

## Pre-Ph.D. Course 2023

### Subject: Education

### Paper- I Research Methodology

<b>Subject: Common for all faculties</b>		
Course Code: -----	<b>Course Title: Paper-I</b> Research Methodology	Theory
<p><b>Course Objectives:</b> The main objective of this paper is to</p> <ol style="list-style-type: none"><li>1. Identify and discuss the role and importance of research.</li><li>2. Identify and discuss the issues and concepts salient to the research process.</li><li>3. Identify and discuss the complex issues inherent in selecting a research problem, selecting an appropriate research design, and implementing a research project.</li><li>4. Identify and discuss the concepts and procedures of sampling, data collection, analysis and reporting.</li></ol> <p><b>Course Outcomes:</b> At the end of this course, the students should be able to:</p> <p><b>CO1.</b> Understand some basic concepts of research and its methodologies.</p> <p><b>CO2.</b> Explain key research concepts and issues read, comprehend, and explain research articles in their academic discipline.</p> <p><b>CO3.</b> Select and define appropriate research problem and parameters.</p> <p><b>CO4.</b> Organize and conduct research (advanced project) in a more appropriate manner.</p> <p><b>CO5.</b> Write a research report and thesis.</p> <p><b>CO6.</b> Write a research proposal (grants).</p>		
<b>Credits: 4</b>	<b>Core Compulsory</b>	
Max. Marks: 100	Min. Pass Marks: <b>55</b>	
<b>Total No. of Lectures-Tutorial (in hours per week): L-T: 4-1</b>		
<b>Unit</b>	<b>Topics</b>	<b>No. of Lectures <b>60</b></b>
<b>I</b>	Perception & Definition of Research, Objectives & Motivations of Research, Importance of Research, Types of Research, Research Methods versus Methodology, Process of Research; Review of Literature, Formulation of the Research Problem, Sources and Identification of a Research Problem, Status of the Research Problem, Formulation of Hypothesis, Research Design,	12
<b>II</b>	Outlines of Synopsis;Project Proposal, Project Report Writing; Research Paper Writing; Components of Research Reports;Thesis Writing;Outlines of Thesis, Reference citing, Formats of Writing References, Bibliography; Plagiarism.	12
<b>III</b>	Intellectual Property (IP), Intellectual Property Rights (IPR), Intellectual Property Law, Different fields of Intellectual Property Rights, Patents, Publication Ethics: Definitions importance Conflicts of Interest,	12

	Publication Misconduct Definition, Concept, Problems that lead to Unethical Behavior and vice versa, Types Identification of publication misconduct, Complaints and Appeals; Violation of publication ethics, Authorship and Contributorship; Predatory Publishers and Journals.	
IV	Web Browsers, Search Engines, MS Word: Handling Graphs, Tables and Charts, Formatting in MS-Word, MS Power Point: Creating Slide Show, Screen Layout and Views, Applying Design Template, MS Excel: Features, Formulas and Functions.	12
V	Subject Classification Index, Citation, Citation Index, Impact Factor, h-index, i-10index, INFLIBNET, Introduction to Peer Reviewed and Open Access Journals, e-Journals, e-Library, Research Databases, Institute for Scientific Information (ISI) & Journal Citation Reports, Science Citation Index (SCI), Social Sciences Citation Index (SSCI), Arts and Humanities Citation Index (AHCI), Databases: UGC care list, Web of Science (WoS), Scopus.	12

**Teaching Learning Process:** Class discussions/ demonstrations, Power Point presentations, Class activities/ assignments, Field visits., Internship, etc.

**Suggested Readings:**

1. **Creswell. W.:** Research Design, Qualitative, Quantitative and Mixed Methods Approaches (3<sup>rd</sup> Edition), SAGE, Inc., 2018.
2. **Gupta. S:** Research Methodology: Methods and Statistical Techniques, Deep & Deep Publications, 2010.
3. **Gupta. S.P.:** Statistical Methods, Sultan Chand & Sons, 2014.
4. **Kumar. R:** Research Methodology: A Step-by-Step Guide for Beginners (3<sup>rd</sup> Edition), SAGE, Inc., 2011.
5. **Melville. S. and Goddard. W.:** Research Methodology: An Introduction (2<sup>nd</sup> edition), Juta Academic, 2004.
6. **Shortis, T.:** The Language of ICT: Information and Communication Technology, Taylor & Francis, 2016.
7. Research Methodology: Methods and Techniques by C.R. Kothari, Second revised edition
8. Research Methodology: A step by step guide for beginners by Ranjit Kumar
9. Research methodology: Methods and Statistical techniques, by Santosh Gupta
10. Statistical Methods, by S.P. Gupta
11. Research Design, Qualitative, Quantitative and mixed method approaches, by W. Creswell, 3rd edition.
12. Information Communication Technology, by Tim Shorts Handbook of Communication and Social Interaction Skills, by John O. Green, Brant Raney Burleson
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## Pre-Ph.D. Course 2023

