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

SELF-LEARNING HOME TASK (SLHT)

Subject: **Inquiries, Investigation and Immersion**   Grade Level: 12
Quarter: 3   Week: 2-4

Competencies: Formulate the Background of the Study or Rationale, Conceptual Framework,
                      Statement of the Problem, Statement of the Hypothesis, Significance of the Study,
                      Scope and Limitations of the Study and Definition of Terms
Competency Code:
Name _____   Section _____   Date _____
School Dalaguete National High School   District Dalaguete 1

Readings/Discussions

The Research Problem and Its Scope

LESSON 1: Background of the Study

The background of the study is very essential in establishing the cognitive setting of the research and it involves: (a) discussing why there is a need to study the problem, (b) clarifying the important terminologies for the reader to understand easily what the research is about and (c) establishing the degree of seriousness of the problem which has prompted the researcher to look for solutions.

The following questions will aid the researcher in formulating the background of the study:

1. What is the rationale of the research problem?
This question is answered by sharing with the beneficiaries the reasons why the researcher has decided to look for solutions to the problem. A narration of the researcher's experience that has driven him/her to conduct the study is commonly done. If it is one's personal experience, an article read, a scene witnessed, news heard, a theory that needs to be clarified, etc., the research proponent should describe the existing and prevailing problem situation based on his/her experience. The scope may be local, national or international.

2. What is the setting of the research problem?
The setting forms part of the delimitation of the problem, as it defines the geographic boundaries of the study and implies certain demographic characteristics. This describes to the reader the place where the research is conducted since the setting has a significant bearing on the variables being studied. In describing the setting, focus on the peculiarity or uniqueness of the setting to make the reader more interested in reading the paper. If the setting is in school, discuss its vision-mission, special clientele, unique mode of student transport and many more.

3. What is the basic literature foundation of the study?
This part defines or clarifies the terms or variables used in the study. The terms and variables must be clear to the researcher so that he/she can make his/her reader understand them as well.

This backgrounder assists the researcher in determining the boundaries of the study. It is derived from different literature sources. Thus, this part of Chapter 1 requires the use of various references.

4. How serious is the chosen research problem?

This is to answer the question, why is there a need to look for solutions to the problem? The researcher must intensify and expand the magnitude of the problem. When the gravity of the problem has already been determined, the researcher may take actions and work on the problem. He/she looks for statistical or quantitative evidence to assess the weight of the problem.

5. What is the general objective of the research problem?

This is derived from the general statement of the problem and should be the basis of the enumerated statements of specific problems.

6. What is the overall purpose of the research problem?

It must be stressed that the researcher should be totally aware of the purpose of the research problem. He/she must know how the researcher findings will help his/her classmates or fellow students.

The Background of the Study includes:

1. Discussion of the problem in general and specific situations as observed and experienced by the macro to micro approach.
2. Concepts and ideas related to the problem including clarification of important terminologies; and
3. Discussion of the existing or present conditions and what is aimed to be the future or the gap to be filled-in by the research.

In the Background of the Study or Rationale, it is important to give the reader a clear notion of the general scope of the problem investigated. The reader should be given enough idea about similar problems from other countries (mega level), in our country (macro level) and the particular place where the research is conducted (micro level).The writer should underscore the difficulties caused by the problem and the importance of investigating it. Hence, this part of the study, the introduction, is primarily designed to meet this felt need to the reader. The presentation of the investigation should very naturally lead to the objectives of the study.

For example:
Title: Problems of State Universities and Colleges' Middle Level Managers: A Basis for the Development of a Management Intervention Program (Muello, 2002)

Background of the Study

Since time immemorial, conflict has been a natural part of human existence. It exists in many levels and takes many different forms. It is an inevitable part of organizational life. Although conflict is natural and avoidable, it is important that administrators learn to manage conflict effectively and turn it constructively. When properly handled, it does not disrupt the normal operation of the organization. At its level, however, conflict may lead to radical measures of reform like strikes, mass leave of absence and even unwanted unionism. Therefore, managers need to understand the nature and cause of the conflict. They need to analyze what the conflict is, where it comes from, and how it develops and dissipates.

Managers must understand that conflict is an almost constant and continuous process (Himoc, 1989). By sound and planned action, management leaders can constantly direct the energies of conflict into productive and creative channels of related endeavors. These perspectives on conflict give the manager additional roles - that of being referee and counselor who helps the protagonist reach an acceptable solution. They act as motivators who direct human energies towards organizational goals. Ultimately, this educational experience "of resolving conflict could provide the managers deeper insights,

and greater understanding of the goals of the organization, vis-à-vis the interests and needs of their subordinates. The feedback on conflicts may serve as clues in potential problem analysis and enhance the development of measures to minimize conflict and maximize smooth interpersonal relationship.

Today's educational leaders are faced with more changes, more conflicts, and more pressures than in any other decades in the 20th century (Gmelch, 1981). This is largely due to substantial increases in their responsibilities. Many factors have also contributed to the broader scope and expanded amount of work that leaders need to fulfill. Among such factors are the tremendous increases on the school population and additional job requirements necessitated by many educational innovations. Not only are they expected to continue their traditional duties such as planning and over-all school organization, but they are also asked to give personal leadership and inspiration. Leaders are expected to actively engage in establishing educational programs and developing good teacher's morale. Thus, it has become exceedingly important that school administrators and teachers understand and are prepared to meet the many responsibilities inherent in their positions. Thus, time management becomes exceedingly important for managers to efficiently attend to their duties and avoid conflicts (Muello, 2002).

The researcher, being a manager, will surely be personally benefited from the results of this study which generally aims to analyze the common problems encountered by middle-level managers in state universities and colleges in region IV which, in turn will be utilized as the basis for reposing a management intervention program.

Points to remember:

The Background of the Study is very important in establishing the cognitive setting of the research and involves (a) discussing why there is a need to study the problem, (b) clarifying the important terminologies for the reader to easily understand what research is about, and (c) establishing the degree of seriousness of the problem which has prompted the researcher to look for solutions. The elements in writing the Background of the Study are the rationale of the problem, setting of the research problem, related literature, seriousness of the research problem and the overall purpose of the study. The Background of the Problem emphasized the need for research not only to solve problems and difficulties but also to expand the frontier of knowledge and improve the quality of social life. It deals with the guidelines in writing the problem of the study.

Exercise 1

Directions: Read and understand the sample background of the study below. Answer the questions that follow. Write your answer in a separate sheet of paper.

Background of the Study

The Internet has enabled new forms of social interaction. This is due to its widespread usability and accessibility. Most people use the internet to access news, weather conditions and reports. It is also used to book accommodations during vacation and to find out more about their interests. Today people are using the internet mostly to interact using social media. They chat, share photos and keep in touch with friends and relatives worldwide. Social Networking Sites enable people to continuously make social interactions regardless of the distance. Social Media sites such as Facebook, Twitter and Instagram allow individuals to present themselves, articulate their social networks and establish or maintain connections with others. Participants may use the said networking sites to interact with people they already know online and to meet new people.

An interpersonal relationship is a relatively long-term association between two or more people. This association may be based on emotions like love and liking, regular business interactions or some other type of social commitments. Interpersonal relationships take place in great variety of contexts, such as family, friends, marriage, acquaintances, work, clubs, neighborhoods and churches. They may be regulated by law, custom, or mutual agreement, and are the bases of social groups and society as a whole. Social networking sites influence the interpersonal relationship of students in many ways. Through social networking sites, users come to meet other people worldwide. These people can affect the users' interpersonal relationship with other people close to him/her. This influence can either be good or bad for the user.

Ellison (2007) said Social Media typically offers many features and those features are positively the reason why many students are interested in checking out these sites. One of the general features of social media are profiles. A profile contains

all the information about the person plus their photos, videos, applications that they used and comments/ messages posted by other person.

