

BHARATHIAR UNIVERSITY, COIMBATORE 641 046

M.Phil: EDUCATIONAL TECHNOLOGY

**Paper: I Teaching Techniques /Pedagogical Methods in
Educational Technology**

Objectives:

At the end of the course, the scholars will be able to

1. Understand the meaning, scope and concept of Education, Educational Technology, Instructional Technology & Educational Evaluation.
2. Appreciate the contributions made by philosophers and psychologists to the field of education.
3. Review the relative effectiveness among the different methods and techniques of teaching and learning in Higher Education.
4. Discriminate among different types of tests meant for students' evaluation, diagnose the learning problems of the students and take remedial measures.
5. Be aware of the web based communication strategies for professional development and be benefited of the e-resources in Education.

UNIT – I Higher Education and Learning

Historical Perspectives ... Objectives and Role of Higher Education ... Learning and Learning Hierarchy ... Information Processing ... Learning Events and Outcomes ... Motivation.

UNIT – II Teaching Technology: Designs

Teaching Technology: Meaning, concept and scope ... Instructional Designs: Objective based, Skill based, Competency based, Learning style based and Model based.

UNIT – III Methods and Techniques of Teaching

Large Group Techniques: Lecture, Modified Lecture, Seminar, Symposium, Panel Discussion, Team Teaching, Project Approach and Workshop ... Small Group Techniques: Group Discussion, Simulation, Role Playing, Buzz Technique, Brain Storming, Case Discussion and Assignment ... Systems Approach in Education.

UNIT – IV Measurement and Evaluation in Education

Educational Evaluation: A Conceptual Framework...Methods of Evaluation ... Self Evaluation and Student Evaluation in Higher Education ... Question Banking ... Diagnostic Testing and Remedial Teaching.

UNIT- V Electronic Media in Education

Instructional Media: Concept, Selection, Use and Variety ... e-Learning Resources: e-Learning, e-books, e-journals,etc. ... Web- based Learning: Access and Teaching Issues.

Text Books:

For Units I to IV-

Vedanayagam, E.G. (1989) Teaching Technology for College Teachers. New Delhi: Sterling

Publishers (P) Ltd.

For Unit V

Rajasekar, S. (2005) Computer Education and Educational Computing, Hyderabad: Neelkamal Publications.

Books for References:

1. Kumar, K.L. (1997) Educational Technology, New Delhi: New Age International (P) Ltd.
2. Sampathkumar, K., Paneerselvam, A and Santhanam, S. (1990) Introduction to Educational Technology, New Delhi: Sterling Publishers (Pvt.) Ltd.
3. Tony Bates, A.W. (2005) Technology, e-Learning and Distance Education, New York:Routledge.

PAPER II: RESEARCH TRENDS AND METHODOLOGY

OBJECTIVES

1. To enable students to understand modern trends in Educational Technology
2. To enable students to understand research methods and statistical tools in education.
3. To enable students to understand the principles of evaluation, research and statistics
4. To help students in preparing model research proposals for research studies

Unit I: MODERN TRENDS IN EDUCATIONAL TECHNOLOGY

Educational Technology - definition – meaning – scope – relevance to the present day.

Application of principles of Educational Psychology to Educational Technology – conditions facilitating – Effective learning – teacher and learner roles. Principles of modern communication informal and non-formal situations of learning – nature and role of communication in class rooms – mass communication – the media and methods. Distance education – the concept, principles and practices – the media and methods for distance education – life long education – role of radio and television. The media – method relationship – their applications of classroom instruction – criteria for appropriate media – OHP, tape, slides, CAI, CCTV and so on.

Unit II: AUDIO, VIDEO AND COMPUTER COMMUNICATION TECHNOLOGY IN EDUCATIONAL RESEARCH

Psychology of Communication and its application to Educational Technology. Models of Teaching – Analysis of different models with reference to their format and principles -Organization of message, instructional events and learning experiences in relation to teaching - Multi-media approach to learning and instruction - Audio, Video recording for presentation and scripting for Educational Video Production - Evaluating the media - Computer Assisted Instruction: definition and fundamentals - Methods of Computer Assisted Instruction: Drill & Practice, tutorials, demonstrations, etc.. – Computer Managed Instruction. EDUSAT: Use of satellite technology in Educational research.

Unit III: RESEARCH METHODS

Research – Nature, types and scope- Research Design – Qualitative Research Techniques – Historical case study, Participatory and Ethnography Research Methods – Quantitative Research Techniques – Survey, Experimental, Action, Longitudinal Research Methods – Review of related studies - Tools for data collection: Observation, Interview schedule, Checklist, Questionnaire, Achievement test and attitude scale – Construction and Standardization of tools – Reliability and Validity – Item analysis.

