How to Write CHAPTER 1:
THE PROBLEM AND ITS SETTING

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Chapter 1

Introduction

Statement of the Problem

Assumptions and Hypotheses

Significance or Importance of the Study

Definitions of Terms

Scope and Delimination of the Study

Conceptual Framework

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Introduction

Guidelines in writing the introduction:

1. Presentation of the Problem.
2. The existence of an unsatisfactory condition, a felt problem that needs a solution.
3. Rationale of the study.
4. Historical background of the problem.

Introduction

Guidelines in writing the introduction:

5. A desire to have a deeper and clearer understanding of a situation, circumstance, or phenomenon.
6. A desire to find a better way of doing something or improving a product.
7. A desire to discover something.

Introduction

Guidelines in writing the introduction:

8. Geographical conditions of the study locale.
9. A link between the introduction and the statement of the problem.

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Significance / Importance of the Study

Guidelines in explaining the importance of the study:

1. The rationale, timeliness, and/or relevance of the study.
2. Possible solutions to existing problems or improvement to unsatisfactory conditions.
3. Who are to be benefitted and how they are going to be benefitted.

Significance / Importance of the Study

Guidelines in explaining the importance of the study:

4. Possible contribution to the fund of knowledge.
5. Possible implications.

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Definition of Terms

Guidelines in defining terms:

1. Only terms, words, or phrases which have a special or unique meanings in the study are defined.
2. Terms should be defined operationally, that is, how they are used in the study.
3. The researcher may develop his own definition from the characteristics of the term defined.

Definition of Terms

Guidelines in defining terms:

4. Definitions may be taken from encyclopedias, books, magazines, … , and other publications but the researcher must acknowledge his sources.
5. Definitions should be as brief, clear, and unequivocal as possible.
6. Acronyms should always be spelled out fully.

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Scope and Deliminations of the Study

Guidelines in writing scope and deliminations:

1. A brief statement of the general purpose of the study.
2. The subject matter and topics studied and discussed.
3. The locale of the study, where the data were gathered or the entity to which the data belong.

Scope and Deliminations of the Study

Guidelines in writing scope and deliminations:

4. The population or universe from which the respondents were selected.
5. The period of the study.

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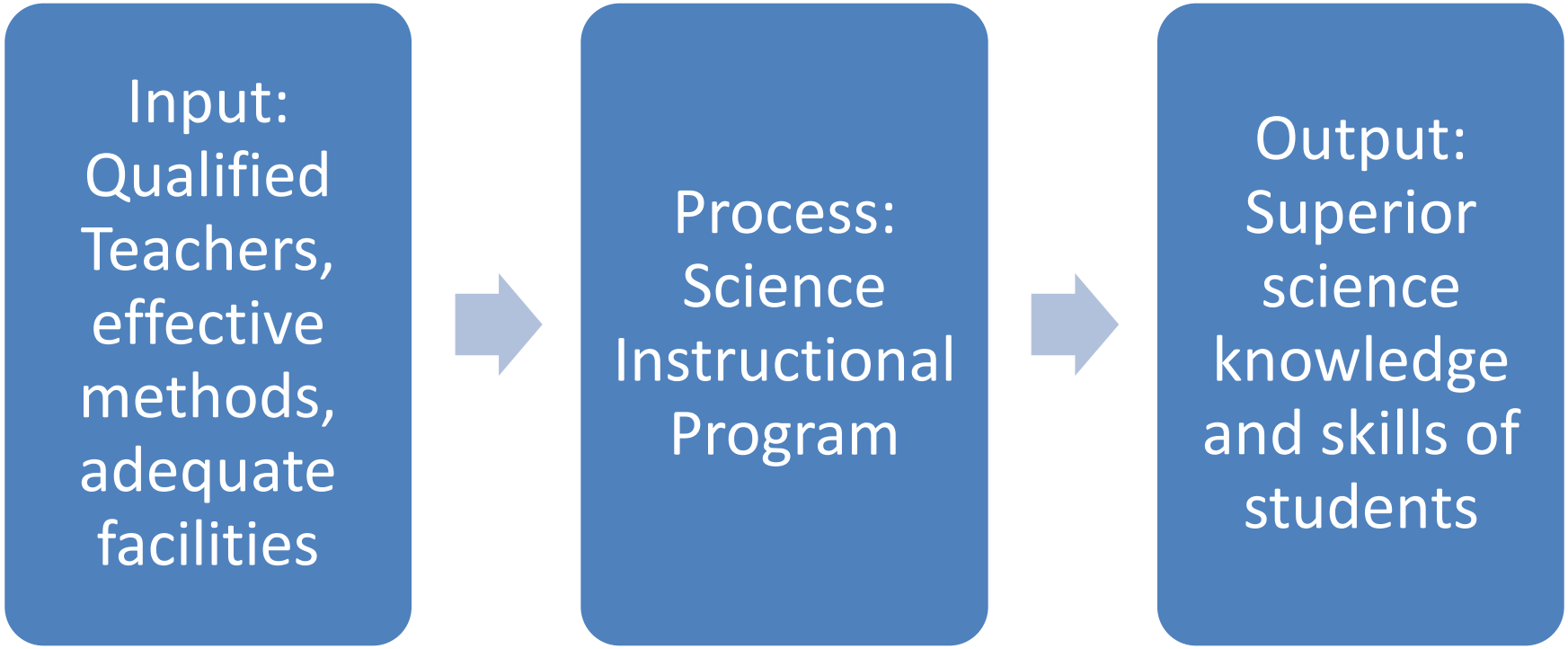
Conceptual Framework

The **CONCEPTUAL FRAMEWORK** is the central theme, the focus, the main thrust of the study.

