

## SELF-LEARNING HOME TASK (SLHT)

Subject: Practical Research 2 Grade Level: 12 Quarter: 2 Week : 5

MELC: *Presents and interprets data in tabular or graphical forms.*

Competency Code: CS RS12-Ild-g-2

Name \_\_\_\_\_ Section \_\_\_\_\_ Date \_\_\_\_\_

School \_\_\_\_\_ District \_\_\_\_\_

### A. Readings/Discussions

Once data is gathered, it is necessary to present and interpret it. Presentation of data in a proper way would lead to a proper interpretation of data that would be useful in making conclusions and recommendations.

To do this, one needs to review his/her knowledge and skills in tables and graphs because this is necessary in data presentation. Once the raw data have been given numerical codes, they are ready for tabulation. (Calmorin and Calmorin, p. 112, 2007)

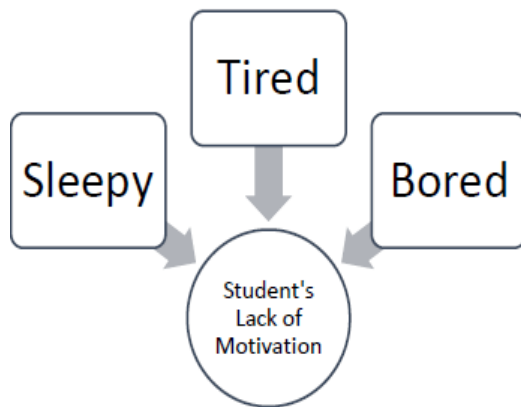
Data presentation and analysis is one of the most essential part in your research study. An excellent data presentation can be potential for winning the hearts of the panelists, clients, or simply the readers. No matter how good your data, if it is not well presented, you will not be able to earn the preferences of those whom you are trying to persuade. Good data presentation matters.

### Techniques in Data Processing

The data processing involves three actions: **editing, coding, and tabulation.**

**Editing** is a process wherein the collected data are checked. At this stage, handling data with honesty should be employed. When you edit it is expected that you will not change, omit, or makeup information if you think that the data you collected is insufficient or does not meet your personal expectations. The main purpose of editing is for checking the consistency, accuracy, organization, and clarity of the data collected. Data editing can be done manually like traditional tallying or with the assistance of a computer or combination of both.

**Coding** is a process wherein the collected data are categorized and organized. It is usually done in qualitative research. In quantitative research, coding is done to assign numerical value to specific indicator especially if it is qualitative in nature. This numerical value will be useful when you are going to analyze your data using statistical tool. Just make sure that the categories created are aligned with your research questions. Consider the following example.



Students' reasons for lack of motivation is qualitative in nature. The research will then assigned a numerical. Data also shows that this will be summarized using frequency and percentage distribution.

*Assigned values:*

- Sleepy – 1
- Tired – 2
- Bored – 3

**Tabulation** is a process of arranging data. In many studies, table is used to do this process. Tabulation can do manually or electronically using MS Excel. Again, organize the data based on your research questions. Before inputting your data into the table, it will be helpful to review your statistics class on how to arrange data according to the statistical techniques you will use. Take note that the digital tool you are going to use will also matter on how you are going to tabulate your data; like MS Excel, Minitab, or other digital tools have different ways of entering your data. Correct arrangement of your data will be helpful during actual data analysis.

### **Presentation and Interpretation of Data**

The next step after editing, coding, and tabulating the data is to present them into graphical or visual presentation called **non-prose materials**. The purpose of presenting the data in this way is to make the outlined of the results more presentable. Non-prose materials are composed of graphs, bars, tables, charts, diagrams, illustrations, drawings, and maps.

In quantitative research, tables and graphs are usually used. Standard format in presenting the data into a table or a graph like its title, labels, contents, and many more

can be followed as well when school institutional format is not provided or identified. You may visit APA, CMOS, or MLA on how to do so.

**Tables.** Table helps summarize and categorize data using columns and rows. It contains headings that indicate the most important information about your study.

