Project Development

Module 1

Let’s Do It

Find out an example of research topic which can be studied using each of following methods.

|  |  |
| --- | --- |
| 1.Descriptive | A specialty food group launching a new range of barbecue rubs would like to understand what flavors of rubs are favored by different people. |
| 2.Experimental | How fungus is the biggest enemy of any type of plant and even its danger for humans |
| 3.Correlational | If there are multiple pizza trucks in the area and each one has a different jingle, we would memorize it all and relate the jingle to its pizza truck |
| 4.Historical | Immortality in Ancient Egypt played not only religious role, but also controlled social status of each ruler |
| 5.Explanatory | if an animal shelter tries to find out why cities tend to experience an increase in animals being abandoned. |
| 6.Ex-Post Facto | a researcher is interested in how weight influences self-esteem levels in adults |
| 7.Ethnographic | Observing a group of children playing |
| 8.Exploratory | Family life |

Let’s do It

List down five topics you are interested to study in your area/field of specialization. Rank them from one (1) to five (5). Write down at least five reasons why you want to study the topic you ranked first. Use the template below.

|  |
| --- |
| 1. Proper waste disposal |
| 1. Water shortage |
| 1. Internet Connection |
| 1. Noise Pollution |
| 1. Proper Road |

Let’s do it

If you make your thesis proposal, how you will conduct it? Make a process using your own flowchart

|  |
| --- |
| 1. Make an outline of your thesis proposal before you start writing. 2. Prepare figures and tables. 3. Figure captions. 4. Methods. 5. Discussion of your data. 6. Inferences from your data. 7. Introduction. 8. Abstract. |

VII. SELF-EVALUATION:

Supply the statement below to assess what you learn in this module.

1. In your own words, research is important for us to solve and learn problem in our society.

2. What research which you think is applicable to your field. Explain briefly.

It plays an important role in discovering new treatments, and making sure that we use existing treatments in the best possible ways. Research can find answers to things that are unknown, filling gaps in knowledge and changing the way that healthcare professionals work.

3. Steps in conducting research is vital because for almost everyone irrespective of one's career field-from doctors to lawyers, students to the research scholars of science stream, from communication to Arts, from professional people to those engaged in small unskilled work, conducting research is grit to better work. However, it is a myth that research is for science students only and rest don't need to research.

PRE-ASSESSMENT: Fill-in the opposite column in the table below.

|  |  |
| --- | --- |
| I will conduct research because | It is important |
| The type/s of research that I know is/are | Solving problems |
| The first thing to do in conducting research is to | evaluate |

POST-TEST:

In your own words, answer the following questions briefly.

1. What is research? investigate systematically.

2. What are the types of research based on the following classificatory schemes? 1.Descriptive 2.Experimental 3.Correlational 4.Historical 5.Explanatory 6.Ex-Post Facto 7.Ethnographic 8.Exploratory

2.1 based on who does the study

Correlational

2.2 based on the application of the results of the study

Experimental

2.3 based on methodology or purpose of the study

Exploratory

2.4 based on the type of data sought

Descriptive

3. What are the sequential steps in the research process? What are the activities a researcher has to undertake in each of these steps?

* Identifying the problem.
* Reviewing literature.
* Setting research questions, objectives, and hypotheses.
* Choosing the study design.
* Deciding on the sample design.
* Collecting data.
* Processing and analyzing data.
* Writing the report.

Module 2

Let’s Do it

Using the semantics web, enumerate the importance of conducting a literature review.

VII-Self Evaluation : in your own words define the following terms.

Review of related literature

is a detailed review of existing literature related to the topic

Related literature

existing literature relevant to your topic

Conceptual literature

visually represent relationships of different concepts

Research Literature

A literature review is a survey of scholarly sources (such as books, journal articles, and theses) related to a specific topic or research question.

PRE-ASSESSMENT.

Answer briefly.

1. How important is the review of the literature in research?

It describes how the proposed research is related to prior research in statistics.

