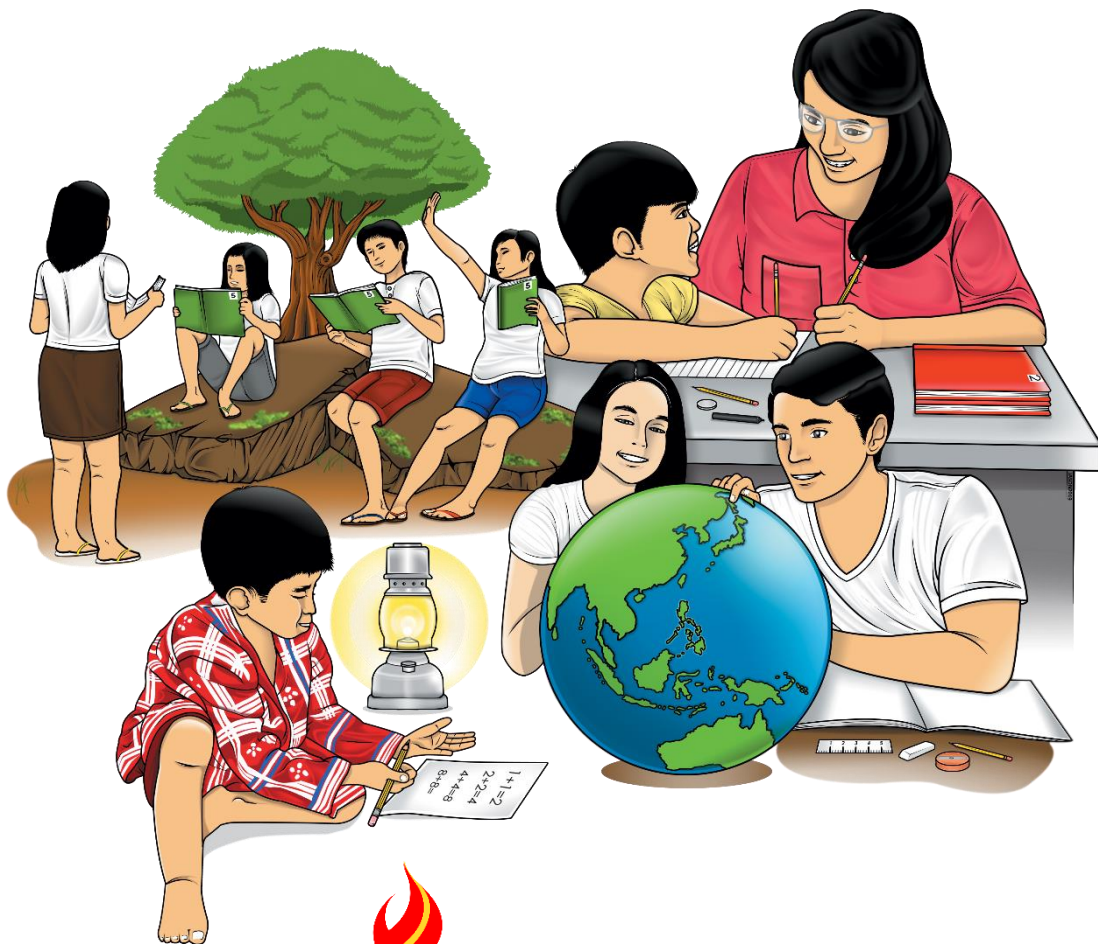


Senior High School

Practical Research 2

Quarter 1 - Module 3

Conceptual Framework and Review of Related Literature



Practical Research 2- Grade 12
Alternative Delivery Mode
Quarter 1 - Module 3: Conceptual Framework and Review of Related Literature
First Edition, 2020

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Senior High School

Practical Research 2

Quarter 3- Module 3

Conceptual Framework and Review of Related Literature

Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

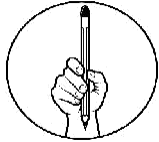
Thank you.



What I Need to Know

At the end of this module, you should be able to:

1. illustrate and explain the research framework **(CS_RS12-If-j-6)**;
2. define terms used in the study **(CS_RS12-If-j-7)**;
3. list research hypothesis (if appropriate) **(CS_RS12-If-j-8)** and
4. present a written review of related literature and conceptual framework **(CS_RS12-If-j-9)**.



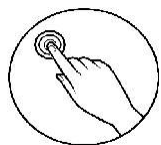
What I Know

Directions: Read and analyze the statements below. Encircle the letter of the correct answer.

1. Which of the following frameworks refers to the actual ideas, beliefs, and tentative theories that specifically support the study?
A. methodological framework C. conceptual framework
B. chronological framework D. theoretical framework
2. A research variable that is considered as the presumed effect of the study.
A. independent variable C. dependent variable
B. moderating variable D. control variable
3. Mediating variable is also called as:
A. independent variable C. moderating variable
B. intervening variable D. dependent variable
4. The conceptual framework wherein there is an intervention being made by the researcher is:
A. IV-DV C. ODV
B. IPO D. PPE
5. One of the two types of defining the terms in research wherein you need to define according to how the term is being used in the study is:
A. methodological C. operational
B. theoretical D. conceptual
6. Which among the following is a guideline/characteristic of a good definition of terms?
A. the term should be in parenthesis C. direct to the point
B. underlined the entire meaning D. not indented
7. The word is defined according to its meaning from the dictionary.
A. operational C. historical
B. conceptual D. technical

8. Which of the following hypotheses shows no relationship between variables?
- A. alternative hypothesis
 - B. logical hypothesis
 - C. complex hypothesis
 - D. null hypothesis
9. Which of the following hypotheses expresses the connection between two or more independent variables and two or more dependent variables?
- A. alternative hypothesis
 - B. logical hypothesis
 - C. complex hypothesis
 - D. null hypothesis
10. "There is no difference in height between boys and girls who are taking vitamins every day." This is an example of:
- A. non-directional hypothesis
 - B. directional hypothesis
 - C. empirical hypothesis
 - D. simple hypothesis
11. It refers to the assumption about the relationship between the variables.
- A. guide questions
 - B. hypothesis
 - C. framework
 - D. literature
12. A literature review which introduces several theories or concepts that focus on a specific topic.
- A. methodological review
 - B. integrative review
 - C. theoretical review
 - D. context review
13. It is a part of the literature review which summarizes and synthesizes the different ideas from the different sources.
- A. recommendation
 - B. main body
 - C. conclusion
 - D. introduction
14. The chosen edited summaries by journalists for the general readers.
- A. scholarly journal
 - B. periodicals
 - C. dissertation
 - D. books
15. It is a reference done within the text/paragraph in the paper.
- A. list of references
 - B. in-text citation
 - C. bibliography
 - D. source

RESEARCH FRAMEWORK



What I Need to Know

As you begin writing your research project, you must consider the framework that is suitable for your study. What is a research framework? A **research framework** illustrates the structure or blueprint of the **research plan** and helps the researcher formulate relevant research questions.

The framework consists of the key concepts and assumes relationships of the research project. It is normally used as a guide for researchers so that they are more focused on the scope of their studies. It can be presented using visual (diagrams, chart, etc.) and narrative (paragraph stating the concepts and relationships of the study) forms.

Theoretical and Conceptual Framework

The types of research frameworks are classified as the theoretical and conceptual frameworks. A **theoretical framework** is commonly used for studies that anchor on time-tested theories that relate the findings of the investigation to the underpinning relevant theory of knowledge. At the same time, a **conceptual framework** refers to the actual ideas, beliefs, and tentative theories that specifically support the study. It is primarily a conception or model of what is out there that the researcher plans to study.

Similarities of the Theoretical and Conceptual Framework

The following are the similar characteristics of Theoretical and Conceptual Framework:

1. Provide an overall view of the research study;
2. Anchor a theory that supports the study;
3. Guide in developing relevant research questions/objectives;
4. Help justify assumptions/hypothesis;
5. Aid in choosing appropriate methodology;
6. Help in gathering and interpreting data and
7. Guide in identifying possible threats to validity.

A Summary of the Differences of Theoretical and Conceptual Framework

	Theoretical framework	Conceptual framework
Content of Discussion	<ul style="list-style-type: none"> • Focus on specific theory used already in the field. 	<ul style="list-style-type: none"> • Focus on concepts related to your study
Range	<ul style="list-style-type: none"> • Broader in sense • Applicable in different studies 	<ul style="list-style-type: none"> • Narrower/focused • Directly related to a specific study
Theories Presented	<ul style="list-style-type: none"> • Presents one or more theory at a time and specifically related to the current study 	<ul style="list-style-type: none"> • May synthesize one or more theories or concept related to current study
Time Frame	<ul style="list-style-type: none"> • Usually, theory is established before the study 	<ul style="list-style-type: none"> • A working concept during the time of study.

