

CHAPTER III

RESEARCH METHODOLOGY

Research Method

- Research methods can be defined as “**a systematic and scientific procedure of data collection, compilation, analysis, interpretation, and implication pertaining to any problem**”- **Bajpai (2011)**. Types of research methods can be classified into several categories according to the nature and purpose of the study and other attributes. In the methodology chapter of your thesis paper, you are expected to specify and discuss the type of your research according to the following classifications.



Types of Research Method

- **Historical Research-** It deals with the past events and integrates it with the present situations.
- **Descriptive Research-** Describe things as the market potential of a product, consumer demographics and attitudes. It deals with what is happening in the present situation, as it exists in the time of the study. Focuses on the descriptive variables from the present.

DESCRIPTIVE RESEARCH

DEFINITION

Descriptive research involves collecting data to provide an accurate portrayal or detailed account of a phenomenon without influencing it in any way. It aims to observe, document, and create a thorough profile of the subject under study, often exploring patterns, behaviors, or attributes.

EXAMPLES

- **National Census:** An official survey that records information about demographics, employment, and housing.
- **Market Surveys:** Businesses gather data about their consumers' preferences to understand market trends and guide product development.

“Descriptive research is defined as a research approach that describes the characteristics of the population, sample or phenomenon studied. This method focuses more on the “what” rather than the “why” of the research subject.”

(Matanda, 2022, p. 63)

Types of Descriptive Research

- O. **Case Study** - Provides an intent study of a person with a vision in the future. It employs a detailed study about a person/ unit over a considerate period of time.
 - It provides us with an insight into human behavior which may lead us to discover new findings not discovered before.

Types of Descriptive Research

- **b. Survey Research** - A survey is used to gather relatively limited data from a relatively large number of cases.
- **Purpose:** To gather information about prevailing conditions or the variables under study.

Types of Descriptive Research

- Oc. **Developmental Studies** - Intends to get reliable information about a group of people over a long period of time.
- Od. **Evaluative/Assessment Studies** - Those which refers to the efficiency or effectiveness of practices, policies, instruments, programs, projects or other variables that may be considered.

Types of Descriptive Research

- **e. Correlational Studies** - This is designed to determine which different variables are related to each other in the population of interest.
- **f. Follow-up Studies** - This is used when you want to follow-up development of a certain condition.
- **Example:** Tracer Study

Types of Descriptive Research

- **g. Trends and Projection Studies** - Popular descriptive study for projects that is forward-looking.
- Example: Feasibility Study

- **h. Experimental Research** - Future-oriented, here you can identify the result of 2 groups.
- Example: Technology vs Traditional

Sampling Methods

Definition:

Sample: A fraction of population selected in any manner is known as sample

Population: It is the totality of persons, objects, items or anything conceivable pertaining to certain characteristics.

Sampling: It is a process of selecting subjects who are representative of population events, behaviours or other elements with which to conduct study.

Purposes of sampling:

- Population is so large and scattered.
- It offers high degree of accuracy.
- Results can be obtained shortly.
- Needs small portions.
- Economical

Sampling Methods

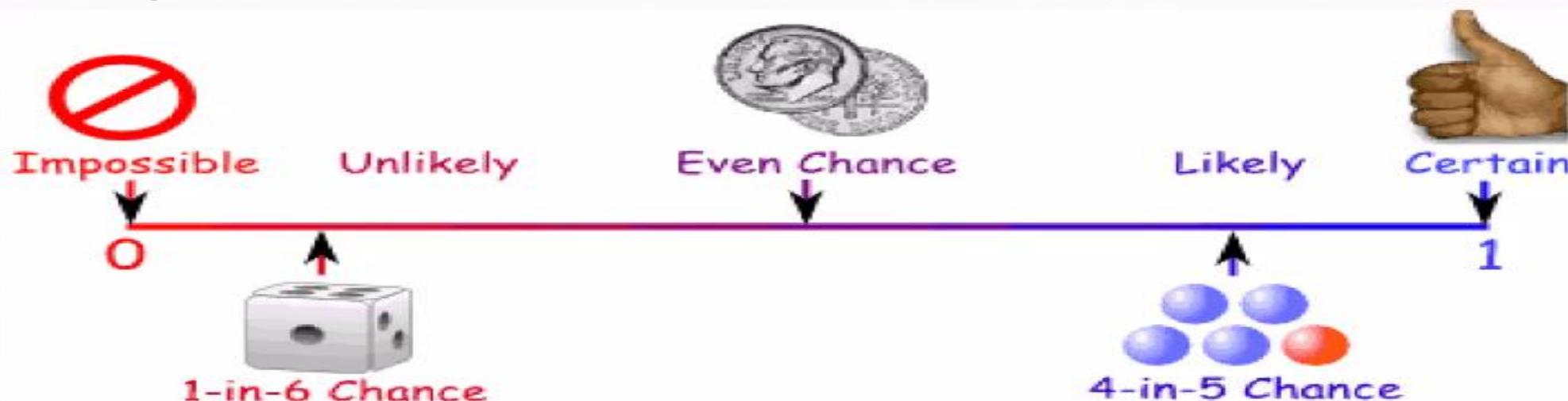
- **Probability-** members in the population have an equal chance of being selected into the sample.
- **Non-Probability-** not everybody has the chance to be selected as a sample.

