SYLLABUS FOR Ph.D. COURSE WORK IN EDUCATION

Ph.D. COURSE WORK

2022

DEPARTMENT OF EDUCATION

VIKRAM UNIVERSITY, UJJAIN (M.P.)

(SMITA BHAWALKAR)

PRIYANSI PAREKH

(ARCHANA SHREEVASTAV.)

Dr. Neeta Ravankar

1. **Guidelines (as per ordinance 11) for Ph. D. Course Work in Education**

   The course work is prerequisite for Ph.D. preparation. The duration of the course work will be as per ordinance . The course work shall be of 16 credits and shall consist of 05 courses. Course-1: Research Methodology, Course-2: Review of Published Research in the relevant field, Course-3: Computer Applications, Course – 4: Advance course in the relevant subject , Course – 5: Comprehensive Viva-Voce will be compulsory for all.

2. **Course Structure**

S.NO	COURSE	COURSE	CRADIT
1.	Course -1	Research Methodology	4 credits
2.	Course -2	Review of Published Research in the relevant field	3 credits
3.	Course -3	Computer Applications	3 credits
4.	Course -4	Advance course in relevant subject(Education)	3 credits
5.	Course -5	Comprehensive Viva-Voce	3 credits

COURSE - 1: RESEARCH METHODOLOGY

Credits: 04

PART: A

Contents

Unit I: Research in Education

- Essential Characteristics of Science and Scientific Method.
- Definition of Research & Educational research,
- Qualitative & Quantitative Research: Meaning, Definition Characteristics and Need.

Unit II: Descriptive Research:

- Meaning, Definition, Characteristics, Nature of Descriptive Research and types.
- Survey: School Survey, Community Survey, Opinion Survey, Job Analysis survey and Document Analysis.
- Inter-Relation Studies: Correlation - Prediction Study, Causal – Comparative Study.
- Developmental Study: Growth study- Longitudinal & Cross Sectional Study, Follow up and Trend Study.

Unit III: (a) Experimental Research

- Experimental Design: Definition, Characteristics, Methods of Control.
- Types of Experimental Design: Pre, True and Quasi experimental design.
- Internal and External Validity of Experimental design.

(b) Qualitative Research Approaches:

- Ethnography,
- Phenomenology,
- Naturalistic Enquiry,
- Historical
- Case Studies,
- Philosophical research
- Analysis of Qualitative Data

Unit IV: Sampling and Tools

(a) Sampling

- Population and Sample,
- Importance of Sampling, Sampling Unit, Sampling Frame, Sampling Error & Bias,
- Probability & Non Probability Sampling, Methods and Sample Size.

(b) Tools & Process of development of tools:

- Tools of Measurements.
- Characteristics of Tools, Reliability, Validity, Sensitivity,
- Types of Tool- Test, Scale, Interview Schedule, Observation Schedule and Questionnaire.
- Steps of Developing Tools and standardization.

Unit V: Planning of Good Research -

(a) Preparing the Research Proposal

- Formulation of the problem for research -Sources, Specification.
- Review of related literature, Identifying the emerging trends from the review, building a strong rationale for selecting the problem.
- Practice to formulate the 'Problem' related to the area of interest of the researcher (it will include the exercise of writing the titles with various statements and getting it modified for correctness).
- Formulation of Objectives - Specifying objectives and hypotheses of the Study.
- Choosing appropriate design and stating the procedure (Selecting appropriate methods)
- Instruments/tools/techniques, Deciding about the subjects for the study, conditions for conducting the study including procedures of data collection and data-processing) Operational definitions of the concepts and terms used (with the statements of underlying assumptions, perceived limitations and specific delimitations of the study).

(b) **Report Writing** - General Guidelines:

- Format of Research Report (Journal Article, Thesis and Dissertation, Paper at Professional Conferences) Preparation of the Manuscript.
- Writing style
- Bibliography and References, APA Reference Style
- Preparation of summary and abstract
- Evaluating and Finalizing the Report (Including the process of converting dissertations and theses for publication as a journal article)
- Research Ethics, Steps to avoid Plagiarism in Research.

PART: B

Contents

Unit I:
- Scales of Measurements: Nominal, Ordinal, Interval & Ratio.
- Statistics permissible at each level of measurement. scales- Parametric & Non-parametric tests: Underlying assumptions, considerations for deciding appropriateness of statistical tests..

Unit II:
- The concept of Hypothesis testing: Null hypothesis, Alternative hypothesis: Directional & Non-directional hypothesis, One & Two tailed tests.
- Significance of statistics in terms of critical value & probability, Errors in hypothesis testing: Type I and Type II errors.

Unit III:
- One way ANOVA, Post Hoc tests of Varying powers, Two way ANOVA with equal and unequal cell size,
- One & Two way ANCOVA of equal & unequal cell size.

Unit IV:
- Non Parametric statistics: Mann Whitney test, Wilcoxon test, Signed

  Ranks test, Chi Square test-One and two samples.