Guidelines and strategies in choosing and developing a Research Framework

In deciding on what research framework, you are going to use in your study, you have to take into consideration the following vital information about the theoretical and conceptual framework.

Theoretical framework	Conceptual framework
<ul style="list-style-type: none">• Revisit the information given by your related literature and identify if there are potential theories or knowledge that may be use or anchored to the possible outcome of your study.• With the use of these information, you can now create a plan or blueprint for your research study.• You also need to comprehend and consider the variables that will be significant in your study and their relationship with another.	<ul style="list-style-type: none">• Refer to your research questions or objectives to identify the essential themes in your study. Look for additional theories that involve the same principle and see how they relate to one another. Make a concept map of your conceptual framework, utilizing the existing theories as a reference. If there are topics which are not included in the theories you have chosen and you know that it is essential to your study, you can include it.• You have to make a written explanation on the concepts that are being incorporated and their impact to one another after you have made the first draft of your conceptual framework. Moreover, you have to revisit your research questions and conceptual framework if they are aligned.• It is important to remember that developing a conceptual framework is a process. This means that as you study more material and research more theories, it may still be refined or updated. The research hypothesis may be stated at the end of the conceptual framework in some situations.

Concept Map

A concept map is a visual representation of information that helps show the relationship between ideas. Concept maps begin with the main topic and then branch out into sub-topics, reflecting the connection of all the elements in the study. It can also provide and organize new ideas.

It is composed of different figures such as lines, circles, boxes, and other marks or symbols which represent the elements of your research. It can take the form of charts, graphic organizers, tables, flowcharts, Venn Diagrams, timelines, or T-charts. Concept map arranges related ideas in a hierarchy. You start broad, and the sub-topics will get more and more specific. It also helps you in formulating a specific topic from the general or the main idea with significant connections of information. In other words, understanding the big picture makes the details more significant and easier to comprehend.

Concept maps are very useful for researchers and readers who understand better visually. With the proper connection of lines and linking arrows to shapes and other symbols representing your concepts about the research, the readers can visualize a comprehensive picture of your study.

However, in the concept map, you are not yet actually researching your study. It is developing or creating your plan or blueprint so that you will be guided on the flow and direction of your research study. And that includes your research questions, variables, and methodology. It means that you are just gathering and soliciting ideas on what you could learn about your chosen topic.

Before creating your conceptual framework, you have to understand first the different variables of your study. Although these were already discussed in the previous module for the purpose of utilizing it in your framework, an in-depth concept is a need.

The **independent variable** is the “presumed cause” of the research problem. It is the reason for any “change” or difference in a dependent variable. It can be purposely manipulated by the researcher, depending on the focus of the study. It maybe can cause, influence, or affect the result or outcome of the study. It is also called as the experimental, treatment, antecedent, or predictor variable. Moreover, it refers to the variable that is stable and unaffected by the other variables you are trying to measure.

The **dependent variable** is the “presumed effect” of the research problem. It is usually the problem itself or the element that is being questioned. This variable is altered as a result of experimental manipulation of the independent variable or variables. It is also called as the criterion, effect, response, or outcome variable which captures the interest of the researcher and requires analysis, interpretation, and implication of the findings of the study. The variable that depends on other factors that are measured and are affected or influenced by the independent variable.

The **moderating variable** is an independent variable which influences the direction and the strength of the connection between independent and dependent variables. The independent variable interacts with the moderator variable, which makes the relationship of the independent and dependent variable stronger or weaker. It alters the effect that an independent variable has on a dependent variable base on its value. The moderator thus influences the effective component of the cause-effect relationship between the two variables. This is also called as the interaction effect.

Mediating variable or **Intervening variable** is an element that exists between the independent to the dependent variable. A mediator (or mediating) variable is an integral part of the cause-effect relationship and helps us to understand the effects of the independent variable on the dependent variable. It is a variable that describes the effect and influence of the relationship between the variables and what is controlling that relationship. This is also called as *correlated* or *mediator* variables

The **control variable** is a special type of independent variable that can influence the dependent variable. It takes an active role in quantitative studies. Statistical procedures are used to control this variable. It is useful to integrate the control variables into your research study, but it is not the main focus.

It has somehow an effect on the dependent variable and an extension of the independent variable. However, if you omit the control variable from your study, the findings would be less accurate. It is mostly relevant if your study is about to prove a cause-effect relationship by undertaking statistical analysis.

The Input-Process-Output Model

The Input-Process-Output Model (IPO) is a conceptual paradigm which indicates the inputs, required process, and the output. This approach is seated on the premise of acquiring essential information by converting inputs into outputs through the required processing steps in obtaining the result. The IPO Model is also referred to as a functional model that is usually used in action research where an intervention or solution is necessary to solve the identified problem.

The **Input** is usually the independent variable of the study. Meanwhile, the **Process** is the intervention or solution consist of the instruments and analyses used to acquire the result. Lastly, the **Output** is the findings or outcome of the interventions being made to solve the identified problem.

Common Example of Conceptual Framework

As you read on different research studies, the common conceptual frameworks used of most studies are the independent and dependent variable model and the input, process, and output model.

A. Independent Variable - Dependent Variable Model (IV-DV)

For example:

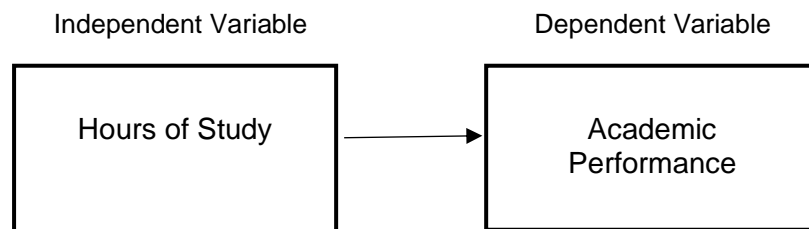


Figure 1. The schematic diagram of the Independent and Dependent Variables of the Study.

This conceptual framework shows the independent and dependent variables of the study. It is presumed that the more number of hours a student prepares for the exam, the higher would be the expected academic performance.

B. The Input – Process - Output Model (IPO)

For example:

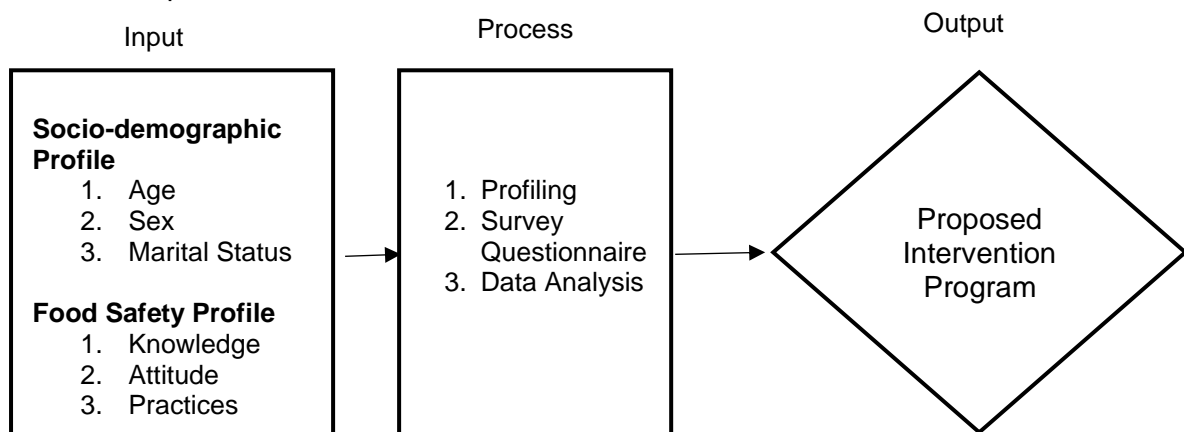


Figure 2. The schematic diagram of the Input, Process, and Output Approach of the Study.

This conceptual framework shows the input, process, and output approach of the study. The input is the independent variable, which includes the socio-demographic and food safety profile of the respondents. The process includes the tools and analyses in gathering the data, while the output is the outcome based on the results of the study.

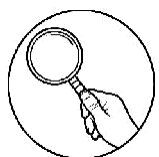


What's New

Activity 1: Who is YTC?

Identify the following statements whether it is true to both theoretical and conceptual framework or not. Write (Y) for "yes" on the space at the left side of the statement if it is true to both while (T) for "theoretical" and "C" if it is conceptual.

Answer	Statement
	Directly related to a specific study.
	Overall view of the research study.
	Considered as the blueprint of the research.
	General frame of reference used in conducting the research.
	Researcher's idea of how the study will be explored.
	Anchor in a particular theory existing already in the field.
	Generalized in scope.
	Guide in choosing an appropriate methodology.
	Can be presented using both visual and narrative form.
	Enable the readers to obtain a general understanding of the research study.
	Considers the relevant theory underpinning the knowledge base of the phenomenon.
	It may synthesize one more theory.
	Can monitor possible threats to the validity of the study.
	It is more focused and narrower in scope.
	Develop only during the planning stage of the study.

