SENIOR HIGH SCHOOL

Department of Education
National Capital Region
SCHOOLS DIVISION OFFICE
MARIKINA CITY

Practical Research 2

Quarter 2-Module 2
Sampling Procedure and Sample

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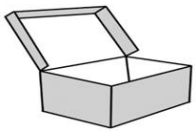


What I Need to Know

Good day Senior High School Students! In this lesson, you are going to learn how to:

Describe sampling procedure and sample (CS_RS12-IIa-c-2)

Moreover, in this lesson, you will learn concepts and do practice activities that will help you do the following:

1. define the terminologies used in sampling procedure;
2. differentiate the probability and non-probability sampling; and
3. discuss the process of conducting sampling procedures.

What I Know

Before you proceed to the different activities inside the module, answer first this ***pre-assessment activity*** below to find out what you already know about the topic.

Select your answers from the options provided after each item. Choose the letter of the correct answer and write it before the number.

1. Which of the following refers to the big idea or big group of ideas that have the same characteristics?
   A. Population
   B. Sampling frame
   C. Sampling size
   D. Sampling unit

2. What term refers to the chosen people to represent the population?
   A. Population
   B. Sampling frame
   C. Sampling size
   D. Sampling unit

3. Which refers to the individual that belongs to the sample size?
   A. Population
   B. Sampling frame
   C. Sampling size
   D. Sampling unit

4. What term describes each student, family, or elector that becomes the basis of selecting the sample?
   A. Population
   B. Sampling frame
   C. Sampling size
   D. Sampling unit

5. What is the most popular and rigorous form of probability sampling technique?
   A. Clustered
   B. Simple random
   C. Stratified
   D. Systematic

6. What type of probability sampling is being done by dividing the population on some specific characteristics and sample from each subgroup?
   A. Clustered
   B. Simple random
   C. Stratified
   D. Systematic

7. What probability sampling is being done in selecting respondents in cluster than in separate individuals?
   A. Clustered
   B. Simple random
   C. Stratified
   D. Systematic

8. What non-probability sampling refers to selecting the participants because they are willing and available to be studied?
   A. Convenience sampling
   B. Purposive sampling
   C. Quota sampling
   D. Snowball sampling

9. What non-probability sampling is being done through choosing respondents whom the researcher has judged as people with good background knowledge or with great enthusiasm about research?
   A. Convenience sampling
   B. Purposive sampling
   C. Quota sampling
   D. Snowball sampling

10. What non-probability sampling is considered as an alternative to convenience sampling in which researcher asks participants to identify others to become members of the sample?
   A. Convenience sampling
   B. Purposive sampling
   C. Quota sampling
   D. Snowball sampling

Lesson 1	**Sampling Procedure and Sample**

What's In

Before we start our lesson, let us first review some information that you have learned in sampling process in qualitative research. This task will help you to recall some ideas related to sampling process.

Set A: Quantitative vs. Qualitative Data!
Determine whether the following description or characteristics being describe is **qualitative** or **quantitative** data. Write your answer on the space provided before the item number.

_____1. The colors of E-Jeepneys on a used parking lot.

_____2. The number on the Jersey of the basketball players of Ginebra.

_____3. The number of seats in cinema.

_____4. The list of house numbers on your street.

_____5. The ages of a sample 16 teachers of Matapat Elementary School

Set B: General vs. Specific

Determine whether the underlined part of each sentence is general or specific term. Write **G** on the top of the underlined word if it is general and Write **S** on the top of the underlined word if it is specific.

1. A survey of 50 jeepney drivers found that 35% of jeepney drivers are using traditional model of jeepney.

2. A recent survey of 40 players in grade 10 level found that 15% of players can be qualified for SHS scholarship for special sports program.

3. A recent survey of 250 grade 3 students found that 35% of them can be classified as obese.

4. The average weight of every sixth person entering the mall within 3-hour period was 146 lb.

5. A researcher for a teacher applicants' content and pedagogical knowledge interviews all the teacher applicants on five randomly selected subject area.

Let's analyze: Answer the following questions.

1. How did you determine if some of the items in Set A is considered as qualitative data and others are quantitative data?

   _____
   _____
   _____

2. What made you say that the percentage part in each item in set B are considered as specific?

   _____
   _____
   _____

3. What made you say that the remaining underlined part in the sentence are general?

   _____
   _____
   _____

In today's lesson, you will learn about the sampling procedure and sample size as used in quantitative research.

What's New

A. Pre-reading activity

1. Unlocking of Difficulties

Determine the meaning of the underlined words in the sentence using the context clues. Write the letter of the correct answer on the space provided before the item number.

_____1. The researcher used <u>random</u> sampling in selecting the respondents of the study.

A. Selecting participants carefully
B. Obtaining participants with equal chances
C. Following patterns in choosing participants
D. Using systematize procedure in using participants

_____2. The researcher utilized a total of 135 <u>respondents</u> in this study.

A. Person who conducted the study
B. Person who are involved in the study
C. Person who constructed the research instrument
D. Person who conducted the statistical computation of data

_____3. The researcher used random <u>sampling</u> in selecting the respondents of the study.

A. The process of validating research instrument
B. The process of constructing research instrument
C. The process of selecting respondents in the study
D. The process of selecting respondents who will construct the research instrument

_____4. In the research methodology part of the research, the <u>population</u> frame and sampling scheme used were defined and discussed.

A. A group of people in which a sample is being generated
B. A group of people who will analyze the data gathered
C. A group of people who will construct a research instrument of the proposed study
D. A group of people with different characteristics that can be potential respondents in the study

B. Reading Activity

Read the sample text lifted from a research conducted and answer the following questions below.

Population Frame and Sample Scheme

The researchers aimed to identify the most common grammatical mistakes of fifth-year Computer Engineering students from school years 2014 to 2017. The researchers conducted random sampling in selecting the respondents since only

the thesis write-ups for 2014 are available for access. The researchers sought help from one of RTU's research project leaders in order to gain permission to look into the thesis write-ups from 2014 to 2017. The highest number of thesis write-ups available for the school year 2017 is 5, so in order to be able to correlate the write-ups equally, the researchers took 5 thesis write-ups for each year from 2014 to 2017. The average number of researchers per thesis is 7.