Conceptual Framework

A **PARADIGM** is a diagrammatic representation of a conceptual framework.

Conceptual Framework



Paradigm for science teaching in high school

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Review Questions

What are the contents of Chapter 1?

Review Questions

Give one guideline in writing the introduction.

Review Questions

Give one guideline in writing the significance of the study.

Review Questions

How terms should be defined?

Review Questions

How is the study delimited?

Review Questions

How can we construct the conceptual framework?

End of Slide.

THANK YOU!

Review of Related Literature and Related Studies

Outline

- Introduction
- Importance, Purposes, and Functions
- Characteristics
- Sources
- Ways of Citing

Review of Related Literature & Studies

- Related Literature is composed of discussions of facts and principles to which the present study is related.

Review of Related Literature & Studies

Classification of Related Literature

- Local
- Foreign

Review of Related Literature & Studies

- Related Studies are studies, inquiries, or investigations already conducted to which the proposed study is related or has some bearing or similarity.

Review of Related Literature & Studies

Classification of Related Studies

- Local
- Foreign

Importance, Purposes, and Functions of RRLs

1. They help or guide the researcher in searching for or selecting a better research problem or topic.

Importance, Purposes, and Functions of RRLs

2. They help the investigator understand his topic for research better.

Importance, Purposes, and Functions of RRLs

3. They ensure that there will be no duplication of other studies.

Importance, Purposes, and Functions of RRLs

4. They help and guide the researcher in locating more sources of related information.

Importance, Purposes, and Functions of RRLs

5. They help and guide the researcher in making his research design:

a. Specific questions
b. Hypotheses
c. Conceptual framework
d. Methods of research
e. Validation
f. Analysis, interpretation, presentation
g. summary

Importance, Purposes, and Functions of RRLs

6. They help and guide the researcher in making comparison between his findings with the findings of other researchers on similar studies.

Characteristics of RRLs

- Must be as recent as possible
- Must be objective and biased
- Must be relevant to the study
- Must been based upon genuinely original & true facts
- Must not too few nor too many.

Sources of RRLs

- Books, encyclopedia and other similar references
- Articles published in professional journals, magazines, periodicals, newspapers, and other publications
- Manuscripts, monographs, memoirs, speeches, letters, and diaries

Sources of RRLs

- Unpublished theses and dissertations
- The Constitution, and laws and statutes of the land
- Bulletins, circulars, and orders emanating from government offices and departments
- Records of schools, public and private
- Reports from seminars, educational or otherwise

Sources of RRLs

- Reports from seminars, educational or otherwise
- Official reports of all kinds, educational, social, economic, scientific, technological, political, etc. from the government and other entities.

Where to Locate the Sources of RRLs

1. Libraries, government, school, or private
2. Government and private offices
3. National Library
4. The Library of Department of Education

Ways of Citing

1. By author or writer.

Example: According to Enriquez, praise helps much in learning…

Ways of Citing

2. By topic.

Example: It has been found out that praise is an important aid in the learning of children.

Ways of Citing

2. Chronological.

Materials which were written earlier should be cited first.

Summary

- Introduction
- Importance, Purposes, and Functions
- Characteristics
- Sources
- Ways of Citing

Question

- Define related literature.

Question

- Define related studies.

Question

- How are related literature and studies classified?

Question

- Why are related literature and studies important in research?

Question

- How are good related literature and studies characterized?

Question

- From what sources may related studies and literature be taken?

Question

- Where are these sources of related literature and studies located?

Question

- What are the three ways of citing related literature and studies?

THANK YOU!

Chapter 3 METHODS OF RESEARCH AND PROCEDURES

Outline

- Method of Research
- Method of Collecting Data and Development of the Research Instrument
- The Sampling Design
- Statistical Treatment of Data

Method of Research

- The method of research used whether historical, descriptive or experimental should be explained briefly.

Method of Research

- The procedural part of the method, its appropriateness to the study, and some of its advantages should be given attention and should be well discussed.

Method of Research

EXAMPLE

- The descriptive method of research was used in this study. Descriptive method of research is a fact-finding study with adequate and accurate interpretation of the findings… Since the present study was concerned with…, the descriptive method of research was the most appropriate method to use.

Method of Collecting Data and Development of the Research Instrument

Includes:

- Collection of Data
- The questionnaire
- The interview
- Observation

Method of Research

EXAMPLE

- The method of collecting data used was the normative survey. This is concerned with looking into the commonality of some elements. Since the present research is a status study, the normative survey was the most appropriate method to use in gathering data.

Sampling Design

Should explain are:

- The size of the population;
- The study population;
- The margin of error and the proportion of the study population used;
- The type or technique of sampling used whether pure, systematic, stratified, cluster, or combination
- The actual computation of the sample; and
- The sample.

