

# Practical Research 2

## Quarter 1 - Module 11

### Terms Used in Study



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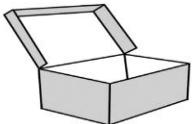
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## What I Need to Know

Good day Senior High School Students! In this lesson, you are going to learn how to:

Define terms used in study (CS\_RS12-1f-j-7)

In finding the answer to the research problem and in testing the hypothesis of the study, the important variables and technical terms should be defined operationally. Moreover, in this lesson, you will learn concepts and do practice activities that will help you do the following:

1. identify the different measurements of scale;
2. evaluate the terminologies to be used in the study; and
3. learn the concept of defining technical terms in the study.



## What I Know

Before you proceed to the different activities inside the module, answer first this **pre-assessment activity** below to find out what you already know about the topic of define terms used in study.

Encircle the variable or terminology horizontally or vertically that is usually used in the research.

A B S D A T A Y S I U B W A O P E T E Y U I D F R K H S D F R T H J K I  
L O P Y Y Y W F G H J K L Q W E R T Y U I O P A S D F G H J K L M N B  
N S V C X Z A Q T U O P J F C R T B H U N J I M K O P L Z A Q W S X C D  
D F V B G T Y H N R T G H Y V U J M J H G T K L J P O I U Y T R E W L K  
E H A F D S A M N B V C X Z M L P N K O P L M O K N I J B U H V Y G C I  
P F R R D Z E S Z A W Q Q R D I N A L V F E B G R N H T M J Y M K U E  
L L I H G F T N P J Y G D O U Y T F D C V B H G Y U I O P G H J K L F N R  
Y A A O P J H G F D S A J H U G T F D M N B V T Y U J K L O P I U Y D J  
F B B Y U I O P M N B V C X Z S D F G H J K L P O K J N M G T R F D E  
E S L A Q Z X S C A L E G B H N J M K L K U I O P M K H G F R T Y U N  
U H E V F D S A Z X C V N M K L O I U J H G J K L P F G T Y H K K J T G  
H F S J K U Y O O I J N H B G J K L P N B V F G D T Y U U G F T U K H B  
G F C F D O J U Y T F H R E S C A L E O S D T Y H E D F B H J K I O P Z  
X C V B N M S D F G H T R E W Q A Z X D R G B J U I Y J K L P F G H Y T  
E I N D E P E N D E N T R F V B H N U M K L O P N O M I N A L X Y Z



## Lesson 1

## Terms Used in Study



### What's In

Last time, you have studied about **formulation of conceptual framework**. This task will help you to recall your previous lesson regarding the process of generating a framework.

Please answer what is being ask given the topic “Effectiveness of Technology-Based Instructional Materials in Teaching Practical Research 2 of STEM Student at Marikina High School” SY 2019-20.

1. Identify the dependent, independent or intervening variables.

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2. What do you think is the best framework for the study. Justify your answer

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3. Based on your answer in question number 2, what do you think are the variables that you need to connect with other variable?

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In today’s lesson, you will learn about how to define terms used in the study. After generating the research topic in the previous module, this lesson will use your research topic as a tool in identifying what scales of measurement to be used and technical terminologies to be defined and evaluated. And eventually you will attempt to evaluate the concept of defining technical terms based on the elements that will be discussed in the succeeding part of this module.





## What's New

Defining operationally the variables, sub-variables, indicators and dimensions is not simply explaining its content or meaning on available dictionaries, book, or manuals of the terms. Variables and sub-variables or values in conceptual framework are defined, except very common variables like grade level, gender, school type where the values are indicated in the framework itself.

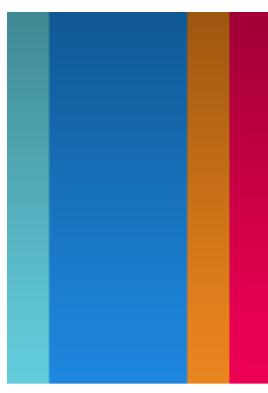
### Format:

The following terms are defined as used in the study: (followed by list of terms with conceptual and operational definitions, if appropriate).

- Conceptual definition – original author's qualitative definition.
- Terms defined operationally are variables measured using instruments, e.g., test or rating scale.
- Example: Millennials' attitude – total rating in a rating scale.

It also involves the dependent and independent variable on the technical terms to be defined, meaning the observable and measurable data levels or terminologies or components used of the present investigation. As researcher, you must be able to specify the component to be studied and how these will be observed. Operational definition, however, gives more clarity and measurability of the study.

There are four scales of measurement that can help in evaluating operationally the indicators or dimensions of the study, since operational definition has only limited insight of what a variable really is.



A variable varies and has values. The values of variables under study are the research data.

Are these variables? chair, shape of table, tweet, shirt style.

**Classifying Variables  
according to Scales of  
Measure**



### **1. Nominal**

- Variable with no quantitative value
- It has two or more categories but does not imply ordering of cases
- Can be easily identified

#### **Examples:**

##### A. Nature of business

- ✓ Agriculture
- ✓ Construction
- ✓ Trading

##### B. Religion

- ✓ Roman Catholic
- ✓ Muslim

### **2. Ordinal**

- Scales are mutually exclusive
- Data are arranged in order
- Two or more categories which can be ranked

#### **Examples:**

- ✓ Class Officers
- ✓ Teachers
- ✓ Honors Students

### **3. Interval**

- Difference between two values does have meaning
- Categories are ordered or ranked using quality of distance

#### **Examples:**

- ✓ Average monthly income
- ✓ Room temperature
- ✓

### **4. Ratio**

- Properties of interval variables and possesses true zero point.
- Data can be transformed

#### **Examples:**

- ✓ Height
- ✓ Age of Managers
- ✓ Net income per year

#### **Let's Analyze:**

On the space before the number, write **I** if the variable is Interval, **N** if Nominal, **O** if Ordinal and **R** if Ratio.