What is Probability?

Probability is the chance that something will happen - how likely it is that some event will happen.

Sometimes you can measure a probability with a number like "10% chance of rain", or you can use words such as impossible, unlikely, possible, even chance, likely and certain.

Example:



Probability Sampling Method

1. Simple/Pure Random Sampling- every unit in the population has an equal probability of being included in the sample size.

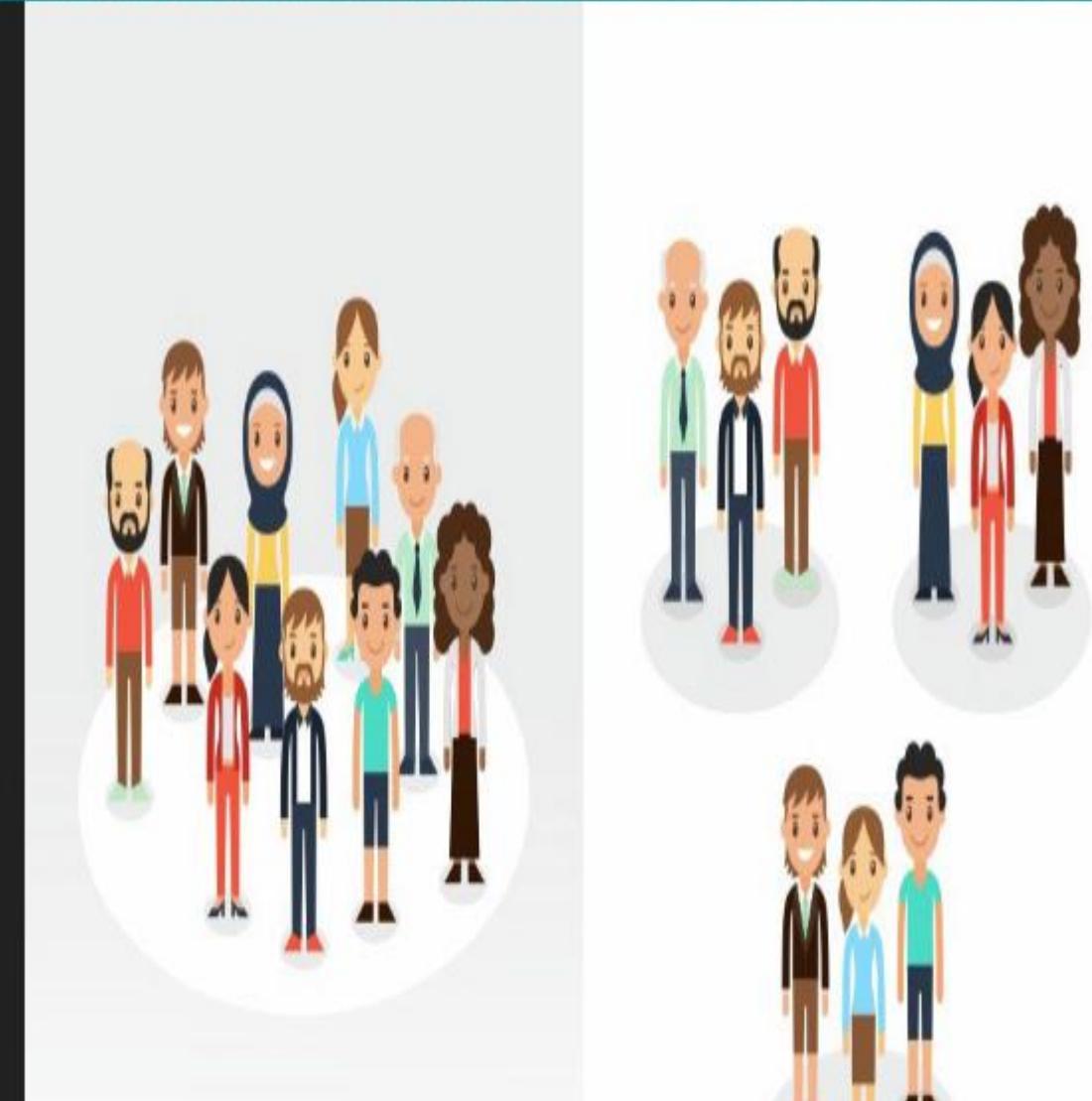


Example: Lottery Sampling



Probability Sampling Method

2. Stratified Random Sampling- involves the process of selecting randomly samples from the different strata of the population used in the study.