The researches of this study utilized thesis write-ups in a span of four years in the Computer Engineering of Rizal Technological University as basis in identifying the most common grammatical errors in technical writing data in each school year 2014 to 2017; hence the number of respondents in each school year varies. In school year 2014, there was a total of 20 respondents. In school year 2015, there was a total of 31 respondents. Furthermore, in 2016, there was a total of 51 respondents and in School year 2017, there was a total of 33 respondents. Overall, a total of 135 respondents was subjected into this study by the researchers ***(Cailing, Escolta, Manalusan, Marcelo, and Pamintuan, 2018).***

C. Post-reading activity- Answer the following questions.

1. What is the objective of the study mentioned in the text?

_____
_____
_____

2. Who are the respondents of the study mentioned in the text?

_____
_____

3. How does the researchers select the respondents of the study conducted?

_____
_____
_____

4. After selecting the respondents of the study, how many students were chosen as the respondents of the study?

_____
_____

What is It

Conducting a research really follows a separate and scientific procedure starting from identifying a research problem, formulating a research title, writing the background of the research, constructing a research questions or statement of the problem and conceptualizing the quantitative research design to be used in the study, before a researcher can proceed to the process of collecting quantitative data in order to arrive in the findings or the results of the study. According to Creswell (2014), there are five steps in the process of collecting quantitative data. These processes are not just merely or simply gathering information but it contains interrelated process.

First, determine the participants of the study. Second, obtain permission needed from several individuals and organizations. Third, collect information from the respondents or participants and other sources that can be used in qualitative research. Fourth, construct and choose appropriate quantitative research instrument that will be useful for data collection. Lastly, administer data collection process to gather the necessary data for the study.

This module will solely focus on the first step of collecting data which is **to determine the participants of the study**. Specifically, you will learn the different terminologies in sampling procedure as the process of selecting and determining the participants of the study. Differentiating probability and non-probability sampling techniques and discussing the process of conducting sampling procedure in which some of the terminologies are discussed in the sample text in the reading activity and the rest of the terms under this lesson will be discussed below.

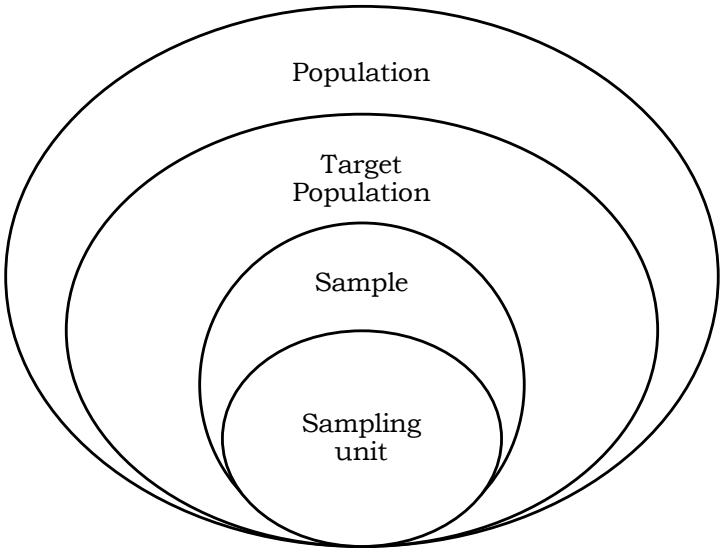
In the first set of activity in "What's In", you are required to identify whether the data being described is qualitative or quantitative. Based on your answer what are the items that you considered as quantitative data?

_____

_____

These data can be considered as quantifiable and can be subjected as the participants or data for a quantitative research. The first step in the process of collecting data as mentioned by Creswell (2014) is to identify the participants of the study. After determining or identifying the participants or data as quantitative aspect, the next thing to do is to determine whether you will study them individually, a group from the population or the entire population.

The term POPULATION refers to the big class or big group of individuals who have the same characteristics. Under the population, quantitative researchers' sample from the list and available to people to be studied is called TARGET POPULATION. Creswell (2014) further discussed it as the group of individuals or population in which researcher wishes to generalize the findings of the study. On the other hand, the term SAMPLE is the chosen people to represent the target population and the researcher plans to study it for generalizing about the target population. Lastly, the term SAMPLING UNIT refers to the individual who belong to the sample size.



The figure above shows the difference among term discussed a while ago, from the population as the large group up to the smallest circle which represents the sampling unit.

In the set B activity of "What's New" you are instructed to determine the general and specific terms among the underlined terms in the given statement. The general terms that you have identified are what you call the target population while the specific terms underlined are the sample size being lifted from the target population.

In item #1, "A survey of 250 jeepney drivers, 75% of the jeepney drivers are using traditional jeepney." The 250 jeepney drivers represents the target population while 75% of the jeepney drivers from the 250 refers to the sample size. So, the next question is "How do you select a sample for your study?", this question will be answered through the following steps:

1. Defining the target population: as defined a while ago, it is a group of individuals or a group of organization with some common defining characteristics.
2. Specifying the sampling frame: after identifying the target population, researcher can now decide on the sample frame. As defined, sampling frame is the list of elements from which the sample may be drawn.
   Example:
   Target Population: Senior High School Academic Track
   Sampling frame:
   A. Humanities and Social Science
   B. General Academic Strand
   C. Accountancy Business and Management
   D. Science and Technology Engineering and Mathematics

3. Specifying the sampling unit: based on the definition of Creswell (2014), sampling unit refer to the individual number of the target population or a cluster of members included in the target population. In the example above, since the target population is the Grade 12 senior high school under the frame of academic track, therefore all the individuals from grade 12 male and female students are included in the sampling unit.
4. Selection of Sample method: one factor that may affect the process of choosing the sampling method for your proposed research paper is the nature and objective of the study. Once the researcher knows the nature and objective of the study including the research design, he/she can easily decides on the sampling method to be used either probability sampling or non-probability sampling.

