

Department of Education

Part-A (Research Methodology)

Unit 1 Methods of Research in Education

- Basic Research Paradigm-Quantitative and Qualitative Research
- Positivism-Quantitative Research
- Phenomenological Enquiry-Qualitative Research
- Mixed Method Approach
- Historical Research-External and Internal Criticism
- Descriptive Research-Types of Descriptive Research
- Experimental Research – Designs of Experimental Research

Unit 2 Tools and Techniques of Research

- Meaning of Data Collection Tools and Techniques
- Differences in Quantitative and Qualitative Research Tools
- Questionnaire
- Interview
- Observation
- Socio-metric Technique

Unit 3 Data Collection and Analysis in Research

- Organization of Quantitative data
- Analysis and Interpretation of Quantitative data
- Organization of Qualitative Data
- Analysis and Interpretation of Qualitative Data

Unit 4 Research Proposal & Research Report Writing

- Need & Preparation of Research Proposal
- Concept of Research Report Writing
- General Format of Research Report Writing
- Style and Format of Report Writing
- Referencing and Bibliography

Unit 5: Publication Ethics

- definition, introduction and importance of publication ethics.
- Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice-versa, types.
- Violation of publication ethics, authorship and contributor ship

Unit-6: Scientific Conduct

- Ethics with respect to science and research
- Intellectual honesty and research integrity
- Scientific Misconducts: Falsification, Fabrication, and Plagiarism (FFP)
- Redundant publications: duplicate and overlapping publication, salami slicing

Unit-7 Databases and Research Metrics

- Use of plagiarism software like Turnitin, Urkund, Drillbit and other open source software tools.
- Citation databases: Web of Science, Scopus, etc.
- Impact factor of journal as per journal citation report, SNIP, SJR, IPP, CiteScore.
- Metrics: h-index, g index, i10 index