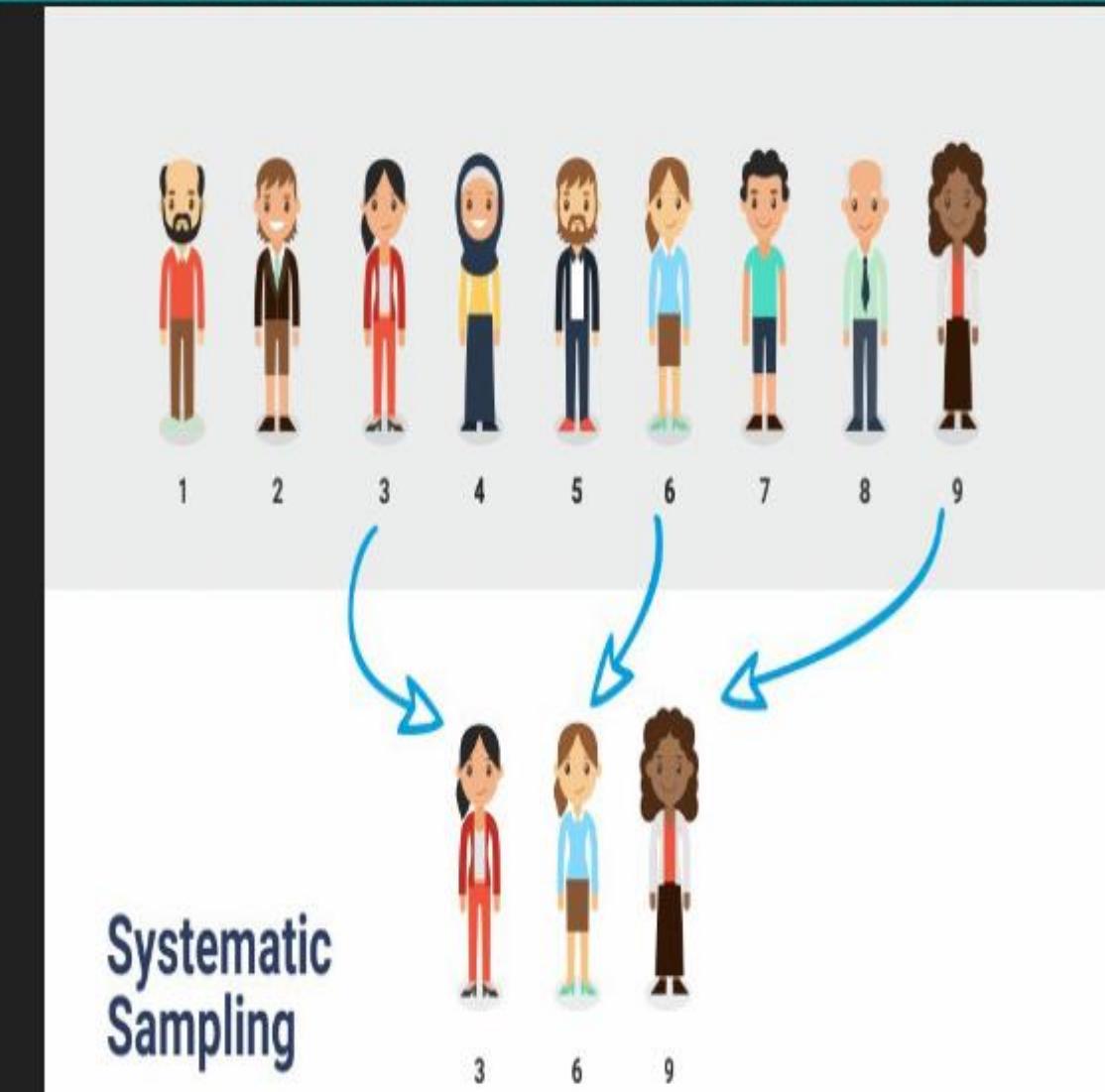


Stratified sampling



Probability Sampling Method

3. Systematic Random Sampling-
an element of the population is selected starting from a randomly selected first element.



Probability Sampling Method

4. Cluster Sampling-

○ also called “**Area Sampling**” because it is used/applied on geographical basis.