Statistical Treatment of Data

What functions do statistics perform in research?

1. Statistical methods help researcher in making his research design, particularly in experimental research.
2. Statistical techniques help the researcher in determining the validity and reliability of his research instruments.

Statistical Treatment of Data

What functions do statistics perform in research?

3. Statistical manipulations organize raw data systematically to make the latter appropriate for study.
4. Statistics are used to test the hypothesis.

Statistical Treatment of Data

What functions do statistics perform in research?

5. Statistical treatments give meaning and interpretation to data.
6. Statistical procedures determines the levels of significance of vital statistical measures.

Statistical Treatment of Data

Guidelines in the selection and application of statistical procedures.

- Data should be organized.
- When certain proportions of the population based on certain variables such as age, height, income, etc. are desired to be known, frequency counts with their frequency percents may be used.

Statistical Treatment of Data

Guidelines in the selection and application of statistical procedures.

- When the typical, normal, or average is desired to be known, the measures of central tendency may be computed and used.

Statistical Treatment of Data

Guidelines in the selection and application of statistical procedures.

- When the variables being studied are abstract or continuous such as efficiency, excellence, the weighted mean may be computed and used.

Statistical Treatment of Data

Guidelines in the selection and application of statistical procedures.

- When the variability of the population is desired to be known, the measures of variability such as range, deviation, may be computed and used.

Statistical Treatment of Data

- relative placements of scores or positions – ranking, quartile, percentile rank
- Significance of trend of reaction or opinion – neutral position, chi-square of equal probability
- Significance of the difference between the reactions – chi-square of equal probability

Statistical Treatment of Data

- Determine how one variable varies with one another – coefficient of correlation
- Significance of difference between the perceptions of two groups – difference between means
- Determine the relative effectiveness of the different ways of doing things – analysis of variance

Statistical Treatment of Data

- Determine the effects of some variables upon a single variable to which they are related – partial and multiple correlations

- Determine the association between two independent variables – chi-square of independence or chi-square of multiplication

Collection of Data

Outline

- Classification of Data
- Categories of Data
- Selecting the Method of Collecting Data
- Characteristics of a good Research Instrument

Data

Data, plural for datum, are a collection of numbers, quantities, facts, or records used as bases for drawing conclusions or making inferences.

Classification of Data According to Source

1. Primary Data
2. Secondary Data

Classification of Data According to Source

1. Primary Data are those gathered from:
    a. Individual persons
    b. Organized groups
    c. Established practices
    d. Documents in their original forms
    e. Living organisms
    f. Man-made material things
    g. Natural objects and phenomena

Classification of Data According to Source

1. Secondary data are those gathered from:
    a. Books
    b. Articles published
    c. Unpublished master's theses and dissertations
    d. Monographs, manuscripts
    e. All other verbal or written data

Advantages of Primary over Secondary Data

1. Primary data give detailed definitions of terms and statistical units used in the survey.
2. The primary data includes a copy of the schedule and a description of the procedure used in the selection of the type of the sample and in collecting the data.
3. Primary data can be broken down into finer classifications.

Advantages of Secondary Data

1. Secondary data are more convenient to use because they are already condensed and organized.
2. Libraries make secondary data more easily accessible.

Categories of Data supplied by the Respondents

1. Facts
   a. Personal circumstances
   b. What they do
2. Attitudes and Feelings
3. Judgments
4. Psychomotor skills (activities that involve five senses)
5. Results of Tests and Experiments

Selecting the Method of Collecting Data

A. Clerical Tools
   - Questionnaire Method
   - Interview Method
   - Empirical Observations Method
   - Registration Method
   - Testing Method
   - Experimental Method
   - Library Method

B. Mechanical Devices (microscopes, thermometers, cameras, etc)

Characteristics of a Good Research Instrument

A. It must be valid and reliable
B. It must be based upon what the researcher wants to find out
C. Must gather data suitable for and relevant to the research topic
D. Must gather data that would test the hypotheses or answer the questions under investigation

Characteristics of a Good Research Instrument

E. Should be free from all kinds of bias

F. Must contain only questions that are unequivocal

G. Must contain clear and definite directions to accomplish it.

H. If mechanical device, must be of the best or latest model

I. Must be accompanied by a good cover letter or letter of recommendation from sponsor

Questionnaire

ECEN 3323 METHODS OF RESEARCH

Outline

- Define Questionnaire
- The Cover letter
- Types of Questions asked in Survey Questionnaire
- Guidelines in formulating questions
- Evidences of Misleading Questions
- Advantages and Disadvantages of using Questionnaires

What is Questionnaire?

- Defined by Good as a list of planned, written questions related to a particular topic

- With space provided for indicating the response to each question, intended for submission to a number of persons for reply

What is Questionnaire?

- Commonly used in normative survey studies and in the measurement of attitudes and opinions.

- It will supply the necessary information to complete a research study.

The COVER LETTER

a. The purpose of the questionnaire or study;
b. Who is sanctioning, endorsing, or sponsoring the study;
c. What will be done with the information gathered by the questionnaire;
d. The reason why the respondents should answer the questionnaire and giving importance to the respondents;
e. The deadline date for the return of the questionnaire;
f. A guaranty of anonymity of the respondents and the confidentiality of the information given by him;
g. An expression of gratitude for the respondents participation in the study; and
h. An offer to inform the respondents of the results of the study if he is interested.