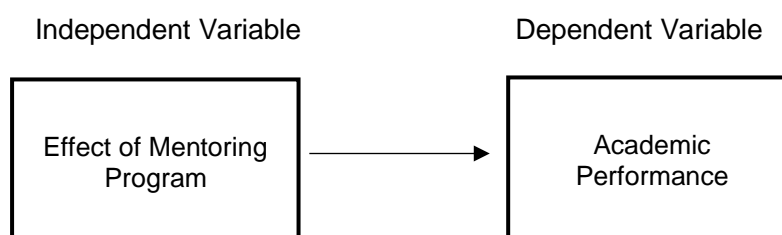


What Is It

Example 1

Research Title: Effect of Mentoring Program on Academic Performance among Senior High School Students

Conceptual Paradigm:

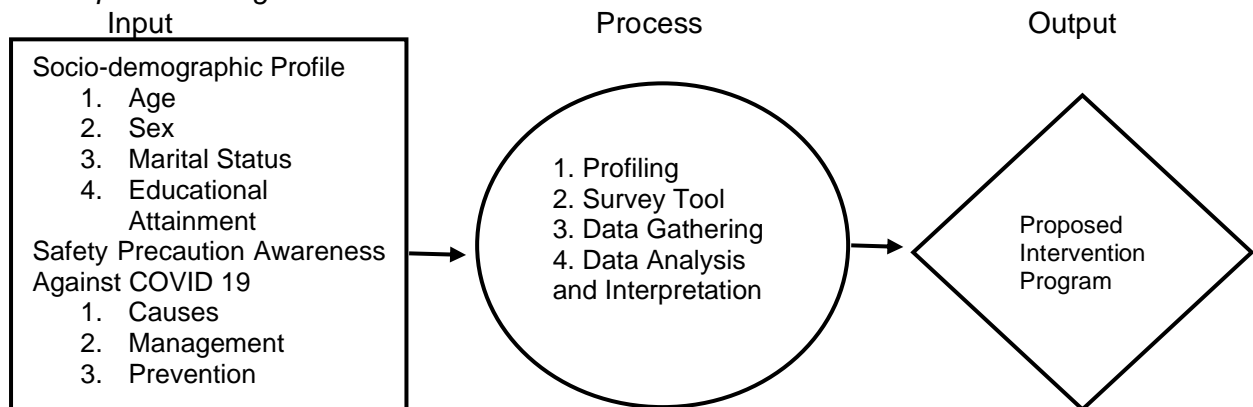


In this conceptual framework, it is expected that the students who underwent the mentoring program will have better academic performance than those who did not.

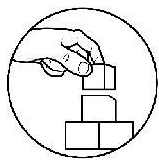
Example 2

Research Title: Awareness on the Safety Precaution against COVID 19 among the Senior Citizens who are living in the Home Care Facilities: Basis for a Proposed Intervention Program

Conceptual Paradigm:



In this conceptual framework, the input is the baseline information about the respondents. Necessary steps and procedures are to be implemented to obtain the vital data as a result and findings of the research. Furthermore, these findings will be the basis for a proposed intervention program as the output of the study.

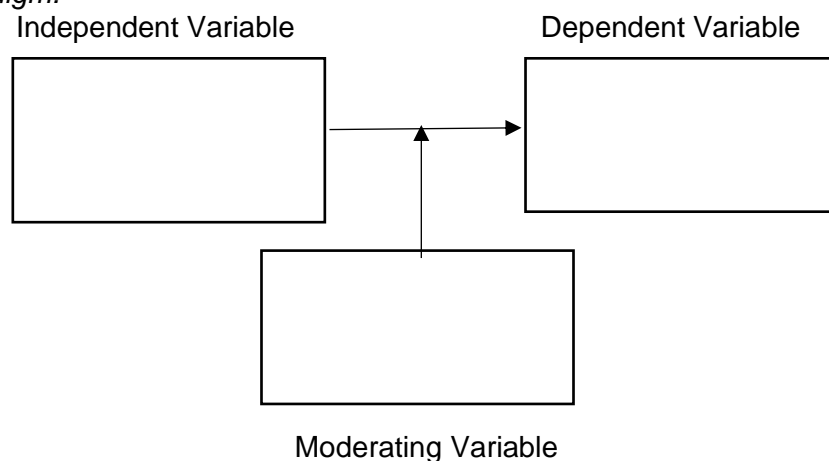


What's More

After thorough reading on the guidelines on how to make your conceptual framework, kindly answer the following activities. You are given the title of the research study and the variables in the framework. Designate which box or variable you are going to place the different elements in the study. Make sure to identify only the factors that can affect the result of the study. (*Note that not all of the elements are applicable.*)

Activity 2: Spot the Variable (Part 1)

Research Title: Medical Intervention and the Number of Patients Recovering from Pneumonia
Conceptual Paradigm:



Elements/Factors

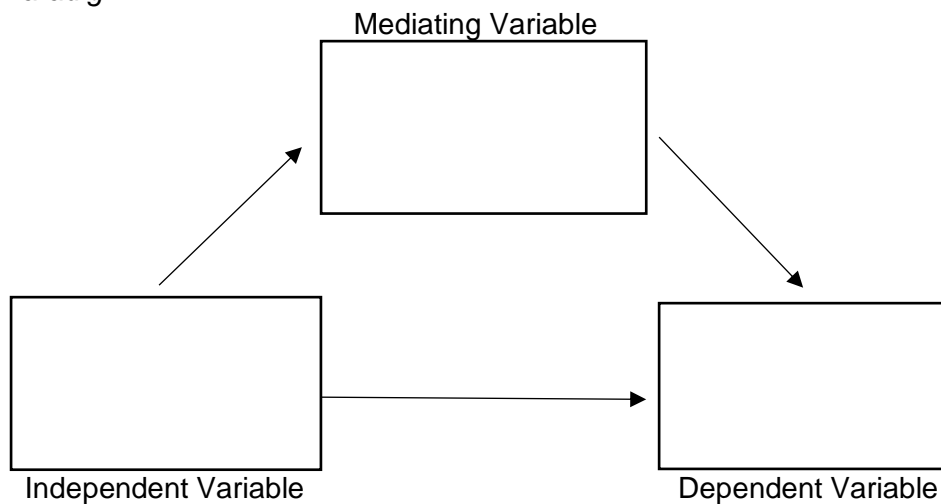
- 1. Health Care Facilities
- 2. Work Experience of the Medical Team
- 3. Medical intervention
- 4. Social Status of the Patient
- 5. Number of Patients Recovered from Pneumonia
- 6. Immune System of the Patient
- 7. Patient’s Employment

In this conceptual framework, there are assumed moderating variables that are taken into consideration that somehow influence the relationship between the independent and the dependent variable. They can affect the strength of the connection of the variables.

Activity 3: Spot the Variable (Part 2)

Research Title: Effects of the Social Responsibility of a Corporation to its Organizational Performance

Conceptual Paradigm:



Elements/Factors

- 1. Organizational Performance
- 2. Total Number of Employees
- 3. Clients’ Loyalty
- 4. Corporate Social Responsibility
- 5. Employee’s Dedication
- 6. Administrative Commitment
- 7. Corporate Business Location
- 8. Type of Business

In this conceptual framework, there are assumed moderating variables that are taken into consideration that somehow can affect the relationship of the independent variable to the dependent variable. Hence, they would potentially influence the dependent variable.