Del Mundo (2013) explained that the studies have shown that people actually are becoming more social and more interactive with others, but the style of that communication has changed so that we're not meeting face-to-face as often we used to. That our interactions on social media tend to be weak ties- that is, we don't feel as personally connected to the people at the other end of our communication as we do when we're face-to-face.

It is evident that many students greatly rely on these sites to interact with their friends and other people whether they know them or not. Being dependent to these sites promotes online friendships which are not good since they might encounter people that are suspicious in behavior.

Through the abovementioned situations, the main objective of the researchers is to determine the effects of social media in relation to the interpersonal relationship of Grade11 and 12 HUMMS students of Don Gregorio Osmeña Memorial High School Moreover, the researchers would like to know the different reasons why students often use social media as a medium to interact with their friends and loved ones.

Questions:
1. What are the reasons of the research problem?
2. Where is the setting of the research problem?
3. What is the basic literature/studies/theory of the study?
4. How important is the chosen research problem?
5. What is general objective of the research problems?

LESSON 2: Conceptual Framework

In each component of your research, you should show the variables that influence it. For example, if you are studying childhood development outcomes, you might study home life, school and community which would each be influenced by different variables. For school, your variables might be peers, teachers and learning disabilities. These variables are written in your diagram. The more detailed you are with your diagram, the more thorough your conceptual framework will be.

Conceptual Framework

The explanation of the scope and the range of a concept or construct can be done even without a theory, in some cases, with a combination of two or more theories which lead to a researcher's formulated framework. **This is called a conceptual framework.** It is largely based on theories or parts of theory combined with other parts of another theory, or on the intellectual synthesis of the various readings of the researcher. It guides the researcher by giving clear directions to the research.

Example of Theoretical Framework:

This study is anchored from the Business Ethics Theory by Bigg (2004) and Shareholder Value Theory by Freeman (1984).

Introduction

Business Ethics Theory by Bigg (2004)

Shareholder Value Theory by Freeman (1984)

Ethical Responsibility
- Social responsiveness and expectations
- Eternal and intrinsic values
- Corporate citizenship
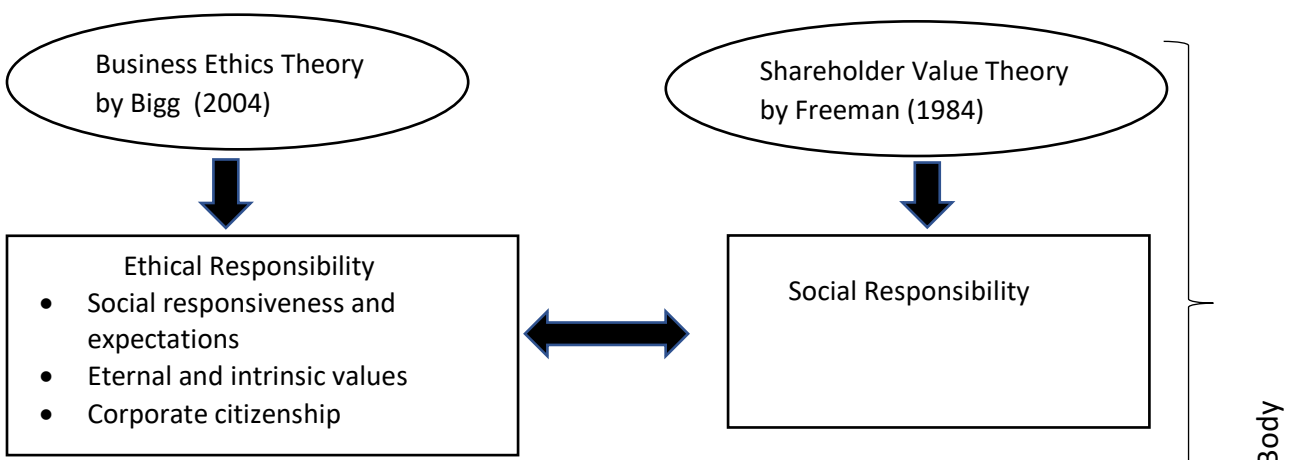
Social Responsibility

Body

Fig. 1 Theoretical Framework of Corporate Competitive Benefits

The Business Ethics Theory by Bigg is based on the wider social obligation and the moral duty that business has towards society. According to this theory, there are three (3) varied but interrelated ethical grounds. These are changing and emerging social responsiveness and social expectations to particular social problems; eternal and intrinsic values that are inspired by ethics and denoted by some normative and universal principals of social justice, fairness and human rights; and corporate citizenship in which a corporation or a business establishment contributes to social well being. In this theory, CSR is viewed as philanthropic and ethical responsibilities rather than legal and economic responsibilities.

While the Shareholder Value Theory by Freeman (1984) argues that only the social responsibility of business is to develop its profits, it is believed by economists that the corporation owners as its managers and stakeholders as agents have a fiduciary duty to serve the shareholders' interest rather than any others. Thus, corporate social obligations are regarded often as an strategic instrument for corporate competitive benefit and more profit or gain.

It is, therefore, noted that although the business enterprise's mission is to have profits, they should not forget giving back to the shareholders or clients the appropriate returns not only on the quality of their products but also in some other ways like attending to some obligations through the different programs that will benefit the community they are serving (Cristobal & Montella, 2016).
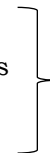
Conclusion

Paradigm of the Study

The result of a clear understanding of the conceptual or theoretical framework is a diagrammatic presentation of the study called the **paradigm.**

Merriam-Webster (2006) defines paradigm as a pattern, model or set of forms which contains particular elements. It is the researcher's scientific imagination expressed graphically by drawings or sketches. In a scientific work, the symbols must be specific in meaning. The usual figures used are regular shapes (rectangles, circles and squares), lines and arrows. Irregular shapes are sometimes utilized and there must be an acceptable rationale for them. The paradigm is something like a visual representation of the entire thesis. It is considered as the heart of the research paper. A title is needed to encapsulate the whole paradigm.

The common paradigm or models of the study used are as follows:

1. **IPO model (input-process-output)**. This model is largely used when the research attempts to isolate the factor or major variable that causes the problems, subject or phenomenon under investigation. The model is used when the statements of the problem are all factor-isolating questions.

Sample paradigm of a thesis entitled " Entrepreneurs' Roles toward Improved Work Performance

- Profile of entrepreneurs
  a. Age
  b. Sex
  c. Seminars Attended
- Roles of Entrepreneurs
  a. Assessment
  b. Planning
  c. Implementation
  d. Evaluation

Analysis of data through the questionnaire, informal interviews and statistical treatment

Profile and roles of entrepreneurs are determined

2. **IV-DV model (Independent variable-dependent variable model).** This model is used in experiment-based studies. The questions raised are higher order and classified as situation-relating.

Sample IV-DV Model of a thesis entitled "Effects of Computer-assisted Instruction and Demonstration Method on the Level of Performance of Grade 12 Students

