

Department of Education
Saurashtra University-Rajkot
Ph.D Coursework

Research Methodology	
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1	<p>Resources for Research Purpose of literature review, Major steps in a literature review, Types of sources: Library skill: Reading skill and Note taking, Internet search</p>
2	<p>Variables and Hypotheses Meaning and types of variables-Meaning and types of hypotheses, Hypothesis construction: bases, involving variables, Testing a hypothesis</p>
	<p>Tools of Research Psychological Test: (a) types and its uses (b) general information about construction procedure, Questionnaire: (a) types, format and basic guidelines for constructing questions and questionnaire, (b) advantages and disadvantages of questionnaire, Interview: (a) types of interview such as individual & group and structured & unstructured, (b) conduction of interview / interview schedule, Rating Scales: types, format and basic guidelines for constructing scale, Measurement of Attitude: Thurston and Likert technique, Concept of some other tools: format and use of (a) Checklist, (b) Opinionnaire (c) observation schedule Standardization of research tool: Reliability, Validity, and Norms</p>
	<p>Sampling Technique Meaning of population and sample-Importance of sampling-Characteristics of a good sample Sampling technique: (a) Probability sampling: simple random sampling, stratified random sampling, systematic sampling, cluster sampling. (b) No-probability Sampling: incidental sampling, purposive sampling, quota sampling-Determining sample size.</p>
	<p>Methods of Research-1 Historical Method: (a) purpose and steps in doing historical studies, (b) primary and secondary sources including external and internal criticism of source materials, and (c) interpretations in historical research, Survey: Problems and method of school surveys, job analysis, documentary analysis, public opinion surveys, community surveys, Inter Relationship Studies: problems and method of case study, causal comparative study, correlation study, Developmental Studies: Nature of longitudinal and cross sectional studies, Experimental Studies: (a) meaning and characteristics of experimental research, (b) method of control, (c) criteria for selecting (evaluating) an experimental design-appropriateness, adequacy of control, internal validity and external validity, and (d) various types of experimental designs: pre, true and quasi-experimental design, Concept of qualitative research., Comparison of qualitative and quantitative research, Brief understanding of methods of qualitative research</p>
	<p>Treatment of Data Level of measurement of data, Treatment of data: editing, coding, classification, tabulation, visualization, Selection of technique for analysis of data: Descriptive statistics and inferential statistics, Deriving Conclusions, generalization, and educational implications.</p>
	<p>Writing Research Report Divisions of a report: (a) Preliminary part, (b) Content part: problem identification, review of related literature, methodology, analysis and interpretation of data and result section,</p>

	(c) supplementary part: appendices, references, abstract, glossary of terms, Format, style, typing, quotations, footnotes, bibliography, pagination, tables, figures, and graphics in the report, Criteria for evaluating research report
Information Technology In Education	
sr	content
1	Use of Computer in Education Instructional uses of computer: Computer Assisted Instruction/Learning, Online etc., Non Instructional uses of computer: Scoring, Result generation, Declaration of result, Records and data management, Concept of Institutional Website, Presentation package: MS POWERPOINT, Paint tool: PAINT
2	Computer Application in Research Introduction to : MSEXCEL, using formulas and Fuctions, Regression analysis with Excell ,features for Statistical Data analysis, Generating Charts/Graphs, Introdouction to MS word, Features and Functions, Writing Report in MS word, Creating Presentation in MS Power Point , Introduction to Internet Based Search, Use of Advance Research Techniques.