    4.1 Probability sampling is used by the researcher through selecting individuals from the target population who will serve as their representative. According to most of the researchers and statistician, this sampling method is known as the rigorous form of sampling method that belongs to the probability sampling, they are: simple random sampling, systematic random sampling, stratified sampling, and clustered sampling.

    4.1.1 Simple Random Sampling- this method relies on selecting the participants through equal probability being chosen. Creswell (2014) noted that this probability sampling method is meant to be unbiased representation of a group. For instance, 400 senior high school students under the Academic track will serve as the target population, the researcher decides to use 100 students as the sample size. So how does the researcher select the 100 students sample size without biased representation? The researcher will assign each of those 400 employees a number between 1-400, after which 100 of those number would be chosen at random.
    In the sample text in the "What's New", what type of sampling technique is used?

    _____

    _____

    4.1.2 Systematic Random Sampling- this method relies on randomly picking the first item or subject from the population then, the researcher will select each (n'th) subject from the list.

    Process of doing the systematic random sampling

    4.1.2.1 Calculate the sampling interval through dividing the total number of the target population by the number we want in the sample. For instance, there are **100 senior high school** students as the target population and the **sample size is 25** therefore the **sampling interval is 4**

4.1.2.2 Select random start between 1 and sampling interval in the example below. The yellow part is the start of the number and the blue one is the sampling interval. Therefore, you will randomly select between numbers 2 and 3 as the starting number for sampling. For instance, the researcher decides to choose #2 as the start of counting. Then from #2, the researcher will count 4 times to reach the second interval which is #6 and do the same counting in the succeeding number given and select the desire number of respondents at end of counting.

1	**2**	3	4	5	**6**	7	8	9	**10**
11	12	13	**14**	15	16	17	**18**	19	20
21	**22**	23	24	25	**26**	27	28	29	**30**
31	32	33	**34**	35	36	37	**38**	39	40
41	**42**	43	44	45	**46**	47	48	49	**50**
51	52	53	**54**	55	56	57	**58**	59	60
61	**62**	63	64	65	**66**	67	68	69	**70**
71	72	73	**74**	75	76	77	**78**	79	80
81	**82**	83	84	85	**86**	87	88	89	**90**
91	92	93	**94**	95	96	97	**98**	99	100

From the 100-target population, here are 25 participants selected as sample size using systematic random sampling.

1	**#2**	8	**#30**	15	**#58**	22	**#86**
2	**#6**	9	**#34**	16	**#62**	23	**#90**
3	**#10**	10	**#38**	17	**#66**	24	**#94**
4	**#14**	11	**#42**	18	**#70**	25	**#98**
5	**#18**	12	**#46**	19	**#74**		
6	**#22**	13	**#50**	20	**#78**		
7	**#26**	14	**#54**	21	**#82**		

4.1.2.3 Stratified Sampling- this type of sampling relies on dividing the entire target population on some specific characteristics like age, gender, or other category which is called strata. Random samples are selected from each stratum. For instance, if the researcher wants to get a sample of 150 senior high school students from 400 senior high school in the academic track as the target population, the proportionate stratified random sample will be obtained using this formula:
(n/N) x Strata Sample
n= sample size
N= population
Stratum Size= 150

The table below will show how the population size of 400 is divided into the following strata (according to academic track)

Academic Track	**HUMSS**	**GAS**	**ABM**	**STEM**	**Total**
Number of people in stratum	150	125	50	75	400
Strata Sample size	56	47	19	28	150

Based on the result, the strata sample size are as follows, in HUMSS out of 150 students, the strata sample size of 56 students will be used. For GAS, out of 125 students, the strata sample size of 47 students will be used. In ABM, out 50 students, the strata sample size of 19 students will be used. Lastly, in STEM out of 75 students, the strata sample size of 28 students will be used.

4.2. Non-Probability Sampling- this type of sampling method is the opposite of probability sampling method. The researcher selects individual because they are available, convenient, and represent some characteristics that the researcher seeks to study (Creswell, 2014). The four types of probability sampling will be presented in this part are: Convenience Sampling, Purposive Sampling, Snowball Sampling, and Quota Sampling.

4.2.1. Convenience Sampling- it is defined as a method used by the researchers when they collect data from a conveniently available pool of respondents (Flutwood, 2009).

4.2.2 Purposive sampling- is a non-probability sample technique that is selected based on characteristics of a population and the objective of study. Crossman (2020) stated that purposive non-probability sampling is also known as judgmental, selective or subjective sampling.

4.2.3. Snowball sampling- Creswell (2014), mentioned in his book that snowball sampling is alternative of convenience sampling. In this sampling method, the researcher will ask one respondent to ask other people or identify others to become the member of the respondents. This form of non-probability sampling is very helpful to the researcher who has a large number of participants.

4.2.4 Quota Sampling- This type of sampling method is used when population is heterogeneous i.e. every element of population does not match all the characteristics of the predefined criteria.

What's More

Answer the activities that will follow to practice your knowledge and skill about sampling procedure and sample.

Activity 1. POPULATION VS. SAMPLE!