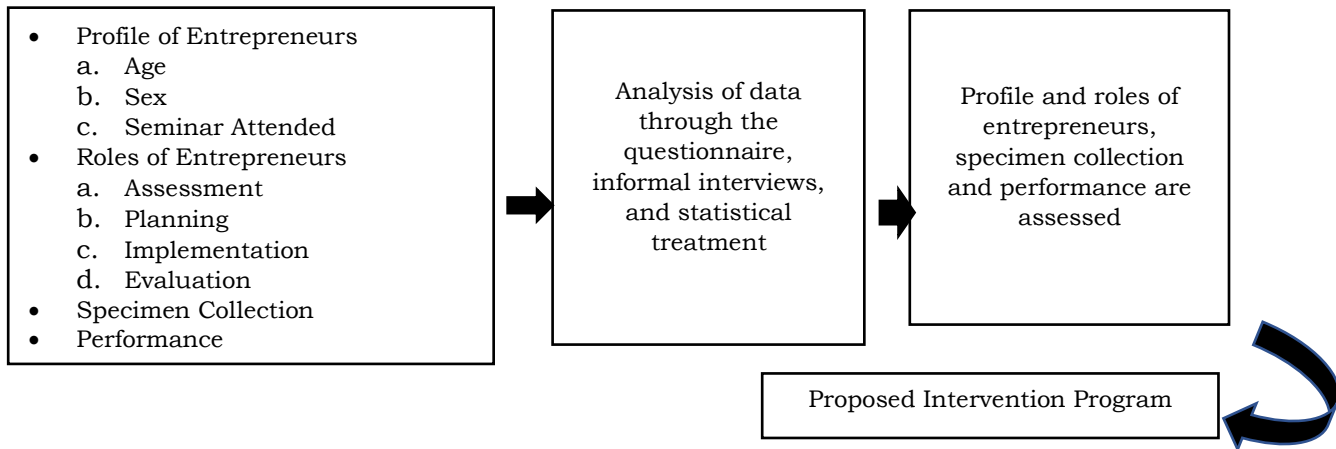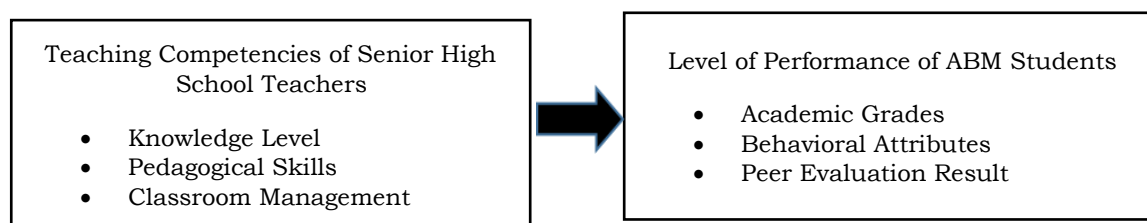| Teaching methodology used by instructors • Computer-assisted Instruction • Demonstration Method	→	Level of Performance of Grade 12 Students • Academic Grades • Practicum Grades • Parents' Satisfaction
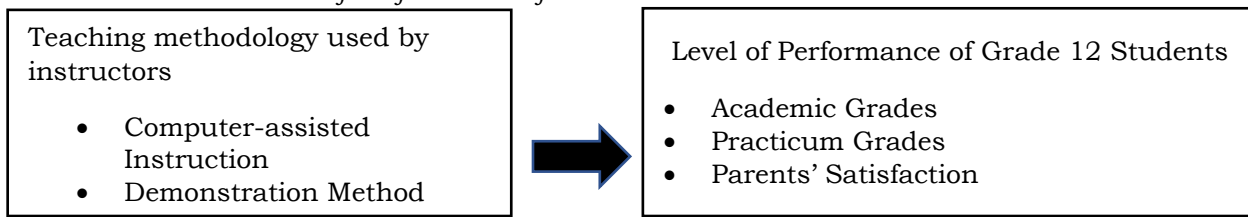
3.-P model. This model is used in research studies that propose a program or any intervention measure. It fits the situation producing level of questioning.

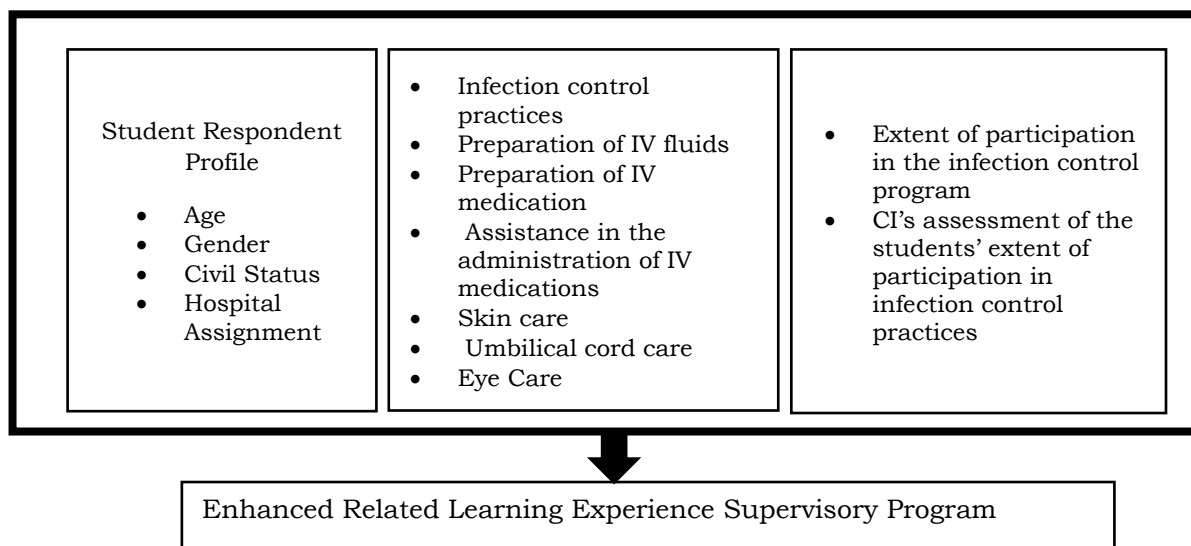| • Profile of Entrepreneurs
  a. Age
  b. Sex
  c. Seminar Attended
• Roles of Entrepreneurs
  a. Assessment
  b. Planning
  c. Implementation
  d. Evaluation
• Specimen Collection
• Performance
	→	Analysis of data through the questionnaire, informal interviews, and statistical treatment	→	Profile and roles of entrepreneurs, specimen collection and performance are assessed

Proposed Intervention Program

4. PC model (predictor-criterion model). This model is used when relating and assessing the influence between two or more variables. Studies that focus on relationships, associations, differences, and impacts will benefit from this model.

Sample PC model for the thesis entitled " Relationship of the Teaching Competence of Senior High School teachers to the Level of Performance of ABM Students"

