

UNIVERSITY OF LUCKNOW
DEPARTMENT OF EDUCATION

Ph. D. Course Work

OBJECTIVES:

At the end of this course, the students will be able to –

- Explain and compare the various types of research methods
- Conduct the research in their area of interest
- Prepare research proposal
- Develop the research tools
- Apply appropriate and advanced statistical techniques in analyzing the data
- Interpret the research findings
- Write the research report.

SYLLABUS:

Part- A: Theory Papers

There shall be two papers.

Paper-I: Research Methodology

Paper-II: Qualitative & Quantitative Research and Data Analysis

Part- B: Activities

- I Preparation of Research Proposal
- II Development of Research Tool
- III Assignment based on Theme Paper/ Research Area of interest
- IV Assignment based on Computer usage in research
- V Assignment based on Review of Related Literature

SCHEME OF EVALUATION:

- 1 Two theory papers to be evaluated through Internal assessment and Written Examination of 100 (30+70) marks each.
- 2 Preparation and presentation of Research Proposal to be evaluated through viva-voce of 50 marks.
- 3 Development and presentation of Research Tool to be evaluated through Viva voce of 50 marks
- 4 Assignment based on Theme Paper/ Research Area of interest, computer usage in research and Review of Related Literature to be evaluated by the teachers concern through Grade from A to E.

STANDARD OF PASSING:

1. The candidate must obtain at least 50% marks in each theory paper separately.
2. Minimum passing marks in Preparation of Research Proposal and Development of Research Tool activities shall also be 50%.
3. The candidate must obtain at least 'C' grade in Computer usage in research and Review of Related Literature activities.

Paper-I: Research Methodology

Unit-I

Basic Characteristics of Science and Scientific Method, Positivistic Paradigm, Meaning and Definition of Research and Educational Research, Types of Research, Approaches to Research: Qualitative & Quantitative, Selection & writing of a Research Problem, Writing Objectives of the Study, Formulation of the Hypotheses, Delimitation of the Study, Conducting and Reporting the Review of Related Literature, Common Errors in Research

Unit-II

Sampling: Population and Sample, Need of Sampling, Sampling Unit, Sampling Frame, Sampling Error & Bias, Probability & Non-Probability Sampling Methods and Sample Size
Process of Development of Measurement Tools: Difference between Assessment, Measurement and Evaluation, Characteristics of a good Tool, Tools of Measurement: Test Scale, Interview Schedule, Observation Schedule and Questionnaire, Steps of Development of Tools and Standardization

Unit-III

Statistics permissible with reference to Levels of Measurement, Parametric and Non-Parametric Tests, underlying Assumptions and considerations for deciding appropriateness of Parametric Tests, Hypothesis Testing: One & Two tailed Tests, Deciding Level of Significance, and Errors in Hypothesis Testing: Type-I and Type-II errors

Unit-IV

Preparing a Research Proposal, Deciding Chapters of Research Report, Research Report writing, Common Errors in Research Report writing, Presentation of Content, Tables, Graphs and Appendices, Footnotes, References and Bibliography, Research Ethics and Plagiarism
Use of Computer in Research: Preparation of Tables, Graphs and Curves, Searching Related Literature online, Power Point preparation, Use of EXCEL and SPSS in Data Analysis: Data entry, testing underlying Assumptions, Running the Tests, Editing and Exporting the output, Writing interpretation

Paper-II: Qualitative & Quantitative Research and Data Analysis

Unit-I

Qualitative Research-I

Qualitative Research: Meaning, Definition, Characteristics and Need
Qualitative Research Approaches: Interpretivism, Phenomenology, Heuristic Method, Historical Research, Philosophical Research, and Content Analysis (with special reference to Research Proposal, Sampling, Tools, Data generation & Analysis, and Report writing).
Cautions and Cares in Qualitative Research

Unit-II

Qualitative Research-II

Qualitative Research Approaches: Naturalistic Enquiry, Ethnography, Ethno- methodology, Grounded Theory Methodology, Focus Group Discussion, Symbolic Interactionism (with special reference to Research Proposal, Sampling, Tool, Data generation & Analysis, and Report writing).
Nexus with conventional terms in reference to data and findings: Trustworthiness vs. Validity, Credibility vs. Internal Validity, Transferability vs. External Validity, Dependability vs. Reliability, Conformability vs. Objectivity, Conviction of Researcher in his/her Research

Unit-III

Quantitative Research

Quantitative Research: Meaning, Definition, Characteristics and Need
Descriptive Research: Meaning, Definition, Characteristics and Nature, Types of Surveys Status Survey, Normative and Casual-Comparative Survey, Developmental Survey, Longitudinal & Cross Sectional Study, Correlation and Predictive Study, Follow up and Trend Study
Experimental Research and Experimental Designs: Meaning and Definition, Characteristics, Methods of Control, Types of Experimental Design: Pre, True and Quasi Experimental Designs
Factors affecting Internal and External Validity of Experimental Design

Unit-IV

Application of Statistics in Data Analysis

Descriptive Statistics: Definition and Applications of Mean, Standard Deviation, Coefficient of Variance, Percentiles
Correlation and Correlation Coefficient: Meaning, Types and Interpretation
Methods of Correlation Coefficient: Linear, Partial and Multiple correlation
Regression Analysis: Simple and Multiple Regression Equations, Contribution of independent variables in Prediction of dependent variable
Parametric Statistics: t- test, One & Two way ANOVA with equal and unequal cell size, One & Two way ANCOVA of equal and unequal cell size (Assumptions, Computation & Interpretation)
Non Parametric Statistics: Chi-square test, man Whitney U test, Friedman Analysis of Variance