STRATA

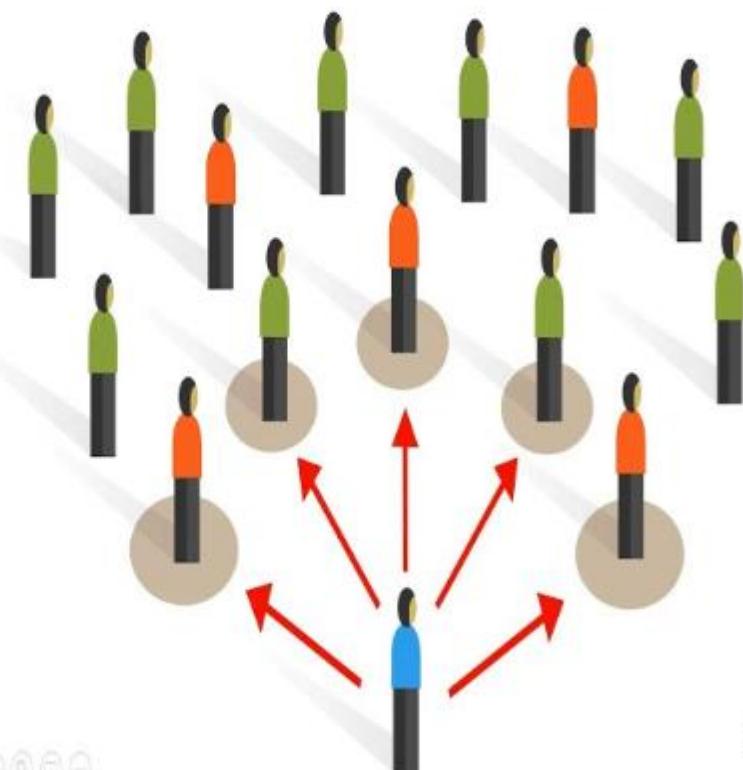
CLUSTERS

Subscribe
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Non Probability Sampling Method

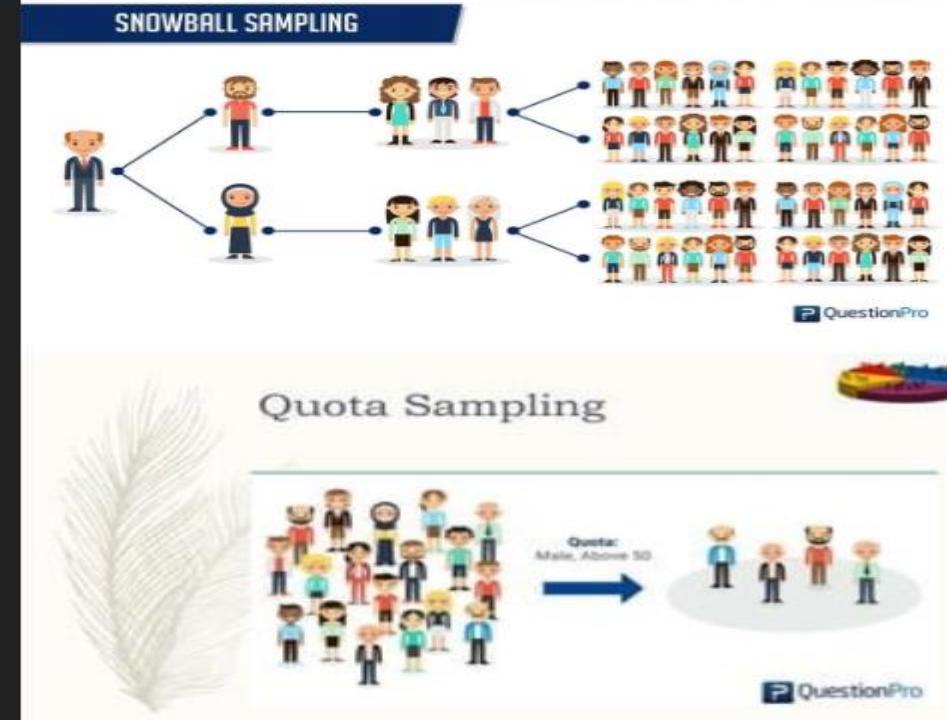
1. **Convenience or Haphazard Sampling-** involves the process of picking out people in the most common and fastest way to get immediate reactions.

Convenience sampling



Non Probability Sampling Method

- **2. Purposive Sampling**- involves the determination of the target population.
- **Quota sampling**- selecting people randomly according to some fixed data.
- **Snowball Sampling**- identifying someone who meets the criteria for inclusion in



Also known as **chain sampling** or **network sampling**, snowball sampling begins with one or more study participants. It then continues on the basis of referrals from those participants. This process continues until you reach the desired sample, or a saturation point.