- \_\_\_\_ 1. Liquidity ratio
- \_\_\_\_ 2. Clothing such as Hat, shirt, shoes
- \_\_\_\_ 3. Year Level
- \_\_\_\_ 4. Height
- \_\_\_\_ 5. Scales in Centigrade Fahrenheit measuring temperature.





## What is It

Lifting definition of terms directly from the dictionary is a mistake in research. Terms should be operationally defined to give the readers a clear understanding of the research language employed in the study, meaning, the key acceptable operational definition is that the procedure is specified precisely enough to allow replication by others. Operational definition of a term pertains to the utilization of the concept in the study. Therefore, in order to conduct research and communicate meaningful with others, as a researcher you must define the terms and variables explicitly so that the reader will clearly understand. Operational definition specifies the observable and measurable characteristics of a term or a concept.

Examples:

1. Depression is defined conceptually as a state of being in which the individual exhibits initiative and has sad and gloomy thoughts. Hence, researcher can define depression as an effect.
2. In the study “Pedagogical Content Knowledge of Senior High School Teachers in the Division of Marikina”, the word “content” has a dictionary meaning of “materials in a container”. However, the operational definition of “content” pertains to the topics listed in the teaching curriculum.

### Activity: Define operationally the underline variables.

**Directions:** In the sample presented above, your task is to come up with operational definition for emotions, behavior and state of being for each of the following statement. Please provide an operational definition for the underlined words. While you are doing this, keep in mind that an operational definition is one that makes it clear how the researcher should go about measuring the process, activity, or thing.

1. I have found a way to study more efficiently.

Answer:

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2. Boys show more affection towards their father than towards their mother.

Answer:

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3. Overall, the sophomore girls are prettier than the freshman girls.

Answer:

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4. Does this drug help people overcome their tardiness?

Answer:

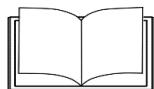
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5. High school athletes are not as smart as regular student.

Answer:

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## What's More

Answer the activities that will follow to practice your knowledge and skill about defining variable or sub variable

### Activity 1. VOCABULARY ENRICHMENT

Below are the terminologies used by SHS Student for their research, give the definitions of the following using *Operational definition* and for next column is in the *Dictionary definition*.

Terms	Operational Definition	Dictionary Definition
Learning		
Intelligence		
Anxiety		

### Activity 2. MOVIE CLIP – How to write definitions of terms

<https://www.youtube.com/watch?v=wqHpbw5TCPk>

Open the given site from you tube, watch it and answer the following questions. This will add information regarding our lessons.

1. What is the other term for “Definition of Terms”?

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2. How important are the variables in your research?

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3. Why is definition of terms called Operational Definition?

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### **Activity 3. Citing your idea**

In the space provided, write your own idea about the difference between operational and conceptual definition.

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## **What I Have Learned**

In this lesson, we focused on defining terms used in study and now that you have finished the lesson, you may have that specifically:

- It is important to consider the variables, since the research focus on that and reflected on the topic.
- Operational definition provides precision by defining variables in terms of specific operations.
- Definition of terms is also called operational definitions as it reflects how the word of variables was used in the research.
- The scale or level of measurements has an impact that can help in defining operationally the variables and affect the kind of study that will be used by the researcher.
- Operational definitions by themselves, are not explanations.
- Operational definitions guarantee the researcher, and used to remove ambiguity and ensure all data collectors have the same meaning.



## **What I Can Do**

Apply what you have learned about defining terms used in study by doing the activity below.

Write your concise learning about the following:

1. Operational definition

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2. Nominal Scale

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3. Ordinal Scale

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4. Interval Scale

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5. Conceptual definition

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## Assessment

Showcase the knowledge and skills you have learned in this lesson by answering the assessment activity.

### **Assessment Activity: Challenging task**

Please give at least five examples for each level or scales of measurements.  
Put your answer on the box.

<b>Level of Measurements</b>	<b>Examples</b>
Nominal Label or category	
Ordinal Rank order	



Interval Rank order + Equal Intervals	
Ratio Rank order + Equal Intervals + Absolute zero	



## Additional Activities

### Activity: Learning enrichment – Multiple choice

Encircle the best answer that agree on the given questions.

1. The operational definition process in measuring the variables.  
A. True              B. False              C. Maybe              D. Sometimes
  
2. All operational definitions require clear instructions and in language and measurable that research participants can clearly understand.  
A. True              B. False              C. Maybe              D. Sometimes
  
3. Operational definitions are needed in experimental research because experiments are always conducted in the laboratory.  
A. True              B. False              C. Maybe              D. Sometimes
  
4. Operational definitions:  
A. Are vital only in correlational research.  
B. Should always follow the guidelines outlined in the APA publication manual.  
C. Determine the meaning of a variable in a particular study.  
D. Are developed before beginning the specification of the construct.



5. You are developing the operational definition of anxiety that you will use in a survey of SHS students preparing for exams. Which of the following would **not** be true to your study?
- Telephone administration would be best because SHS students spend much time in their gadgets.
  - Face to face administration would permit you to explain your study and reassure participants about any concerns over who might see the results.
  - Mail administration would be very cost effective because you could use campus mail.
  - Students might be concerned about computer administration because e-mail and computer networks are not completely private.



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