Types of Questions asked in Survey Questionnaire

a. According to form

1. The free-answer type
2. The guided response type

- Recall type
- Recognition type
  - Dichotomous
  - Multiple choice
  - Multiple responses

Types of Questions asked in Survey Questionnaire

- b. According to kind of data asked for
  1. Descriptive data (verbal)
  2. Quantified data (numerical)
  3. Intensity of feeling, emotion or attitude.
  4. Degree of judgment
  5. Understanding
  6. Reasoning

Guidelines in Formulating Questions

1. Make all direction clear and unequivocal.

Example of poor direction for a multiple response question: Answer the following questions.

Better: Choose the items or options that would best answer the question and write a check mark on the space before each option. You may have more than one choice.

Guidelines in Formulating Questions

2. Use correct grammar

Example of poor grammar: Please accomplish the questionnaire as soon as possible return it.

Better: Please accomplish the questionnaire and return it as soon as possible.

Guidelines in Formulating Questions

3. Make all question unequivocal.

Example of Double barrel question: Are you employed or not?

4. Avoid Asking biased Questions.

Example: Do you used Colgate Toothpaste?

Better: Which brand of toothpaste do you use?

Guidelines in Formulating Questions

5. Objectify the responses.

Example: *Why do you use Camay soap?*

_____ *It is Fragrant.*

_____ *It makes my skin smoother.*

_____ *It is Cheap.*

_____ *It is available all the time*

_____ *It lasts long.*

Guidelines in Formulating Questions

6. Relate all questions to the topic under study.

7. Create categories or classes for approximate answers.

Guidelines in Formulating Questions

8. Group the question in logical sequence.
    a. Questions may be grouped according to the specific question under the statement of the problem.
    b. Questions that deal with items that are logically and usually placed together under a big category should be grouped together.
    c. In each grouping, Easier questions should be asked first.
    d. Question should be given in successive steps if the topic of study is a process such as baking a cake, constructing a house, preserving foods, etc.

Guidelines in Formulating Questions

9. Create sufficient number of response categories.

10. Word carefully or avid question that deal with confidential or embarrassing information.

11. Explain and illustrate difficult questions.

12. State all questions affirmatively.

Guidelines in Formulating Questions

13. Make as many questions as would supply adequate information for the study.

14. Add a catch-all word or phrase to options of multiple response questions.

15. Place all spaces for replies at the left side.

16. Make the respondents anonymous.

Evidences of Misleading Question

1. All-or-none response
2. Considerable differences in responses when the order is changed.
3. High proportion of omission or “no response”.
4. High proportion of “don’t know” or ”don’t recall”.
5. High proportion of “other” answer.
6. Considerable number of added comments.

Advantages of the Questionnaire

- The questionnaire is easy to construct.
- Distribution is easy and inexpensive.
- Responses are easy to tabulate.
- The respondent's replies are free.
- Confidential information may be given freely.
- The respondents can fill out the questionnaire at will.
- The respondents can give more accurate replies.

Disadvantages of Questionnaires

- The questionnaire cannot be used with those who cannot read nor write well, especially those who are totally illiterate.

- If many respondents may not return the filled up copies of the questionnaire purposely or forgetfully, considerable follow-ups are necessary.

- If a respondents gives a wrong information it cannot be corrected at once

Disadvantages of Questionnaires

- A respondent may leave some or many questions unanswered because nobody urges him to do or he may not understand the significance of the information he gives.

- Some questions may be vague and so the respondents may not answer them or if he does, he may give wrong replies.

Disadvantages of Questionnaires

- The number of choices may be so limited that the respondents may be forced to select responses that are not this actual choices. This is especially true with yes or no questions.

Interview

ECEN 3323 METHODS OF RESEARCH

Outline

- Definition
- Purposes and Uses
- Advantages and Disadvantages
- Types or Classes
- Interview Instrument
- Steps in the Instrument
- What to Avoid in Interviews

What is Interview

It is defined as purposeful face to face relationship between two persons, one of whom called "Interviewer" who asks questions to gather information and the other called "Interviewee" or respondent who supplies the information asked for.

Purposes and Uses of the Interview

1. The researcher may approach and interview knowledgeable people to enable him to gain insight into his problem.

2. The researcher may also interview knowledgeable people about the proper construction and validation of a questionnaire.

Purposes and Uses of the Interview

3. The interviewer may wish to gain information from the overt, oral, physical, and emotional reactions of the subject towards certain questions to be used for a possible remedy of the abnormality.

4. The researcher may also use the interview as the principal tool in gathering data for his study or just to supplement data collected by other techniques.

Advantages of Interview

1. It yields a more complete and valid information.
2. It can be used with all kinds of people.
3. The interviewer can always clarify points of questions which are vague to the interviewee.
4. Only the Interviewee respondent can make replies to questions of the interviewer.