Sampling Technique Formula:

n- Sample size

N- Total Population

e- Estimate Margin of error
(0 .05)

$$n = \frac{N}{1 + N(e)^{-2}}$$



SLOVIN FORMULA

Example:

n - ?

N - 1000

e- 0.05

$$n = \frac{N}{1 + N(e)^{-2}}$$

$$n = \frac{1000}{1 + 1000(0.05)^{-2}} \quad n = \frac{1000}{1 + 1000(0.0025)}$$

$$n = \frac{1000}{1 + (2.5)} \quad n = \frac{1000}{3.5}$$

$$n = 285.71$$

n = 286 IS THE SAMPLE SIZE

Sampling Technique Formula:

n- Sample size

Z-score - confidence level

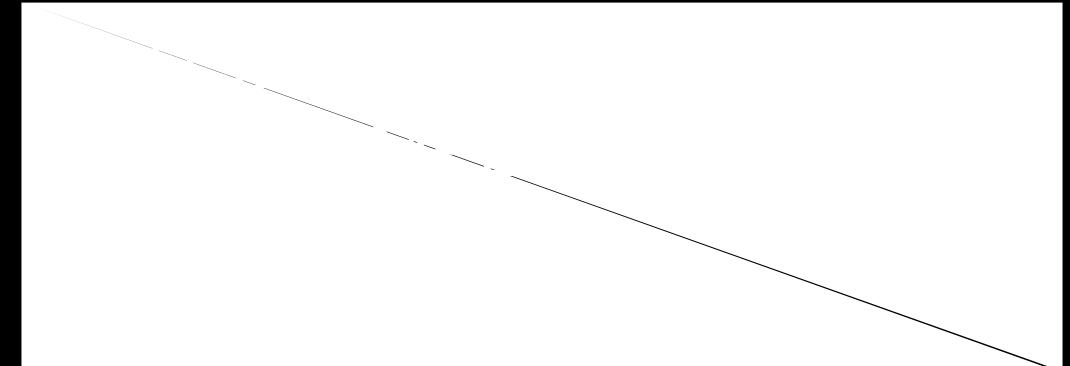
90% - zscore = 1.645

95% - zscore = 1.96

SD- Standard Deviation (0.50 / 0.30)

e- Estimate Margin of error (0 .05)

$$n = \frac{(z\text{-score})^2 \times SD(1-SD)}{(e)^2}$$



Example:

Z-score- 95% as the confidence level
margin of error (e) - 0.05

$$n = \frac{(z\text{-score})^2 \times SD(1-SD)}{(e)^2}$$

$$n = \frac{(1.96)^2 \times 0.5(1 - 0.5)}{(0.05)^2}$$

$$n = \frac{(3.8416) \times 0.5(0.5)}{(0.0025)}$$

$$n = \frac{(3.8416) \times (0.25)}{(0.0025)}$$

$$n = \frac{0.9604}{(0.0025)}$$

$$n = 384.16 = 384 \text{ sample size}$$

Only **384 respondents** are needed, assuming a confidence level of **95%** with a standard deviation of **0.5** and a margin of error of **0.05**

Determining the Sample Size

Estimation of a sample size may be utilized. The rule of thumb of effective sample size for each research approach and data collection method presented were designed by Dr. Bonie Nastasi in her presentation “Qualitative Research: Sampling & Sample Size Considerations”.

Rule of Thumb Based on Research Approach

Biography/ Case Study	Select one case or one person
Phenomenology	Assess 10 people. If you reach saturation prior to assessing ten people you may use fewer.
Grounded theory/ ethnography/action research	Assess 20-30 people, which typically is enough to reach saturation.

Rule of Thumb Based on Data Collection Method

Interviewing key informants	Interview approximately five people
In-depth interviews	Interview approximately 30 people
Focus Groups	Create groups that average 5–10 people each. In addition, consider the number of focus groups you need based on —groupings represented in the research question.
Ethnographic Surveys	Select a large and representative sample (purposeful or random based) with numbers similar to those in a quantitative study.



DATA COLLECTION INSTRUMENTS

1. INTERVIEW

In qualitative research, doing interviews is the most common type of instrument that is being used. Interviews are done by having a set of questions to your respondents and letting them answer as truthfully as possible. There are mainly three types of interview:

- Structured Interview- this type of interview has a set of predetermined questions that are ready to use. If you are using a structured interview as your instrument to gather data, take note that you should not ask beyond what is written in your interview questions.