2. What do you think is/are the strategy/les in writing the literature review?

1) Planning: identify the focus, type, scope and discipline of the review you intend to write. 2) Reading and Research: collect and read current research on your topic. Select only those sources that are most relevant to your project.

3. If you are to outline the steps of writing the literature review, how you will do it?

1) Planning: identify the focus, type, scope and discipline of the review you intend to write. 2) Reading and Research: collect and read current research on your topic. Select only those sources that are most relevant to your project.

POST-TEST:

Answer the following questions briefly.

1. Why there is a need for a researcher to conduct the review of literature and studies?

It establishes the authors' in-depth understanding and knowledge of their field subject. It gives the background of the research. Portrays the scientific manuscript plan of examining the research result. Illuminates on how the knowledge has changed within the field.

2. What are the requirements for doing the review of literature?

Just like most academic papers, literature reviews also must contain at least three basic elements: an introduction or background information section; the body of the review containing the discussion of sources; and, finally, a conclusion and/or recommendations section to end the paper.

3. What are the guidelines that a researcher has to consider when reviewing the literature?

A literature review surveys books, scholarly articles, and any other sources relevant to a particular issue, area of research, or theory, and by so doing, provides a description, summary, and critical evaluation of these works in relation to the research problem being investigated.

Module 3

Let’s Do it

List 5 possible research problem you want to address. Focus in your area or field of interest.

1. Waste disposal

2. Water shortage

3. Internet connection

4.noise pollution

5. Proper road

Justifying The Research Problem

Having defined clearly the problem of the study, the researcher's next task is to justify why he selected it over other probable ones. To justify your study on a problem, try to answer the following questions:

1. Does the problem require immediate solution? no
2. Is it widespread? no
3. Does it affect a number of people? If yes, in what way? No
4. Who shall benefit from the study of the problem? The participants
5. What benefits can be derived from the study on the problem? Knowledge
6. Who else are interested in studying the problem? Researchers
7. What contribution to human knowledge can it bring about? Wisdom

VII - SELF-EVALUATION:

To assess your leaning in this module, provide what are asked. If you are going to conduct research, what research problem/s will you seek to answer? Consider the types of research below and write your answer on the opposite column.

|  |  |
| --- | --- |
| Descriptive Research | A specialty food group launching a new range of barbecue rubs |
| Relationship Research | the statistical relationship between high-income earners and relocation |
| Difference Research | Resilient, Sustainable and Global Food Security for Health. |

POST TEST:

Answer the following questions briefly.

1. What are the factors to be considered in the choice of a research problem?

Personal Inclination, Resources Availability, Relative Importance And Researcher Knowledge.

2. What must be considered in stating the research problem?

The title

3. Why must a researcher give his study a title?

To evaluate its content

Module 4

Let’s Do it

Formulate your conceptual framework based on your theoretical framework

|  |
| --- |
|  |

VII Self Evaluation

To assess your learning in this module, provide what is asked

|  |
| --- |
| Using Venn diagram differentiate theoretical from conceptual framework |

Pre-Assessment : Provide what are being asked.

|  |
| --- |
| A Research framework is important because… |

POST TEST: Answer the following questions briefly.

1. What is the relationship of theoretical framework and conceptual framework in research?

The theoretical framework provides a general representation of relationships between things in a given phenomenon. The conceptual framework, on the other hand, embodies the specific direction by which the research will have to be undertaken.

2. How should the theoretical framework of a study be developed?

Choose your topic. Decide on what will be your research topic. Do a literature review. Review relevant and updated research on the theme that you decide to work on after scrutiny of the issue at hand. Isolate the important variables. Generate the conceptual framework.

