

Mangalore University

MEd

MEH404 - Methodology of Research in Education - I

Objectives / Course Outcomes

After completing this course the students will be able to

- Understand the different Sources of Knowledge, different types and paradigms of Research.
- Elucidates meaning, purpose & characteristics of Educational Research.
- Critically reviews a Research study, identifies the research gaps and formulates the research problems
- Understand the components of research proposal and prepares a research proposal on an identified problem.
- Understands the different types of measurement scales, tools and Techniques of Research and constructs research tool for the proposed research study.
- Computes measures of central tendency & variability.
- Classify, tabulate and graphically represent the given data meaningful

Unit 1: Basics of Educational Research

- 1.1 Sources of Knowledge, Scientific Method –Definition, Basic assumptions, steps and limitations of Scientific Method; Research – meaning, characteristics ; Paradigms of Research – Quantitative, Qualitative and Mixed –Characteristics and Structure; Educational Research – meaning, importance, characteristics, functions , Steps of Educational Research process and scope of Educational Research ; areas of Educational research ; Ethical issues in conducting Research.
- 1.2 Review of Research and Formulation of Research Problem: Review of Literature – meaning, purpose and need at different stages of research, Five steps of conducting a Literature Review – Identifying key terms, Locating Literature, Critically evaluate and select the Literature, Organizing the Literature and writing of a Literature Review. Primary and Secondary sources of information for Review.
- 1.3 Research Problem – Sources of a Research Problem, Identification and analyzing a Research Problem, Criteria for selection of Research Problem, Steps in the formulation of a Research Problem, Criteria for evaluation of a Research Problem.

Unit 2: Sampling, Research Proposal and Design

- 2.1 Research Variables – meaning and types ; causal model based – Independent Variable, Intervening Variable, Extraneous Variable and Dependent Variable ; study design based – Active Variable and Attribute Variable ; based on unit of measurement – Continuous

Variable and Categorical Variable. Research Hypothesis – meaning, characteristics, types of hypothesis, and different forms of stating hypothesis.

2.2 Sampling: Concept of population and sample, criteria of good sample, steps in the sampling process; Sampling and non-sampling errors,

Sampling Methods: Probability/ Random sampling methods: Simple random, Stratified random, Cluster sampling, Multi-stage sampling – meaning, procedure and limitations; non probability sampling methods: Quota sampling, Incidental sampling, Purposive sampling and Convenience sampling – meaning, nature, merits and limitations.

2.3 Research Design and Proposal – meaning, characteristics, context and format of a Research Proposal. Characteristics and steps of a good research design.

Unit 3: Tools of Research and Methods of Data Collection

3.1 Scales of Measurement – Nominal scale, Ordinal scale, Interval scale and Ratio scale – meaning, properties and use, sources of errors in measurement.

3.2 Tools of Research – Questionnaire, Achievement test, Appraisal test, Check list – meaning, characteristics, procedure of constructions, advantages and limitations; Rating Scales – meaning, forms, advantages and limitations;

Methods of Data Collection: Observation, Importance, Characteristics, Types, steps in the process, Merits and Demerits; Interview: meaning, characteristics, types, non-directive and focussed interview, steps for conducting interview, merits and limitations.

3.3 Validity and Reliability of Research Tool: Validity – meaning, methods of establishing Validity, factors influencing Validity and Research tool; measures to increase the Validity of a tool. Reliability – meaning, methods of establishing reliability, factors influencing reliability of a research tool, measures to increase reliability of a test.

Unit 4: Processing & Descriptive analysis of data

4.1 Processing and graphical representation of data – Classification and tabulation of data, Graphical representation of Data- Frequency Polygon, Histogram and Ogive

4.2 Measures of Central Tendency and Variability - Concept, Computation & Uses.

4.3 Measures of Relative positions- Quartiles, Percentiles & Percentile Ranks - Concept, Computation & Uses; Derived Scores – Z score, T score & Stanine - Concept, Computation & Uses.

Practicum:

- Preparation of research abstract of 10 M.Ed. dissertations.
- Critical evaluation of two research tools used in M.Ed. dissertations.
- Preparation of research tool and establishing validity and reliability.

- Preparation of a sampling design, given the population, objectives and research questions/hypotheses of a research study.
- Review of two research papers published in e-journals.
- Preparation and presentation of research proposal on an identified problem.

(Any other relevant or suitable topics related to the syllabus)

References:

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