Advantages of Interview

5. The interviewer can observe the nonverbal reactions or behavior of the respondent which may reveal rich pertinent information.
6. Greater complex questions be asked with the interviewer around to explain things greater complex data which are vital to the study can be acquired.
7. There is flexibility.

Disadvantages of Interview

1. Sometimes, selected respondents are hard to contact or cannot be contacted at all because of the distance of their place or due to some other reasons.
2. It is expensive.
3. The responses may be inaccurate.
4. It is time consuming.

Disadvantages of Interview

5. It is inconvenient for both the interviewer and the interviewee in terms of time and place.
6. There is no anonymity and so the interviewee may withhold some confidential but vital information.

Disadvantages of Interview

7. There is a tendency of interviewers to introduce bias because they may influence their interviewees to give replies that would favor their research-employers.

8. If the interviewer modifies a question, the standardized construction of the questions is lessened and, categorization and tabulation become a problem.

Types or Classes of Interviews

- *Standardized Interview* – the interviewer is not allowed to change the specific wordings of the question in the interview schedule. This is the same as the so called "Formal Interview".
- *Non-standardized Interview* – the interviewer has complete freedom to develop each interview in the most appropriate manner for each situation.

Types or Classes of Interviews

- *Semi-standardized Interview* – the interviewer is required to ask a number of specific major questions, and beyond these he is free to probe as he chooses.
- *Focused Interview* – also called as depth interview. The researcher asks a series of questions based on his previous understanding and insight of the situation. The interviewer is focused on specific topics that are to be investigated in depth.

Types or Classes of Interviews

- *Non-directive Interview* – the interviewee or subject is allowed and even encouraged to express his feelings without fear of disapproval. The purpose of this interview is to get a comprehensive picture of the motives, values, and thoughts of the subject or interviewee. The problem is how to make the interviewee talk and that the question asked may influence his/her point of view.

The Interview Instrument

Two Types of Interview Instruments:

- *Interview Schedule* – it is the same as the questionnaire. The procedures of preparing and validating an interview schedule are the same as those of preparing and validating a questionnaire.
- The interview schedule is used when the researcher knows all the items to be included in the interview about the hypotheses or specific questions.

The Interview Instrument

Two Types of Interview Instruments:

- *Interview Guide* – this interview instrument does not go into details but it only provides ideas and allows the interviewer to freely pursue relevant topics in depth.
- It is used when the researcher has a limited knowledge or information about the topics to be researched on, so that he needs more probing for an in-depth investigation.

Steps in Conducting the Interview

1. Planning step (Preparatory Step)
2. Selecting the place for interview.
3. Establishing rapport.
4. Carrying out the interview.
5. Recording the interview.
6. Closing the interview.

What to Avoid in Interviews?

- Avoid exerting under pressure upon a respondent to make him participate in an interview.
- Avoid disagreeing or arguing with or contradicting the respondent.
- Avoid unduly pressing the respondent to make a reply.
- Avoid using a language well over and above the ability of the respondent to understand.

What to Avoid in Interviews?

- Avoid talking about irrelevant matters.
- Avoid placing the interviewee in embarrassing situations.
- Avoid appearing too high above the respondent in education, knowledge, and social status.
- Avoid interviewing the respondent in an unholy hour.

Observation

ECEN 3323 METHODS OF RESEARCH

Outline

- Definition
- Purposes of Observation
- Types of Observation
- Advantages and Disadvantages of Observation
- Recording the Results of Observation

Observation

- Defined as perceiving data through the senses: sight, hearing, taste, touch, and smell

- The most direct way and the most widely used in studying behaviour.

Purposes of Observation

- To enable the researcher to gather empirical data which are difficult to obtain by other means.

- To enable the researcher to gather sufficient data to supplement or verify information gathered by other means.

- To enable the researcher to gather information or data needed to describe the aspect of a variable being studied which cannot be describe accurately without observation.

Purposes of Observation

- To enable the researcher to gather directly primary data or first-hand information for his study for a more accurate description and interpretation.

- To enable the researcher to gather data from the laboratory or elsewhere through experimentation.

Types of Observation

Participant and nonparticipant observation

a. Participant observation – the observer takes active part in the activities of the group being observed.

b. Non-participant observation – the observer is a mere by-stander observing the group he is studying about.

Types of Observation

Structured and unstructured observation

a. Structured observation – concentrates on a particular aspect or aspects of the variable being observed, be it a thing, behavior, condition, or situation.

b. Unstructured observation – the observer does not hold any list of the items to be observed.

Types of Observation

Controlled and uncontrolled observation

a. Controlled observation – is utilized in experimental studies in which the experimental variables are controlled by the researcher.

b. Uncontrolled observation – is usually utilized in natural settings.

Advantages of Observation

- The investigator is able to gather directly, first-hand information about the subject of his study.
- The researcher can observe his subjects for as long as he needs the time and as many times as he can.
- Observation is a superior technique of collecting information from non-verbal behavior and inanimate objects.
- The subjects of the inquiry can be observed in their natural settings and this will exclude artificially in description and interpretation.

Disadvantages of Observation

- In observation in natural settings, there is a lack of control upon extraneous variables.
- There is a smaller size of sample if the universe covers a very wide area and the researcher cannot afford to observe a substantial area.
- It is difficult to quantify data for standard tabulation.
- Sometimes it is hard to gain entry into the area to be observed.
- Lack of anonymity makes the observed subjects withdraw or keep secret some vital but sensitive and controversial information.