3. How should the conceptual framework be formulated?

Based on the theoretical framework

Module 5

Lets Do it

1. What is your main problem in your proposal research?
2. What are the sub- problems you are going to answer?

Lets do it

Based on your sub problems in B, Identify and describe the data you need to gather to answer each of them follow your number sequence in B.

|  |
| --- |
|  |

On the basis of oyur answer in B and C, what research design should you use?

|  |
| --- |
|  |

Based from your identified main problem and sub-problems in the previous exercise, craft a research question that need to be answered.

|  |
| --- |
| 1. |
| 2. |
| 3. |
| 4. |
| 5. |

VII Self Evaluation.

1.The basic purposes of research design are:

|  |
| --- |
| 1. organize |
| 2. generalize |
| 3. categories |
| 4. analyze |
| 5. visualize |

2. The factor a researcher has to consider in the choice of an appropriate research design are as follows:

|  |
| --- |
| 1. Information |
| 2. variables |
| 3. researchers |
| 4. participants |
| 5.location |

Pre-Assessment

|  |  |  |
| --- | --- | --- |
| The purpose why I will conduct research is … | Appropriate research design is important in order ….. | Align design according to the area of specialization of the researcher will…. |
| To understand a phenomenon, situation, or behavior under study. | To helps ensure that your methods match your research aims, that you collect high-quality data, and that you use the right kind of analysis to answer your questions, utilizing credible sources. | Alignment refers to the congruency and consistency among all components of the study, from the topic to the research methodology and everything in between—research objectives, research questions, hypotheses (if appropriate), research method, and research design. |

Post Test

1.When are the following research design appropriate to use?

|  |
| --- |
| 1.1 Ethnographic - in the early stages of user-focused systematic investigations. |
| 1.2 Experimental - the process of carrying out research in an objective and controlled fashion so that precision is maximized and specific conclusions can be drawn regarding a hypothesis statement. |
| 1.3 Explanatory - when limited information is available. It can help you increase your understanding of a given topic, ascertain how or why a particular phenomenon is occurring, and predict future occurrences. |
| 1.4 Exploratory - when the topic or issue is new and when data is difficult to collect. |
| 1.5 Historical - to collect, verify, and synthesize evidence from the past to establish facts that defend or refute a hypothesis. |
| 1.6 Evaluation - It is used to evaluate the results or output of the project in regard to the objectives and projected results. |
| 1.7 Policy - incorporates the values and ethics of policy analysts as well as decision makers, who rely on these studies to determine the allocation and distribution of resources within and among society. |
| 1.8 Ex-post facto - is widely used in social as well as behavioral and biomedical sciences. |
| 1.9 Action Research - is to improve educational programs within schools. The four main types of action research design are individual research, collaborative research, school-wide research and district-wide research. |
| 1.10 Correlational - To investigate non-causal relationships |
| 1.11 Quantitative - such as online surveys (web, mobile and email), direct (postal) mail surveys, point-of-purchase surveys, and in some cases telephone surveys as well. |
| 1.12 Qualitative - varies depending upon the method used; participant observations, in-depth interviews (face-to-face or on the telephone), and focus groups are all examples of methodologies which may be considered during qualitative research design. |

Module 6

Lets Do it

From your identified research problem describe now your participants applicable to your study.

|  |
| --- |
|  |

Let’s do it

Now craft a research design based from your identified problem

|  |
| --- |
|  |

VII- Self Evaluation

|  |
| --- |
| Sampling size will be determined through the research design |
| Factors to be considered in determining appropriate sampling size are participants and its class. |
| An interview guide is important for a primary source |

PRE-ASSESSMENT. Answer the following questions briefly.

1. How important is selecting participants in conducting a research study?

Selecting who will participate in your study is a very important step in the research process, and requires careful thought. Indeed, it is something you need to think about early on in the process of designing your research study.

2. Why is there a need to select only number of participants to be included in the conduct of research?

This is important because it means that your sample may or may not be representative of the population, and this can influence the external validity of your study.

3. Why Validity and reliability are needed to be considered in the conduct of research?

The purpose of establishing reliability and validity in research is essentially to ensure that data are sound and replicable, and the results are accurate. The evidence of validity and reliability are prerequisites to assure the integrity and quality of a measurement instrument.