A. Determine whether the data is a population or sample. Explain or Justify your reason in stating your answer.

1. The age of each grade 12 students

   _____
   _____
   _____

2. All students from 5 academic tracks

   _____
   _____
   _____

3. The number of subjects in each academic track

   _____
   _____
   _____

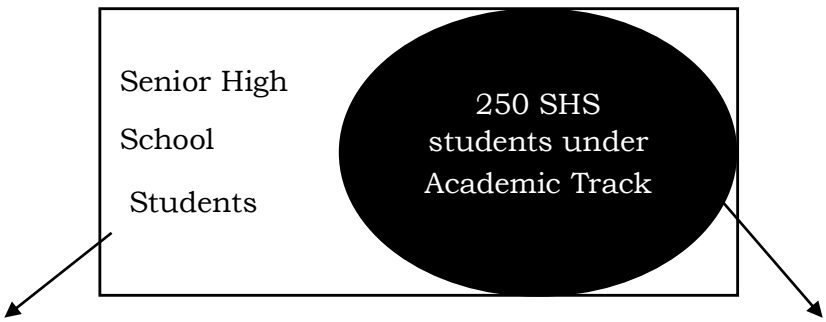
4. The number of teachers in the Senior High School Department

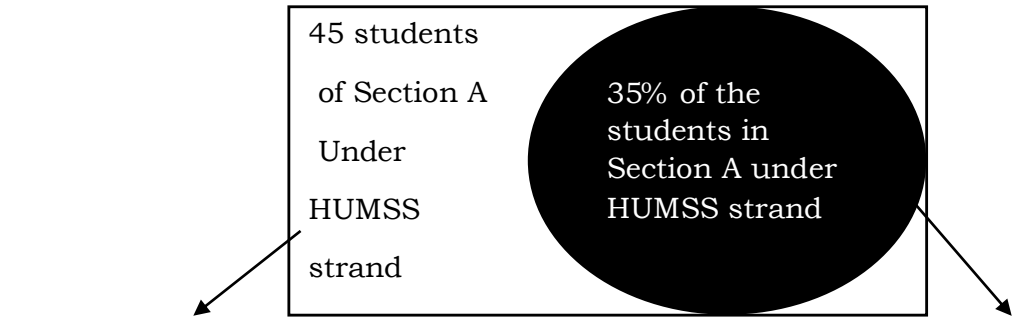
   _____
   _____
   _____

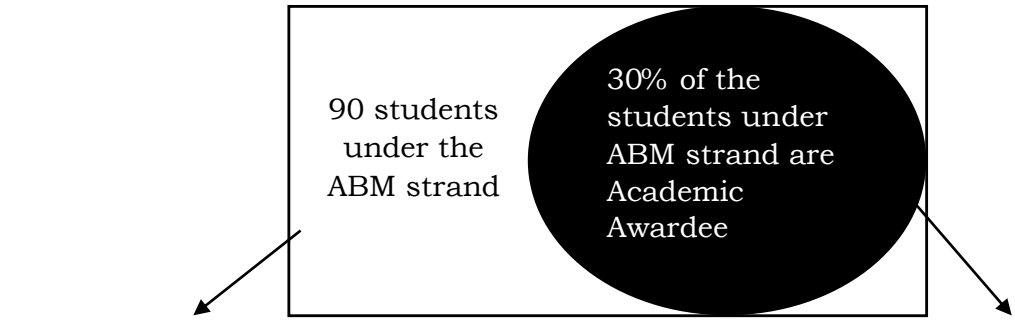
5. The annual salary of each Senior High School faculty

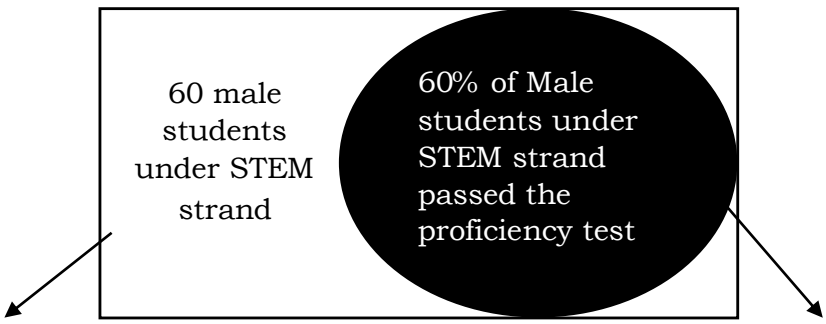
   _____
   _____
   _____

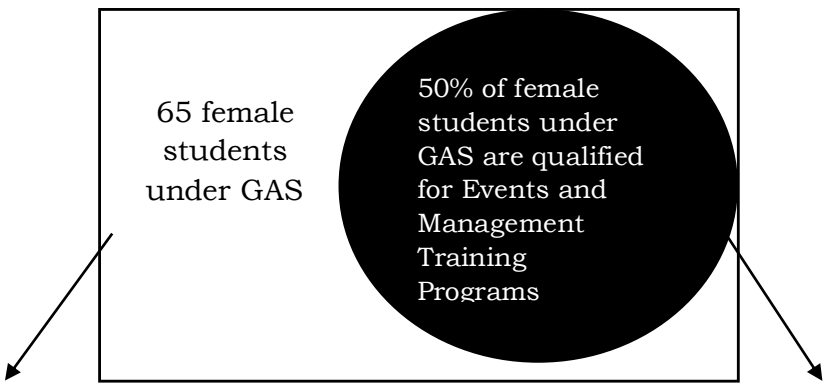
B. Directions: Identify the population and the sample in the illustration




45 students of Section A Under HUMSS strand
35% of the students in Section A under HUMSS strand


90 students under the ABM strand
30% of the students under ABM strand are Academic Awardee


60 male students under STEM strand
60% of Male students under STEM strand passed the proficiency test


65 female students under GAS
50% of female students under GAS are qualified for Events and Management Training Programs

Activity 2 PROBABILITY SAMPLING

Identify the probability sampling techniques being describe in the following statements. Write your answer on the space provided before the number. Then underlined the phrase (s)/ word (s) that served as your basis of your answer.

_____1. You divide the SHS students' population with respect to their Academic track and interview some students in each track.

_____2. You assign each student under Humanities and Social Science strand a number and generate a random number. Then, you conduct an interview in each students whose number is selected randomly.

_____3. You select your classmates in STEM strand as your respondents.

_____4. You select a class under ABM strand and interview each student in the class.

_____5. You assign each student under GAS strand a number and after choosing a starting number you interview every 10^{th} student.

_____6. Choosing 550 grade 12 senior high school students in Marikina randomly are being traced and asked their perception about work immersion.