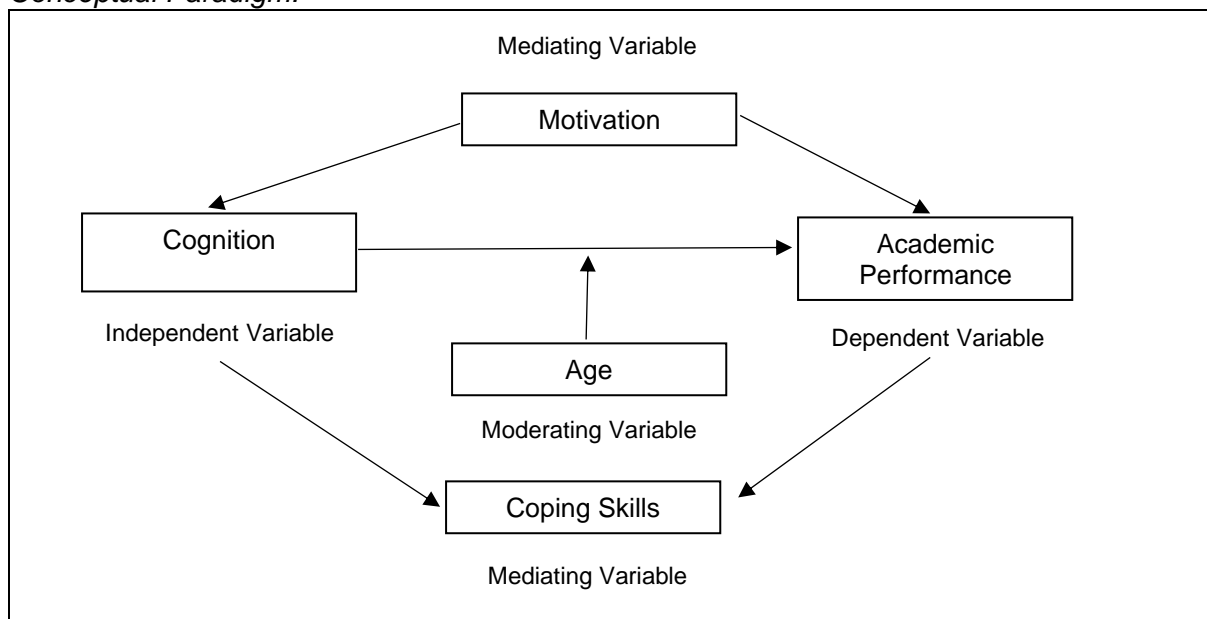


What I Have Learned

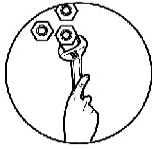
Activity 4: Name that Title

Direction: Base on the knowledge and understanding that you have gained from the previous examples and activities, you have now captured the idea on how to make a conceptual framework from the research title. With this, you are now given the framework, and you need to formulate the research title according to the elements and factors that are present in the variables. Give three (3) possible research titles that would reflect on the given variables. Write your answers in the box provided below.

Conceptual Paradigm:



Answers: Write three (3) possible research titles.



What I Can Do

Task 1: Build a Framework

Create an initial research framework for your research study. Consider the relationship between the concepts and variables in your research. Then, draw a concept map representing this relationship visually. Use the space below for your answer, or you may use a separate paper if the space provided is not enough.

Task 2: Say Something

After finishing your map, describe it in no more than ten (10) sentences. Use the space below for your answer, or you may use a separate paper if the space provided is not enough.



Additional Activity

Direction: After you submit your research framework and once it is corrected in accordance with the guidelines given, you may start incorporating your research framework into your research manuscript.

DEFINITION OF TERMS



What I Need to Know

Usually, in writing a research paper, the definition of terms is included. It helps in simplifying some of the technical terms which are vital in the understanding of the research project. Although this part of the paper is optional, it is advantageous for the reader to include this to prevent the ambiguous meaning of terms that might otherwise be interpreted in different ways, causing confusion. It can also enhance comprehension of important key terms.

Definition of Terms is also called as **Operational Definition of Variables (ODV)**. The word operational refers to “how the word/term was used in the study. At the same time, the variables are the elements essential to the study.

There are two ways in defining the terms, the conceptual and operational definition. The **conceptual definition** is the meaning of the term that is based on how it is defined in the dictionary or encyclopedia. **Operational definition**, on the other hand, is the meaning of the term based on how it was used in the study.

Generally, there are two cases in which important terms need to be defined; first, if the term is not common or widely known, and second, if the term has a specific or unique meaning in the context of the study.

Benefits of Having Definition of Terms

1. It is a useful place to include technical terms in the topic of the research questions.
2. It can clarify the definition of term, especially if it has a different meaning. Define the term according to how it was used in the study.
3. It makes it easier to revisit or check the meaning of a term instead of trying to locate it through the paper.
4. Helps to ensure that the reader can understand the technical terminologies and jargons while reading the paper.

Guidelines on How to Write the Definition of Terms

1. Write a brief introductory statement. It must shortly describe the content of the definition of terms.
2. List/write the words/terms (which are technical) that would be included (make sure that the variables and key terms found in the title are included).
3. The terms should be arranged alphabetically.
4. Indention should be applied to each term.
5. The term should be followed with a period.
6. It can be underlined or not.
7. It can be bold and italic or not.
8. It does not have to be lengthy (direct to the point).

9. Acronym/initials should be defined clearly. Complete name should be written first, followed by the acronym/initials in open-close parenthesis, then the definition/meaning.
10. Do not overflow with technical terms (only those relevant and significant to the study).
11. Keep the definition brief and basic. You will elaborate on it more in the body of your paper.

Note: Refer also to your institutional format (some institutions have different formats).

Examples of Writing the Definition of Terms

1. Conceptual definition

Face to face. It is when the people involved are being close together and looking directly at each other (<https://bit.ly/2L2luML>).

Module. It is any in a series of standardized units used together, such as an educational unit that covers a single subject or topic (<https://bit.ly/380jv5X>).

Online. It is controlled by or connected to another computer or network (<https://bit.ly/3aUatJA>).

2. Operational definition

Face to face. This refers to one of the modalities used in learning delivery in which the teacher and students should be in the same place or setting, such as the classroom.

Module. Teaching modules are guides of the topics and lessons of a specific subject given to students under the modular method. It is also an alternative distance learning delivery in which students are required to read and answer the activities specified in the module.

Online. It refers to another form of distance learning wherein the teacher and students will have their lessons using internet connectivity.



What's New

Activity 1: Define Me

- A. Define at least five (5) key terms in your research study according to a conceptual definition. Write your answers to the space provided or on a separate paper.

1. _____
2. _____
3. _____
4. _____

5. _____

B. Using the terms in your conceptual definition, define them according to an operational definition. Write your answers to the space provided or on a separate paper.

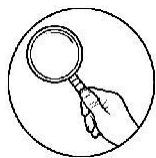
1. _____

2. _____

3. _____

4. _____

5. _____



What Is It

Example 1

Compose a brief introductory statement written before the list of terms to be defined.

1. For a better understanding of this study, the following terms are defined in the context of this research.
2. The following terms are defined as used in the study.
3. To comprehend the study better, the following terms are operationally defined.

Example 2

source: <https://bit.ly/3eln72E>

Write the meaning of the key terms, both conceptually and operationally.

1. Student. A person who is enrolled or attends classes at school, college, or university. (*This is defined conceptually*).

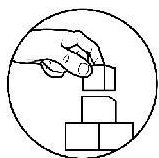
Student. Refers to a person who is enrolled and attends a Bachelor of Science in Pharmacy of this university. (*This is defined operationally*).

2. Undergraduate. A student at a college or university who has not yet earned a bachelor's or equivalent degree. (*This is defined conceptually*).

Undergraduate. Refers to a student who is enrolled in the course of Bachelor of Science in Pharmacy in this university who has not yet received the degree. (*This is defined operationally*).

3. Graduate. A person who has completed a course of study or training, especially a person who has been awarded an undergraduate academic degree. (*This is defined conceptually*).

Graduate. Refers to a student who has completed the degree of Bachelor of Science in Pharmacy of this university. (*This is defined operationally*).



What's More

Activity 2: My Order Please

Arrange the following words/terms according to how it should be ordered. Note the number of sequences on the space provided at the left side of the terms.

Order	Defined Terms
	Response rate. In survey research, the actual percentage of questionnaires completed and returned.
	Accuracy. A term used in survey research to refer to the match between the target population and the sample.
	Precision. In survey research, the tightness of the confidence limits.
	Control group. A group in an experiment that receives not treatment to compare the treated group against a norm.
	Data. Recorded observations, usually in numeric or textual form
	Hypothesis. A tentative explanation based on theory to predict a causal relationship between variables.
	Reliability. The extent to which a measure, procedure or instrument yields the same result on repeated trials.
	Random sampling. The process used in research to draw a sample of a population strictly by chance, yielding no discernible pattern beyond chance.
	Parameter. A coefficient or value for the population that corresponds to a particular statistic from a sample and is often inferred from the sample.
	Synchronic reliability. The similarity of observations within the same time frame; it is not about the similarity of things observed.

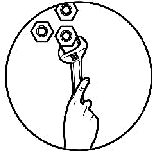


What I Have Learned

Activity 3: Spot Me Wrong

Read the following definition of terms and **identify and encircle the errors** on how it was written. Rewrite the correct terms and its definition to the space provided.

Definition of Terms	Answer
Mean. The average score within a distribution.	
Median = The center score in a distribution.	
mode. The most frequent score in a distribution.	
RANGE. The difference between the highest and lowest scores in a distribution.	
ANOVA. A method of statistical analysis used to determine differences among the means of two groups on a variables.	



