

KADI SARVA VISHWA VIDYALAYA
GANDHINAGAR

Ph.D. Course Work

In

PSYCHOLOGY

Paper-I: Research Methodology

Section-A (Common to all faculties)

- 1) Introduction to Research Methodology: Meaning of Research, Objectives of Research, Motivations in Research, Types of Research, Research Approaches, Significance of Research, Research Methods v/s Methodology, Research and Scientific Methods, Research Process, Criteria of Good Research – 3
- 2) Defining the Research Problem: What is Research Problem?, Selecting the Problem, Necessity of and Techniques in defining the problem – 6
- 3) Research Design: Meaning, Need, Features of Good Design, Concepts, Types. Basic Principles of Experimental Design, Developing a Research Plan – 6
- 4) Sample Design: Implication, Steps. Criteria for selecting a sample procedure, Characteristics of Good sampling Procedure, Types of Sample Design, Selecting Random Samples, Complex random sampling Design – 7
- 5) Measurement and Scaling Techniques: Measurement in Research, Measurement Scales, Sources of Errors in measurement, Tests of Second measurement, Technique of developing Measurement Tools, Meaning of Scaling, Scale Classification Bases, Important Scaling Techniques, Scale Construction Techniques – 10
- 6) Methods of Data Collection: Collection of Primary Data, Observation Method, Interview method, Collection of Data through questionnaire and Schedules, Other methods. Collection of Secondary Data, Selection of appropriate method for data collection, Case Study Method, Guidelines for developing questionnaire, successful interviewing. Survey v/s experiment – 10
- 7) Processing and analysis of Data: Processing Operations (Meaning, Problems), Data Analysis (Elements), Statistics in Research, Measures of Central Tendency, Dispersion, Asymmetry, Relationship. Regression Analysis, Multiple correlation and Regression, Partial Correlation, Association in case of Attributes –10
- 8) Sampling Fundamentals: Definition, Need, Important sampling Distribution, Central limit theorem Sampling Theory, Sandler's Atest, Concept of Standard Error, Estimation, Estimating population mean, proportion. Sample size and its determination, Determination of sample size Based on i) Precision Rate and Confidence level ii) Bayesian Statistics – 12
- 9) Testing of Hypothesis: Meaning, Basic concepts, Flow diagram, Power of a hypothesis test, Important parametric tests, Hypothesis Testing of Means,

Differences between Means, Comparing Two related samples, Testing of Proportion, Difference between proportions, Comparing variance to hypothesized population variance, Equality of variances of two normal populations, hypothesis testing of Correlation coefficients, Limitations of Tests of hypothesis - 12

- 10) Chi- square test: Applications, Steps, characteristics, limitations - 3
- 11) Analysis of Variance and Covariance: Basic Principles, techniques, applications, Assumptions, limitations - 7
- 12) Analysis of Non-parametric or distribution-free Tests: Sign Test, Fisher-Irwin Test, McNemer Test, Wilcoxon Matched pair Test (Signed Rank Test), Rank - 7
- 13) Sum Tests: a) Wilcoxon-Mann-Whitney Test b)Kruskal-Wallis Test, One sample Runs Test, Spearman's Rank Correlation, Kendall's Coefficient of Concordance, Multivariate Analysis Techniques: Characteristics, Application, Classification, Variables, Techniques, Factor Analysis (Methods, Rotation), Path Analysis - 7

Reference Books: Latest Editions of following Books

- 1) Kothari, C.R., Research Methodology (Methods and Techniques), New Age Publisher
- 2) Fundamentals of modern statistical methods By Rand R. Wilcox
- 3) Power Analysis for Experimental Research A Practical Guide for the Biological, Medical and Social Sciences by R. Barker Bausell, Yu-Fang Li Cambridge University Press
- 4) Design of Experiments: Statistical Principles of Research Design and Analysis, by Robert O. Kuehl Brooks/Cole

Section-B (Psychology)

Objectives of the paper

- To make aware about the procedural aspects of research in Psychology.
- To understand the scientific nature of Psychology research.
- Realistic planning of the social research.
- To know about the presentation of the research paper / report.