Recording the Results of Observation

1. The checklist

   -a device which contains the items to be observed and a space for number or checkmarks or short verbal entries.

a. Checklist with short verbal entries. Suppose a boy is to be observed in physical education. The items to be observed are listed down to be followed by short verbal description of each item.

Recording the Results of Observation

Name_____ Date_____
College Year Level_____ Age_____

Direction: Give a brief description of each item.

1. Type of activity _____
2. Interest _____
3. Effort _____
4. Coordination _____
5. Posture _____
6. Skills in activity _____
7. Sportsmanship _____
8. Other factors _____

Recording the Results of Observation

b. Checklist that indicates the presence or absence of an item.

Name of Observer (Optional) _____

Place of Observation _____ Date _____

Direction for Observer: Fill the space before each item by a checkmark or "Yes" if the item is present and "No" or leave it blank if the item is absent.

1. Type of farming _____ dry _____ wet_____ upland _____ lowland
2. Farming tools _____ plow _____ mudrake _____ hoe _____ bolo
3. Work animals _____ carabaos _____ oxen_____ horses
4. Water management _____ irrigated _____ rain fed _____ pump fed
5. Fertilizer _____ inorganic _____ organic _____ others (specify)

Recording the Results of Observation

c. Dichotomous checklist

– there are only two possible answers, yes or no; present or absent;

Name of project or task: _____

Grade level(s): _____

The Project or Task	*YES*	*NO**
1. Covers a representative sample of English language proficiency or academic content standards		
2. Adequately reflects the standards in scope and breadth		
3. Exemplifies grade level curriculum		
4. Makes provision for multiple language proficiency levels		
5. Requires student work samples or products for the language domains or content area(s) addressed		

Recording the Results of Observation

2. Rating scales

– a checklist with an evaluation standard.

Name of observer _____ Date_____

School _____ Sex____ Grade___ Age_____

Direction for the observer: Rate the professor on trait by writing G on the space provide if the trait is good and write B if it is bad.

_____Health _____ Grooming _____ Method of Teaching _____ Attitude

Recording the Results of Observation

3. Anecdotal forms

– a checklist that provides for less breakdown of dimensions or factors and hence, much space is provided for writing.

– it minimizes the use of highly subjective impressions in recording and obtains instead an objective description of behavior.

Recording the Results of Observation

3. Anecdotal forms

Name of Observer _____

Direction for Observer:

In the space provided, record observations that bear on the individual's physical development and social development. Do not evaluate, but describe. Avoid vague words such as good, strong, shy, etc..

Physical Development

Social Development

Recording the Results of Observation

4. Mechanical recording

– partial summary of the mechanical aids available for recording

- Motion and still pictures;
- Sound recording(tape or video-tape);
- A one-way vision screen or mirror;
- An experimental or isolation cabinet for infants;
- A photographic dome(with one-way vision screen and tracks for movement of the camera);
- Electric-eye “ticker”;
- Counting apparatus at the gate or door;
- Observer with a “ticker” device in his hand to count the number of persons passing a particular spot;
- Mechanical recording device attached to the radio at home to indicate to headquarters that radio is in use.
- Recorder of the number of telephone calls placed per month.
- An applause meter; and
- An odometer on an auto.

Recording the Results of Observation

5. Stenographic recording

– some observers resort to stenographic recording when they want to record the aspects to be observed as fast as they occur.

Making Observation More Valid and Reliable

1. Use observation where and when other data gathering devices cannot be used.
2. Use appropriate observation forms.
3. Record immediately.
4. Be as objective as possible.
5. Base evaluation on several observation.

Summary

- Method of Research
- Method of Collecting Data and Development of the Research Instrument
- The Sampling Design
- Statistical Treatment of Data

Summary

- Classification of Data
- Categories of Data
- Selecting the Method of Collecting Data
- Characteristics of a good Research Instrument

Outline

- Define Questionnaire
- The Cover letter
- Types of Questions asked in Survey Questionnaire
- Guidelines in formulating questions
- Evidences of Misleading Questions
- Advantages and Disadvantages of using Questionnaires

Outline

- Statement of the Problem or Objectives of the Study (minimum 4` questions)
- Questionnaire / Survey (minimum 10 questions)
- Tabulated Responses (30 respondents)
- Analysis of data (tables and graphs)
- To be submitted on October 03, 2017 (Tuesday)

Outline

- Definition
- Purposes and Uses
- Advantages and Disadvantages
- Types or Classes
- Interview Instrument
- Steps in the Instrument
- What to Avoid in Interviews

Outline

- Definition
- Purposes of Observation
- Types of Observation
- Advantages and Disadvantages of Observation
- Recording the Results of Observation

Review Questions

Question

What topics are contained in Chapter 3?

Question

How do you describe your method of research?

Question

How are data classified according to source?

Question

What are the advantages and disadvantages of each class?

Question

What categories of data are gathered from the respondents?

Question

Define Questionnaire?

Question

What does a good cover letter contain?

Question

Give some guidelines in formulating a questionnaire.