What I Can Do

Task 1: Define Me Operationally

Based on your research title and research framework, organize your definition of terms. Write the complete definition of terms of your research study operationally as directed by the guidelines given to you in this module. Note that there are other ways or formats of writing your definition of terms depending on the guidelines of your institution. You may use a separate paper if the space provided is not enough.



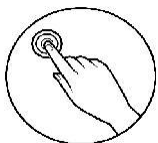
Additional Activity

Direction: After you submit your definition of terms and once it is corrected in accordance with the guidelines given, you may start incorporating them into your research manuscript.

Lesson

3

RESEARCH HYPOTHESIS



What I Need to Know

When you are finished identifying your statement of the problem or research questions/objectives, you may now start formulating the hypothesis of your study. What is hypothesis?

A **Hypothesis** is a tentative statement about the relationship between two or more variables. It is a specific and testable prediction on what you expect to happen with the variables in your study. Usually, it proposes a possible relationship between the independent

variable (what the researcher changes) and the dependent variable (what the research measures). It is also described as an “educated guess” of what possibly the result would be of your research, which should be supported on existing theories and knowledge. Furthermore, the hypothesis states a tentative answer to your research question that can be tested by further investigation in which you can support or refute it through scientific research methods such as data collection and statistical analysis. It is the central concept of any investigation that converts research questions into predictions and incorporates elements such as variables, population, and the relationship between factors.

As a researcher, you must determine whether your hypothesis is accepted or not based on the findings and outcome of your research study. Not all studies have a hypothesis while some studies have several hypotheses.

Types of Research Hypothesis

1. Simple Hypothesis

A simple hypothesis is a prediction of the relationship between two variables, the independent variable and the dependent variable. It shows a connection between one independent variable and a single dependent variable (<https://bit.ly/37UCE9q>).

Ex: The higher the poverty rate in society (*one independent variable*), the higher the number would be the out of school youth (*one dependent variable*).

2. Complex hypothesis

The complex hypothesis reflects the relationship between the independent variable and the dependent variable. It expresses a connection between two or more independent variables and two or more dependent variables (<https://bit.ly/37UCE9q>).

Ex: Eating more vegetables and fresh fruits (*independent variables*) leads to boost immune system and enhance blood circulation and digestion (*dependent variables*).

3. Empirical Hypothesis

An empirical hypothesis is also called as the “working hypothesis.” It is presumed to explain certain facts and relationships of phenomena. It comes to life when a theory is being put to the test, using observation and experiment. From the name itself “working,” it would mean that it can be changed or replace anytime as soon as it is no longer supported or accepted base on the observation and experimentation being done. It is going through some trial and error and perhaps changing around those independent variables (<https://bit.ly/37UCE9q>).

Ex: Plants watered everyday grow faster than plants watered once a week. (*Here, trial and error are leading to a series of findings*).

4. Logical hypothesis

Logical hypothesis expresses explanation with limited evidence that can be verified logically. It reflects a relationship of the variables which are anchored based on logical phenomena. Sometimes, a logical hypothesis can be turned into an empirical hypothesis in which you have to test your theories and postulates (<https://bit.ly/37UCE9q>).

Ex: Tomato plants bear fruit faster in Earth than in Moon. (*Until we are can test the soil and plant growth in Moon's ground, the evidence for this claim will be limited, and the hypothesis will only remain logical*).

5. Statistical hypothesis

A statistical hypothesis is an analysis of a portion of a population. It can be verified statistically. The variables in a statistical hypothesis can be transformed into quantifiable sub-variable to assess it statistically (<https://bit.ly/37UCE9g>).

Ex: If your research is about the psychosocial development of K-3 pupils of the private and public schools in the city, you would want to examine every single K-3 pupil in the city. It is not practical. Therefore, you would conduct your research using a statistical hypothesis or a sample of the K-3 pupil population.

6. Null hypothesis

The null hypothesis is denoted with the symbol H_0 . It exists when you consider that there is no relationship between the independent and dependent variables or that there is an insufficient amount of information to claim a scientific hypothesis (McLeod, 2020).

Ex: There is no significant change in my health, whether I exercise every day or not.

7. Alternative hypothesis

An alternative hypothesis is denoted with the symbol (H_a). It is an alternate statement expressed to be tested in order to generate the desired output when the empirical or working hypothesis is not accepted. In an attempt to disprove a null hypothesis, you tend to seek an alternative hypothesis (McLeod, 2020).

Ex: My health improves during the times when I sleep 8 hours a day than sleeping for 4 hours only.

A Hypothesis can be classified as Directional and Non-directional Hypothesis

Directional Hypothesis

The directional hypothesis relates the relationship between the variables and can also predict its nature. It illustrates the direct association of the impact of the independent variable with the dependent variable, whether it is positively or negatively affected. The direction of the statement should be clear and justified according to the findings of the study. Since the hypothesis is gearing to one specific direction it is investigated through a one-tailed test (McLeod, 2020).

Ex: Students who are eating nutritious food have higher grades than students not having a proper meal. (*This shows that there is an effect between the grades and nutritious food and the direction of effect is clear that the students got a higher grade*).

Non-directional Hypothesis

A non-directional hypothesis is used when there is no principle involved. It is a premise that a relationship exists between two variables. However, the direction of the effect is not specifically determined. It is a statement that reflects the association of the independent variable to the dependent variable without predicting the exact nature of the direction of the relationship. This relationship is not specified as negative or positive. The hypothesis, in this case, is investigated through a two-tailed test (McLeod, 2020).

Ex: There is a significant difference in the average grades between those students that have proper nutritious meal and those that do not have proper meals. (*This depicts that there is an effect between the average grades and nutritious food, but it does not reflect the direction of the effect whether it is positively or negatively affected*).

Guidelines in Formulating Hypothesis

These guidelines must be observed in formulating your hypothesis.

1. Before writing your specific hypothesis, spend more time researching about the topic you are interested in. Focus on information and previous studies related to your topic.
2. Your independent variable and dependent variable must be included in your hypothesis.
3. The relationship of your variables must be reflected in your hypothesis. Will your independent variable affect your dependent variable?
4. Your hypothesis should be simple and specific as possible. If your hypothesis is vague and complicated, it would be difficult to find the answer to your question.
5. Your hypothesis should be concise and comprises clear and simple language. Make it short and simple for it to be easily understood and avoid any misconceptions or misunderstandings.
6. Your hypothesis should be testable without violating ethical standards. It means that it could be investigated and measured through a scientific method such as statistical analysis and data interpretation.
7. Your hypothesis must be falsifiable. It means that your hypothesis can be proven wrong through experiments or empirical data. There are no absolute answers to research questions, but there is a possibility of validating the hypotheses to be true beyond a reasonable doubt.



What's New

Activity 1: Own Words

Direction: In your own words, briefly define the following terms according to how you understood the lesson. Write your answers to the space provided.

1. Alternative hypothesis _____

2. Complex hypothesis _____

3. Concise. _____

4. Directional hypothesis. _____

5. Empirical hypothesis. _____

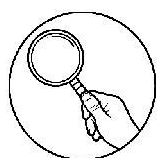
6. Falsifiable. _____

7. Hypothesis. _____

8. Non-directional hypothesis. _____

9. Null hypothesis. _____

10. Testable. _____

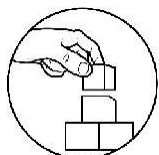


What Is It

Refer on the guidelines given to you on how to formulate hypothesis. Below is a table that gives you a guide on how to determine a good and bad research hypothesis. Reasons are given in order for you to understand deeper the concepts.

Hypotheses	Good	Bad	Reason/Remark
1. If the amount of water given to my plants will be altered, then they may grow at different rates.		√	This hypothesis is not clear and specific. It does not answer a specific question or give a possible explanation of a potential phenomenon.
2. When there is less oxygen in water, the mortality rate of the fish is increased.	√		This hypothesis is good because it is testable, simple, written as a statement, and establishes the participants (fish), variables (oxygen in water, and mortality rate), and predicts effect (as oxygen levels decrease, the mortality rate is increased).
3. Pest infected plants that are exposed to insecticidal soap will have fewer pest after a week than pest infected plants that are not treated.	√		This hypothesis gives a clear indication of what is to be tested (the ability of the insecticidal soap to minimize pest infestation), it includes the independent variable (insecticidal soap) and the dependent variable (number pest) and predicts the effect (exposure to insecticidal soap reduces the number of pests).

Hypotheses	Good	Bad	Reason/Remark
4. In detecting enemy aircraft, a sound warning signal is more effective to a fighter pilot.		√	This hypothesis is not clear in its statement. There is no point of comparison with the sound warning signal.
5. Studying of students is more efficient under bright lights than studying under dim lights.	√		This hypothesis is clear, concise, and complete. It can also be tested and can be falsifiable.



What's More

Activity 2: Type Identity

Given the following hypotheses, identify the type and direction which applies to each. Write your answer in the right column.