Course outline

1. Selection of research problem, Formulation of the Problem
2. Research plan
3. Research Design – Definition, Types, Significance and Importance
4. Review of Literature and Documentation
5. Collection of Data
6. Analysis of Data – Content Analysis, Analysis of Qualitative and Qualitative data
7. Writing research proposal

Reference Books:

Kothari C.R. “Research Methodology”

Laldas D.K. “Research Methodology in Social Science”

Young P. “Scientific Social Surveys and Research”

Goode W.J. and P.F.Hatt “Methods in Social Research”

Paper-II : Scientific Communication

Section-A (Common for all faculties)

- 1) Basics of Communication skill.
- 2) English Grammar
- 3) Word Choice, Sentence Structure, paragraph structure
- 4) Types of Scientific Communication.
- 5) Importance of publishing research paper
 - a) Preliminaries, Format, Choosing Journal
 - b) Title, Running Title
 - c) Authors: Single and Multi authorship
 - d) Writing Abstract
 - e) Selecting Keywords
 - f) Introduction section
 - g) Materials and Methods Section
 - h) Result Section
 - i) Figures: Design Principles, Legends, Table components, Graphs:Types, Style, Tables v/s Graph
 - j) Discussion Section: Format, Grammar Style, Content.
 - k) Acknowledgements
 - l) References: Different Styles
 - m) Communication with the Editor, Handling Referees' Comments, Galey Proofs
- 6) Publishing paper
- 7) Writing Review Articles
- 8) Preparing Posters for Scientific Presentation
- 9) Preparing and Delivering of Oral Presentation
- 10) Writing Practical Reports.
- 11) Avoiding Plagiarism
- 12) Research Grant funding Agencies, Preparing for application to grant providing Agencies.A
- 13) Patent drafting and submission
- 14) IUPAC symbols and Terminology for physicochemical quantities and Units, SI prefixes, Fundamental Constants, Standard Abbreviations and Symbols
- 15) Preparing documents for Technology Transfers, MoUs, Confidentiality Agreements

Reference Books:

1. Study and Communication Skills for the Biosciences by Stuart Johnson and Jon Scott, Oxford University Press
2. Write and Publish a Scientific Paper by Robert A. Day Oryx Press
3. Scientific Easy when you know how by Jennifer Peat BMJ Books
4. Research Projects and Research Proposals A Guide for Scientists Seeking Funding by Paul G. Chapin Cambridge University Press

Section-B (Psychology)

Objectives

- To evaluate any social and situation critically and produced logical reasons behind that.
- To understand the linguistic contestant and presentation of the reference material collected for any research projects.
- To convert the raw data into meaningful information.
- To know about the level of the research papers published in various research journals at national and international land.

Course outline

1. Exercises on writing research paper, preparing project proposal for various agencies presentations.
2. Analysis of at least five research papers of interest published in referred journals with respect to language, content, title, reference style, data, figures, tables, discussions etc and preparing the report on the same.
3. Writing and submitting review article related to doctoral research topic for a national journal.

Reference Books:

Young P. "Scientific Social Surveys and Research"

Goode W.J. and P.F.Hatt "Methods in Social Research"

Paper-III : Specialization Paper

I:- Basic Psychology Process

1. Introduction Definition, nature, goals and Utility of Psychology, as bio-social science.
2. Methods: Experiment, observation, interview, questionnaire and case study.
3. Biological and environmental factors of behaviour:
4. Definition and process of heredity, experiments on heredity, definition of environment types of environment, heredity and environment are supplementary factors of each other.
5. Attention - Definition nature and characteristics - Attention Perception.
6. perceptual Process: Definition nature, determinants of Perception, Perceptual organization errors in perception.
7. Learning: Definition, nature, analysis of the process, Detail analysis and explanation of conditioning. Trial and error and insight as basic types of learning.
8. Memories and forgetting: Definition, factors of memory, characteristics of good memory, Forgetting: decay, interference, retrieval failure, motivated forgetting.
9. Motivation: Definition, nature and types of motivation, interrelationships of needs.
10. Personality: Definition of personality, biological socio cultural determinants of personality.
11. Mental health: Definition, Characteristics and damaging. factors, suggestions to maintain mental health.
12. Healthy social relations: Meaning, fundamental theories, what type of people we like - do not like, why are we impressed at once by some people.

II - Human Development and Child Psychology

1. Introduction: Concept of human development, definition nature and subject - matter of child psychology, importance of developmental and child psychology.
2. Methods: Observation method, event reporting method, self support method and questionnaire method to study behaviour of child.
3. Growth and development: Meaning of growth and development, characteristics of growth and development.
4. Maturity: Meaning of maturity, and Maturity learning psychological aspects of illness and deficiency, duties of parents and teachers.
5. Discipline and authority: Meaning and nature of discipline and authority, source of parental authority, various nature of home authority, socio-cultural effects of familial authority, characteristics of good discipline.