_____7. The SSC president divides the senior high school classes into 30 subsections and randomly select 5 and use all the sample student within those subsections for the games.

_____8. The Senior High School representative randomly selects 5 students from each GAS sections to serve a committee for the incoming SHS fair.

_____9. The supreme student council has a list of 100 faculty of their school. They decided to interview every 5^{th} faculty on the list about their position for the school program.

_____10. A teacher put all his students' name in the box, then he/she selects 10 names from the box. The chosen students will take the self-assessment test.

Activity 3 NON-PROBABILITY SAMPLING

The following methods in doing each non-probability sampling are given. Your task is to arrange the methods on each non-probability in their appropriate places. Use alphabet letters as your answer to signify the proper arrangement of the method.

A. Purposive Sampling

_____1. Participants are told about the research through letters or other forms of communication.

_____2. Whosoever is interested will be contacted by the investigators.

_____3. The researcher will discuss the purpose of his/her research to those who are interested to be part of the study.

B. Convenience Sampling

_____1. He/she is being requested to be the participants of the research.

_____2. If the person permitted the researcher or shows consent, then the data gathering should be done.

_____3. Any member of the target population who is available at that moment is being asked.

C. Snowball Sampling

_____1. The first participant is now requested or asked to refer the researcher to another person that could possibly include as the respondents/participants in the study.

_____2. The researcher will inform the first participants about the purpose of his/her research.

_____3. The researcher selects a person who matches the criteria of the research.

D. Quota Sampling

_____1. On the basis of the identified variable sub groups are made.

_____2. Then the sample is approached on the basis of set quota.

_____3. A quota is set for each sub group.

_____4. First of all, there is a need to identify the variable which makes the target population heterogeneous.

What I Have Learned

In this lesson, we focused on describing the sampling procedure and sample. This time, you have to express what you have learned in this module by answering questions below:

1. What is the difference among the term population, target population, sample, and sampling unit?

   _____
   _____
   _____

2. What are the steps to follow in order to determine the participants of your study?

   _____
   _____
   _____
   _____

3. What are the two methods used to determine the sample who will be served as the respondents of the study?

   _____
   _____

4. What are the types of probability sampling method?

   _____
   _____
   _____

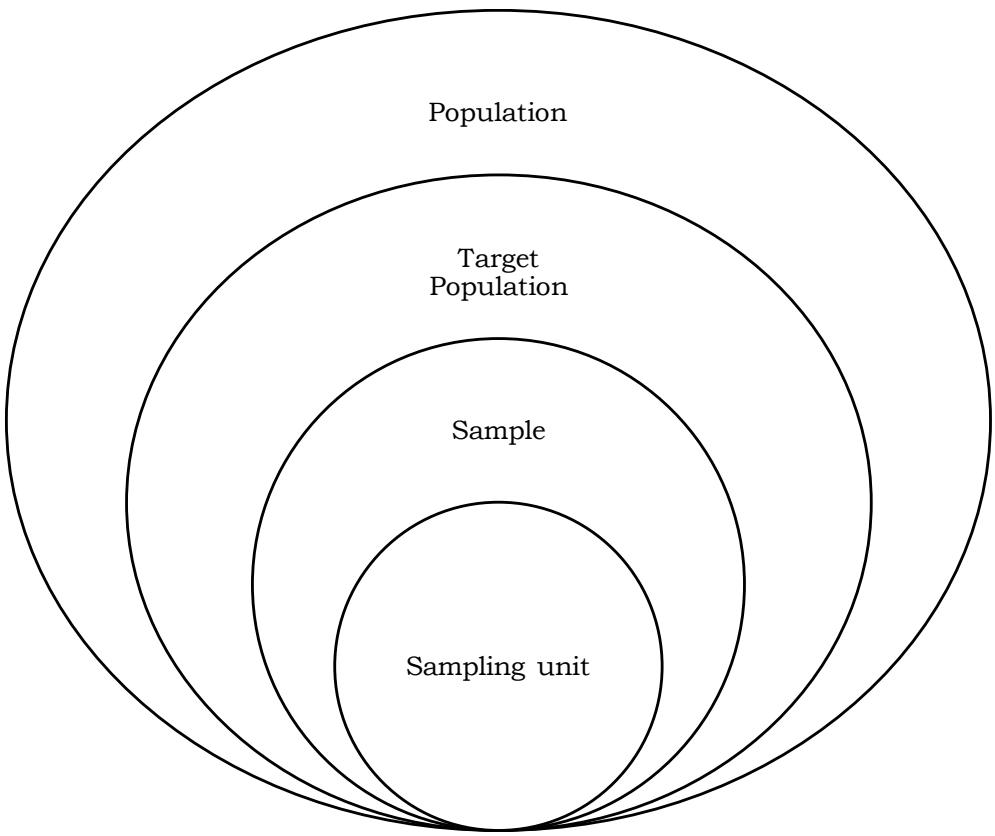
5. What are the types of non-probability sampling method?

