



THE OPEN UNIVERSITY OF SRI LANKA

FACULTY OF EDUCATION

DEGREE OF MASTER OF EDUCATION

FINAL EXAMINATION – 2024/2025

STP9813 – RESEARCH METHODS IN EDUCATION

DURATION – THREE (03) HOURS

Date: 31.01.2026

Time: 9.30 a.m. – 12.30 p.m.

**Instructions:**

**Answer question No.01 and any other three (03) questions.**

**Write your answer for question No. 01 on this paper only.**

**Note that one research problem can only be used in one question.**

01. Assume that the National Institute for Educational Research (NIER) invites researchers and educators to submit research proposals that can be conducted within their respective educational zones, based on the following themes.
- Teacher readiness and ethical practices of Artificial Intelligence (AI) in teaching and learning.
  - Implementing School-Based Formative Assessments. (SBFA)
  - Developing the 4Cs (Critical thinking, Communication, Collaboration, and Creativity) among students.
  - Teacher migration and localized shortages in rural schools and student performance in Science, Mathematics and English.
  - Social-Emotional Learning (SEL) and psychological support in a post-crisis society.
  - The transition of students from “Inclusive Education Units”( IEUs) to mainstream classrooms.
  - Bilingual instructions on social mobility and academic equity.
  - Developing primary students’ literacy skills through digital storytelling.

State the selected theme:.....

- i. State a specific research problem you have identified in relation to one of the given themes. (05 marks)

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- ii. Briefly explain the significance of studying the selected research problem.

(04 marks)

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- iii. State the main purpose of studying the problem and formulate **three (03)** research objectives or research questions or hypotheses related to your research problem.

(09 marks)

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- iv. Explain the research design selected for achieving the objectives stated above with justification [with at least **two (02)** reasons]

(04 marks)

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- v. State the sample and sampling techniques you intend to use with justification.

(05 marks)

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- vi. Specify the data collection instruments you proposes and justify their suitability to achieve the objectives of your research study. (06 marks)

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- vii. State the analysis techniques you intend to use for the data collected in the study. (03marks)

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- viii. Specify **two (02)** expected limitations and **two (02)** delimitations of your research study. (04 marks)

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(Total = 40 marks)

02. Research design is the overall strategy that a researcher chooses to integrate the different components of the study in a coherent and logical way to address the research problem.
1. Distinguish between experimental and survey research designs, Discuss the **two (02)** advantages and **two (02)** limitations of each design with suitable examples from education research. (07 marks)
  2. Explain **three (03)** key characteristics of action research and discuss how it differs from other research designs providing an example. (07 marks)
  3. Critically evaluate **three (03)** strengths and **three (03)** limitations of action research in educational settings. (06 marks)  
(Total = 20 marks)
03. Data analysis is a systematic process of inspecting, cleaning, transforming and modelling data in order to discover useful information and support decision-making in research.
1. Briefly explain nominal, ordinal, interval, and ratio scales of measurement. Identify appropriate data analysis methods for each scale. (06 marks)
  2. Explain the purpose and application of measures of central tendency in educational, citing relevant examples. (06 marks)
  3. Describe at least **three (03)** key steps that you will follow to analyse qualitative data gathered in your research study, and explain the importance of each step with relevant examples. (08 marks)  
(Total = 20 marks)
04. Research ethics refers to the moral principles and professional standards that guide researchers to conduct studies with integrity, honesty, and respect for participants.
1. Discuss **three (03)** key principles of research ethics, and explain why these principles are especially important in educational research. (07 marks)
  2. Explain **three (03)** common ethical issues faced by researchers in educational research, and suggest appropriate ways to address each issue. (07 marks)
  3. Explain the role of institutional ethical review boards in research. State **three (03)** main components related to ethical compliance that must be included in an ethical clearance application for an educational research study. (06 marks)

05. The research process is a systematic and structured approach used to investigate research questions and generate new knowledge in educational contexts.

1. State the main stages of the educational research process and explain how each stage contributes to the rigor and validity of a research study. (07 marks)
2. Describe **three (03)** characteristics of a good research problem in the field of education. Explain **two (02)** sources from which research problems can be identified, providing suitable examples for each source. (07 marks)
3. Differentiate among research objectives, research questions, and research hypotheses, illustrating your answer with relevant examples from educational research. (06 marks)

(Total = 20 marks)

06. The quality of research instruments and data collection procedures has a significant impact on the credibility and trustworthiness of research findings.

1. Distinguish between quantitative and qualitative research data collection instruments, providing one example for each approach. (08 marks)
2. Briefly explain **three (03)** key aspects that should be considered when developing a questionnaire for educational research. (06 marks)
3. Describe the steps involved in establishing the validity and reliability of a newly developed questionnaire in your research study. (06 marks)

(Total = 20 marks)

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