6. Conflict: Meaning of conflict, reasons of conflicts observed in child, aims of punishment, emotional effects of punishment. characteristics of proper punishment.
 7. Motivation and frustration: Meaning of motivation and frustration, deprivation, motivational change through incentives.
 8. Deprivation: Meaning of deprivation, difference between frustration and deprivation, motivational change through incentives, some general incentives.
 9. Rational and linguistic development: Factors affecting rational development, variable affecting intelligence, obstacles and remedies for rational development, factors affecting language development, speech deficiency.
 10. Social and emotional development: Contribution of peer group in social and emotional development, meaning and nature of emotion.
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III- Pathology and Personal Adjustment

1. Introduction to psychopathology: The concept of normality and abnormality.
 2. Definition, nature characteristics and fields of adjustment. Improvement of adjustment.
 3. Frustration: Meaning, reasons and results of frustration.
 4. Defence mechanisms: Definition, functions and types of defence mechanisms - direct action Accusation and channelization escapism.
 5. Neurosis: Meaning and characteristics of neurosis reasons for he beginning of neurosis, types of neurosis.
 6. Family adjustment: definition, functions of family, family adjustment.
 7. Vocational adjustment: Transaction from study to job, factors affecting job satisfaction of working women.
 8. Psychosexual adjustment: Factors for selection of life partner, why some people do not marry ?
 9. Psychotherapy: Psychotherapy as a learning process, relation between patient and psychotherapist, aims of psychotherapy.
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IV- Social Psychology

1. Introduction: Definition nature, goals and scope of social Psychology. Social Psychology and other social sciences.
Methods: Experimental and non experimental methods.
2. Socialization: Definition, nature, and aspects of family society and culture.
Attitudes: Definition nature and formation of attitude.
and behaviour change of attitudes.
3. Social Attitudes & Prejudice as a Social Behaviour. Definition, Nature and formation Process of Social attitude change of attitude.
Prejudice: Definition. Nature and Suggestions for reducing prejudice.

4. Psychological Group & Crowds
Definition. Characteristics and types of group. Definition. Characteristic and types of crowd - Audience.
 5. Leadership. Public Opinion & Propaganda as a Group behaviour. Definition types of functions as leader. Definition and Process of Public Opinion Methods of changing public opinion. Propaganda its meaning and Techniques.
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V- Systems & Theories of Psychology

1. Meaning of school reasons for existence of schools in psychology.
 2. Introduction of the following schools and theories.
 - (1) Structuralism (2) Functionalism
 - (3) Associationism (4) Behaviourism
 - (5) Gestaltism (6) Psychoanalysis
 - (7) Hormic Psychology (8) Field Theory
 3. Behaviourism
Principles of Behaviourism
Limitations of Behaviourism
Contributions of Watson. Lesly, Guthrie, Skinner
 4. Associationism
Meaning of associationism contribution of associationism in Psychology.
Connectionism of Thorndike
The basic role of Pavlov.
 5. Gestaltism
What is gestalt psychology
Principles of Gestalt Psychology
Contribution in the field of Perception
Contribution of Wertheimer. Kohler, Koffka
 6. Psycho-Analysis
Principles of Psycho analysis
Personality Theory of Freud
Contributions of Adler, Jung.
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VI:- Psychology Methods

1. Experiment:
 - (1) Characteristics of Experiment.
 - (2) Laboratory Experiment and natural Experiment.
 - (3) Experimental errors - constant and variable errors and their effects.
 - (4) Basic understanding of the concepts of independent, dependent and controlled variables.
 - (5) Steps of Psychological experiment.

2. Psychophysical Methods:
 - (1) Method of average error.
 - (2) Minimal changes method.
 - (3) Constant stimulus method.
(Only the general nature and merits and demerits of each method)
 - (4) concepts of absolute Threshold and Differential threshold.
3. Survey Method
 - (1) Nature of social surveys.
 - (2) Objects of social survey and tools of social survey.
 - (3) Planning of the social survey.
 - (4) Pre-tests and pilot surveys.
4. Sampling Methods and Their Principles:
 - (1) Population and Samples.
 - (2) Parameter and statistics.
 - (3) Random, Stratified and Purposive sampling.
5. Questionnaire Method:
 - (1) General principles of constructing of questionnaire method.
 - (2) Subject matter of questionnaire.
 - (3) Wording in a questionnaire.
6. Interview Method:
 - (1) Types of interviewing, what is an interview - types
 - (2) Interviewer's Task, Selection and Training of the interviewer.
 - (3) Practical problems confronting an interviewer.