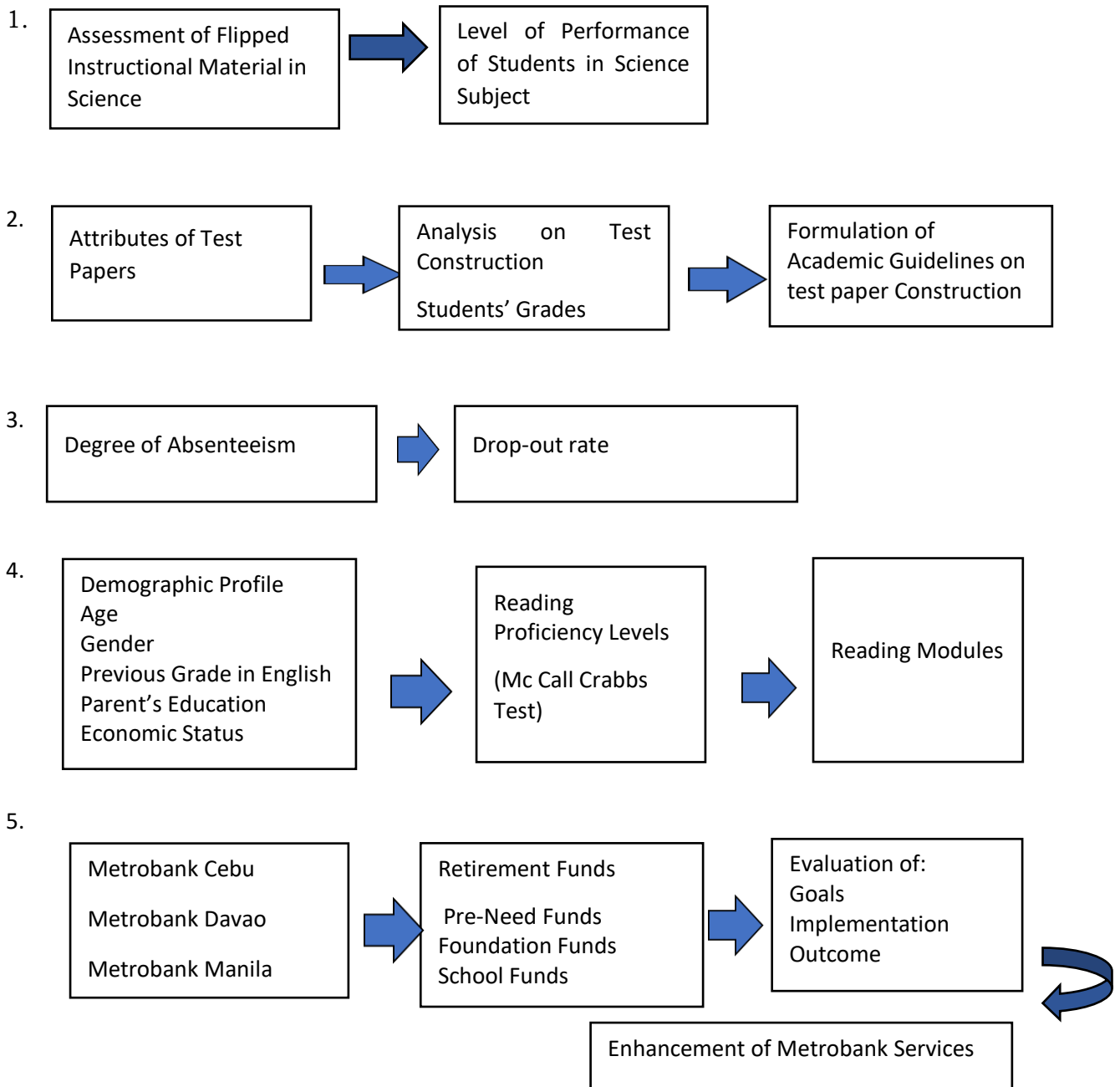| Teaching Competencies of Senior High School Teachers • Knowledge Level • Pedagogical Skills • Classroom Management	→	Level of Performance of ABM Students • Academic Grades • Behavioral Attributes • Peer Evaluation Result

4. **POM (proposed original model).** This model is used when the researcher presents an original paradigm. The requirement is that it must be scientific.

Student Respondent Profile • Age • Gender • Civil Status • Hospital Assignment	• Infection control practices • Preparation of IV fluids • Preparation of IV medication • Assistance in the administration of IV medications • Skin care • Umbilical cord care • Eye Care	• Extent of participation in the infection control program • CI's assessment of the students' extent of participation in infection control practices

Enhanced Related Learning Experience Supervisory Program

The theoretical framework may be formulated from an existing theory/ies that serve as the foundation of the study. A theory is a conceptual intervention that is used to describe, explain, predict or understand a certain phenomenon. The word is derived from the Greek word "*theoria*" which means "*vision*". The conceptual frameworks provide an explanation of the scope and range of concept or construct and discusses cases that combine two or more theories. The result of a clear understanding of the conceptual or theoretical framework is a diagrammatic presentation of the study called paradigm. This is inserted within the conceptual/theoretical framework. In some cases, it is not included. There are 5 common paradigm models used in a research. These are the IPO model, IV-DV model, PC model, -P model and POM.

Exercise 2
Directions: Identify the following according to their kind based on the discussion. Write your answer in a separate sheet of paper.

1.

Assessment of Flipped Instructional Material in Science	→	Level of Performance of Students in Science Subject

2.

Attributes of Test Papers	→	Analysis on Test Construction / Students' Grades	→	Formulation of Academic Guidelines on test paper Construction

3.

Degree of Absenteeism	→	Drop-out rate

4.

Demographic Profile / Age / Gender / Previous Grade in English / Parent's Education / Economic Status	→	Reading Proficiency Levels (Mc Call Crabbs Test)	→	Reading Modules

5.

Metrobank Cebu / Metrobank Davao / Metrobank Manila	→	Retirement Funds / Pre-Need Funds / Foundation Funds / School Funds	→	Evaluation of: / Goals / Implementation / Outcome

Enhancement of Metrobank Services

Exercise 3

Directions: Read and understand the conceptual framework given and answer the questions that follow. Write your answer in a separate sheet of paper.

Research Title: Parental Intervention in the Career Choice of the Junior High School
          Students

Conceptual Framework

   The study is anchored on Holland's Theory of Career Choice (1997) which states that in order to make an informed career decision, many factors have to be taken into account, such as the individual's unique characteristics, values, interests, skills and personality. Career satisfaction contributes significantly to the general happiness, stability and well-being of adults. In order to experience career satisfaction, an individual has to first make a fitting or appropriate career choice. Individuals will select and be more content in a work environment that corresponds to their type, attributes, decision-making style and career maturity.

   Watson and Stead (1999) supported the theory of Holland who pronounced that a clear understanding of the characteristics of the individual who is making the career choice involving the investigation of the characteristics of the chosen work environment that requires careful consideration of the characteristics in order to ensure the best possible "goodness of fit" or match. In short, the better, the more likely the individual is to adjust to and thrive in, the chosen field of work.

   Figure 1 shows the conceptual framework of the study. The students have to choose what career they want to pursue after taking their Junior High School with respect to academic track, technical/vocational, sports track, arts and design tracks. However, parental intervention in students' career choices is considered as a factor that may affect the future career of children.

Questions:
1. What is the theory used as support of the study?
2. Who is the theorist?
3. What is the theoretical statement of the theory that explains the present study?
4. How does the theory relate to the present study?

LESSON 3: Statement of the Problem

   For beginning researchers, identifying a research topic or a problem is a very difficult task. What should be my research problem is always the first question in mind. Selecting a research topic is not easy for the students because they find difficulty in identifying and writing the statement of the problem. How should it begin? Let's recall your lesson in Identifying the Problems in your module 1.

The following steps are suggested in identifying the research problem.

   1. The first step in identifying a research problem is to identify a general topic or problem area that interests the researcher.
Example:

 Suppose a student wants to make a study on job satisfaction. The, JOB SATISFACTION becomes his general problem area.

   2. The next step is to narrow down the general problem are to specific researchable problems.
Example:

This, if JOB SATISFACTION is the general problem considered, then the student may ask: What is it in job satisfaction that I am particularly interested about? Am I interested about job satisfaction in terms of:

- Job Knowledge;
- Salaries and Benefits;
- Physical Working Conditions;
- Adequacy of Communication; or
- Psychological Working Conditions?

Thus, the researcher is now narrowing the concept of job satisfaction in terms of specific areas.