   _____
   _____
   _____

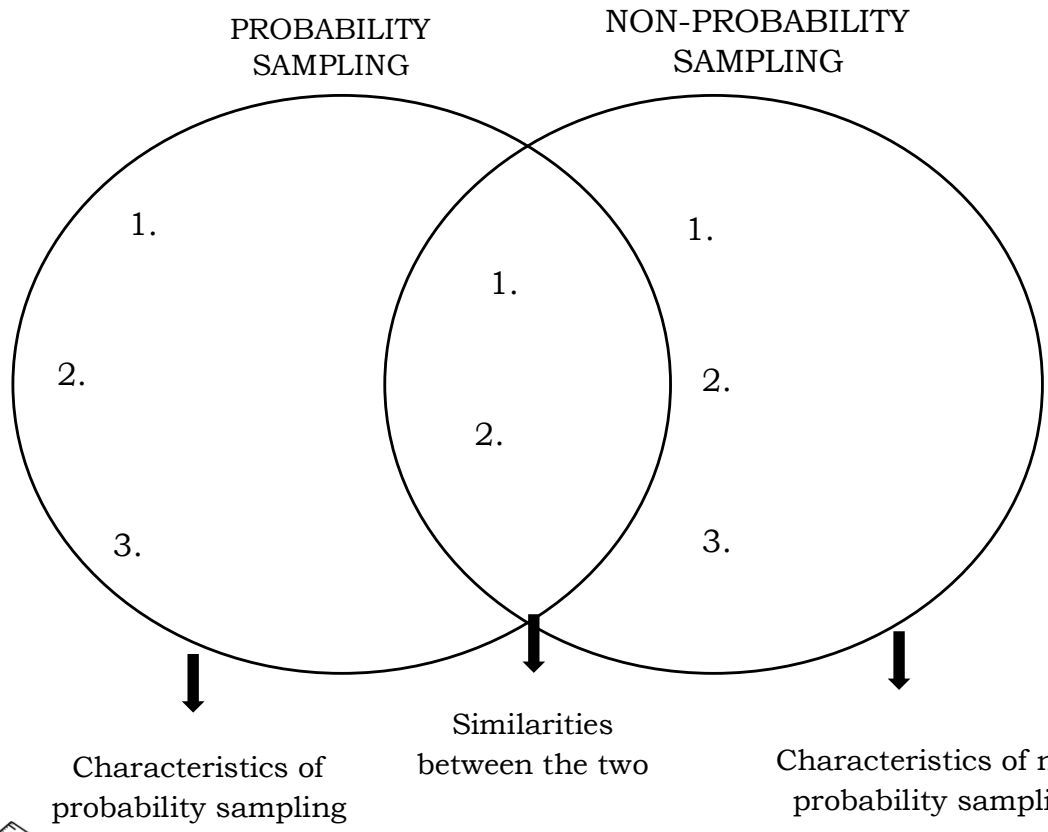
What I Can Do

Apply what you have learned about describing sampling procedure and sample.

A. Differentiate the following terms in the illustration. Write your answer on their respective circles.



B. Using a Venn Diagram, identify the similarities and differences between Non-probability and probability sampling.



Assessment

Showcase the knowledge and skills you have learned in this lesson by answering the assessment activity.

A. Categorize the following statements whether it belongs to the descriptions of POPULATION or SAMPLE. Write your answer in the column given.

POPULATION	SAMPLE
1.	1.
2.	2.
3.	3.

Descriptions

1. It refers to all the members who meet the particular criterion specified for a research investigation.
2. It can be defined as a group of relatively smaller number of people selected from a population for investigation purposes.
3. It may be homogenous or heterogeneous.
4. It is the chosen people to represent the big class or big group in the study.
5. Same group may be homogenous for one research project and heterogeneous for the other.
6. The larger the sample, the more likely the sample will share the same characteristics as the population.

B. Encircle the letter of the correct answer.

1. It is a probability sampling method that ensures member of the population has an equal chance of being selected.
   A. Cluster C. Stratified
   B. Simple random D. Systematic
2. It divides the population into a large number of clusters.
   A. Cluster C. Stratified
   B. Simple random D. Systematic
3. It divides the population into pre-existing strata.
   A. Clustered C. Stratified
   B. Simple random D. Systematic
4. It is a type of sampling method that is also used for homogenous population.
   A. Clustered C. Stratified
   B. Simple random D. Systematic
5. This non-probability sampling method is useful if the target population is defined in terms of a very broad category.
   A. Convenience sampling C. Quota sampling
   B. Purposive sampling D. Snowball sampling
6. This non-probability sampling method is used when the population is heterogenous.
   A. Convenience sampling C. Quota sampling
   B. Purposive sampling D. Snowball sampling
7. This non-probability sampling method is being done through approaching one respondent at a time and then they are being asked to refer the researcher to other elements of the population.
   A. Convenience sampling C. Quota sampling
   B. Purposive sampling D. Snowball sampling

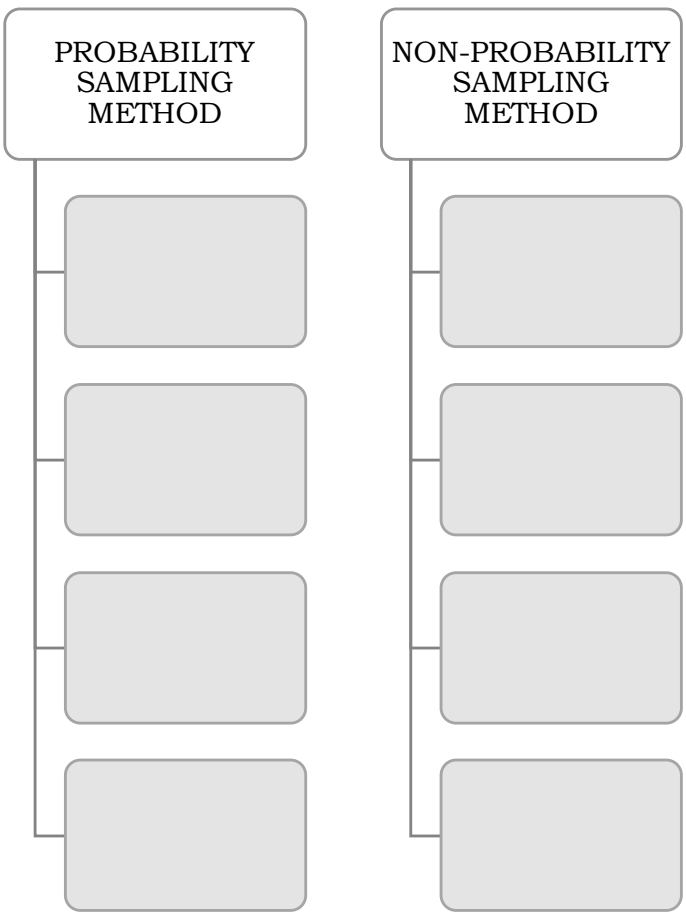
8. This non-probability sampling method is being done through selecting of respondents based on the characteristics of the population and the objective of the study.
   A. Convenience sampling
   B. Purposive sampling
   C. Quota sampling
   D. Snowball sampling

9. It is a sampling method utilized by the researcher through selecting individuals from the population who will serve as their representative.
   A. Negotiable sampling
   B. Non-negotiable sampling
   C. Non-probability sampling
   D. Probability sampling

10. It is a sampling method that selects the individual because they are available, convenient, and represent some characteristics that the investigator seeks to study.
   A. Negotiable sampling
   B. Non-negotiable sampling
   C. Non-probability sampling
   D. Probability sampling

Additional Activities

Complete the graphic organizer by supplying the keywords needed below in order to see the categorization of sampling method.



