Discussion
 - Personal Interviews
- What is the way of data reduction without compromising and changing the meaning of the data?
 - Coding
 - Encoding
 - Summarizing
 - Themes
- What method is used to analyze content gathered from various sources such as personal interviews, field observation, and surveys?
 - Content Analysis
 - Narrative Analysis
 - Grounded Theory
 - Discourse Analysis
- Which method of data analyses used to document information in the form of text, media, or even physical items characteristics?
 - Content Analysis
 - Narrative Analysis
 - Grounded Theory
 - Thematic Analysis
- What data analysis that studying documents, artifacts, and other materials to gain insight into the group's behaviors, actions, and other characteristics over a period?
 - Grounded Theory
 - Case Study

For questions 14-15, refer to the Table of Responses of Grade 11 students in Bulua National High School when asked about their General Mathematics Subject.

Question	Response	Theme
<p>Kumusta man ang inyong General Mathematics Subject?</p> <p>Translation: How do you find your General</p>	“Medyo lisod ang uban exercises wala man gud lain textbook kami pa mangita ug laing resources.”	LEARNING RESOURCES
	“I find some exercises a little harder because we don’t have textbook.”	
	“Pwedi man ma research online ang mga topic pero walay free internet sa school.”	
	“We can research online but we don’t have free internet connectivity.”	STUDENTS’ PREFERENCES TO ACHIEVE LEARNING
	“Wala mi libro sa balay para maka review.”	
	“We don’t have books to review.”	
	Gusto ko magpatutor kang Mam pero maulaw ko magnutana sa klase.”	STUDENTS’ PREFERENCES TO ACHIEVE LEARNING
	“I want my teacher to tutor me but I am a shame in the class.”	
	“Unta manghatag si Mam ug kopya sa iyang powerpoint.”	
	“We want our teacher to give us a copy of powerpoint.”	
	“Naa untay online tutorial.”	
	“We want online tutorial.”	
	“Kay ga trabaho man ko, gamay sa akong time mag review sa balay.”	SITUATIONS THAT HAMPER STUDENTS TO ACHIEVE LEARNING
	“I have no time to review at home because I am working.”	
“Dugay nako naka undang mao medyo lisod na makasabot.”		
“I find it hard to understand because I stopped schooling long time ago.”		
“Kulang ra gyud ang isa ka adlaw nga discussion sa kadaghan sa module.”		
“One day in a week is not enough to handle all the modules.”		

14. Which of the following is not among the theme of the responses of Grade 11 students in Bulua National High School when asked about their General Mathematics Subject?
- A. Learning Resources

- B. General Mathematics
 - C. Students Preferences to achieve learning
 - D. Situations that hamper students to achieve learning
15. Which of the following statements does NOT belong to the theme Learning Resources?
- A. “We don’t have books to review.”
 - B. “One day in a week is not enough to handle all the module.”
 - C. “We can research online but we don’t have internet connectivity.”
 - D. “I find some exercises a little harder because we don’t have textbook.”

Suggested Enrichment/Reinforcement Activity/ies

Once you are done with the assessment part, you can now proceed to your own data analysis based on the approved topic from your research teacher. Decide, with the help of your teacher, what data analysis method in qualitative research to used and manipulate so that you can easily interpret the result of your study.

References

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