

Ph.D Course Work Syllabus

Department of Education

The University of Burdwan

Course: CW-101

F M : 50

Credit: 4

Methodology of Research in Education:

Unit-I Nature and scope of Education:

- a) Meaning nature and limitations
- b) Need and purpose of Educational research
- c) Scientific enquiry and theory development
- d) Fundamentals, applied and action research
- e) Quantitative and qualitative research

Unit-II Tool and Techniques of Data Collection

Criteria of good research tools

Characteristics and uses of-

- a) Observation
- b) Interview
- c) Questionnaire
- d) Rating Scale
- e) Attitude Scale
- f) Test of performance
- g) Checklist
- h) Tools of electing qualitative data

Unit-III Methods of Educational Research

- a) Experimental
- b) Quasi-experimental
- c) Case study
- d) Descriptive methods
- e) Methods of qualitative data analysis

Unit-IV Types of data: Quantitative & Qualitative

- i) Classification, Quantification and presentation of research data

ii) Geographical presentation of research data-

- a) Histogram
- b) Polygon
- c) Ogive
- d) Application and uses of the above in Educational Research

iii) Statistical description with different measures of central tendencies and variability

Unit-V Normal Probability Curve

j) Concept Characteristics and uses

ii) Causes of non-normality

iii) Standard scores-kinds and uses in Educational research

Unit-VI Measures of Relationship

Co-efficient of Correlations

- a) Rank difference
- b) Product moment
- c) Biserial correlation
- d) Point biserial correlation
- e) Partial and Multiple correlation

Unit-VII Inferential Statistics

Logic of inferential process, cause and effect relation, Single cause, multiplicity of causes, testing of hypothesis-null or directional, qualitative & statistical difference and relationship testing, meaning of statistical significance of difference between means and other statistics, t-test, ANOVA, ANCOVA, chi square test, inference and generalization.

CW-102: Research and Publication Ethics: F M 25, Credit : 2

Theory

Unit I: Philosophy and Ethics

- a) Introduction to philosophy: definition, nature and scope, concept, branches
- b) Ethics: definition, moral philosophy, nature of moral judgements and reactions

Unit II: Scientific Conduct

- a) Ethics with respect to science and research
- b) Intellectual honesty and research integrity
- c) Scientific misconduct: Falsification, Fabrication, and Plagiarism (FFP)
- d) Redundant publications: duplicate and overlapping publications, salami slicing
- e) Selective reporting and misrepresentation of data

Unit III: Publication Ethics

- a) Publication ethics: definition, introduction and importance
- b) Best practices/standards setting initiatives and guidelines: COPE, WAME, etc.
- c) Conflicts of interest
- d) Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types
- e) Violation of publication ethics, authorship and contributorship
- f) Identification of publication misconduct, complaints and appeals
- g) Predatory publishers and journals

Practice

Unit IV: Open Access Publishing

- a) Open access publications and initiatives
- b) SHEPRA/RoMEO online resource to check publisher copyright & self-archiving policies
- c) Software tool to identify predatory publications developed by SPPU
- d) Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc

Unit V: Publication Misconduct

A. Group Discussions

- a) Subject specific ethical issues, FFP, authorship
- b) Conflicts of interest
- c) Complains and appeals: examples and fraud from India and abroad

B. Software tools

Use of plagiarism software like Turnitin, Urkund and other open source software tools

Unit VI: Databases and Research Metrics

A. Databases

- a) Indexing databases
- b) Citation databases: Web of science, Scopus, etc

B. Research Metrics

- a) Impact Factor of journal as per journal Citation Report, SNIP, SJR, IPP, Cite Score
- b) Metrics: h- index, g index, i10 index, altmetrics

Course: CW-103

F M. 50

Credit: 4

Research Competencies and Computer Application

Unit-I Research Competencies

- i) Construction of research tools
- ii) Review of literature
- iii) Writing research articles
- iv) Writing reference as per APA style

Unit-II Computer in Research

- a) Use of MS-Word, MS-Excel, SPSS and other software for data and statistical analysis
- b) Interpretation of result
- c) MS-PowerPoint for presentation

CW-104: Term paper and Related Seminar Presentation: FM 50, Credit: 4

References

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