To interpret the tables, one needs to do the following:

1. Analyze the connections among the details of the headings.
2. Check the unusual pattern of the data and determine the reason behind these.
3. Begin with the table number and the title.
4. Present the significant figures (overall results, high and low values, the unusual pattern).
5. Refrain from repeating again what is inside the table.
6. Support your findings with literature and studies that confirms or contrasts your results.
7. Establish the practical implications of the results. This will add value to your research findings.
8. End with a brief generalization.

**Example 1:**

Table 1. Frequency and Percentage Distribution of Student's Overall Performance in Pre-Calculus Pretest

Student's Overall Performance	f	%
Outstanding	2	5
Very Satisfactory	15	30
Satisfactory	33	66
Unsatisfactory	0	0
Poor	0	0
Total	50	100

**Interpretation:**

*Table 1 shows the summary of the overall adjectival rating in frequency and percentage of students in their pretest in Pre-calculus at Gulayan National High School for S.Y. 2019-2020. Results reveal that 66% of the students have satisfactory rating. Only 5% have outstanding rating. Overall, the data showed that the students at Gulayan National High School have fair ratings based on their pretest scores. This implies that most of the students do not have prior mastery on the concepts of this*

*subject. Hence, teacher is expected to apply teaching strategies that will increase students' concepts of the subject. This result is supported by Ignacio (2016) that pretest scores especially if it is valid and reliable shows prior knowledge of the learners of the subject matter.*

**Example 2:**

**Table 3. Correlation Analysis of Positive Discipline and Sense of Belonging**

Variables	Sense of Belongingness		Interpretation
Classroom Interaction	Pearson Correlation	.973	Significant
	Sig. (2-tailed)	.000**	
Use of Reinforcement	Pearson Correlation	.073	Not Significant
	Sig. (2-tailed)	.663	

\* $p < .05$ , \*\* $p < .01$

**Interpretation:**

*Looking at Table 3, there is a significant relationship between the classroom interaction that facilitates positive discipline and sense belonging ( $r(39) = .973, p = 0.000$ ). The feeling of being safe and welcome in school is significantly related to how the teachers manage classroom interaction. This result is supported by the early studies on classroom management by Brophy and Avertson (1976) that though variety of teaching behaviors affect effective teaching; classroom management appeared to be one of the most critical aspects as viewed by students.*

**Graphs.** Graphs focuses on how a change in one variable relates to another. Graphs use bars, lines, circles, and pictures in representing the data. In interpreting the graph, it is the same process in table. In choosing what type of graph to use, determine the specific purpose of the presentation. **Line Graph** illustrates trends and changes in data over time, **Bar Graph** illustrates comparisons of amounts and quantities, while **Pie Graph (Circle Graph)** displays the relationship of parts to a whole.