- Unstructured Interview- this type of interview is the opposite of structured interview. You are not required to make a set of pre-made questions, but rather make an OUTLINE or what kind of questions you want to ask your respondents. Dawson (2002) calls this type of interview as life history interview. That is because you want to understand the point of view of your respondents, hence it is not advisable to use a pre-made questions. You want them to tell you a story, your respondents are free to talk about what they want to share with a little guide question from you as a researcher.

- Semi-structured Interview- this type of interview is a mix of structured and unstructured interview. It may be one of the most common types of interviews. You have to prepare a set of questions; however, you are also free to ask to follow up questions to your respondents if you want to clarify something or add information that is not available to you. This type of interview is also flexible that is why it is preferred to be used by most researchers.

2. Observations

Another data gathering instrument that is being used most in ethnography is observations. This happens when a researcher observes and takes notes of the behavior of people that they want to be a part of their research. There are three types of observations:

- **Naturalistic Observation**- this happens when a researcher observes the behavior of a group of people in their natural setting. For example, you want to observe the behavior of students inside a classroom without putting any external disturbances on them then you are using naturalistic observation.
- **Participative Observation**- this observation happens when a researcher takes part on the activities of the group of people that they are observing. Say for example you want to study the daily routine of a *Lumad* community. To have a better understanding of what their everyday activities are, you as a researcher decided to join a community so that you can immerse yourself in their daily life. This is utilizing participative observation.
- **Non-naturalistic Observation**- this type of observation happens when you take your respondents out of their natural environment and put them in an environment of your choice. You observe how people behave when they are not in their usual settings. One situation for this is taking a group of high school students and letting them attend one or two college classes where you must observe their learning behaviors. Non-naturalistic observation is where you as a researcher decides what is the “ideal” environment for you to complete your research.

3. Questionnaires

Questionnaires are also one of the most common types of instruments that is being used by qualitative researchers. This is somewhat similar to interviews based on the format of questions that is being used. There are three types of questionnaires:

- Closed-ended questionnaires- this type of questionnaire is similar to a structured interview. This is mostly used when you want to conduct surveys on your respondents. This is mostly for statistical purposes and the questions are already prepared for your respondents to answer. These types of questionnaires usually have boxes for the respondents to put a check mark.
- Open-ended questionnaires- unlike close-ended questionnaires, this type of questionnaire leaves a blank space for the respondents to give their point of view about a specific question.
- Combination of both- this type of questionnaire combines both the close-ended and open-ended questionnaires. For example, you may want to ask a yes or no question to your respondents and also want them to explain *why* they have answered yes *or no*.

4. Focus Group Discussion

This type of data gathering instrument focuses on groups of people being interviewed at the same time. This relies on the respondents to give a discussion amongst themselves on the questions that you, the researcher, give. You will serve as the *moderator* or *facilitator*. Put three or more people around a table and give them guide questions for them to discuss among themselves. Your role as the researcher and facilitator is to take note of their discussions.

[DATE]

Ana Apostol Rempohito

Punong Barangay

Brgy. Poblacion, Valencia City, Bukidnon

Sir

Good day.

We, the students of Valencia National High School are currently enrolled in Practical Research I in the open high school curriculum. One of the requirements for this subject is to make a research paper.

In this connection, we would like to ask approval from your office to allow us to conduct research on the qualitative analysis on the effectiveness of 4P's at Wao, Lanao del Sur and to conduct an interview to the residents of this barangay that are 4P's beneficiaries.

We appreciate your time and help in this academic exercise. Thank you and very much power.

Respectfully,

[YOUR NAME HERE]

Noted:

RESEARCH ADVISER

Adviser

Approved:

ANA APOSTOL REMPOHITO
Punong Barangay

Sample Interview Protocol

Name (Optional): _____

Age: _____ Sex: _____ Interview Date: _____

Good day! We are students currently enrolled in Practical Research I under the Open High School program of _____ school _____. This is an interview for our study _____ (your research topic) _____. We would like to ask for your permission to allow us to ask some questions regarding your experiences and opinions. Rest assured that the answers you will give us will be for academic purposes only and will not be used for any personal gains.

Please try to answer all questions as honestly and accurately as you can.

Question no. 1 _____

Question no. 2 _____

Question no. 3 _____

Question no. 4 _____

Question no. 5 _____



CHAPTER 4

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

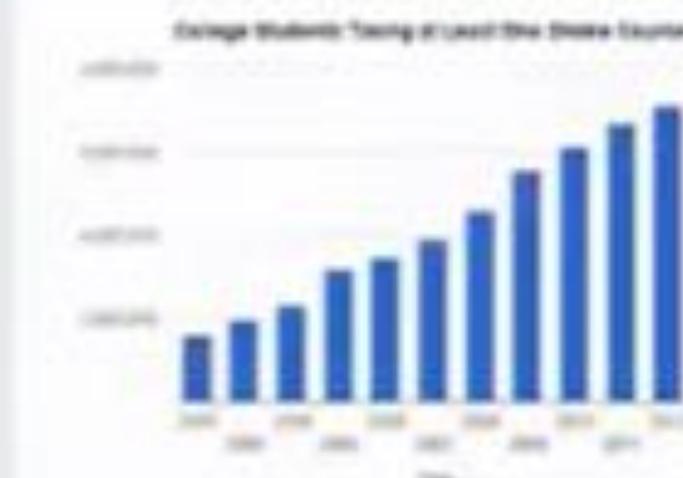


Presentation of Data

The data are usually presented in charts, tables, or figures with textual interpretation.