The following diagram represents the general problem area narrowed down into specific problem areas.

```
┌─────────────────────┐                    Job Knowledge
│                     │
│  Job Satisfaction   │                    Salaries and Benefits
│                     │                    Physical Working Conditions
└─────────────────────┘                    Adequacy of Communication
                                           Psychological Working Conditions
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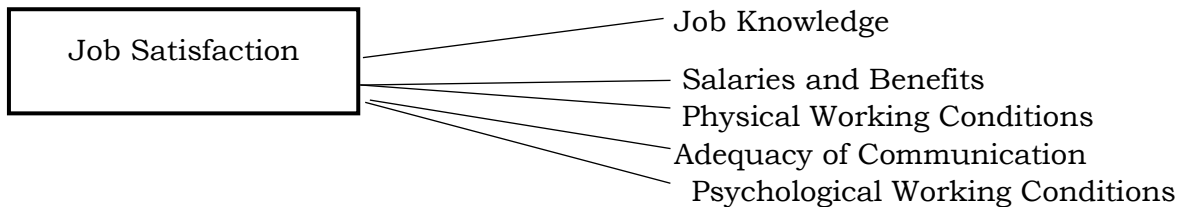
After identifying the general problem area as well as specific problem areas, the researcher is now ready to write the Statement of the Problem. The sample is shown in the next page.

The Statement of the Problem has two basic parts: The <u>main problem</u> and <u>sub-problems.</u> The main problem contains the general problem while the sub-problems contain the specific problem areas.
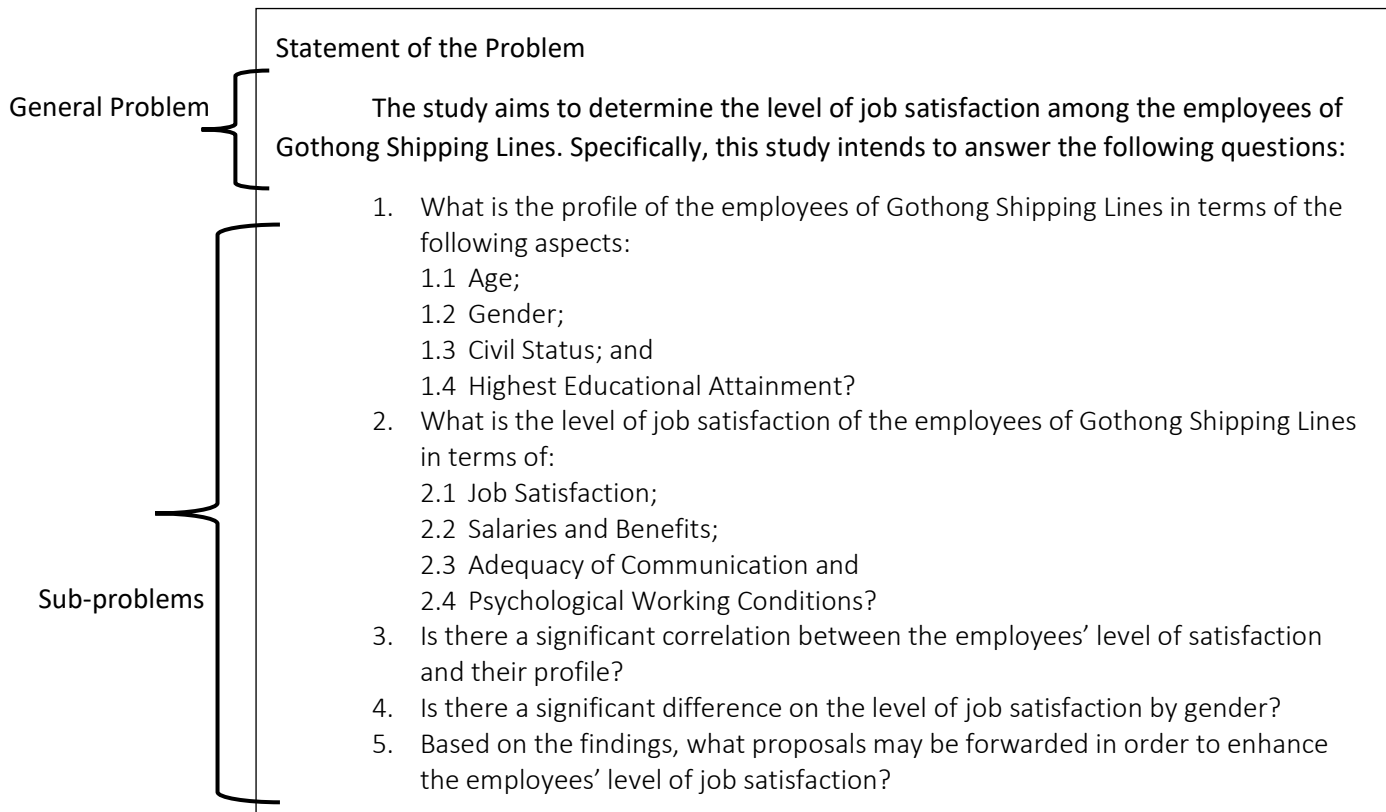
Here are more examples of general problems:

1. The main problem of this research is to look into the influence of video games and the utilization of social media on the language proficiency of the freshman students of Leyte National High School for the first semester of academic year 2014- 2015. The result of this investigation will be the basis of the formulation of the guidelines in the development, organization and implementation of effective study habits.
2. This study aims to assess the behavioral traits of senior high school students and to relate them to the productivity level in reviewing lessons and passing the long examinations. This study is to be conducted during the first semester of SY 2016-2017 in the Division of Palo, Leyte.
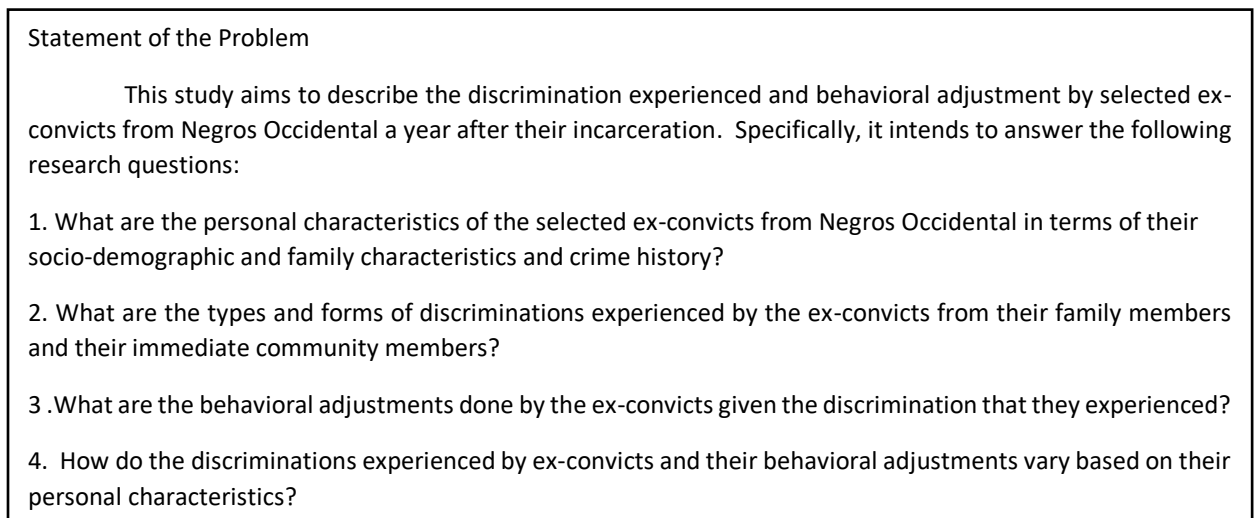
The general problem is followed by an enumeration of the specific problems. The specific problems are usually stated as questions that the researcher seeks to answer. The specific problems must meet the following criteria:

1. They must be in question form.
2. They must define the population and the sample (that is, the respondents or subjects) of the study.
3. They must identify the variables (major and minor) being studied.
4. They must be empirically tested.

Sample Statement of the Problem in a quantitative research

General Problem

Sub-problems

Statement of the Problem

The study aims to determine the level of job satisfaction among the employees of Gothong Shipping Lines. Specifically, this study intends to answer the following questions:

1. What is the profile of the employees of Gothong Shipping Lines in terms of the following aspects:
   1.1 Age;
   1.2 Gender;
   1.3 Civil Status; and
   1.4 Highest Educational Attainment?
2. What is the level of job satisfaction of the employees of Gothong Shipping Lines in terms of:
   2.1 Job Satisfaction;
   2.2 Salaries and Benefits;
   2.3 Adequacy of Communication and
   2.4 Psychological Working Conditions?
3. Is there a significant correlation between the employees' level of satisfaction and their profile?
4. Is there a significant difference on the level of job satisfaction by gender?
5. Based on the findings, what proposals may be forwarded in order to enhance the employees' level of job satisfaction?

Sample of a Statement of the Problem in a Qualitative Research:

Statement of the Problem

This study aims to describe the discrimination experienced and behavioral adjustment by selected ex-convicts from Negros Occidental a year after their incarceration. Specifically, it intends to answer the following research questions:

1. What are the personal characteristics of the selected ex-convicts from Negros Occidental in terms of their socio-demographic and family characteristics and crime history?

2. What are the types and forms of discriminations experienced by the ex-convicts from their family members and their immediate community members?

3 .What are the behavioral adjustments done by the ex-convicts given the discrimination that they experienced?

4. How do the discriminations experienced by ex-convicts and their behavioral adjustments vary based on their personal characteristics?

LESSON 4: Research Hypothesis

Research Hypothesis

A hypothesis is a tentative prediction about the relationship between two or more variables in a population under study (Polit, 2007). It translates a research question into a prediction of expected outcomes. It is commonly used in an experiment-type research, formulated particularly before the conduct of an experimental-quantitative research. It is also considered an intelligent guess that occurs with at least 2 variables: one is **independent** and the other is **dependent**. It is only after the experiment that the researcher can finally assess if his/her guess is correct or not. When the result

of the experiment is the same as the hypothesis, then the hypothesis is accepted. When the result of the study is the exact opposite of the hypothesis, then the hypothesis is rejected.

Purpose and Importance of Hypotheses in Research

Hypothesis has a role to play in research as discussed in the previous paragraphs. This is substantiated by pointing out its purpose and importance.

1. It provides a tentative explanation of phenomenon and facilities the extension of knowledge in the area.
2. It provides the investigator with a relational statement that is directly testable in a research study.
3. It provides a direction to the research. It provides a framework for reporting conclusions of the study.
4. It could be considered as the working instrument of theory. It can be deduced from theory and from other hypothesis.
5. It could be tested and shown to be probably supported, apart from one's own values and opinions.

Characteristics of a Hypothesis

1. Testable
2. Logical
3. Directly related to the research problem
4. Represents a simple unit or subject of the problem
5. Factually or theoretically based
6. States relationships between variables
7. Sets the limits of the study
8. Stated in such a form that it can be accepted or rejected.

Kinds of Hypothesis

1. **Simple Hypothesis.** It is a hypothesis formulated when predicting a relationship between an independent variable and a dependent variable.
   Example:
   a. The nature of teachers is related to the nature of the students.
   b. There is a relationship between the level of exercise and weight retention among elementary school children.

2. **Complex Hypothesis.** It is a hypothesis formulated when predicting the relationships of two or more independent variables to two or more dependent variables.
   Examples:
   a. There is no significant relationship between the profile, classroom leadership and management skills and the school's performance secondary school teachers.
   b. The intrapersonal and interpersonal competencies of principals do not relate significantly to the performance of secondary schools.

3. **Directional Hypothesis.** It is a hypothesis that specifies not only the existence but also the expected direction of the relationship between the independent and the dependent variables.
   Examples:

   a. Lower levels of exercise are associated with greater weight retention than higher levels of exercise.
   b. The types of promotional campaigns positively affect the level of patronage of customers.

4. **Non-directional Hypothesis.** It is a hypothesis that does not stipulate the direction of the relationship between the independent and dependent variables.
   Examples:
   a. Women with different levels of postpartum depression differ with regard to weight retention.
   b. The sources of stress are related to the different coping mechanisms among teachers.

5. **Null Hypothesis.** It is a hypothesis formulated for the purpose of statistical analysis. This kind is always expressed as a negative statement. It is subjected to testing in which the decision is either to accept or reject it. This is the hypothesis of "no effect," "no relationship," or "no difference" in which the researcher doubts to be true.
   Examples:
   a. There is no significant relationship between the reasons for using alternative medicine and the level of comfort of the patients.
   b. The kind of teaching methods used has no effect on the level of performance of students as shown in their academic grades and behavior in class.

The question now is how do you formulate you own statement of the hypothesis in your quantitative research. Remember that statement of hypothesis applies only to quantitative research.
   If a researcher aims to study about the relationship between the employees' quality-of-work life and their profile, the statement of hypothesis can be:

> This study presented this hypothesis:
>
> 1. There is no significant correlation between the respondents' quality-of-work life and their profile