Question

What are the evidences of a misleading question?

Question

What are the advantages of using questionnaires?

Question

What are the disadvantages of using questionnaires?

Question

What are the characteristics of a good research instrument?

Question

Define Interview.

Question

What are the advantages of the Interview?

Question

What are the disadvantages of the Interview?

Question

What are the types or classes of Interview?

Question

Describe the instruments used in interviews. In your own opinion which is better?

Question

What are to be avoided in interviews? Why should these things be avoided?

THANK YOU!

How to Write Chapter 4 and Chapter 5

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How to Write Chapter 4

Group-derived Generalizations

Group-derived Generalizations

1. Generally, only proportional predictions can be made.

Example

Suppose in a certain school offering civil engineering, it is a known fact that all through the years, about 70% of its graduates with an average of 2.0 or higher pass the licensing examination.

Example

On this basis, we can predict that about 70% of the graduates of the school with an average grade of 2.0 or higher will pass the next licensing examination…

Example

But we cannot predict with certainty the passing of a particular graduate even if his average grade is 1.25.

Group-derived Generalizations

1. Generally, only proportional predictions can be made.

2. The average can be made to represent the whole group.

Group-derived Generalizations

3. Full-frequency distribution reveals characteristics of a group.

4. A group itself generates new qualities, characteristics, properties, or aspects not present in individual cases.

Presentation of Data

Presentation of Data

Tabular Presentation of Data

- There should always be unity in a table.
- Presenting too many ideas in a single table should be avoided.

Presentation of Data

Textual Presentation of Tabular Data

(Two Ways)

- All items in the table are textually presented. This manner enables the reader to comprehend the totality of the data even without consulting the table.
- Only the highlights or important parts of the data are textually presented.

Presentation of Data

Basic Principles that should be remembered:

1. The textual presentation of a table should be as complete as possible so that the ideas conveyed in the table are understood even without referring to the table itself.

Presentation of Data

Basic Principles that should be remembered:

2. Textual presentation is generally followed by interpretation, inference or implication. This is done after the data from the table have been textually presented.

Presentation of Data

Basic Principles that should be remembered:

3. Findings in the present study should be compared with the findings of the other studies as presented in the related literature and studies.

Example

Table 1

Degrees and Specializations of the Teachers

Degrees Earned	Specializations (Major)								Total	
	English		History		Math		Science			
	F	%	F	%	F	%	F	%	F	%
AB	1	1.69	2	3.39	6	10.17	12	20.34	21	35.59
BSCE					4	6.78			4	6.78
BSE	2	3.39	2	3.39	14	23.73	13	22.03	31	52.54
MA					1	1.69	2	3.39	3	5.08
Total	3	5.08	4	6.78	25	42.37	27	45.76	59	99.99

Example

(Complete) Table 1 shows that there were 59 science teachers in the highschools of Province A. Of this number, 21 or 35.59 percent were AB graduates. Of the AB graduates, one or 1.69 percent majored in English, two or 3.39 percent in History, six or 10.17 percent in Mathematics, and 12 or 30.34 percent in Science.

Example

(Only the highlights) Of the 59 teachers, the AB and BSE graduates constituted the most number. Twenty-one or 35.59 percent were AB graduates and 31 or 52.54 percent had BSE degrees or a total of 52 or 88.13 percent.

Example

(Only the highlights) Of the majors, 27 or 45.76 percent of the teachers were majors in Science, 25 or 42.37 percent in Mathematics, and three or 5.08 percent in English and four or 6.78 percent in History.

Example

(Findings) All the science teachers were qualified to teach in the high school as per regulation. Unfortunately, more than half of them were not science majors and therefore cannot teach science. Taking all other things equal, a teacher with a science major can teach science better than one with a non-science major.

Example

(Findings) Consequently, it can be assumed that the teaching of science in the high school Province A is weak. As a result, the students and the whole country will suffer and the consequences will be far-reaching. There is a need to encourage teachers who are non-science majors to increase their science units by attending evening or summer courses or by attending more science seminars.

How to Write Chapter 5

Summary of Findings

Guidelines in Writing Summary of Findings

The following should be the characteristics of the summary of findings:

1. There should be brief statement about the main purpose of the study, the population or respondents, the period of the study, method of research used, the research instrument, and the sampling design. There should be no explanations made.

EXAMPLE

This study was conducted for the purpose of determining the status of teaching science in the high schools of Province A. The descriptive method of research was utilized and the normative survey technique was used for gathering data. The questionnaire served as the instrument for collecting data. All the teachers handling science and a 20 percent representative sample of the students were the respondents. The inquiry was conducted during the school year 1989-1990.

Guidelines in Writing Summary of Findings

The following should be the characteristics of the summary of findings:

2. The findings may be lumped up all together but clarity demands that each specific question under the statement of the problem must be written first to be followed by findings that would answer it. The specific question should follow the order they are given under the statement of the problem.

EXAMPLE

How qualified are the teachers handling science in the high schools of Province A?

Of the 59 teachers, 31 or 53.54 percent were BSE graduates and three or 5.08 percent were MA degree holders. The rest, 25 or 42.37 percent, were non-BSE baccalaureate degree holders with atleast 18 education units. Less than half of all the teachers, only 27 or 45.76 percent were science majors and the majority, 32 or 54.24 percent were non-science majors.