Common Tools Used in Data Presentation

● GRAPHS



● TABLES

A screenshot of a Microsoft Excel spreadsheet titled "Demographic data of the college nonresident population". It contains two tables: "Population 18 years and older" and "Population 6 to 17 years". Each table has columns for "Category", "Male", "Female", and "Total".

Demographic data of the college nonresident population			
Population 18 years and older			
Category	Male	Female	Total
Total	10,000	10,000	20,000
White	8,000	8,000	16,000
Black	2,000	2,000	4,000
Asian	1,000	1,000	2,000
Hispanic	1,000	1,000	2,000
Population 6 to 17 years			
Category	Male	Female	Total
Total	5,000	5,000	10,000
White	4,000	4,000	8,000
Black	1,000	1,000	2,000
Asian	500	500	1,000
Hispanic	500	500	1,000

TABLE

 It provides exact values and illustrates results efficiently as they enable the researcher to present a large amount of data in a small amount of space.

Elements of a Table:

I

- a. Title
- b. Rows
- c. Label
- d. Columns
- e. Data

● Research Title:
Peer Tutoring: Its Effects on Reading Fluency
of Senior High School Students

● Example:

PRE-TEST RESULT



POST-TEST RESULT

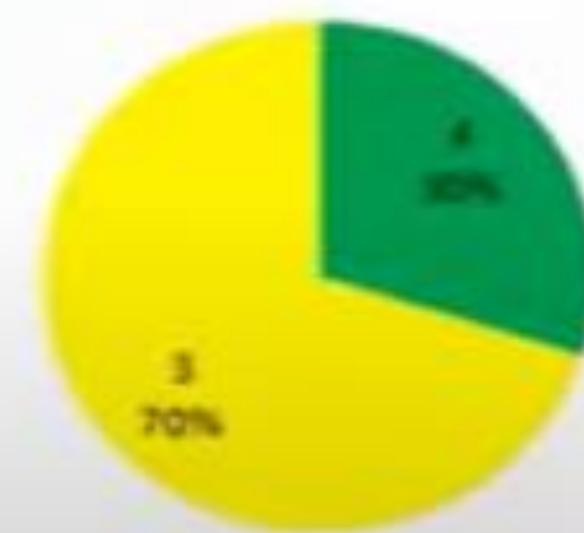


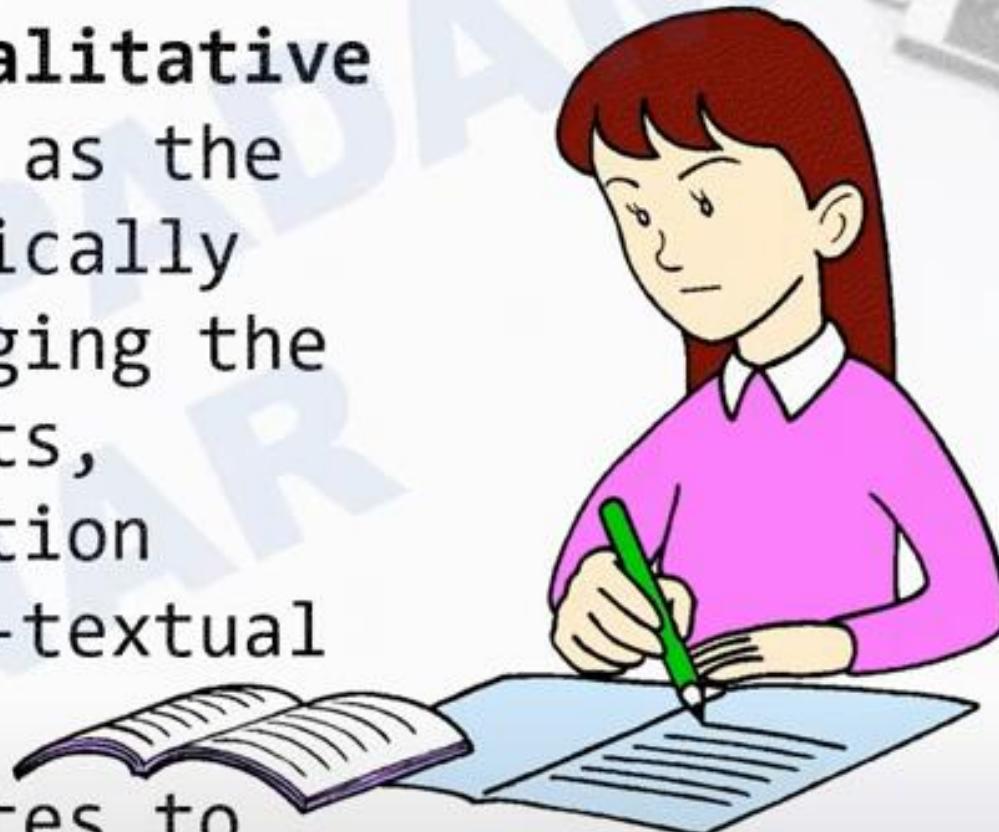
Figure 2. Percentage of Fluent and Nonfluent According to Levels