Or a researcher wishes to study about the effect of gender on students' IQ score. Thus, the statement of hypothesis may be:

> This study established this hypothesis.
>
> 1. There is no significant difference between the IQ scores of male and female students.

A very important note to remember that your hypothesis is anchored from the statement of the problem, theories and prior readings.

How will Hypothesis Help in Scientific Method?

Researchers use hypothesis to put down their thoughts directing how the experiment would take place. Following are the steps that are involved in scientific method:

1. Formation of question
2. Doing a background research
3. Creation of hypothesis
4. Designing an experiment
5. Collection of data
6. Result analysis
7. Summarizing the experiment
8. Communicating the results

A hypothesis is a tentative prediction about the relationship between two or more variables in a population under study. There are different kinds of hypothesis, namely: simple, complex, directional, non-directional and research. Formulating hypothesis is possible among quantitative studies. Hypothesis is anchored from the statement of the problem, theories and prior readings. And it will help any scientific study in the formation of a question, doing a background research, creation of hypothesis, designing an experiment, collection of data, result analysis, summarizing the experiment and communicating the results.

Exercise 4

If you can do this, you are ready to formulate the hypothesis of your study. You figure out the independent and dependent variables present in the following titles. Please remember that independent variables stand alone and they are not changed by the other variables you are trying to measure, on the other side, dependent variables depend on other factors. For example, a test score could be dependent variable because it could change depending on several factors such as how much you studied, how much you sleep before you took the test or even how hungry you were when you took it. We need to remember these things because identifying the variables in your quantitative research helps you establish a well-grounded hypothesis.

Direction: Copy and complete the table below.

Example:
Title: Methods of Teaching and Language Achievement among Elementary
    Pupils
Independent variable: Method teaching
Dependent variable: Language achievement

TITLES	INDEPENDENT VARIABLE/S	DEPENDENT VARIABLE/S
The Effects of Types of Audio-visual Materials to the Problem-solving Skills in Mathematics		
Various Study Habits and their Effects on the Level of Performance in Management Subject		
Effects of Types of Soil and Fertilizer on the Growth of Papaya Tree		
Types of Feeds and Salinity Level: Their Effects on the Growth of Tilapia in Fishponds		

LESSON 5: Significance of the Study

Essentially, Significance of the Study informs the reader on how the study will contribute to the well-being of a person or progress of a group or society in general. For example, in addressing social problems like epidemics, e.g. COVID-19, in a research study, the findings can benefit, first and foremost, the victims themselves and their respective families, policy makers like the Department of Health, Department of Social Welfare and Development, practitioners, leaders, both local and national government, as well as NGO's.

Significance of the Study

When we speak of significance of the study, we are identifying the beneficiaries and the benefits it will give when the problem is solved. The beneficiaries include individuals like students, teachers, doctors, principals. Parents and others: the government; non-governmental organizations; and even private institutions. It is also important to note that the benefits these entities will receive from the research vary from personal benefits to multi-faceted benefits.

The significance of the study discusses the benefits of the study to the society in general, and to individual beneficiaries. The researcher defines who will benefit out of the findings of the study. He/she describes how the problem will be solved and specifically pinpoints who will benefit from such

findings or results. Usually the beneficiaries of the study are those experts concerned about the problem, the administrators or policy-makers who make the decisions or implement programs, subjects themselves, future researchers and those who directly or indirectly affected by the problem.

Sample of the Significance of the Study

Significance of the Study

The study must be conducted to find out the major causes of teenage pregnancy and the extent of the effect of teenage pregnancy on the development of students and out-of-school youth in Maramag, Bukidnon. The result of this study is beneficial to students and out-of-school youth, to the parents, teachers, to the community, school administrators, researchers and other interested individuals because this can give empirical data as bases for suggestions on minimizing teenage pregnancy in the community.

The study will also benefit **students** who are still at school because it will give them information about the causes of teenage pregnancy and its possible effects on their studies.

The study will also benefit the **out-of-school youth** in the sense that they are making aware of the causes of teenage pregnancy and are helped to avoid the same to increase their chances to participate in the Alternative Learning System(ALS) or increase their chances to go the formal school.

This study will also benefit the **parents** to enable them to realize their great role in educating their teenagers, protecting, and diverting them from indulging in premarital sex. This study, too, will make the parents aware that education about the use of contraceptives will start also at home.

This study will also benefit the **teachers** on the steps to take for they could be informed how important education is to the development of children to manhood/womanhood. This enables them to guide and identify the major causes of teenage pregnancy especially in Maramag, Bukidnon.

This study will benefit **school administrators.** It will provide them information on the importance of knowing the major factors behind early pregnancy and the possible effects on educational development of teenagers. It is one way that administrators will intensify sex education in their school and improve the knowledge of their teachers regarding this matter.

Finally, the researcher hopes that the result of this study would also be a great help to **future researchers** and to all people who are interested to know more about teenage pregnancy-their causes and the possible effects on their educational development.

Significance of the Study should reflect the extent of the contribution made by the study to improve our understanding, to change a concept or to promote a new hypothesis in a particular field of research.

Another example:

Significance of the Study

This literary analysis gives benefits to the following people*: Surigaonon people, literary teachers, literary students and literary researchers.*

This study will be a living record of the literary richness of Surigao del Sur. Through this, the Surigaonon people can achieve a better view of understanding their own identity and distinct characteristics as Surigaonons and enrich their own culture and practices. This is also helpful to **Literary teachers** because this anthology provides them with necessary background and empirical data on the diversity of cultures in the Philippines through this ethnoliterary study. Thus, the findings are utilized in the improvement of the curriculum, classroom learning conditions, and teaching strategies. For **Literary students,** this study is also significant because they can have a full grasp of the cultural differences and similarities among the regions of the Philippines in accordance with the collected printed literary tales which they can use in academic and scientific studies. Also, this study is of big help to the **Literary researchers** because this serves as their frame of reference for any current and future studies they aim to conduct especially if they have resemblance or similar bearing with this study.

The sequence of the beneficiaries of the research starts from the most benefited to the least benefited. The benefits must be specific and arranged according to the degree of significance.

In simple terms, the significance of the study is basically the importance of the research and the contribution to the beneficiaries. In the wider understanding the result will be useful to the beneficiaries like for livelihood for better living of the beneficiaries in the community.

Exercise 5