Unit IV: SAMPLING TECHNIQUES AND MEASUREMENT

Population and Sampling – Purposive sampling, simple random sampling, systematic sampling, stratified sampling, cluster sampling, stage sampling –levels of confidence – Degrees of freedom – Hypothesis formulation and testing statistical significance, one tailed and two tailed tests – correlated and uncorrelated data – Scales of Measurement – Nominal scale, Ordinal scale, Interval scale and Ratio scale.

Unit V: ADVANCED STATISTICAL TECHNIQUE AND REPORT PREPARATION

Introduction to statistics – meaning, scope, concept , descriptive and inferential statistics, parametric and non-parametric statistics, variables, classifying and presenting the data- Graphical representation of data –Descriptive statistics – Measures of Central tendency and Variability- Normal Distribution: characteristic features and application- Measures of correlation –Chi –square, t-test, ANOVA and MANOVA - Computer Application: Computer Packages – SPSS- word processing and graphs – Preparation of Research Documents: Preparation of Research proposals, writing of the report of the research studies.

References

1. Kerlinger H Fred. (1964) Foundations of Behavioural Research: Educational Psychological Inquiry.
2. Goode & Hatt. (1952) Methods in Social Research
3. Paulin Young. (1961) Scientific Social Survey and Research
4. John Best. (1975) Fundamentals of Social Research
5. Edwards A L (1966) Experimental Design in Psychological and Education
6. Covers,P.S.(1980) Computer Programming In Basic, Madras Allied Publisher (P) Ltd.

SPECIAL PAPER I: ADVANCED EDUCATIONAL TECHNOLOGY

OBJECTIVES

1. To study how audio, video, and computer technologies can best be exploited in teaching and learning
2. To study the principles involved in the production of media related materials

Unit I: MODERN COMMUNICATION TECHNOLOGY IN EDUCATION- MEANING, SCOPE AND CHOICE

- Systems approach to instruction and instructional designs
- Audio visual technology: projected and non-projected aids
- Individualized instruction: Keller Plan, PSI, CAI, CMI & PLM
- Advanced Techniques In Education: Multimedia, interactive video, teleconferencing, tele-bridge, teletext and videotex

Unit II: EDUCATIONAL TECHNOLOGY FOR FORMAL, INFORMAL AND NON-FORMAL SYSTEMS IN LEARNING: CONCEPT AND SCOPE

- Role, experience and applications of Educational Technology in school education and higher education
- Role, experience and applications of Educational Technology in Special groups: Special education and distance education
- Interpersonal approach: IEC, Social Marketing Approach, Participatory Communication approach
- Media approach: development communication approach, development support communication approach and media forum

Unit III: PROGRAMMED LEARNING; THEORETICAL CONSIDERATIONS

- Programmed learning: Theoretical considerations
- Types and Mechanics/steps of programming
- Programmed Learning/Instruction: some applications
- Difference between PLM and other individualized instructional techniques: CAI, CMI, Keller plan. Personalized system of instruction

Unit IV: COMPUTER IN EDUCATION

- Methods of computer based instruction: Tutorials, Drill & Practice and instructional packages
- Development of computer based instructional packages
- Evaluation of computer based instructional packages
- Computerized test – construction and administration

Unit V: E-LEARNING

- Evolution of Education
- Generations of Distance Educational Technology
- Role of E-Learning
- E-Learning: Definition, Advantages, Characteristics
- Components of e-learning: CBT, WBT and Virtual Classroom
- E-Learning Tools
- Learning Management Systems: Definition – Components – LMS Vs LCMS.

References

1. J. Brown, et. al. "An Instructional Technology Media and Methods".
New Delhi: Mc Graw Hill
2. Henry Ellington. (1985) "A Handbook of Educational Technology"
London: Kogan Press
2. Len Masterman. (1985) "Teaching Of Media", London : Comedia
3. Keval J. Kumar (1989) "Reading in media Education" , Columbus: Ohio State
University
4. UNESCO. (1984) "Media Education"
5. Duchi (Ed.) (1987) "Development Communication at Grass root Level"
6. UNESCO "Distance education in Asia and the Pacific" : Bulletin of the UNESCO
regional office for education in Asia and the Pacific" (26) 1-119, I-XL, Dec. 1985
7. Billows (1971) "The Techniques of Language Teaching" London: Longmans
8. Currie William. (1973). "New Directions In Teaching English Language"
9. Chauhan, S.A. (1978) "A text book of Programmed instruction", New Delhi:
Sterling Publishers.
10. Dececco, J.P. (1964) "Educational Technology: Reading in Programmed Instruction"
New York: Rinehart and Wington
11. David Hardisty and Scott Windeatt (1989) "Computer Assisted Language Learning"
Oxford O.U.P
12. Stephen et.al. (1985). "Computer based instruction methods and development" New
York : Prentice hall
13. Kumar K.L (1996) "Educational Technology" New Delhi: New age International
Publishers.