Unit V:

- Use of SPSS in Data Analysis: Data entry, testing underlying assumptions, running the tests, editing and exporting the output, writing interpretation.

****

COURSE - 2: REVIEW OF LITERATURE

Credits: 03

Contents

Unit I: Review of Research:

- Concept, Purpose and Importance.
- The functions of Review - Conceptual frame of reference.
- Status of research, Research Approach, Method, Instrumentation and Data Analysis, Probability of success and significance of findings, Stating the definitions, assumptions, limitations and hypotheses, Selection of Tools and Design.

Unit II: Use of Reference Materials:

- Using library.
- Encyclopedias, Handbooks of research on teaching,
- First, Second and Third handbooks of Psychological and Social instruments,
- Research Surveys in Education I-VI,
- Journals and Research Abstracts,
- Dictionaries of Education,
- Yearbooks,
- role of Association of Indian Universities,
- NCERT publication,
- Searching related literature online, Shodh Ganga .etc

Unit III: Conducting a review of the literature:

- Listing key words,
- Checking preliminary sources,
- Reading and noting selected references.
- Preparing references at the time of review of literature.

Practical Work-

> Conducting a review of research in the area of interest and preparing the abstract of reviewed studies.(at least five abstracts are to be submitted during the course work)

****

COURSE -3: COMPUTER APPLICATION

Credit : 03

Contents : -

Unit I: Introduction to Computer System: Definition, Characteristics, Parts of Computer and their functions, Block Diagram of Computer System, Input and Output Devices, Operating System, Memory. Modern Components of different Hardware like laptop, tablet, smart Mobiles, Measure Application of Android.

Unit II: MICROSOFT WINDOWS : An Overview of different versions of Windows, Features of Windows, Creating Folders and Short cut Icons. Saving, Copying and Deleting Files, Loading software. Uses of Note Pad, Calculator, Dictionary and Paint Brush. Word Processing:- Saving, Closing, Opening an Existing Document, Selecting text, Editing text Finding and Replacing text, Creating and Printing Merged Documents, Character and Paragraph Formatting, Page Design and Lay Out,

Unit III: MS EXCEL: Creating Worksheet and use of Simple Commands,

Unit IV: Presentation Package: Creating, Opening and Saving Presentation, Working in different Views, Working with Slides, Adding and Formatting Text, Making Notes, Pages and Handouts, Designing Slides show, Running and controlling presentation, Printing Presentations. Uses of Multimedia during Presentation: Meaning, Graphics, Animation, Audio Images, Video Survey and Text.

Unit V: Use of Web Based Instruction: Designing, Advantages and Limitations. Use of Educational Software and CD's. Use of Computers in Library, Internet: Meaning, Online Surfing, Use of e-mail, Chat. Use of Search Engines. World Wide Web-Access information, reliability of information Web Page and Home Page, Use of Internet in Teaching- Learning Process. Downloading Information, Uses and Abuses of Internet.

PRACTICAL ACTIVIES -

- MS-WORD,
- MS-EXCEL
- POWER POINT,
- INTERNET.
- USE OF 2G AND 3G TOOL

****

COURSE -4: ADVANCE COURSE IN EDUCATION

Credit: 03

Contents :-

Unit – I : (a) Educational Studies; Philosophical Perspective of Education- Indian and Western Philosophy.

(b) Sociological Perspective of Education.

Unit – II : Education policy - Committees and Commissions,

Contribution to Teacher Education - Secondary Education Commission (1953), Kothari Education Commission (1964-66), National Policy of Education (1986,1992), National Commission on Teachers (1999), National Curriculum Framework 2005, National Knowledge Commission (2007), Yashpal Committee Report (2009), National Curriculum Framework for Teacher Education (2009), Justice Verma Committee Report (2012), National Education Policy (2020)

Unit – III: Innovative Strategies of Teaching and Learning

- Learning Approaches: Behaviorist Approach, Cognitive Approach, and Constructivist Approach.
- Organizing Teaching: Memory Level, Understanding Level, Reflective Level .
- Competencies of Self-directed Learning and Self dependent Learning(Aatmnirbhar Adigem)
- Models and Strategies in teaching- learning process, Learning Styles, Cooperative Learning Strategies, Blended Learning, Meta-cognitive Learning Strategies, Flipped Learning Strategy, Self- Regulated Learning Strategies, Peer Tutoring, Instructional Scaffolding, Integrated Instructional Strategy .

Unit -IV: Use of Technology in Learning and updating, e portals –

SWAYAM, SWAYAMPRABHA, MOOC etc.