VII:- Experimental Psychology

1. Experiments :
 - (1) Measurement of Illusion by Muller - Lyer of verical method using the method of average error.
 - (2) Comparative study of the method of rank order and Paired comparison though color preference.
 - (3) Mirror - drawing.
 - (4) Maze learning (as demonstration of Trial and error learning)
 - (5) Division of Attention.
 - (6) Concept Formation.
 - (7) Meaningfulness and learning.
 - (8) Mental fatigue.
 - (9) Comparison of control and Free-Association.
 - (10) Judging Emotion from Photographs.
 - (11) Either span of Attention or Immediate memory Span.
 - (12) Forgetting of Meaningful material as a function of Time.

- (13) Problem - Solving.
 - (14) Suggestion through progressive weights method.
 - (15) The effect of Intention on learning.
 - (16) Either gestalt Factors in Perception or fluctuations of Attention.
 - (17) Learning: Letter - Digit symbol substitution.
 - (18) Whole Vs. Pari Method of Learning.
 - (19) Transfer of Training.
 - (20) Accuracy of the witness.
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VIII:- Abnormal Psychology

1. Abnormal Psychology Introductions
 - Nature and scope of abnormal Psychology Classification of Abnormal behaviour causes of Abnormal behaviour, Criteria of abnormal behaviour.
2. Defence Mechanism:
 - What is a Defence Mechanism ? Defence Mechanism as attack technique, attention getting technique and flight technique. Utility as adjustment view point.
3. Neurosis:
 - Definition - The Basic Nature of Neurosis - specific-Neurotic pattern Anxious neurosis - Obsessive neurosis - Compulsive Neurosis - Dissociative Reaction - Conversion Reaction - Depressive Neurosis Hypochondriacal neurosis - Causes of neurosis.
4. Schizophrenia:
 - What is schizophrenia - Types of Schizophrenia - (Simple Schizophrenia Reaction - Hebephrenic Schizophrenia - Catatonic Reaction type - Paranoid Schizophrenic Reaction) - Childhood Schizophrenia - Schizoaffective type - Latent type - Chronic undifferentiated type - Residual type - causes of Schizophrenia.
5. Affective and Paranoid Reaction:
 - Manic - Depressive Psychoses - Psychotic depressive Reactions - Paranoid reaction and its causes.
6. Psychosomatic Disorders:
 - What is Psychosomatic disorder ? Peptic ulcers - allergic, backache, rheumatism - asthma - Migraine - Hypertension and its reasons.
7. Psycho Therapy:
 - What is Psycho-therapy - Goal of Psycho therapy - Psychoanalytic therapy - Directive therapy - interpersonal Therapy - Group therapy.
8. Alcoholism and Drug Addition:
 - General effects of wine - Pathological intoxication - Delirium tremens-Korsakoff-Drug Addition - Morphine and heroin-cocaine and marijuana.

9. Physic - Therapy:

Insulin shock Therapy - Mertzson Convulsive Therapy - Mectro shock therapy - Electro Narcosis - Psycho surgery and Bio-Chemo Therapy.

10. Mental Health:

Mental health - important - terminology - objectives of mental health science - Mental health and home, school and society, Limitations of mental health efforts.

Paper-IX:- Psychology and Health

1. Meaning of Health in Socio-cultural contexts:

Nature, Scope and development of health psychology. The role of health psychologist.

2. Models of Health:

Bio-Psycho-Social and Cultural Models: Health Belief models.

3. Health Damaging and Health Promoting life styles / Behaviours

Type A behaviour pattern and Cardio Vascular Diseases and rule of CVD Illness.

4. Stress and Health:

Nature and types of stress. Causes and consequences of stress management. Rule of social support.

5. Health Issues Relating to Children, Women and Elderly.

Paper-X:- Industrial Psychology

1. Nature and scope of industrial psychology the work and impartial status of industrial psychologist.

2. Individual differences its importance in industry effects of training in Industrial differences. Selection of personal its factors and methods.

3. Job description. Job analysis and its uses and its importance criteria of Job success. Worker analysis, its methods.

4. Interview. Personal history data, problem of rating letters of reference.

5. Intelligence testing and its application to industrial placement.

6. Aptitude tests: Various aptitude tests and their use. Personality tests and their uses.

7. Interest and personality scales Personality and other factors affecting efficiency of work, music, temperature, ventilation, heat, lighting hours of work, rest periods.

8. Meaning of productivity and fatigue Monotony and Boredom.

9. Industrial motivation an incentive - why men work A general point of view on motivation. Certain specific hypotheses, studies of attitudes. what is industrial morale. Factors affecting the same. How to boost up morale of the workers.