### Sample Interpretation of a Bar Graph

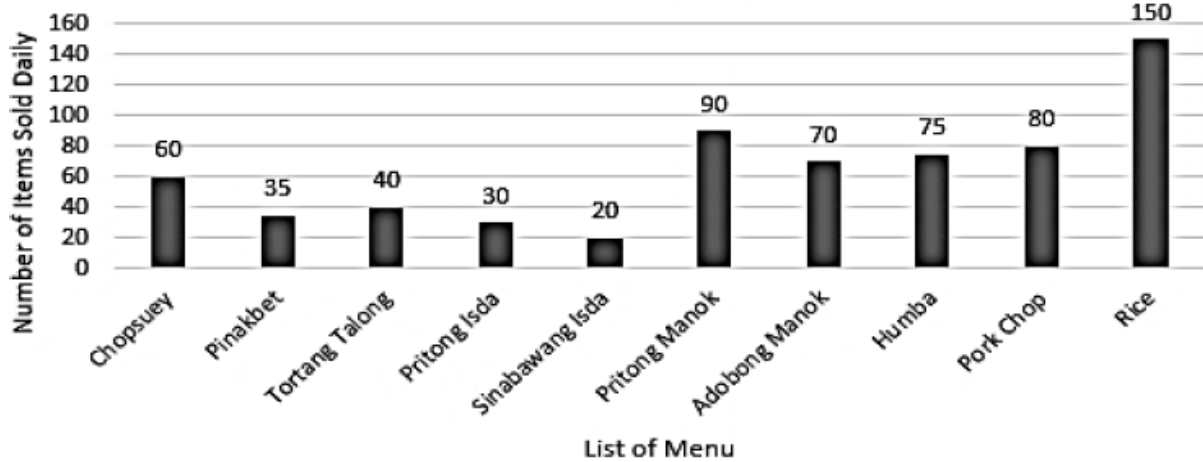


Figure 1. GRSHS-X Canteen Lunch Menu

### Interpretation:

Figure 1 shows the canteen lunch menu of GRSHS-X. The graph reveals that rice is highly patronized by the students and teachers with 150 cups sold daily. It can also be noted that pork and chicken menus have a good number of buyers (315 serve/pieces). Vegetable menus cannot be undervalued since several consumers (135 serve/pieces) also patronized the food. At the same time, seafood menus earn the last spot (50 serve/pieces sold). Generally, students and faculty of GRSHS-X preferred meat (pork and chicken) menus next to rice.

### Sample Interpretation of a Line Graph

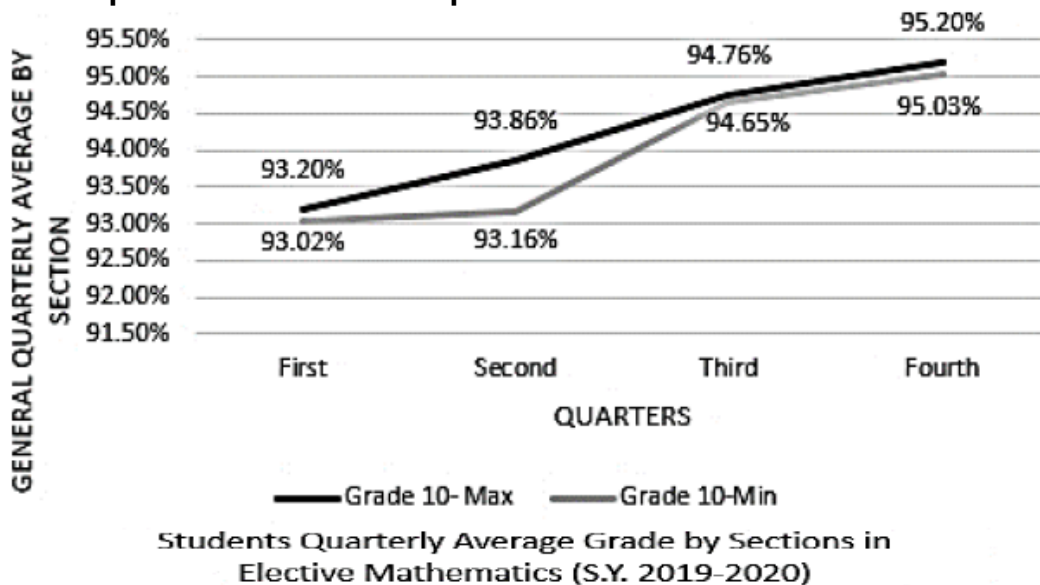


Figure 2. Students Quarterly Average Grade by Sections in Elective Mathematics (S.Y. 2019-2020)

**Interpretation:**

Figure 2 showed changes in the average grade of Elective Mathematics between Grade 10- Max and Grade 10-Min from the first quarter to the fourth quarter for S.Y. 2019-2020. From the graph, it is evident that both sections are performing well, but Grade 10-Max managed to maintain consistently its high performance than Grade 10-Min every quarter. During the second quarter, there is a noticeably far difference between the two sections. Overall, Grade 10-Max gained a better performance in Elective Mathematics than Grade 10-Min.