### Paper-II - Emerging Trends and Issues in Education

<b>Subject: Education</b>		
Course Code: -----	<b>Course Title: Paper-II - Emerging Trends and Issues in Education</b>	Theory paper
<b>Course Objectives:</b> The main objective of this paper is to <ul style="list-style-type: none"><li>To acquire knowledge of new emerging research areas or dimensions in Education</li><li>To develop power of critical thinking in particular area or issue.</li><li>To demonstrate the skill of tool construction</li><li>To demonstrate their abilities to discuss on original academic research topics</li><li>To show sufficient confidence in term of his/ her knowledge, ideas and skills during presentation of research works.</li></ul>		
<b>Course Outcomes:</b> At the end of this course, the students should be able to: <ul style="list-style-type: none"><li><b>CO1</b> Impart knowledge about importance of tool construction in research.</li><li><b>CO2</b> Developing skills of standardizing the research tool.</li><li><b>CO3</b> Inculcating information about the regulations, policies, status and guidelines that govern the conduct of research.</li><li><b>CO4</b> Understanding the issues and trends in Teacher Education.</li><li><b>CO5</b> Understanding statistical techniques.</li><li><b>CO6</b> Understanding interdisciplinary approach in teaching and learning.</li></ul>		
<b>Credits: 4</b>	<b>Core Compulsory / Elective</b>	
Max. Marks: 100	Min. PassMarks: <b>55</b>	
<b>Total No. of Lectures-Tutorial (in hours per week): L-T-P: 4-0-0</b>		
<b>Unit</b>	<b>Topics</b>	<b>No. of Lectures (Total sum = 60)</b>
<b>I</b> <b>Introduction to Approches and New Concepts of Learning</b>	<ul style="list-style-type: none"><li>Interdisciplinary approaches - concept , need and scope</li><li>Interdisciplinary approach in Teaching, Learning and Research</li><li>Life-Long Learning, Open and Distance Learning</li><li>Co-operative Learning, Reflective Learning</li><li>Blended Learning, Flexi Space Learning</li></ul>	12
<b>II</b> <b>Trends in Education</b>	<ul style="list-style-type: none"><li>Inclusive Education</li><li>Peace Education</li><li>Life Skill Education</li><li>Multicultural Education</li><li>Social Constructivism</li></ul>	12
<b>III</b> <b>Issues in Education</b>	<ul style="list-style-type: none"><li>Value Education</li><li>Global Policies in Education, EFA, MDGs &amp; SDGs</li><li>Wellbeing Education</li><li>Comparative Education</li></ul>	12

	<ul style="list-style-type: none"> <li>• Citizenship Education</li> <li>• Economics of Education</li> <li>• ICT in Educational Research</li> </ul>	
<b>IV Parametric and Non Parametric Tests</b>	<ul style="list-style-type: none"> <li>• Meaning and purpose of parametric test and non-parametric test</li> <li>• Difference between parametric and non-parametric test</li> <li>• Analysis of variance technique of “F” test</li> <li>• Correlation and it’s types</li> <li>• t-Test, H-test, Chi-square test, Median test, Sign test,</li> <li>• Factor Analysis</li> <li>• Analysis of co-variance technique</li> <li>• Regression and it’s types, Step regression</li> </ul>	12
<b>V Using Data Analysis Software</b>	<ul style="list-style-type: none"> <li>• Using MS-Excel &amp; “R” for Data Analysis and Pictorial Representation</li> <li>• Drawbacks of Using Data Analysis Software</li> <li>• Data Entry and Application of SPSS</li> <li>• Steps of Computing Descriptive Statistics, Correlation , t-test, ANOVA, Chi-Square, and Regression through SPSS, Interpreting of results from Output Tables in SPSS</li> </ul>	12

**Teaching Learning Process:** Class discussions/ demonstrations, Power point presentations, Class activities/ assignments, Field visits., Internship, etc.

**Suggested Readings:**

- Shavelson, R. J., & Towne, L. (Eds.) (2002). *Scientific research in education*. Washington, DC: National Research Council, National Academy Press.
- Israel, M. (2014). *Research Ethics and Integrity for Social Scientists. Beyond Regulatory Compliance*, Sage publ., pp.18-19.
- Best, J. &. (2011). *Research in Education*. New Delhi: PHI Learning Pvt. Ltd.
- Blss C, & Higson, C (2004). *Fundamentals of Social Research Methods (3<sup>rd</sup> ed)*,. Lusaka: Juta
- Flick, U. (2009). *An Introduction Qualitative Research*, London: Sage, pp39-45
- Hilliday, A. (2002). *Doing and Writing Qualitative Research*. New Delhi: Sage Publications.
- James Arthur, M. W. (2013). *Research Methods and Methodologies in Education*. London: Sage Publications.
- Kelinger, F. N. (1979). *Foundations of Behavioural Research*. New York: Wadsworth Publishing Co Inc
- Mark, R. (1996). *Research Made Simple: A Handbook for Social Workers*, Thousand Oaks, C.A.: Sage Publication
- George, Darren and Mallery, Paul (2013). *SPSS for Windows-Step by Step: A Simple Guide and Reference 17.0 Update, 10th Edition*, Pearson