Guidelines in Writing Summary of Findings

The following should be the characteristics of the summary of findings:

3. The findings should be textual generalizations, that is the summary of the important data consisting of text and numbers. No deduction, nor inference nor interpretation should be made otherwise it will only be duplicated in the conclusion.

Guidelines in Writing Summary of Findings

The following should be the characteristics of the summary of findings:

4. Only the important findings, the highlights of the data, should be included in the summary, especially those upon which the conclusions should be based.

Guidelines in Writing Summary of Findings

The following should be the characteristics of the summary of findings:

5. Findings are not explained nor elaborated upon anymore. They should be stated as concisely as possible.

Guidelines in Writing Summary of Findings

The following should be the characteristics of the summary of findings:

6. No new data should be introduced in the summary of findings.

Conclusions

Guidelines in Writing Conclusions

The following should be the characteristics of the conclusions:

1. Conclusions are inferences, deductions, abstractions, implications, interpretations, general statements, and/or generalizations based upon the findings.

Guidelines in Writing Conclusions

The following should be the characteristics of the conclusions:

1. Conclusions are the logical and valid outgrowths of the findings. They should not contain any numericals because numericals generally limit the forceful effect or impact and scope of a generalization.

Guidelines in Writing Conclusions

The following should be the characteristics of the conclusions:

1. No conclusions should be made that are not based upon the findings.

EXAMPLE

All the teachers were qualified to teach in high school but the majority of them were not qualified to teach science.

Guidelines in Writing Conclusions

The following should be the characteristics of the conclusions:

2. Conclusions should appropriately answer the specific questions raised at the beginning of the investigation in the order they are given under the statement of the problem.

Guidelines in Writing Conclusions

The following should be the characteristics of the conclusions:

3. Conclusions should point out what were factually learned from the inquiry. However, no conclusions should be drawn from the implied or indirect effects of the findings.

Guidelines in Writing Conclusions

The following should be the characteristics of the conclusions:

4. Conclusions should be formulated concisely, that is, brief and short, yet they convey all the necessary information resulting from the study as required by the specific questions.

Guidelines in Writing Conclusions

The following should be the characteristics of the conclusions:

5. Without any strong evidence to the contrary, conclusions should be stated categorically. They should be worded as if they are 100 percent true and correct. They should not give any hint that the researcher has some doubts about their validity and reliability. The use of qualifiers such as probably, perhaps, maybe, and the like should be avoided as much as possible.

Guidelines in Writing Conclusions

The following should be the characteristics of the conclusions:

6. Conclusions should refer only to the population, area, or subject of the study.

Guidelines in Writing Conclusions

The following should be the characteristics of the conclusions:

7. Conclusions should not be repetitions of any statements anywhere in the thesis. They may be recapitulations if necessary but they should be worded differently and they should convey the same information as the statements recapitulated.

Recommendations

Guidelines in Writing Recommendations

1. Recommendations should aim to solve or help solve problems discovered in the investigation.

2. No recommendations should be made for a problem, that has not been discovered or discussed in the study.

Guidelines in Writing Recommendations

3. There may also be recommendations for the continuance of a good practice or system, or even recommendation for its improvement.

4. Recommendations should aim for the ideal but they must be feasible, practical, and attainable. It is useless to recommend the impossible.

Guidelines in Writing Recommendations

5. Recommendations should be logical and valid.

6. Recommendations should be addressed to the persons, entities, agencies, or offices who or which are in position to implement them.

7. There should be a recommendation for further research on the same topic in other places to verify, amplify, or negate the findings of the study.

Evaluation of a Thesis

Evaluation of a Thesis

I. The subject and the Problems

1. Is the subject significant, timely, and of current issue?
2. Is it clearly delimited but big enough for making valid generalizations?
3. Is the title appropriate for the subject?
4. Are the sub problems specific, clear, and unequivocal?

Evaluation of a Thesis

II. The Design of the Study

1. Is the research methodology appropriate?
2. Is the design clear and in accordance with the scientific method of research?
3. Is the report prepared carefully following acceptable format and mechanics?
4. Are the documentations adequate and properly done?

Evaluation of a Thesis

III. The Data (Findings)

1. Are the data adequate, valid, and reliable?
2. Are they analysed carefully and correctly treated statistically?
3. Are they interpreted correctly and adequately?

Evaluation of a Thesis

IV. Conclusions (Generalizations)

1. Are the conclusions based upon the findings?
2. Do they answer the specific questions raised at the beginning of the investigation?
3. Are they logical and valid outcomes of the study?
4. Are they stated concisely and clearly and limited only to the subject of the study?

Evaluation of a Thesis

V. Recommendations

1. Are the recommendations based upon the findings and conclusions?
2. Are they feasible, practical, and attainable?
3. Are they action-oriented?
4. Are they limited only to the subject of the study but recommend further research on the same subject?

Reference

- *Methods of Research and Thesis Writing* by Jose F. Calderon, Ed.D. and Expectacion C. Gonzales, National Bookstore, Inc., 2006

End-of-Slide

THANK YOU FOR LISTENING!