****

SUGGESTED QUESTIONS FOR DISCUSSION AND UNDERSTANDING OF COURSE- 1 AND COURSE – 2

- Meaning and difference between 'Need, Rationale and Significance'
- Meaning and difference between 'Research Objective and Research Question'.
- Meaning and difference between 'Method and Methodology'.
- Meaning and difference between 'Bibliography and References'.
- Meaning and difference between 'Limitation and Delimitation'.
- Meaning and difference between 'Hypothesis and Assumption'.
- Meaning and Difference between ' Measurement and Assessment.'

  Similar other points can be added as per requirement of the participants.

****

References-

- Anfara, Vincent & Mertz Norma T. (2006). Theoretical Frameworks in Qualitative Research. SAGE Publication.
- Best J.W. (1986) Research in Education, New Delhi: Prentice Hall of India Pvt. Ltd.
- Borg, W.R. and Gall, M.D. (1983) Educational Research – An Introduction, New York, Longman, Inc. • Booch, M.B. (1978) A Survey of Educational Research, CASE, The M.S. University Barodara.
- Biffle, C. (2013). Whole brain teaching for challenging kids. NA: Whole Brain Teaching.
- Broota, K.D., Experimental design in behavioural sciences, New age international publishing house, New Delhi. • Chohan,L., Manion, L.& Morrison ,K. (2007) Research method in education (6th edition) Routledge ,London.
- De Bono, E. (1999). Six Thinking Hats. New York: New York: Bay Back Books / Little, Brown and Company.
- Elliott, Jane (2005).Using Narrative in Social Research: Qualitative and Quantitative Approaches. SAGE Publication.
- Ellis, R. (2003). Task-based language learning and teaching. Oxford: Oxford University Press.
- Fraenkel, J.R., Wallen, N.E. (1983) How to Design and Evaluate Research in Education, Singapore: McGraw Hill, Inc.

- Garret, H.E(1975) Statistics in Psychology and Education, Vakils, Feffer and Simons Ltd, Bombay, India Print. 2.
- Gravetter. F.J. & Wallanau, C.B. (2002). Essentials of Statistics for the Behavioural Sciences (4th edition) Australia, Wodsworth.
- Grbich, Carol (2006). Qualitative Data Analysis: An Introduction. SAGE Publication.
- Guilford, J.P. (1956): Fundamental Statistics in Psychology and Education, Kogkusha, Tokyo
- Gupta, Santosh (1983) Research Methodology and Statistical Techniques, New Delhi : Deep and Deep Publisher.
- Joyce, B., Weil, M. & Showers, B. (1992). Models of teaching (4th Ed.). Englewood Cliffs, N.J.: Prentice-Hall, Inc.
- Kerlinger, F.N. (1973) Foundations of Behavioural Research, New York : Holt, Rinehart and Winston.
- Kaul, Lokesh (1984) Methodology of Educational Research, New Delhi : Vikas Publications.
- Kumar, S.P.K. &Bindhu, C.M. (2002). Instructional learning strategies and cognitive entry behaviour: An experimental Analysis. New Delhi: Kanishka Publishers & Distributors
- Kumar, S.P.K. & Sasidharan, P. (2004). Jigsaw Process in Education: The Way for Joyful Self Learning. New Delhi: Kanishka Publishers & Distributors
- Leary, M.R. (2004). Introduction to Behavioral research Methods (4th edition) Boston: Pearson Prentice hall
- Lichtman, Marilyn (2006). Qualitative Research in Education-A User Guide. SAGE Publication.
- Mc Call, R.B (1970) : Fundamentals Statistics for Psychology : New York : Harcourt, Brace & World Inc.
- Novak, J. D., &Gowin, D. B. (1984). Learning how to learn. New York: Cambridge University Press.
- Robert, J.S (2000) : GGUM 2000 User's Guide: Versian L.O (on line) Available http:/www.education.umd.edu/ EDMS tutorials/ index html
- Rose C. and Nicholl, M. J. (1997). Accelerated learning for the 21st century. The six-step plan to unlock your master-mind. New York: Dell Publishing.
- Salkind, N.J. (2006). Exploring Research (Sixth Edition) NJ: Pearson Prentice Hall.
- Sansanwal,D.N.(2020) : Research Methodology and Applied Statistics.New Delhi: Shipra Publications .
- Sax, Gilbert (1968) : Empirical Foundations of Educational Research, Englewood Cliffs , J.J.

- Siegal, Sidney (1956) : Non parametric Statistics, Tokyo : McGraw Hill Kog Kusha Ltd.
- Sidhu, K.S. (1987) Methodology of Research in Education, New Delhi: Sterling Publishers Pvt. Ltd
- Tarrant, P. (2017). Reflective Practice and Professional Development. SAGE Publications, Ltd
- Travers, R.M.W. (1969) An Introduction to Educational Research, New Delhi: Sterling Publishers Pvt. Ltd.
- Van, Dalen, Debonald, B. and Meyer, William J. (1979) Understanding Educational Research: An Introduction, New York: McGraw Hill Co.
- Wiersma, W.(2000). Research Methods in Education. (7th edition) Allyn & Bacon.

****