**Sample Interpretation of a Pie Graph**

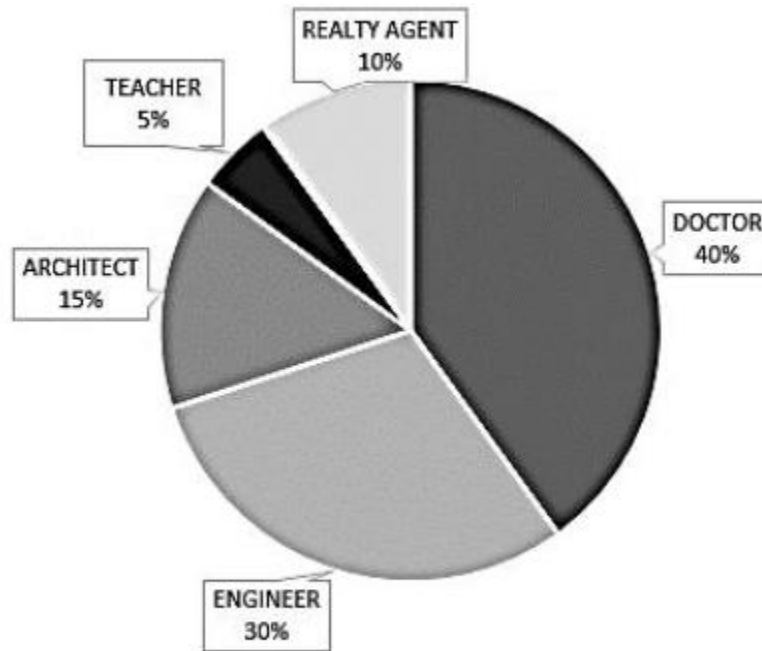


Figure 3. Dream Job of the Grade 7 Students from GRSHS-X

**Interpretation:**

Figure 3 showed the result of the survey conducted to Grade 7 students when asked about their dream job. From the graph, forty percent (40%) and thirty percent (30) of the participants wanted to become a doctor and an engineer, respectively with just thirty percent (30%) left for other professions. Only about five percent (5%) wanted to become a teacher. From the data, more than 70% of the Grade 7 students will likely pursue STEM strand courses when they graduate in high school.

## B. Exercises

### Exercise 1

**Directions:** Look at the latest figures gathered by the Philippine Statistics Authority from a conducted census. Try to answer the questions that follow on how you are going to interpret the data.



Source: <https://psa.gov.ph/>

1. How is the data presented?

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2. If you will be asked to present again the data, how will you arrange and label it? Use the space to draw your presentation of the data.

3. Write 3-5 sentences explanation of the data presented.

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## Exercise 2

**Test I. Directions:** Present the following data using a specific non-prose material according to its purpose. Write an interpretation in each presentation. Use a separate paper for your presentation.

According to the latest Facebook post of Department of Health-Philippines DOH COVID-19 CASE BULLETIN #106, dated June 28, 2020. Source: <https://bit.ly/3dMehug> ; <https://bit.ly/31nmgv2>

1. There are a total of 24, 137 Active Cases of COVID-19 in the Philippines (Data as of June 27, 2020) with the following breakdown:

Asymptomatic	- 898 persons
Mild	- 23, 090 persons
Severe	- 125 persons
Critical	- 24 persons

2. These are the data on hospital beds and mechanical ventilators for COVID-19 patients with the following breakdown:

Ward beds	- 3, 179 (41.15% occupied)
Isolation Beds	- 8,925 (37.93% occupied)
ICU Beds	- 1, 313 (36.63% occupied)
Ventilators	- 1, 883 (22.89% in use)



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

**Directions:** Interpret each figure given below. Follow the guidelines in interpreting the graph. Write a brief interpretation of the data on the space provided for each figure.