POST TEST: Answer the questions briefly.

1. How will you draw out your samples? What sampling strategy will you use?

By using formulas and some appropriate sampling strategy.

2. What kind of data will you be collecting in your proposed study?

Observation data

3. How will you format your data for analysis?

By showing data tables and describing the content with the use of numbers and statistics.

Module 7

Let's do it!

|  |
| --- |
| Kind of Data to Collect. What kind of data will you collect for your proposed research? Identify the specific qualitative or quantitative data you will gather for each of your specific research problems.  It is Qualitative |

Let's do it!

Method of Analysis To Employ. What method of qualitative or quantitative method analysis will you use with your data?

|  |
| --- |
| Focus group Discussion and observation |

VII-SELF-EVALUATION: Supply the statements below to assess your understanding in ris module.

|  |  |  |
| --- | --- | --- |
| differentiate quantitative tom qualitative data.  Quantitative data refers to any information that can be quantified, counted or measured, and given a numerical value. Qualitative data is descriptive in nature, expressed in terms of language rather than numerical values | The data presented in qualitative and quantitative researchers are....  Qualitative and quantitative data is presented side by side, in a clear, digestible format. Our reports are designed to display information cohesively, so audiences can discern trends and make informed decisions. | Statistical tool is needed in interpreting data because...  Statistical knowledge helps you use the proper methods to collect the data, employ the correct analyses, and effectively present the results. Statistics is a crucial process behind how we make discoveries in science, make decisions based on data, and make predictions. |

PRE-ASSESSMENT: Answer the following questions briefly.

|  |
| --- |
| 1. How a qualitative data will be interpreted?  - With qualitative analysis, data is not described through numerical values or patterns, but through the use of descriptive context |
| 2. How a quantitative data will be interpreted?  -Quantitative data interpretation includes studying the results from various questions in a survey. The results are usually displayed numerically and by percentage in the data tables. |
| 3. What is the main reason why a data will be interpreted?  - The interpretation of data helps researchers to categorize, manipulate, and summarize the information in order to answer critical questions. The importance of data interpretation is evident and this is why it needs to be done properly. |

POST-TEST: Answer the questions briefly.

1.What purposes are served by the analysis of research data?

- The motive behind data analysis in research is to present accurate and reliable data. As far as possible, avoid statistical errors, and find a way to deal with everyday challenges like outliers, missing data, data altering, data mining, or developing graphical representation.

2. What functions are served by statistics in quantitative data analysis?

- Statistics helps in providing a better understanding and accurate description of nature's phenomena.

3. How are data presented in qualitative and quantitative researches?

Qualitative and quantitative data is presented side by side, in a clear, digestible format. Our reports are designed to display information cohesively, so audiences can discern trends and make informed decisions.

Module 8

Let’s Do it

Identify the statistical tool to be used in your proposed study. Justify why such tool is to be considered.

|  |
| --- |
| Focus group Discussion and observation is the best way since our study is a qualitative research. |

Let’s Do it

Make an outline of the ideas you will present in your proposed research project, based on the guidelines for writing the research proposal. Please follow the following format in presenting your outline.

1. Title of the Study

- The effect of Pandemic to the Students of Surigao State college of Technology

2. The Problem and Its Background

3. Review of Related Literature and Studies

4. Methods and Procedures

5. Bibliography

6. Curriculum Vitae

VII-SELF-EVALUATION: Assess yourself on your understanding on this module.

|  |  |  |
| --- | --- | --- |
| Concrete statistical tools to be used in research will | What is research abstract? | Writing a research proposal... |

PRE-ASSESSMENT: Answer the following questions briefly.

1. What statistical tool which is applicable to your research proposal?

2. What you will do first when you will write a research proposal?

3. How you will prepare yourself in the conduct of proposal defense?

POST-TEST: Answer briefly the following questions.

1. What is a research proposal?

2. What are the characteristics of a research proposal?

3. What are the guidelines that you have to follow in writing the major parts of a research proposal?