SPECIAL PAPER II: EDUCATIONAL COMMUNICATION

OBJECTIVES

1. To Understand the principles of Communication
2. To Understand the usage of Audio-Visual medium in education
3. To Understand Educational Technology in teaching learning process
4. To Understand the usage of computers in education

Unit I

Types of Communication – Models: Lasswel, Shannon and Weaver’s model – role of communication in social change – Technology in Communication – Media and development – Communication and Information Technology – Research in Communication.

Unit II

Educational Technology: meaning and definition objectives, scope and classification, divisions, evolution and development – Hardware and Software – Concept of principles of learning – Application of learning principles in Educational Technology - Teaching models: Definition and meaning, characteristics and types – Glacer’s model, Bruner’s model – Macro and Microteaching

Unit III

Audio-Visual medium in Education: Definition and Psychology of the use of Audio-Visual aids – characteristics of good teaching aids – classification – projected and non-projected – Meaning and significance of Radio’s school Broadcasting programme – Education Broadcast in India – Press as medium of Education.

Unit IV

Educational Television – Satellite Instructional Television experiment – Cable TV, Community Television – Instructional television – Countrywide classroom – Different types of programmes and formats: - News programmes, TV Documentaries, Interview, Quiz programmes, children’s program, Commercial and Educational programmes.

Unit V

Use of Computer Technology In Education – Computers in classroom – Computer literacy – Computer as a teaching and learning tool – Capabilities and application of Computer – CAL, CAI, CML – Use of Computer in Research

Reference

1. Kumar J. Keval “Mass Communication in Media” , Jaico Publication House
2. Aggarwal J.C. “Essentials of Educational Technology-Teaching learning innovations in Education” ‘ Vikas Publishing House Pvt. Ltd
3. Kumar K.L. “Educational Technology”
4. Kaplar S. Paul “Educational Psychology for tomorrow’s teachers”

SPECIAL PAPER III : LANGUAGE TEACHING

OBJECTIVES:

- To help the students to know methods of language teaching and learning.
- To equip the students for using computer for testing the language competence.
- To provide introductory knowledge about language pedagogy.
- To enable students classify errors and evaluate language use.

UNIT I: LANGUAGE TEACHING AND LEARNING

Language-acquisition, learning, -first and second language acquisition/teaching
In different soio-cultural settings, cognate and foreign language, teaching /learning
.Various
Approaches in language teaching. Using technology -teaching aids.

UNIT II: LANGUAGE, SOCIETY AND COMMUNICATION

Inter-relationship of language, society and communication- Mass media and society-
language use in different media –print, electronic. The process of communication-Models
of communication: Shannon and Weaver, Wilbur Schramm, Osgood, Barriers to
communication. Language variety-dialect, idiolect, pidgin, creole, sociolect, ecolect and
register.

UNIT III: LANGUAGE PEDAGOGY AND ERROR ANALYSIS

Developing Language curriculum-syllabus-Textbook evaluation. Errors-Types of errors-
Error analysis at Phonological, lexical, semantic and syntactic level.

UNIT IV : USE OF COMPUTERS IN LANGUAGE TEACHING

Computer basedlanguage learning and Teaching, Use of computer aided packages
for teaching and material production, Meaning and Need for Language Laboratory to
develop LSRW skills.

UNIT V :LANGUAGE TESTING AND EVALUATION

Principles and methods of language testing, Types of Tests- proficiency test, aptitude,
diagnostic prognostic test, achievement -reliability, validity, item analysis. Formative and
summative evaluation.

References :

1. Essentials of Educational Technology:Innovations in Teaching Learning –
J.C.Aggarwal
2. Applied Linguistics and the Learning and teaching of foreign languages – Theo
Van Ellis et al
3. Language Teaching – Robert Lado
4. Applied Linguistics – P.Corder
5. Educational Linguistics – Michael Stubbs
6. Understanding second language acquisition – R.Ellis
7. Computational Linguistics:An Introduction –R.Grishnan

8. An Introduction to Human Communication –G.A. Bordern
9. Approaches and Methods in Language Teaching - Jack.C.Richards and Theodore Rodgers
10. Essentials of Examination System: Evaluation, Tests and Measurement