Posttest

Write the letter of the correct answer on the space before the number

1. Which of the following words can best describe the term POPULATION?
   A. Age
   B. Gender
   C. Group of individual
   D. Social status

2. It is being used in the study since the population contains too many individual to be included
   A. Population
   B. Respondents
   C. Sample
   D. Sampling

3. Which among the following words is the target population?
   A. Academic Track
   B. General Academic Strand
   C. Humanities and Social Science
   D. Accountancy, Business, and Management

4. Which among the following words is an example of sampling frame?
   A. Academics
   B. Sports
   C. Technical Vocational
   D. Accountancy, Business, and Management

5. Grade 12 female and male students from Accountancy, Business, and Management strand is an example of____?
   A. Population
   B. Sample
   C. Sampling unit
   D. Target Population

6. It is used by the researcher through selecting individuals from the target population who will serve as their representative.
   A. Probability Sampling
   B. Systematic Random Sampling
   C. Non-Probablity Sampling
   D. Stratified Sampling

7. This method relies on randomly picking the first item or subject from the population then, the researcher will select each (n'th) subject from the list
   A. Probability Sampling
   B. Systematic Random Sampling
   C. Non-Probablity Sampling
   D. Stratified Sampling

8. This type of sampling method is the opposite of probability sampling method. The researcher selects individual because they are available, convenient, and represent some characteristics that the researcher seeks to study.
   A. Probability Sampling
   B. Systematic Random Sampling
   C. Non-Probablity Sampling
   D. Stratified Sampling

9. In this sampling method, the researcher will ask one respondent to ask other people or identify others to become the member of the respondents.
   A. Convenience sampling
   B. Purposive sampling
   C. Quota sampling
   D. Snowball sampling

10. It is a non-probability sample technique that is selected based on characteristics of a population and the objective of study.
   A. Convenience sampling
   B. Purposive sampling
   C. Quota sampling
   D. Snowball sampling

11. A survey of 50 jeepney drivers found that 35% of jeepney drivers are using traditional model of jeepney. What do you call the underlined part in the sentence?
   A. Population
   B. Sample
   C. Sampling Unit
   D. Target Population

12. A recent survey of 40 players in grade 10 level found that 15% of players can be qualified for SHS scholarship for special sports program. Which word could best desrcibed the underlined part in this sentence
   A. Population
   B. Sample
   C. Sampling Unit
   D. Target Population

13. It refers to a subset of the population which is being sampled
   A. Statistics
   B. Strata
   C. Stratified
   D. Stratification

14. It is a probability sampling method that ensures member of the population has an equal chance of being selected.
   C. Cluster
   D. Simple random
   C. Stratified
   D. Systematic

15. It is a sampling method utilized by the researcher through selecting individuals from the population who will serve as their representative.
   C. Negotiable sampling
   D. Non-negotiable sampling
   C. Non-probability sampling
   D. Probability sampling

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1. Cailing, Krazy Marjorie R et al. ***Assessment of Computer Engineering Students Grammatical Errors in Thesis Writing***. Unpublished Thesis. Rizal Technological University. (2018).
2. Creswell, John W. ***Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research***. USA: Pearson, 2014.
3. MEANING OF SAMPLING AND STEPS IN SAMPLING PROCESS. https://www.mbaknol.com/research-methodology/meaning-of-sampling-and-steps-in-sampling-process/

Answer Key

PRACTICAL RESEARCH 2

QUARTER 4 MODULE 2- SAMPLING PROCEDURE AND SAMPLE (ANSWER KEY)

What I can do? (pages 18-19)

A. CIRCLE
1. POPULATION- refers to a big group or a big class who have the same characteristics
2. TARGET POPULATION-group of individuals lifted from the population in which researcher wishes to generalize the findings of the study.
3. SAMPLE- is the chosen people to represent the target population.
4. SAMPLING UNIT- it refers to the individuals who belong to the sample size.

B. VENN DIAGRAM
1. PROBABILITY
1.1 In probability sampling, every member of the population has a known (non-zero) probability of being included in the sample.
1.2 Some form of random selection is used.
1.3 The probabilities can be assigned to each unit of the population objectively.
2. NON-PROBABILITY
2.1 Every unit of population does not get an equal chance of participation in the investigation.
2.2 No random selection is made.
2.3 The selection of the sample is made on the basis of subjective judgment of the researcher.
3. SIMILARITIES BETWEEN PROBABILITY AND NON-PROBABILITY
3.1 Both are used in order to get the appropriate respondents for a specific study.
3.2 Both methods may possibly produce or cannot produce errors while doing it.

Assessment Activity (page 20-21)

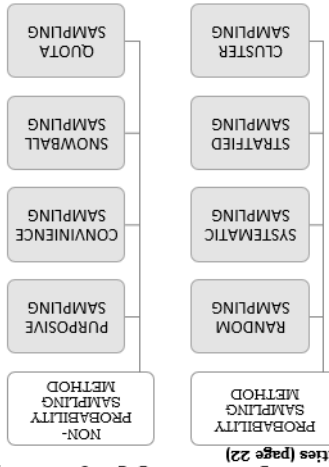
A. POPULATION AND SAMPLE

POPULATION	SAMPLE
4. It refers to all the members who meet the particular criterion specified for a research investigation.	4. It can be defined as a group of relatively smaller number of people selected from a population for investigation purposes.
5. It may be homogenous or heterogeneous.	5. It is the chosen people to represent the big class or big group in the
6. Same group may be homogenous for one research project heterogeneous for the other.	