Hypotheses	Answer
1. The higher the unemployment rate, the higher will be the poverty and crime rate.	
2. Increase of food intake with high carbohydrate content daily leads to obesity.	
3. There is a significant change in my sleeping pattern when I drink milk before sleeping or do not.	
4. Planets revolve around the sun at diverse speeds.	
5. There is no relationship between the use of social media and the attention span of students in school.	
6. Implementing a flexible working arrangement enhance job contentment of the employees.	
7. Sex education for high school students has no effect on the rates of teen pregnancy.	
8. People who value freedom and longevity are more likely to experience happiness than those who do not value their freedom and longevity.	
9. The number of lectures attended by the senior high school students does not affect their final exam scores.	
10. If you sleep at least 6 hours a day, you will get a high score on the test than if you get less sleep.	

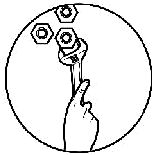


What I Have Learned

Activity 3: With Guidance

Refer to the guidelines on how to write a hypothesis. Choose at least 3 guidelines and explain them further on why or how they are vital in formulating hypothesis. Write your explanation in the right column of the table.

Guideline	Explanation



What I Can Do

Task 1: H_0 vs H_a

Based on your research study, refer to your research questions. Formulate three (3) null hypotheses and three (3) alternative hypotheses. Write your research title and research questions, followed by your hypotheses. Use the space provided for your answer.

Research Title:	
Research Questions:	
Null Hypotheses (H_0)	Alternative Hypothesis (H_a)



Additional Activity

Direction: After you submit your research hypotheses and once it is corrected in accordance with the guidelines given, you may start incorporating them into your research manuscript.

Lesson

4

REVIEW OF RELATED LITERATURE



What I Need to Know

After you have selected your research topic, you have to spend more time for your review of related literature. As a researcher, you are promoting knowledge. The knowledge created by other previous studies is essential because it can be a baseline or reference for your research study as the related literature.

Review of related literature is a compilation of studies related to a specific area of research (Fraenkel & Wallen, 2020). It evaluates, classifies and summarizes all the relevant previous studies conducted on a specified topic. It is also designed to justify your research by exposing the gaps of the previous studies. It is vital that your literature review is centralized. Thus, you should choose studies that are focused to your topic rather than collecting a broader scope of studies which are already not relevant to your research.

Moreover, literature review is an essential component of research. It forms a "picture" for the reader, providing a support and full comprehension of the developments in the field. This picture tells the reader that you have acknowledged, considered and adapted previous related significant works in the field into your research.

Literature review plays a significant impact in the discussion of the results and findings. The discussion of results and findings should focus on your research rather than those of the other previous research. Hence, the literature review should be used only in the discussion as support, evidence, and further explanation for your study. These are the three (3) ways of using literature review in the discussion of your study: a) providing context as a foundation to develop your ideas, b) comparing your findings from other previous related studies, and c) stating what contribution your study has made in the field.

However, there are also three (3) common errors that are usually made when including literature reviews in the discussion of the study. First, there are wide range of studies being included in which most of them are not anymore relevant to your specific topic under investigation. Second, Related article mentioning the original article is cited rather than citing

the original article itself. Lastly, previous work has been cited by the researcher based only on the abstracts and without even reading the entire research.

Purpose of a Literature Review

The review of related literature is anchored on the following purposes.

1. To discover the connection of your research to the existing body of knowledge and to the real-life situations.
2. To identify more theories or concepts as the foundation of your research study and to learn from them.
3. To determine the relationship of your research with previous research studies to prevent duplication and to acknowledge other researchers.
4. To acquire knowledge on the accuracy and significance of your research questions.
5. To acquaint yourself with the technical terminologies relevant to your study.
6. To determine possible gaps, conflicts, and open questions left from other research which might help you in formulating and justifying your research ideas.
7. To clarify misconceptions on previous research and help refocus, polish, and contribute to the development of the body of knowledge.

Structure of Literature Review

This is how you are going to structure your review of related literature. The main goal for doing this is to make the reader understand easily the different studies and how they are relevant to your study.

1. Introduction

The introduction somehow presents the fundamental idea of the particular study of the literature review.

2. Main Body

The main body consists of the organized discussion of sources. This is where you summarize and synthesize your literature review and reflect how they related to your study.

3. Conclusions/Recommendations

Conclusion and recommendation emphasize what you have learned from reviewing the literature and where your study leads to.

Types of Literature Review

These are the different types of literature review according to Nueman (2011). Following the type of literature review depends on how you organize and present your review of related studies.

1. Context review

From the name itself, context review is primarily focused on the content or contextual aspect of research. Usually, it is a type of review in which the researcher relates his or her study to a larger body of knowledge. It presents the current research

by merging it into a wider framework and determine its contribution and impact to the specific field of study.

2. Historical review

Historical review is a specialized type of literature review in which the researcher organizes the related research according to the period of time it was conducted. Historical literature review focuses on probing research in a specified field throughout a chronological order, which usually starts from the oldest period of time going to the most recent studies. The goal of this type of research is to gain knowledge on the advancement of technology and to identify developments on certain areas, which progress through time. It can be integrated with a theoretical or methodological review to illustrate how a concept, theory, or research method developed through time.

3. Integrative review

Integrative review is a common type of literature review in which the researcher introduces and summarizes the recent knowledge of the study. It emphasizes the agreements and disagreements of knowledge among various previous research. It also considers reviews, critiques, and synthesizes representative literature in an integrated way in order to generate new structure and viewpoint on the topic. This is the most common form of literature review in the social sciences. This review is usually merged with a context review.

4. Methodological review

Methodological review is a specialized type of literature review in which the researcher gathers, compares and contrasts other studies to the current research. It basically summarizes and evaluates the strengths and gaps in methodological aspects of various studies and illustrates the effects of different methodologies (research designs, samples, process) to different outcomes. This approach also emphasizes ethical issues when necessary, which you should consider and be conscious of as you go through your current research.

5. Self-study review

Self-study review is a literature review in which the researcher demonstrates his or her understanding of a specific body of knowledge. It contains existing proof associated to a clearly stated research questions and uses standardized methods to determine and evaluate relevant research. However, it can also produce problems of prejudice especially when it is used to summarize claims or statements linking his or her findings to a system of knowledge. Typically, it is a practice in the educational program or course requirement.

6. Theoretical review

Theoretical review is a literature review in which the researcher introduces several theories or concepts that are focused on a specific topic. It is particular on the theories and concepts being highlighted on other researches and compares them to the current study basing on its framework, hypothesis, consistency, and justification. The theoretical literature review aids in establishing the theories already existed, the relationships of theories among various studies, the degree of its investigation, and the development of new hypotheses.

Type of Sources for a Literature Review

In doing a literature review, researchers must be acquainted with the three (3) basic types of sources which are the general references, primary and secondary sources. **General references** are sources in which a researcher refers to track down other sources. **Primary sources** are publications in which a researcher accounts the findings of his or her investigations. Most primary sources are found in journal articles. **Secondary sources** are publications in which a researcher considers the work of others (Fraenkel & Wallen, 2020).

Where can you find the review of related literature?

As a researcher, you can find information about the research studies in numerous formats such as books, scholarly journal articles, dissertations, government documents, policy reports, and periodicals. Most researchers are also presenting their findings during meetings, congress, and conventions of professional societies and organizations. According to Nueman (2011), you can find related literature in:

1. Books

Books convey many forms of information. The needed information here is from the books containing a collection of research materials and articles. You can find citation information on them such as the title, author, date, and publisher in the catalog system.

2. Scholarly Journals

Scholarly journals may also be referred to as academic journals or peer-reviewed journals. They are filled with peer-reviewed information of research. Articles are written by a scholar in the field and the researcher is always identified. List of the sources of the information like footnotes, endnotes, and bibliography is always included. Typically, they contain an advanced terminologies since the researcher uses technical language in their field of study. The researcher assumes that the reader has a background and basic understanding in the field of research.

3. Dissertations

Dissertation is a final requirement for the degree of Doctor of Philosophy (Ph.D.) in which the student or researcher has to complete a work of original research. Some dissertations are eventually published as books or articles which consider their findings and contribution to the academic discipline. Since dissertations are original research, they can be a source of valuable information.

4. Government Documents

Most of the government agencies around the world support research undertakings and publish the findings of the study. Government documents are usually kept at the government and some school libraries. These documents are rarely found in the catalog system. Assistance from the librarian is needed for you to be able to locate these documents since it is considered as specialized publications.

5. Policy Reports and Presented Papers

Policy reports are also a source of information in literature review. Policy papers are not like the typical research papers. Usually, they are discussed to non-academic readers. They may initiate by identifying an issue or phenomenon that usually claim an answer and they are focused on being persuasive. Moreover, policy papers are

written proficiently and most of the readers do not want to read a book due to limited time. Generally, they are supplemented by policy briefs which summarize the papers.

