KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI

COLLEGE OF SCIENCE

B.Sc. (Biological Sciences, Environmental Science), Semester Two, 2019/2020

Year Three

SCI 352 RESEARCH DESIGN AND COMMUNICATION

ONLINE CLASS ASSIGNMENT #3

June 23, 2020

1. a) Ama's mother uses the Authoritarian parental style. His dad who is laid back would rather use the Neglectful style which allows Ama to do what she wants. Yet Ama's grandmother who feels children should be allowed to voice their ideas uses the Authoritative style when Ama visits her during holidays. During an interview as a potential mother, Ama would capture these as Nominal data type.

    a. Discrete

    b. Continuous

    c. Nominal

    d. Ordinal

    e. Combination of Discrete and nominal

2. b) Give THREE reasons for your choice of answer. Remember there is a correct answer but your reasons to your choice of answer is critical (10marks)

    i. The mean of the data cannot be calculated. It is impossible to calculate the main as a researcher in this scenario, even if the data is arranged in alphabetical order in terms of their style of controlling Ama.

    ii. The data collected is qualitative in nature, which can only be observed but can't be calculated or computed. Which is a feature of nominal data

    iii. Nominal data can never be quantified. In the scenario, it is impossible do the researcher to add, subtract or multiply the data

- ❖ Collect data
- ❖ Analyze data.
- ❖ Interpret and report.

2) What would be your null and alternative hypotheses? [5 points]

NULL: every person is vulnerable to the disease.

ALTERNATIVE: every person is not vulnerable to the disease

3) Briefly describe the type of data and the source you would like to collect for your study? [10 points]

ANS: The type of data used is the quantitative data which is the data produced are always numerical, and they are analyzed using mathematical and statistical methods.

The sources for the collection of the study are;

- ❖ Surveying the areas
- ❖ Observations (counting, interviews and coding)
- ❖ Secondary data (assessing other researches)

4) Speculate on how you would like to analyze your data or present your results. [10 points]

DATA PREPARATION

The first stage of analyzing data is data preparation, where the aim is to convert raw data into something meaningful and readable. It includes four steps

- ❖ Data validation
- ❖ Data editing
- ❖ Data coding

DESCRIPTIVE STATISTICS

Typically descriptive statistics (also known as descriptive analysis) is the first level of analysis. It helps researchers summarize the data and find patterns. A few commonly used descriptive statistics are:

- ❖ Mean
- ❖ Median
- ❖ Mode

3

A Researcher decided to put students into groups based on their Cumulative Weighted Averages and had four different groups. He then systematically selected one student from each group and assigned some clear roles and responsibilities. Here, the researcher used _____ in selecting the students

    a. Simple random sampling

    b. Cluster random sampling

    c. Stratified random sampling

    d. Two stage cluster sampling

    e. Convenience sampling

4

b) In a short sentence each, explain THREE of the sampling types indicated in the options above (10marks)

    i.   If I am going to use stratified random sampling, how the students will be grouped base on their shared attribute, that is, their Cumulative Weighted Average is a major factor

    ii.   My consideration will be on the number of students in the population to be grouped

    iii.   How a student is systematically selected from each group, that is, using probability sampling methods

5   Fill in the Table below by ticking (✓) the best for the variable indicated (10marks)

Variable	Nominal	Ordinal	Discrete	Continuous
The names of the students	✓			
The colour of cars plying the road	✓			
The number of women in with natural hair in a room			✓	
Proportion of children who are males				✓
The gender of students in a school	✓			

- ❖ Percentage
- ❖ Frequency
- ❖ Range

5) How would your study benefit the people of Ghana? [4 points]
   - ❖ Increase public awareness
   - ❖ Proving lies and supporting truth.
   - ❖ Helps them make the right choices.
   - ❖ Helps them in understanding society.

6) Of what benefit would this study be to you the researcher? [4 points]
   - ❖ Enhances knowledge.
   - ❖ Offers me a measure of control and autonomy over the research problem.
   - ❖ Gives me an opportunity to confirm, clarify and pursue research problem.
   - ❖ Helps to know how the original study originated.

A. K Anning/A. A. Sylverken