Graph 1. Line Graph of COVID-19 cases in the Philippines since March 15-June 27, 2020



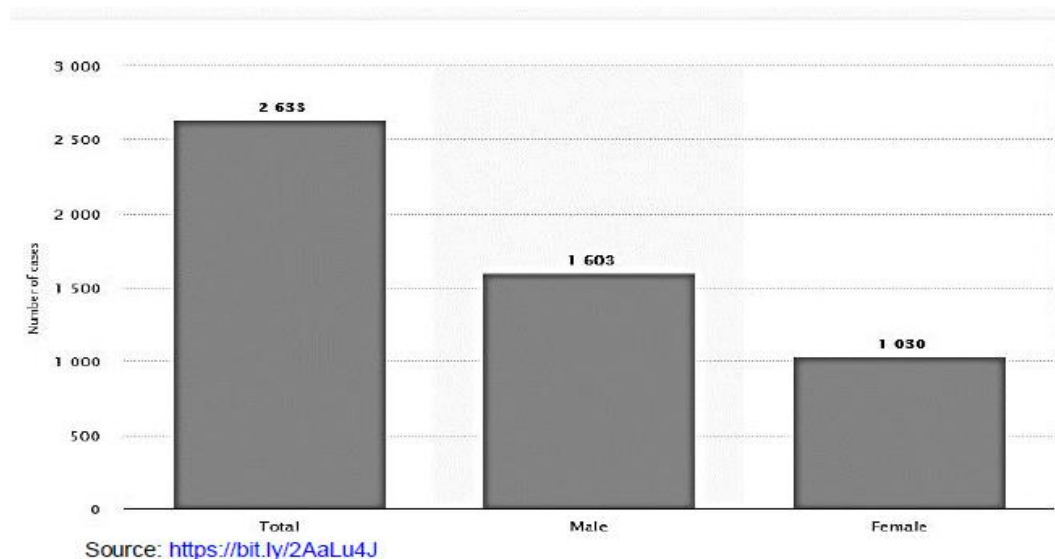
Interpretation:

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Graph 2: Number of COVID-19 cases in the Philippines as of April 2, 2020, by gender



Interpretation:

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**Table 1. Positive Discipline Practices of Teachers using Reinforcement.**

Constructs	Mean	SD	Verbal Descriptions
1. Coach positive social behaviors	3.71	.52	Always observed
2. Reward targeted positive behaviors with incentives	2.89	.84	Often observed
3. Use problem solving strategy	3.16	.89	Often observed
4. Prepare students for transitions with predictable routines	3.24	.71	Often observed
5. Give clear positive directions	3.34	.81	Always observed
6. Warn consequences for misbehavior	3.03	.75	Often observed
7. Use clear classroom discipline plane	3.29	.77	Always observed
8. Use emotion coaching	3.18	.69	Often observed
9. Use imaginary play/drama, stories to teach problem solving.	3.34	.63	Always observed
10. Set up problem scenarios to practice prosocial solutions.	3.37	.67	Always observed
<b>Overall</b>	<b>3.25</b>	<b>.44</b>	<b>Often observed</b>

Legend: 1.00-1.75 = Never Observed, 1.76-2.50 = Sometimes Observed,  
2.51-3.25 = Often Observed, 3.26-4.00 = Always Observed

Interpretation:

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#### D. Suggested Enrichment/Reinforcement Activity/ies

**Directions:** Perform the following task. You may write or encode your answer in short bond paper. Submit your output to your teacher for checking.

Since you are done gathering your data, it is now time to tally the obtained data on a separate sheet of paper. Decide on what type of data presentation you will use in your research study. Why will you use this specific graph? Once you have decided on what data presentation to use, it is time to create your interpretations. Follow the guidelines given.

References:

**Books**

Calmorin, Laurentina Palar and Melchor A. Calmorin. *Research Methods and Thesis Writing, 2<sup>nd</sup> Edition*. Manila, Philippines: Rex Book Store, Inc, 2007.

Faltado, Ruben E. III, Medardo B. Bombita, Helen B. Boholano, and Angeline M. Pogoy. *Practical Research 2: Quantitative Research*. Quezon City: Lorimar Publishing, 2016.

Ragma, Feljone. *Practical Research 2: Quantitative Research*. Intramuros Manila: Mindshapers Co., Inc., 2019.

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Esther, Baraceros. *Practical Research 2 e-Book*. Quezon City: Rex Bookstore, Inc, 2016.

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**GUIDE**

For the Teacher

For the Learner

For the Parent/Home Tutor