LEARNING AS ONE NATION

Expanded Project

Stat & Prob_14

S H S L E A R N I N G A C T I V I T Y

Name: _____ **Score/Mark:** _____

Grade and Section: _____ **Date:** _____

Strand: ☐ STEM ☐ ABM ☐ HUMSS ☐ ICT (*TVL Track*)

Subject: ***Statistics & Probability***

Type of Activity: ☐ Concept Notes ☐ Skills: Exercise/Drill ☐ Illustration ☐ Performance Task ☐ Essay/Report ☐ Others: _____

Activity Title: Sampling Procedure: Basic Concepts

Learning Target: To define the basic terms and concepts of a statistical sampling procedure. To compute a good sample size for statistical analysis.

References: *(Author, Title, Pages)*
1) E.L. Baraceros, "Practical Research 2" 1st Ed, pp. 127-128;
2) R.A. Rañoa, Q.J. Abcede and L.A. Sajulga, CVIF Learning Activities

Basic Statistical Terms and Concepts:

- Population – a technical term used in research that refers to all observations obtained from various types of possible sources of data such as people, diverse living organisms, and subjects of scientific experiments, in various fields of study.
- Sample – a subset of the population selected randomly so that statistical conclusions can be inferred about the entire population being studied.
- Sampling – the process or method of selecting the sample from a large population.
- Sampling frame – the list of all individuals from the population to which you want to apply or generalize your findings about the sample.
- Sampling unit – term used to refer to every single element in the population.

"The sampling, as well as the research results, is expected to speak about the entire population. Unless this does not refer to the population, in general, the sample-selection procedure has no scientific value." (Emmel 2013; Lapan 2013)

Exercise: It is very important to have a good sample size to have valid conclusions! To determine a good sample size, use the equation:

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

, which is called as the Yamane's formula.

where: n = sample size
N = total population
e = margin of error (usually equal to 0.05)

Suppose there is a total of 500 in the population you are studying. How many will you randomly select to answer your research instrument?