Directions: Read carefully the given sample of Significance of the Study and identify the beneficiaries and the benefits that they will receive. Complete the table below with correct answers in a separate sheet of paper. The following individuals and entity will be benefitted in this study:

As the center of educational system, the **students** will benefit from this study if their teachers will enhance their work performance by improving their financial literacy. Pupils will surely acquire the expected competencies they need to learn from financially literate teachers. This can also provide the pupils' insights on how to improve knowledge and skills in handling their finances as exemplified by their financially literate teachers. This is also beneficial for **teachers.** This will provide the springboard for teachers to reflect on their knowledge, attitudes, and behavior regarding financial matters. Eventually they will become masters of their own financial games that will make them productive and financially secured individuals. In effect, better work performance will be by teachers for the betterment of their learners. Similarly, this will provide the **school administrators** ideas on the importance of financial literacy to the performance pf teachers. It will serve as a basis for them to develop programs that will enhance the financial knowledge, attitude, and behavior of teachers. In addition, this will help them decide to include financial education as part of the basic education curriculum. **Parents** will also benefit from this study. This will help them realize the importance of financial education in human life. This will lead them to educate themselves financially for their own financial well-being. This will also motivate them to teach their children how to budget, spend wisely, and save money as early as possible. Finally, the findings of this study will be beneficial to **future researchers** because this study will serve as a frame of reference for further studies.

BENEFICIARIES	BENEFITS RECEIVED FROM THE RESULTS OF THE STUDY

LESSON 6: Scope and Limitations of the Study

In writing the Scope and Limitations of the Study, the researcher should inform the reader what information is included in the research and explain why the author chose that information. Although scope and delimitation explain the way a study is limited, this information adds credibility to research.

Scope and Limitations of the Study

Scope and Limitations comprise one important section of a research paper. The **Scope** defines the coverage or boundaries of the study in terms of the area or locality and subjects, population

covered the duration or period of the study, the nature of variables treated, their number and treatments they received, and instruments or research design should be so stated. **Limitations** are those conditions beyond the control of the researcher that may place restrictions on the conclusions of the study and their application to other situations. In your research, you must know and discuss the scope of your study (delimitations) and the challenges that you anticipate or factors that you were not able to control (limitation).

These two guidelines help your readers understand better the context of your study.

1. Specify the scope of your study the populations, setting and theory (delimitations). Delimitations are all about what you will be able to do or focus on. You simply place clear boundaries on the focus study and clearly state what will not include and possible, why it is not necessary or possible for your study.
2. Think deep about the potential challenges/weakness of your study (limitations). In real life, we all learn to hide our weaknesses. In research, we will have to acknowledge those weaknesses. As you acknowledge them, they become strengths.

Scope and limitations of the study pertains to the boundaries of the study with respect to the major variables and is further clarified by the sub-variables.

In formulating the "scope and delimitation," it is essential that the researcher has already defined the major variables of the study which are contained in the title of the research and in general statement of the problem.

Example

Scope and Limitations of the Study

This study focused on the three major variables: conduct of clinical supervision; common responses to the classroom observation, and the level of performance.

The conduct of clinical supervision is concentrated in the areas of diversity of learners; content and pedagogy; and planning, assessing and reporting learner's outcomes. The content and pedagogy as a sub-variable was sub-divided into teacher behavior in actual teaching and learner's behavior in the classroom. The common responses of the elementary teachers with respect to the classroom observation was assessed before using, and after the conduct of the said activity. Lastly, the level of performance was determined through the result of the competency- based performance appraisal system for teachers.

The fourteen elementary schools in the District of Limay were the schools where the study was conducted. These elementary schools were the Alangan Es, Arsenal ES , Bacong ES, Bliss ES, Carbon ES, Duale ES, Gabaldon ES, Kinaragan ES, Kitang ES, Lamao ES, Bo. Luz ES, Peas ES, and St. Francis ES. The principals and Grade-VI teachers of the abovementioned schools served as the respondents of the study.

This study utilized important documents and the competency-based performance appraisal system for teachers during the AY 2012-2013.

The Scope and Delimitation of the Study have a parameter and it answers the basic WH-questions:

1. **What**-The topic of investigation and the variables included
2. **Where** -The venue or the setting of the research
3. **When** -The time frame by which the study was conducted
4. **Why** -The general objectives of the research
5. **Who** -The subject of the study, the population and sampling

6. **How** -The methodology of the research which may include the research design, methodology and the research instrument

      The scope defines the coverage or boundaries of the study in terms of the area or locality and subjects, population covered the duration or period of the study. The nature of variables treated, their number and treatments they received, and instruments or research design should be so stated. Limitations are those conditions beyond the control of the researcher that may place restriction on the conclusions of the study and their application to other situations. In your research, you must know the scope of your study (delimitations) and the challenges that you anticipate or factors that you were not able to control (limitation). In your research study, you must discuss the scope of your study (delimitations) and the challenges that you anticipate or factors that you were not able to control (limitations).

Exercise 6

Directions: Read the sample Scope and Limitations of the Study below and do the tasks
         that follow.

Scope and Limitations of the Study
    The main purpose of the study is to provide information regarding metro-sexuality and how being a metrosexual affects the lifestyle of the student. The study considers the student's personal information such as their name (optional) gender, age, and section.
    The researchers limited the study to 80 male and female secondary education students enrolled in the second semester of school year 2015-2016 of Technological Institute of the Philippines. Each of the respondents was given a questionnaire to answer. The students selected came from four different sections to prevent bias and get objectives perceptions.

Answer the WH-questions by reading the sample of scope and delimitation above.
1. What is the topic and what are the variables included?
2. Where is the venue of the study?
3. When was the study conducted?
4. Why is study conducted?
5. Who are the subjects/respondents of the study?
6. How was the study conducted?

LESSON 7: Definition of Terms

      The important terms used in the study must be defined clearly. Some of these terms appear in the research title, statement of the problem, theoretical paradigm, and in the scope and delimitation of the study. Certain terms may refer to the respondents, subject and the variables and sub-variables.
       Defining the different terms may be done conceptually or operationally. When s term is defined using books and dictionaries then it is defined **CONCEPTUALLY**. On the other hand, when definition of the term is based on how it is used in the study, it is defined **OPERATIONALLY**. A combination of the two methods is often helpful. Terms that are defined must be arranged alphabetically.

Example:

A. Terms that are defined conceptually:

Drugs. These may refer to substance or mixture of substances used in diagnosis, treatment, prevention of diseases or for the modification of physiological function or prevention of pregnancy and which is incorporate in an official list (Chaudhurri, 2003).

