

MAY 2022

EBS 339J

INTRODUCTION TO RESEARCH

METHODS IN EDUCATION

2 HOURS

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UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
SCHOOL OF EDUCATIONAL DEVELOPMENT AND OUTREACH
INSTITUTE OF EDUCATION

COLLEGES OF EDUCATION
FOUR-YEAR BACHELOR OF EDUCATION (B.ED)
THIRD YEAR, END-OF-FIRST SEMESTER EXAMINATION, MAY 2022

MAY 24, 2022

INTRODUCTION TO RESEARCH
METHODS IN EDUCATION

9:00 AM – 9:40 PM

This paper consists of two sections, A and B. Answer ALL the questions in Section A and Section B. Section A will be collected after the first 30 minutes.

SECTION A

Answer ALL the questions in this Section.

For items 1 to 20, each stem is followed by four options lettered A to D. Read each item carefully and circle the letter correspondent to the correct or best option.

1. A study that tested a hypothesis derived from a theory which suggests that reinforcement affects long term memory would be an example of research.
 - A. applied
 - B. basic
 - C. descriptive
 - D. postmodern
2. If the authors of a textbook report results of their own experiments, that portion of the text in the textbook would be considered as a source of literature.
 - A. preliminary
 - B. primary
 - C. secondary
 - D. tertiary
3. A thesis or dissertation is like a research proposal **except** for the
 - A. literature review chapter.
 - B. organization of research articles in journals.
 - C. organization of research methodology.
 - D. research findings and discussion chapters.

4. "There will be no significant difference between the scores on a measure of achievement of high-and low-anxious students" is a hypothesis written in form.
- A. directional
 - B. interrogative
 - C. null
 - D. objective
5. If a participant in a research project drops out partway through the study
- A. nothing should be done because participants have the right to withdraw at any time.
 - B. they are legally committed to complete the project and should be informed of this fact.
 - C. they should be informed that they must contact the Institutional Review Board that is overseeing the project.
 - D. they should be informed that this is a violation of the ethics code of the Institutional Review Board.
6. Which of the following correlation coefficients represents the **highest** reliability score?
- A. -0.78
 - B. -0.05
 - C. 0.08
 - D. 0.10
7. Which of the following scales of measurement is **most appropriate** for representing data on weight of learners?
- A. Interval.
 - B. Nominal.
 - C. Ordinal.
 - D. Ratio.
8. An appropriate statement of the statistical hypothesis would be that
- A. no difference will be found between the groups being compared in one's research study.
 - B. the difference between sample means reflects a true difference between population means.
 - C. the group receiving the experimental treatment will receive higher scores than the control group.
 - D. the research sample will behave differently than the population from which it is drawn.
9. A researcher is interested in the relationship between students' academic achievement and class size. The appropriate unit of analysis is the
- A. classroom.
 - B. individual student.
 - C. school.
 - D. All the above.
10. All the members of a real or hypothetical set of persons, objects or events to which researchers wish to generalize research results are called a(an)
- A. accessible population.
 - B. random sample.
 - C. target population.
 - D. volunteer subject pool.

11. The main advantage of random sampling is that the sample is **more likely** to
- include most participants in the study.
 - include the correct number of subjects.
 - yield generalizable results for the study.
 - yield insignificant research findings for the study.
12. Systematic sampling is more appropriate when
- a sample must be selected from a nonperiodic list.
 - a sample must be selected from a periodic list.
 - the expected difference between groups is small.
 - the target population is heterogeneous.
13. A researcher divided subjects into two groups according to gender and then selected members from each group for her sample. What sampling method was the researcher using?
- Cluster
 - Random
 - Stratified
 - Systematic
14. A study that uses intact groups when it is **not** possible to randomly assign participants to the groups is called a(n) study.
- causal comparative
 - correlational
 - experimental
 - quasi experimental
15. Rich is conducting a survey of student opinion of the dining hall at his university. Rich decided to conduct his survey by using every tenth name on the registrar's alphabetical list of all students at his school. The type of sampling technique that Rich is using is sampling.
- cluster
 - random
 - stratified random
 - systematic
16. Consider the following survey question: "*Most Africans consider a computer to be a necessity. Do you agree?*" This is an example of a question.
- double-barrelled
 - leading
 - loaded
 - rating scale
17. Letter grade on a test is to the scale of measurement as height is to the scale of measurement.
- interval; ratio
 - nominal; interval
 - ordinal; nominal
 - ordinal; ratio

18. In a study of the effects of alcohol on driving performance, driving performance would be the
- A. control group.
 - B. dependent variable.
 - C. experimental group.
 - D. independent variable.
19. Which of the following does **not** support the need for research proposal? the study
- A. Clues to every aspect of the results of
 - B. Evaluation of the proposed plan for
 - C. Prevention of avoidable mistakes during
 - D. Realistic time schedule for
20. The various conditions beyond the control of the researcher that may place restrictions on the conclusions or applications of the findings is referred in educational research as
- A. confounding.
 - B. delimitations.
 - C. limitations.
 - D. triangulation.

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SECTION B

Answer ALL the questions in this Section.

1. Discuss any **four** of the major types of probability sampling used in educational research. 20 marks

2.
 - a. Write **three** researchable problems and identify their independent and dependent variables. 12 marks

 - b. Explain **two** ways by which individuals acquire knowledge or get to know. 8 marks

3.
 - a. Classify each of the following sampling processes as either random, systematic, stratified, or cluster: 10 marks
 - i. In a large school district, all teachers from two buildings are interviewed to determine whether they believe the students have less homework to do now than in previous years.
 - ii. Every seventh customer entering a shopping mall is asked to select her or his favourite store.
 - iii. Nursing supervisors are selected using random numbers to determine annual salaries.
 - iv. Every 100th hamburger manufactured is checked to determine its fat content.
 - v. Mail carriers of a large city are divided into four groups according to gender (male or female) and according to whether they walk or ride on their routes. Then 10 are selected from each group and interviewed to determine whether they have been bitten by a dog in the last year.

b. Under what circumstances would you recommend a:

8marks

- i. probability sampling?
- ii. non-probability sampling?
- iii. stratified sampling?
- iv. cluster sample?

c. State **one** benefit of reviewing literature in a study.

2 marks