## Pre-Ph.D. Course 2023

### Paper-III- Development and Standardisation of Research Tool

<b>Subject: Education</b>		
Course Code: -----	<b>Course Title: Paper-III- Development and Standardisation of Research Tool</b>	Theory paper
<p><b>Course Objectives:</b> The main objective of this paper is to</p> <ol style="list-style-type: none"> <li>5. Identify and discuss the role and importance of research tool.</li> <li>6. Identify and discuss the issues and concepts salient to the research tool development process.</li> <li>7. Identify and discuss the complex issues inherent in selecting the appropriate research tool.</li> <li>8. Identify and discuss the concepts and procedures of research tool development.</li> </ol> <p><b>Course Outcomes:</b> At the end of this course, the students should be able to:</p> <ul style="list-style-type: none"> <li>• CO1 Describe meaning and need of research tools.</li> <li>• CO2 Understand various types of research tools.</li> <li>• CO3 Explain principles of tool construction.</li> <li>• CO4 Select the appropriate type of research tools for their respective study.</li> <li>• CO5 Develop competency in writing the items for research tool.</li> <li>• CO6 Edit the items of the research tool.</li> <li>• CO7 Standardize the research tool.</li> <li>• CO8 Prepare the manual for research tool</li> </ul>		
<b>Credits: 4</b>	<b>Core Compulsory / Elective</b>	
Max. Marks: 100	Min. PassMarks:55	
<b>Total No. of Lectures-Tutorial (in hours per week): L-T-P: 4-0-0</b>		
Unit	Topics	No. of Lectures (Total sum = 60)
<b>I Research Tool: An Introduction</b>	<ul style="list-style-type: none"> <li>• Meaning of Research tools</li> <li>• Characteristics of good research tools</li> <li>• Essay type and different forms of objective type test items</li> <li>• Nature of Test Scores</li> </ul>	12
<b>II Types of Research Tools</b>	<ul style="list-style-type: none"> <li>• Basis of classifying research tools</li> <li>• Different types of tools; their merits and demerits</li> <li>• Types of tools: Tests, Inventories, Questionnaires, Schedules, Checklists, Rating Scales, Opinionnaire</li> <li>• Their nature, characteristics and importance</li> </ul>	12
<b>III Research Tool: Preparation and Validation</b>	<ul style="list-style-type: none"> <li>• Writing objective type test items, Scrutinizing and editing</li> <li>• Content validity index (CVI)</li> <li>• Items Analysis Procedure, Pre-Tryout &amp; Final Tryout</li> <li>• Item Difficulty, Discrimination index</li> <li>• Distractor analysis, Criteria for selection of valid item</li> </ul>	12
<b>IV Research Tool: Development and Standardization</b>	<ul style="list-style-type: none"> <li>• Reliability and Validity, their meaning</li> <li>• Different methods of establishing reliability and validity</li> <li>• Factors affecting Reliability and Validity</li> <li>• Sensitivity to instructional effects (for mastery tests)</li> <li>• Finalization of items</li> </ul>	12

<b>Procedure</b>		
<b>V Research Tool: Norms establishment and Manual Preparation</b>	<ul style="list-style-type: none"> <li>• Test Norms: Meaning &amp; Concept</li> <li>• Different types of test norms</li> <li>• Their characteristics and computation</li> <li>• Conventional terms of Qualitative Research Tool: Dependability, Transferability, Confirmability</li> <li>• Preparation of Test Manual</li> </ul>	12
<b>Teaching Learning Process:</b> Class discussions/ demonstrations, Power point presentations, Class activities/ assignments, Field visits., Internship, etc.		
<b>Suggested Readings:</b> <ol style="list-style-type: none"> <li>1. Garrett, H.E. (1981). Statistics in Psychology and Education (Tenth Indian Reprint), Vails, Feffer &amp; Simmons Ltd.</li> <li>2. Kaul, L. (2011). Methodology of Educational Research, Vikas Publishing House Pvt. Ltd., Noida</li> <li>3. Best, J. W. and Kahn, J. (1997) Research in Education. (7th ed.) New Delhi: Prentice - Hall of India Ltd.</li> <li>4. Ansari, M.S. (2007). Essentials of Measurement and Evaluation, International Publishing House, Meerut</li> <li>9. Cohen, Louis, Manion, Lawrence and Morrison, Keith (2013). Research Methods in Education, 7th Special Indian Edition, Oxon: Routledge.</li> <li>6. Creswell, John W. (2012). Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, 4th Edition, New Jersey: Pearson Prentice Hall Inc.</li> <li>7. Kerlinger, Fred N. (2014). Foundations of Behavioural Research, 2nd Edition, New Delhi: Surjeet Publications.</li> </ol>		