6. Periodicals

Periodicals are findings of the study which can be seen in newspapers, in popular magazines, on television or radio broadcasts, and in Internet news summaries. They are the chosen edited summaries done by journalists for the general readers. They are deficient in numerous vital details that are required to critically evaluate the study. Therefore, it is essential to supplement these informations with other sources.

Steps in Writing Literature Review

Transcribed from the video presentation: <https://bit.ly/3b12Q4b>

1. Find/Search for the Relevant Literature

There are many ways on how to find relevant research studies. You may use the following:

- a. **Search engines** to facilitate your information inquiry. Make sure that they are reliable.
- b. **University online library**
- c. **Snowballing**
- d. **Related dissertations**

2. Log, Catalogue and Synthesize

After searching and gathering the different relevant studies, you need to arrange them in order for you to organize them easily.

- a. **Log the reference information.** You may use reference management software.
- b. **Catalogue all relevant articles.** You may use excel so that it will be organize and systematic. You can make your own template so that you will be efficient.
- c. **Digest and synthesize.** Organize the different ideas from different sources. Arrange them according to the criteria that you made in your excel template. This would make the connections of the different studies easier to identify.

3. Outlining and Writing Up

In-depth planning and enough time should be given importance during this period since you will need to concentrate and have focus in writing up your paper.

- a. **Draw up your outline.** You need to make an outline first for the structuring of your literature review. Thorough reading and understanding should be done for you to be able to plan and structure the ideas from your different sources. You can use the different approaches like chronological, thematic, theoretical, etc.
- b. **Write it up.** After formulating the outline, you can now begin writing your first draft. It is expected that your first draft is still rough. Your second draft involves tightening up and improving the flow. There would be several drafts needed for your paper to be polished.
- c. **Recap.** When you are finish with your paper, have it read by others who are qualified (expert in the field) for further improvements. Comprehend and incorporate their corrections and suggestions for the betterment of your study. It is so much better if there will be more qualified people that can proof-read your paper.

In-text Citation and Referencing Styles

Source: <https://bit.ly/3pyM8qb>

Citation is a reference to a literature being used in your study. It is a way of giving acknowledgement to the authors whom you have referred their intellectual works and creativity as a support or foundation of your research. Typically, citations include author's name, date, publisher information, journal information and/or DOI (Digital Objective Identifier) if present (Literature Review: Citation Styles, nd).

From the name itself, an **in-text citation** is a reference made within the body of text in the paper. It leads the reader to a source where a particular information has been taken of. An in-text citation should be reflected when you refer, paraphrase, summarize, or quote from another author. A corresponding reference list must be provided at the end of the study as references or bibliography.

A **reference** typically includes only the sources that you have mentioned or cited in-text in your paper, while a **bibliography** is generally a list of all the sources you use to generate your ideas about your research even if you have not mentioned or cited them in your paper.

There are different citing and referencing styles that are being used depending on the specific requirements of different field of disciplines. *Please refer to your Practical Research 1 (PR1).*



What's New

Activity 1: Own Words

Direction: In your own words, briefly define the following terms according to how you understood the lesson. Write your answers on the space provided.

1. Peer-review. _____

2. General references. _____

3. In-text citation. _____

4. Periodicals. _____

5. Snowballing. _____

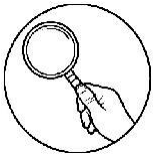
6. Body of knowledge. _____

7. Search engines. _____

8. Reference management software. _____

9. Main body. _____

10. Government documents. _____



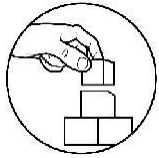
What Is It

Activity 2: Take a View

Refer to the following sites/links for further discussions on review of related literature. Give your comprehensive summary and personal reflection on what you have learn from the videos. Write your answer on the space provided.

<https://bit.ly/3eyzoRI>

<https://bit.ly/2VfLd7W>



What's More

Activity 3: Com-Con

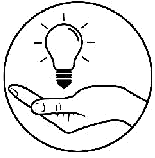
Compare and contrast the following terms. Write your answers in the table. You may use a separate paper.

Terms	Compare	Contrast	
		Reference	Bibliography
Reference and Bibliography			
Thesis and Dissertation		Thesis	Dissertation
Chronological review and Methodological review		Chronological review	Methodological review
Primary sources and Secondary sources		Primary sources	Secondary sources
Theoretical review and Context review		Theoretical review	Context review

Activity 4: Cite Seeing

Direction: Refer to the types of literature review. Choose at least three (3) from the list and give example of each. Search them using the internet. Cite the source and make sure that you have taken your information from a reliable one. Write your answer on the space provided or you may use a separate/additional paper.

Type	Example from the internet	Source



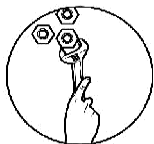
What I Have Learned

Activity 5: Write Me Up

In five (5) to ten (10) sentences, briefly discuss the following:

1. The importance of the review of related literature in your research study.

2. As a student, which among the different types of literature is/are applicable to your research study? Support your answer.



What I Can Do

Task 1: Presenting Written Review and Framework

Direction: Get ready for the presentation of your written review of related literature and conceptual framework. The rubrics below will serve as a guide on how you will be rated by your teacher. The 4C (content, coherence, creativity, communication) technique will be used so that you can easily remember.

Rubrics for Written **Review of Literature and Conceptual Framework**

	5	4	3	2	1
Content (35%) <ul style="list-style-type: none"> ▪ Purpose of the literature review was stated. ▪ Studies reviewed are appropriately arranged according to format chosen. ▪ Literature review presents extensive discussion of disagreements and agreements. ▪ Literature review is related to the current study. ▪ Conceptual Framework is well explained. ▪ Conceptual/Theoretical Framework matched the research problem. ▪ Terms used in the study are well-defined. ▪ Overall content is comprehensive. 					
Coherence (25%) <ul style="list-style-type: none"> ▪ Cohesive of devices are effectively used. ▪ Organization of ideas is smoothly presented. 					
Creativity (25%) <ul style="list-style-type: none"> ▪ Writer's voice is showcased. ▪ Paper uses variety of sentence structures. ▪ Uses appropriate language. 					
Communication (15%) <ul style="list-style-type: none"> ▪ Sentences are well structured ▪ Grammatical conventions are observed. ▪ Correct spelling and proper research format is followed. ▪ Standard in-text citation was followed diligently. 					

Legend: 5 – to a very great extent, 4 – to a great extent,
3 – to some extent, 2 – to a little extent, 1 – not at all



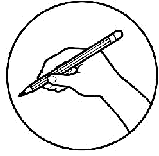
Additional Activity

Direction: After you submit and present your literature review of your research study and once it is corrected in accordance with the guidelines given, you may start incorporating it into your research manuscript.

Summary

- **Research Framework** is the structure or blueprint of the research plan and helps the researcher formulate relevant research questions.
- **Theoretical framework** is used for studies which anchor on time-tested theories that relate the findings of the investigation to the underpinning relevant theory of knowledge.
- **Conceptual framework** are the actual ideas, beliefs, and tentative theories that specifically support the study.
- **Concept map** is a visual representation of information that helps show the relationship between ideas.
- **Input-Process-Output Model (IPO)** is a conceptual paradigm which indicates the inputs, required process, and the output.
- **Conceptual definition** is the meaning of the term that is based on how it is define in the dictionary or encyclopedia.
- **Operational definition** is the meaning of the term based on how it was used in the study.
- **Hypothesis** is an assumption about the relationship between two or more variables. There are seven basic types of hypothesis; these are **Simple, Complex, Empirical, Logical, Statistical, Null, and Alternative**.
- **Directional hypothesis** relates relationship between the variables and can also predict its nature. It illustrates the direct association of the impact of the independent variable to the dependent variable whether it is positively or negatively affected. The direction of the statement should be clear and justified according to the findings of the study.
- **Non-directional hypothesis** is used when there is no principle involved. It is a premise that the direction of the effect is not specifically determined. It is a statement that reflects the association of the independent variable to the dependent variable without predicting the exact nature of direction of the relationship.
- **Review of related literature** is a compilation of studies related to a specific area of research. It evaluates, classifies, and summarizes all the relevant previous studies conducted on a specified topic.
- **Context review** is primarily focused on the content or contextual aspect of research. Usually it is a type of review in which the researcher relates his or her study to a larger body of knowledge.
- **Historical reviews** a specialized type of literature review in which the researcher organizes the related research according to the period of time it was conducted. It focuses on probing research in a specified field throughout a chronological order, which usually starts from the farthest period of time going to the most recent studies.
- **Integrative review** is a common type of literature review in which the researcher introduces and summarizes the recent knowledge of the study. It emphasizes the agreements and disagreements of knowledge among various previous research.
- **Methodological review** is a specialized type of literature review in which the researcher gathers and compares and contrast other studies to the current research. It basically summarizes and evaluates the strengths and gaps in methodological aspects of various studies.