Additional Activities (page 22)

B. PROBABILITY AND NON-PROBABILITY

1. B
2. A
3. C
4. D
5. A
6. C
7. D
8. B
9. D
10. C



ACTIVITY 2 PROBABILITY SAMPLING (PAGE 15-16)

1. STRATIFIED SAMPLING
2. RANDOM SAMPLING
3. CONVINIENCE SAMPLING
4. CLUSTER SAMPLING
5. SYSTEMATIC SAMPLING
6. RANDOM SAMPLING
7. CLUSTER SAMPLING
8. STRATIFIED SAMPLING
9. SYSTEMATIC SAMPLING
10. RANDOM SAMPLING

ACTIVITY 3 (page 16-17)

A. Purposive Sampling

(A)1. Participants are told about the research through letters or other forms of communication.
(C) 2. Whosoever is interested will be contacted by the investigators.
(B) 3. The researcher will discuss the purpose of his/her research to those who are interested to be part of the study.

B. Convenience Sampling

(B) 1. He/she is being requested to be the participants of the research.
(C) 2. If the person permitted the researcher or shows consent, then the data gathering should be done.
(A) 3. Any member of the target population who is available at that moment is being asked.

C. Snowball Sampling

(C) 1. The first participant is now requested or asked to refer the researcher to another person that could possibly include as the respondents/participants in the study.
(B) 2. The researcher will inform the first participants about the purpose of his/her research.
(A) 3. The researcher selects a person who matches the criteria of the research.

D. Quota Sampling

(B) 1. On the basis of the identified variable sub groups are made
(D)2. Then the sample is approached on the basis of set quota
(C) 3. A quota is set for each sub group
(A) 4. First of all there is a need to identify the variable which makes the target population heterogeneous

What I have learned (page 17-18)

6. Population refers to the big group of individuals who have the same characteristics. While TARGET POPULATION refers to the group of individuals or population, that the researcher wishes to generalize the study findings. On the other hand, the term SAMPLE is the chosen people to represent the target population and the researcher plans to study and SAMPLING UNIT is to individual who belong to the sample size.

7. Answer: In determining the participants of the study, you have to follow the following steps: Define the target population, specifying the sampling unit, selection of sample method, and determining the sample size.

8. In the selection of sampling method, there are two options to be considered. The PROBABILITY SAMPLING in which researcher used this sampling method through selecting individuals from the population who will serve as their representative while the other type of sampling method is NON-PROBABILITY SAMPLING METHOD in which the researcher selects individual because they are available, convenient, and represent some characteristics the researcher seeks to study (Creswell, 2014).

9. The types of probability sampling methods are: simple random sampling, systematic random sampling, stratified random sampling, and cluster sampling

10. The types of non-probability sampling method are: Convenience sampling method, purposive sampling, snowball sampling, and quota sampling.

What I Know (pages 2-3)

1. A
2. C
3. D
4. B
5. B
6. D
7. A
8. A
9. B
10. D

What's new (page 4 and 5)
SET A

1. Qualitative
2. Quantitative
3. Quantitative
4. Quantitative
5. Quantitative

SET B

G	S

6. A survey of 50 jeepney drivers found that 35% of jeepney drivers are using traditional model of jeepney.

G	S

7. A recent survey of 40 players in grade 10 level found that 15% of players can be qualified for SHS scholarship for special sports program.

G	S

8. A recent survey of 250 grade 3 students found that 35% of them can be classified as obese.

G

9. The average weight of every sixth person entering the mall within 3 hour period was 146 lb.

S

10. A researcher for a teacher applicants' content and pedagogical knowledge interviews all the teacher applicants on five randomly selected subject area.

G	S

LET'S ANALYZE

4. How did you determine if some of the items in Set A is considered as qualitative data and others are quantitative data?
   Answer: I examined first which items can be counted and which item can be described.
5. What made you say that the percentage part in each item in set B are considered as specific?
   Answer: The word percentage in the statements represent as part of the whole group being described.
6. What made you say that the remaining underlined part in the sentence are general?
   Answer: I used the word ALL and the numbers that represent the total number of items being described in each statement.

What's new (page 6-7)
Pre-reading activity-Unlocking of difficulties (page 6)

1. D
2. B
3. C
4. A

While Reading Activity (page 7)

5. What is the objective of the study mentioned in the text?
   Answer: the objective of the study is to identify the most common grammatical mistakes of Fifth year Computer Engineering Students
6. Who are the respondents of the study mentioned in the text?
   Answer: the respondents are 5th year Computer Engineering students from Rizal Technological University.
7. How does the researchers select the respondents of the study conducted?
   Answer: the researchers used random sampling in selecting the respondents
8. After selecting the respondents of the study, how many students were chosen as the respondents of the study?
   Answer: a total of 135 respondents used in the study.

What is it?
(page 8) Based on your answer what are the items that you considered as quantitative data?
Answer: Most of item in set A are quantifiable or can be countable that is why I decided to label them as quantitative.

(page 10) the researcher used random sampling technique
What's more

ACTIVITY 1 POPULATION VS. SAMPLE (PAGE 13-14)
A.

1. The age of each grade 12 students-
   Answer: (SAMPLE) because the word "each" signifies specific number of students
2. All students from 5 academic tracks
   Answer: (Population) the word "all" was used to denote that all students are included
3. The number of subjects in each academic track
   Answer: (SAMPLE) sample, because it shows a category of the subject in each academic track
4. The number of teachers in the Senior High School Department
   Answer: (POPULATION) because it presents all the teachers in the senior high school.
5. The annual salary of each Senior High School faculty
   Answer: (SAMPLE), because the word "each" refers to individual number of senior high school faculty.

B. Identify the population and sample in the given illustration.

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