2

ANALYSIS OF DATA

DATA ANALYSIS IN QUALITATIVE RESEARCH

Data analysis in qualitative research is defined as the process of systematically searching and arranging the interview transcripts, manuscript, observation notes, or other non-textual materials that the researcher accumulates to increase the understanding of the phenomenon.



Qualitative Data Analysis:

Transcribing

Coding

Categorizing

Formulating
Themes

Data
Verification

3 INTERPRETATION OF DATA

Data Interpretation

The intelligence and logic of the researcher are required in this part. The analysis and interpretation will be the bases of the findings of the study.

Table 1

INTERVIEW QUESTION	ID	TRANSCRIPT	TRANSLATION	CODES	CATEGORY	THEM E
How can you say that you are practicing mañana habit?	R1	“Kapag inuutusan ako, ang madalas kong sabihin ay mamaya na.”	When I am ordered/command ed, what I often say is later.	Later		
	R2	“Kapag may pinapagawa si teacher, sineset- aside ko. Kasi mas may importante akong ginagawa”	“When teacher lets me do something, I set it aside because I have more important things to do.”	Set-aside Important work		
	R3					

1 Our class section are full of students who habitually abuse their own classmates that must be punished!

1 Our class section are full of students who habitually abuse their own classmates that must be punished!

Descriptive Coding

1 BULLYING ISSUE

In Vivo Coding

1 STUDENT ABUSE

Question:

What can you recall about your son's experiences in school during elementary?

1 My son, Barry, went through a really tough time about, probably started the end of fifth grade and went into sixth grade. 2 When he was growing up young in school, he was a people pleaser and his teacher loved him to death. 3 Two boys in particular that he chose to try to emulate, wouldn't, were not very good for him. 4 They were very critical of him, they put him down all the time, and he kind of just took that really kind of internalized it, I think, for a long time. 5 In that time period, in the fifth grade, early sixth grade, they really just kind of shunned him all together, and so his network as he knew it was gone.

- 1 MIDDLE – SCHOOL STRUGGLE
- 2 TEACHERS' FAVORITE
- 3 BAD INFLUENCE
- 4 TWEEN ANGST
- 5 THE LOST BOY

Theme: Identity

Category 1: Ethnicity

Code: Tattoo

Code: Myth

Code: Dressing Style

Category 2: Language

Code: Grammar

Codes: Symbols

Code: Speaking Style

Category 3: Religion

Code: Church Rituals

Code: Daily Sacrifice

Code: Church Officials

ID - refers to the code given representing the respondents

Transcript - written, printed, or typed copy of a dictated or recorded material

Theme - topics, ideas and patterns of meaning that come up repeatedly.

Notes - refers to reminders that helps organize the data and citing relevance of a source to the response

Code - refers to the classification of the identified theme.

CHAPTER 5:

Summary of Findings

Conclusions

Recommendations

CHAPTER 5

Summary of Findings

1. Restatement of main and sub-problems.

2. Reiteration of the type of research, nature, size of sample and locale of study.

3. Enumerate or express the major findings, identify whether the null hypotheses have been rejected or not.

**The conclusion is intended
to help the reader understand
why your research should matter
to them after they have finished
reading the paper.**

**A conclusion is not merely a summary
of your points or a re-statement
of your research problem
but a synthesis of key points.**

Reminders:

It is important that everything in this last section is based on the results of the data analysis. In an empirical research study, the conclusions and recommendations must be directly related to the data that was collected and analyzed.

RECOMMENDATIONS

Help solve a problem

attainable

Suggest something for
improvement

Recommend
continuance of
something good

doable

Feasible

practical