

“Investing in Africa’s future”



AFRICA
UNIVERSITY
A United Methodist-Related Institution

**COLLEGE OF HEALTH,
AGRICULTURE AND NATURAL**

SCIENCES

NSNS 308: RESEARCH METHODOLOGY

END OF FIRST SEMESTER FINAL EXAMINATIONS

NOVEMBER-DECEMBER 2020

LECTURER: MRS CHITUKU S

DURATION: 24 HRS

INSTRUCTIONS

Answer **ONE** question

All questions carry equal marks (100) each.

DO NOT repeat material.

Write legibly and submit your response via **MOODLE**

Question 1

An educational researcher is interested in the relationship between students’ participation in two after school programs and academic achievement. She states the following hypothesis in the description of her study:

H.1. Children who participate in an after school program that emphasizes critical thinking skills will score higher on measures of academic achievement and self esteem than students who participate in a program that emphasizes rote memorization.

- a.
 - i. What are the variables in this study? 2 marks
 - ii. What would be good names for the variables and why? 4 marks
 - iii. Identify the independent variable(s) and dependent variable(s). 3 marks
 - iv. Describe how each variable varies (i.e., whether the variable is categorical or continuous). 6 marks
 - v. Provide justification for why each variable varies the way you describe? 5 marks

- b. Suppose the department of education has developed a new instrument for evaluating teacher performance. What empirical evidence would provide strong support for the validity of the scores resulting from this instrument? Make sure that your answer incorporates the methods of providing validity evidence described in the textbook and in class. 30 marks

- c. What is the difference between qualitative and quantitative research? Include mention of possible differences in purpose, research designs, data collection tools, data sources, and data analysis. 50 marks.

Question 2

- a. Describe the essential elements required in a Method Section for an intervention research study. 25 marks.

- b. Describe the report writing process in both qualitative and quantitative research. What features do they have in common, and how might they differ? Discuss with reference to examples of qualitative and quantitative research. 50 marks

- c. Describe the similarities and differences among grounded theory designs and ethnographic designs. Define each carefully, and provide examples. Why might there be considerable overlap among these categories? 25 marks

Question 3.

- a. Discuss the process of data analysis in qualitative research, including exploring the data, developing themes from the data, coding data, and connecting themes. 30 marks
- b.
 - i. What is an experiment research design? 5 marks
 - ii. What is an independent variable (IV) 3marks
 - iii. What is a dependent variable (DV)? 3 marks
 - iv. What is a confounding variable? 3 marks
 - v. What is an extraneous variable? 4 marks
 - vi. What is a control group? 2 marks

c. A researcher has conducted an independent measures design experiment to investigate whether chewing gum influences concentration. She recorded how many changes were detected in a 'spot-the-difference' puzzle by people chewing gum when completing the task, compared to those who were not. (20)

- i. Name two variables present in a lab experiment. (2)
- ii. Outline one strength and one weakness of using a lab experiment. (6)
- iii. Explain the difference between a lab experiment and a field experiment. (4)
- iv. What is a quasi-experiment? (2)
- v. Why would a quasi-experiment not be appropriate for this study? (2)
- vi. State a strength and a weakness of using quasi experiments. (4)

d. A researcher wanted to covertly observe how mums at a play and stay interacted with each other. He planned to use a naturalistic structured observation. (30 marks)

- i. Outline one strength and one weakness of conducting observational research. (4)
- ii. Outline one strength and one weakness of conducting a covert observation. (4)
- iii. Explain how you would make this observation overt and what problems this might arise. (4)
- iv. Explain the difference between a participant and non-participant observation. (4)
- v. What is a structured observation. (2)
- vi. State a strength and a weakness of using a naturalistic observation in this study. (6)
- vii. Identify one strength and one weakness of using a structured observation in this study. (4)
- viii. Why would an unstructured observation not be appropriate for this study? (2)