Ethics. A branch of philosophy that addresses questions of right or wrong. It is a term that refers to the various ways of understanding and examining moral life (Mappes, 2002).

Nursing process. It is a systematic process of assessment, planning and validation in the practice of nursing through evidence based on the scientific methods for observing, measuring and gathering data and analyzing the findings (Doenges, 2006).

Study habits. The ways or activities an individual learns.

B. Terms that are defined operationally:

Academic institution. Operationally defined as referring to the Asia Pacific College of Advanced Studies where the nursing students are enrolled.

Leadership approaches. This refers to the approaches employed by the dean and which are categorized as strategies, human assets, expertise, box or change and reflected in the respondents' answers measured by a Likert Scale.

Leadership attributes. These pertain to the rating of deans in a questionnaire as to what they consider to be the most important attribute or function of their position: personal integrity, willingness to accept responsibility, understanding people, communication, selflessness, institutions, vision, decision-making ability or ability to simplify situations.

Leadership styles. These refer to the style of management practiced by the deans, which may be autocratic or participative and measured by a Likert Scale.

Study habits. These pertain to the routinary study methods utilized by students like memorization, use of the Internet, library visit and peer review.

C. Terms that are defined conceptually and operationally:

Eating disorders. A group of behaviors fueled by unresolved emotional conflicts, resulting in altered food consumption (Grodner, 2005). As used in this study, it pertains to the kind of food, frequency of eating and amount of intake or consumption.

Nosocomial infection. It is a hospital-acquired infection (Smith, 2005). In this study, the infection acquired in the hospital are confined in the medical and pediatric wards, and operating rooms.

Personality. It refers to the sum total of the qualities and characteristics of a person as shown in his/her manners such as walking, talking, dressing, acting, attitudes, interest and ways of reacting to other people, which are manifestations of his/her behavior thoughts and emotions.

Primigravida. A woman in her first pregnancy (Pilliteri, 2004). Operationally, it pertains to a mother who has given birth at the Bataan General Hospital.

Moreover, before defining the enumerated or listed terms, there must be an opening sentence or an introductory paragraph. These terms are arranged alphabetically.

Example:

Definition of Terms

The following terms are defined for further understanding:

Folktales are stories being passed on from one generation to the next orally. These stories, believable or not usually contain the answer of the complexity of human mind and actions. Different kinds of folktales include fairy tales, tall tales, trickster tales, myths, and legends.

Mythic patterns are displayed patterns or characteristics repetitive to all folktales. These patterns are usually found in the characters, symbols, setting and themes found in different folktales that reflect the cultures, beliefs or practices of the people in the particular region.

Idiosyncrasies are elements or properties in the folktales that best represent the most distinctive characteristics or cultural uniqueness of the people in a certain place. Although Surigaonon people belong to one province, each town is characterized by unique and identifiable behaviors and attributes.

Mimetic Theory is a theory supports the literary analysis that the work of art is the product of imitation of the human world. This is the earliest way of judging any work of art in relation to reality whether the representation is accurate or not. For this purpose, all these theories treat a work of art as a photographic reproduction, i.e. art's truth to life, poetic truth and so forth. This model undoubtedly started from Plato and runs through a great many theorists up to some modern theorists as well.

The important terms used in the study must be defined clearly. Some of these terms appear in the research title, statement of the problem, theoretical paradigm, and in the scope and delimitation of the study. Certain terms may refer to the respondents, subject and the variables and sub-variables. Defining the different terms may be done conceptually or operationally. When a term is defined using books and dictionaries, then it is defined conceptually. On other hand, when definition of the term is based on how it is used in the study, it is defined   operationally. A combination of the two methods is often helpful. Terms that are defined must be arranged alphabetically. Moreover, before defining the enumerated or listed terms, there must be an opening sentence or an introductory paragraph.

Exercise 7
Directions: Analyze and evaluate the role of entrepreneurship in the establishment of small, medium and micro enterprises (SMMEs) and ascertain the value of the economic contributions of these firms in emerging markets.

Guide Questions:

1. What are the key terms that must be defined in the study?
2. How are you going to define them?
3. What are the operational definitions of these key terms?

Assessment/Application/Outputs

Test I. Classify the following variables whether numerical or categorical.

VARIABLES	NUMERICAL	CATEGORICAL
1. Gender		
2. Difficulty		
3. Honor Rolls		
4. Length		
5. Spiritual Practices		

Test II. Directions: Identify the kind of Hypothesis each statement is. Choose from the given choices below.

 Simple Hypothesis   *Complex Hypothesis*   *Directional Hypothesis*
Non-directional Hypothesis   *Null Hypothesis*

1. Temperature and sunlight have no effect on the growth of papaya tree.
2. Consumption of sugary drinks leads to obesity
3. Eating more vegetables and fruits leads to weight loss, glowing skin, reduces the risk of many diseases such as heart disease, high blood pressure, and some cancers.
4. Food intake positive effect the IQ level of children.
5. Poverty has no effect to the crime rate in the society.

Test III. TRUE or FALSE. Write TRUE if the statement is correct, if not, write FALSE in a separate sheet of paper.

1. A person who receives money or other benefits is called benefactor.
2. The sequence of the beneficiaries of the research starts from the most benefited to the least benefited.
3. The significance of the study identifies the beneficiaries and the expected benefits that will result from the study.
4. The main concern of the significance of the study is the benefit of the researcher.
5. The results of the study will enable the beneficiaries to gain insights in the development of their duties and responsibilities.
6. The definition of terms is considered as crucial as it provides context to the readers   in understanding certain words or concepts used in the research study.
7. A term can be defined using the books and dictionaries only.
8. The meaning is based on the context of the study or how the word or concept is used in the study.
9. When a term is defined using books and dictionaries then it is defined operationally.
10. When definition of the term is based on how it is used in the study, it is defined conceptually.

Test IV. Directions: Read the situation below. Follow correctly what are being asked.

1. A researcher is interested to determine the quality of work life among the teachers of Cebu Integrated School. The quality of work is categorized as follows: a.) growth and security, b.) adequate and fair compensation and c.) safe working environment. He is also interested to describe the profile of the teachers in the following terms: age and civil status.

   Furthermore, the researcher wants to find out if there is a significant difference on the quality of work life by civil status. As an output of study, the research intends to propose a Teaching Improvement Program in order to enhance the quality of work life of the teachers.

From the given information above, formulate the Statement of the Problem with complete parts.

Suggested Enrichment/Reinforcement Activity/ies

Performance Output

Directions: Now, that you already learned the skills how to establish The Problem and Its Scope, it's time to write your Chapter 1 of your research.

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Chapter 1
THE PROBLEM AND ITS SCOPE

</div>

Background of the Study
Theoretical and Conceptual Framework
Statement of the Hypothesis
Statement of the Problem
Significance of the Study
Scope and Limitations of the Study
Definition of Terms

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