10. Nature and causes of accidents. Accident proneness its present status. Factors affecting accident proneness prevention and reduction of accidents.
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Paper-XI:- Organizational Behaviour

1. Historical Context of Organisational Behaviour
Contribution of Tylor, Weber, Fayoll Definitions of OB; challenges, scope and opportunities for OB.
2. Perspectives for understanding OB
Open Systems approach, Human Relations perspective, Socio-technical approach; Developing an OB model responsive to Indian realities.
3. Person in the Organisation
Biographical characteristics, personality, Definition and Measurement concept of skill, Self awareness; Major personality attributes affecting OB; Matching personality and job. Personality and culture.
4. The individual and Organisation
Values, attitudes and job satisfaction, Importance of values, sources of values and its indoctrination. Attitudes: Sources, types and measurement of attitudes; Skills involved in changing attitudes.
5. The individual in the Organisation
Motivation. Concept and early theories of motivation: Need hierarchy theory, Theory X and y and Two - factor theory, Skill involved in motivating workers; MBO, Behaviour modification, Employee involvement programs.
6. The Group and Organisation
Nature, types and stage of group development. Condition affecting group functioning: organisational culture and physical setting, Skills involved in managing groups.
7. Communication in Organisations
Communication model Barriers and sources of distortions. Direction and network of communication, Communication and decision-making, Cross-cultural communication. Skills involved in communicating and listening.
8. Leadership in Organisations
Nature and types. Behavioural theories: Contingency theories and contemporary issues in leadership. Leadership and power: Bases of power and power in action. Skills involved in managing politicking.
9. Conflict Negotiation and Stress in Organisations.
Nature sources and techniques of managing conflict in organisation. Negotiation strategies. Work stress: Sources and techniques in Managing stress, Skills involved in managing stress, Conflict and negotiation.

10. Organisational change and Development

Nature, forces and approaches to change management. Organisational development. OD intervention techniques. Cultural issues in change and development. Skills in a managing change at individual level.

Paper-XII:- Educational Psychology

1. Definition, nature, scope and importance of educational Psychology
Different approaches to educational Psychology.
 2. What is teaching ? Teacher and the educative progress Teacher and his task.
 3. Education significance of Physical, mental and social growth and developments (questions regarding the nature of these developments are to be omitted)
 4. Effective and efficient study.
 5. How is Learning related to teaching.
 6. Transfer of training.
 7. Individual differences and their educational significance.
 8. Character development.
 9. Learning and discipline.
 10. Creative thinking and learning. How to teach for understanding. How may teachers teach reflectively.
 11. Mental Health of students and teachers.
 12. Educational evaluation and guidance tools. techniques and functions of educational evaluation, guidance, nature, meaning and functions of guidance.
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Paper-XIII:- Counselling Psychology

1. Meaning, Purpose and goals of counselling with special reference to India.
2. Professional issues, ethics, education and training of the counsellor.
3. Counselling relationship.

4. Counselling interview.
5. Psychodynamic Approach: Freudian, Neo Freudian, Modern. Humanistic Approach: Existential, client centred.
Cognitive Approach: Rational emotive, Transactional analysis.
6. Behavioural Approach: Operant conditioning, Behaviour modification.
7. Indian Contribution - yoga & meditation.
8. Child Counselling, Family Counselling; Counselling in Schools, Carrier Counselling.
9. Alcohol and Drug abuse, Group Counselling, Crisis Intervention Counselling.

Paper-XIV:- Biological Bases of Behaviour

1. Basic reasoning in Biology of Behaviour: historical background of Behavioural Biology; Vegetative/animate process; Types of cells; Neuron: Nerve impulse transmission (Graded potentials; spike potentials: EPSP; IPSP; Chemical mediators; hydrolysis): research methods (Neuroanatomical: Neurophysiological: neurochemical; Neuroelectrical)
2. Peripheral Nervous System (Somatic: autonoic) ; central nervous system (Spinal cord Medulla; Cerebellum; mesencephalon; diencephalon; Rhinecephalon; Basal Ganglia Cerebral: cortex) ; Evolution of Neuours System.
3. Neurophysiology of Arousal. attention. consciousness and sleep; Psychophysiology of emotion; Physiological and chemical correlates of learning and memory. Neurological basic of Aphasia.
4. Science of Genetics; Chemical and physical structure of Nuclei; Protein synthesis; Mitosis and Meiosis; Mendel's laws; Linkage and crossover; Extra Nuclear inheritance introduction to theory of Evolution.
5. Human Behaviour Genetic Analysis (Family and Twin Methods): animal behaviour genetics (Selective breeding ; indeed strains, induced mutations; Dialled Crosses: Foster: Rearing);
Inheritance of learn ability and sociability in animals ; inheritance of intelligence mental retardation and relevant psychopathology in humans.

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