- **Self-study review** is a literature review in which the researcher demonstrates his or her understanding of a specific body of knowledge. It contains existing proof associated to a clearly stated research questions and uses standardized methods to determine and evaluate relevant research.
- **Theoretical review** is a literature review in which the researcher introduces several theories or concepts that are focused on a specific topic. It is particular on the theories and concepts being highlighted on other research and compare them to the current study.
- **General references** are sources in which a researcher refers to tract down other sources.
- **Primary sources** are publications in which a researcher accounts the findings of his or her investigations. Most primary sources are found in journal articles.
- **Secondary sources** are publications in which a researcher considers the work of others.
- **Books** convey many forms of information containing a collection of research materials and articles. Citation information can be found in them such as the title, author, date, and publisher in the catalog system.
- **Scholarly journals** are also be referred to as academic journals or peer-reviewed journals. Articles are written by a scholar in the field and the researcher is always identified.
- **Dissertation** is a final requirement for the degree of Doctor of Philosophy (Ph.D.) in which the student or researcher has to complete a work of original research.
- **Government documents** are usually kept at the government and some school libraries. These documents are rarely found in the catalog system.
- **Policy reports** are also a source of information in literature review. Policy papers are not like the typical research papers. Usually, they are discussed to non-academic readers.
- **Periodicals** are findings of the study which can be seen in newspapers, in popular magazines, on television or radio broadcasts, and in Internet news summaries. They are the chosen edited summaries done by journalists for the general readers.
- **In-text citation** is a reference made within the body of text in the paper. It leads the reader to a source where particular information has been taken of.
- **References** typically include only the sources that you have mentioned or cited in-text in your paper.
- **Bibliography** is generally a list of all the sources you used to generate your ideas about your research even if you have not mentioned or cited them in your paper.



Assessment: (Post-Test)

Directions: Read and analyze the statements below. Encircle the letter of the correct answer.

- Which among the following is a guideline/characteristic of a good definition of terms?
A. The term should be in parenthesis. C. It is direct to the point.
B. The entire meaning is underlined. D. It is not indented.
- A hypothesis which shows no relation between variables is:
A. alternative hypothesis C. complex hypothesis
B. logical hypothesis D. null hypothesis
- It refers to the actual ideas, beliefs, and tentative theories that specifically support the study.
A. methodological framework C. conceptual framework
B. chronological framework D. theoretical framework
- One of the two types of defining the terms in research wherein you need to define according to how the term is being used in the study is:
A. methodological C. operational
B. theoretical D. conceptual
- Mediating variable is also called as:
A. independent variable C. moderating variable
B. intervening variable D. dependent variable
- The conceptual framework to be used in a research study wherein there is an intervention being made by the researcher is:
A. IV-DV C. ODV
B. IPO D. PPE
- The word is defined according to its meaning from the dictionary.
A. operational C. historical
B. conceptual D. technical
- It is a research variable that is considered as the presumed effect of the study.
A. independent variable C. dependent variable
B. moderating variable D. control variable

9. This is a part of literature review which summarizes and synthesizes the different ideas from the different sources.
- | | |
|-------------------|-----------------|
| A. recommendation | C. introduction |
| B. main body | D. conclusion |
10. It is a reference done within the text/paragraph in the paper.
- | | |
|-----------------------|-----------------|
| A. list of references | C. bibliography |
| B. in-text citation | D. source |
11. "There is no difference in height between boys and girls who are taking vitamins every day." is an example of:
- | | |
|-------------------------------|---------------------------|
| A. non-directional hypothesis | C. directional hypothesis |
| B. empirical hypothesis | D. simple hypothesis |
12. A literature review which introduces several theories or concepts that focus on specific topic.
- | | |
|--------------------------|-----------------------|
| A. methodological review | C. theoretical review |
| B. integrative review | D. context review |
13. It expresses the connection among two or more independent variables and two or more dependent variables.
- | | |
|---------------------------|-----------------------|
| A. alternative hypothesis | C. complex hypothesis |
| B. logical hypothesis | D. null hypothesis |
14. It refers to the assumption about the relationship of the variables.
- | | |
|--------------------|---------------|
| A. guide questions | C. framework |
| B. hypothesis | D. literature |
15. The chosen edited summaries by journalist for the general readers are called:
- | | |
|----------------------|-----------------|
| A. scholarly journal | C. dissertation |
| B. periodicals | D. books |



Key to Answers

Module 3 Lesson 1

What's New: Activity 1

Answer
C
Y
C
Y
T
Y
Y
T
T
C
Y
Y
C

What's More: Activity 2

What's More: Activity 3

```

    graph TD
      A[Corporate Social Responsibility  
Independent Variable] --> B[Total Number of Employees  
-Dedication  
-Administrative  
Mediating Variable]
      A --> C[Organizational Performance  
Dependent Variable]
      B --> C
  
```

Module 3 Lesson 2

What's More: Activity 2

Order
9
1
6
2
3
4
8
7
5
10

What's More: Activity 3 (Spot the Errors)

Answer	Definition of Terms
Mean.	The average score within a distribution.
Median.	The center score in a distribution.
Mode.	The most frequent score in a distribution.
Range.	The difference between the highest and lowest scores in a distribution.
ANOVA.	A method of statistical analysis used to determine differences among more groups on a variable.

Answer	
1.	Complex
2.	Simple
3.	Alternative (Non-directional)
4.	Logical
5.	Null (Non-directional)
6.	Alternative (Directional)
7.	Null (Non-directional)
8.	Complex
9.	Null (Non-directional)
10.	Alternative (Directional)

What's More: Activity 2

Module 3 Lesson 3

Module 3 Lesson 4

What's More: Activity 3

Terms		<p>Reference and Bibliography</p> <p>List of resources in gathering literature for a research study which includes the details of the information such as the author's name, date, publisher information, journal information and/or DOI if present.</p>		<p>Thesis and Dissertation</p> <p>A study or research in which a post graduate student must comply as a final requirement to complete the degree.</p>		<p>Chronological review and Methodological review</p> <p>Chronological review that can help you organize your research study.</p>		<p>Primary sources and Secondary sources</p> <p>Type of resources wherein you can gather information and ideas for a certain topic as related literature.</p>		<p>Theoretical review and Context review</p> <p>Type of literature review that can help you organize your research study.</p>	
Compare		<p>Reference</p> <p>Includes only the sources that have been mentioned or cited in-text in the paper</p>		<p>Thesis</p> <p>A final requirement for a Master's degree in which the student or researcher has to complete a work of original research.</p>		<p>Chronological review</p> <p>A literature review that focuses on probing research in a specified field throughout a sequential order, which usually starts from the oldest period of time going to the most recent studies</p>		<p>Primary sources</p> <p>Publications in which a researcher accounts the findings of his or her investigations. Most primary sources are found in journal articles.</p>		<p>Theoretical review</p> <p>It is particular on the theories and concepts being highlighted on other research and compare them to the current study basing on its framework, hypothesis, consistency, and justification.</p>	
Contrast		<p>Bibliography</p> <p>A list of all the sources used to generate ideas about the research even if it was not mentioned or cited in the paper.</p>		<p>Dissertation</p> <p>A final requirement for the degree of Doctor of Philosophy (Ph.D.) in which the student or researcher must complete a work of original research.</p>		<p>Methodological review</p> <p>It summarizes and evaluates the strengths and gaps in methodological aspects of various studies and illustrates the effects of different methodologies (research designs, samples, process) to different outcomes.</p>		<p>Secondary sources</p> <p>Publications in which a researcher considers the work of others.</p>		<p>Context review</p> <p>It is primarily focused on the content or contextual aspect of research in which the researcher relates his or her study to a larger body of knowledge.</p>	

11. A	11. B	1. C	1. C
12. C	12. C	2. C	2. C
13. C	13. B	3. B	3. B
14. B	14. B	4. B	4. B
15. B	15. B	5. C	5. C
		Posttest	Pretest
11. A	11. B	6. B	6. C
12. C	12. C	7. B	7. B
13. C	13. B	8. D	8. D
14. B	14. B	9. C	9. C
15. B	15. B	10. A	10. A
		Posttest	Pretest
11. A	11. B	1. C	1. C
12. C	12. C	2. D	2. C
13. C	13. C	3. C	3. C
14. B	14. B	4. C	4. B
15. B	15. B	5. B	5. B
		Posttest	Pretest
11. A	11. B	6. B	6. C
12. C	12. C	7. B	7. B
13. C	13. C	8. C	8. D
14. B	14. B	9. B	9. C
15. B	15. B	10. B	10. A

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