

## **DEPARTMENT OF EDUCATION**

### **TEZPUR UNIVERSITY**

(A Central University Established by an Act of Parliament)

Napaam, Tezpur

Assam - 784028

[www.tezu.ernet.in](http://www.tezu.ernet.in)



## **Course Structure and Syllabus for Coursework in Ph.D. in Education Programme**

The syllabi of courses for 'Ph.D. in Education' coursework are based on "Learning Outcomes Based Curriculum Framework (LOCF), 2019" by University Grants Commission (UGC).

## **Preamble**

The research in education has had remained a matter of utmost concern due to its direct linkage with the discipline of education and associated linkage with the remaining disciplines of learning. As a matter of the fact, both in numerical terms as well as in terms of the quality the research in education requires a change that may yield the anticipated outcome of proliferation of quality research in our country. This has caused an inevitable need for the promotion and expansion (volume and quality) of the research aptitude among the newly post-graduates. With the paradigmatic shift towards interpretivist approach, both quantitative as well as qualitative methods of doing research has gained prominence. Therefore, the coursework for the doctoral program in education should have the content that may equip the enrolled scholars' comprehension about ontology, epistemology, and methodology of doing educational research in the context of India. With this intention, the coursework for Ph.D. in education is designed to orient scholars in the time frame of a semester whereby both theoretical as well as practical knowledge shall be imparted.

### **1. Introduction**

Doctoral research has been widely acknowledged as the crucial factor responsible for the enhancement of the academics, and largely affects the status of learning as well as teaching in the concerned discipline. 'Education' as a discipline holds immense importance for the 'teacher-education' and related aspects of education apart from the compounding effect on other disciplines of learning in the wake of interdisciplinarity. Along with this, there is a corresponding role of education in articulating and shaping the mindset of general masses. In the context of human development in a state, the need for promotion of research in education has gained wide publicity and interest among those who wish to pursue their career in academics or are willing to join the administrative/education services. The present context of average educational research as well as the continued differing reality in India compels modification in the present pattern of doctoral program in Education that could yield social cohesion and remunerative economic capital apart from heralding knowledge revolution as an outcome of the rich scholarship.

#### **Vision**

The need for philosophical comprehension of the education discipline is imminent to make a gainful and holistic development towards the field of education that shapes the lives of the

citizen in a state. The program shall act as an instrument in fulfilling the task of providing educational research to fill the void in the true development of our society.

### **Mission**

The doctoral program in education intends to impart research aptitude that may further get translated into rich scholarship as well as dissemination of the same to contribute towards existing knowledge about different aspects in education. In this regard, learning outcome-based curriculum framework shall help in establishing and achieving realistic aims for the program which could be continuously monitored as well as verified to the larger extent.

### **About the Programme**

**Name of the Program:** Ph.D. in Education

**Eligibility:** Post-Graduate in Education or in any allied discipline/ subjects with 55% marks. JRF qualified students will be exempted from written test, they must appear in personal Interview and viva. (Check the admission link in the academic section at Tezpur University homepage for details- [www.tezu.ernet.in](http://www.tezu.ernet.in)).

**Priority Areas:** Teacher Education, Educational planning and management, Gender Studies, Inclusive Education, Teacher Policies/programs, Tribal Education, Minority Education, Measurement and Evaluation, Examination and many more. However, Interdisciplinary research are encouraged.

**Coursework time duration** – One Semester

**Mode of Transaction of the Curriculum:** Interactive teaching learning methods are emphasized in transaction of curriculum for construction of knowledge by students. Apart from lecture- cum-discussion mode various other modes such as field work-based assignments, projects, seminar/group discussion and term papers etc. are followed to facilitate learning by experience. An attempt is also made to follow blended approach by integrating ICT in transaction of the curriculum.

**Mode of Assessment and Evaluation:** The University has a uniform mode of continuous and comprehensive evaluation system and follows relative grading system. The students are assessed through sessional tests, written examinations, and assignments for respective programmes.

## **2. Qualification descriptors for the graduate**

### **a) Knowledge of the discipline and linkage with other existing disciplines**

- i) The graduate displays comprehensive knowledge of educational research, and about its convergence with other disciplines of learning.
- ii) The graduate delineates epistemological standpoint of the research issues involved in education.

### **b) Skills for doing educational research**

- i) Through the erudite clarity on the available methodologies, the graduate chooses appropriate methodology (Research design, method, and analysis) for the researched issues in education.
- ii) The graduate demonstrates awareness of availability (sources) and utilization of both, secondary as well as primary data for conducting research in the field of education. This includes accessibility and review of the available literature, and awareness of analytical tools (specific software) for the primary analysis of secondary and empirical data.

### **c) Academic competence**

- i) The graduate displays report writing as one of the several objective skills establishing research competence at national and global level.
- ii) The graduate demonstrates global competence about conducting and publishing educational research with high individual impact factor.

## **3. Graduate Attributes**

The Ph.D. program in Education is committed to develop and enhance the research aptitude among those enrolled towards doing research in varied areas of education. Attuned to this the program is designed to instill following attributes that shall be ascertained after successful completion of the course.

### **a) Philosophical comprehension of education discipline**

The graduate possesses the adequate skill yielding comprehension of the education discipline in philosophical sense such that the discipline of education could be utilized to gain wisdom in specific sense.

### **b) Specialized knowledge of varied dimensions in the discipline of education**

The graduate demonstrates specialized understanding of the chosen dimension(s) in the discipline of education. Such a knowledge is sourced from extrapolation of available knowledge in the related area of education discipline.

### **c) Emphasis on inter-disciplinarity**

The graduate displays relevant utilization of Inter-disciplinary approach that leads to enrichment of the research and knowledge creation.

**d) Knowledge of research methodologies in the field of education**

There is a display of erudite knowledge of different methodologies employed in the area of educational research, and of the selection of appropriate methodology for the chosen dimension of research in education.

**e) Research aptitude reflecting inclusive approach and critical thinking**

The graduate adopts research aptitude in attempting towards problems associated with the accessibility of quality education at different levels (school and tertiary). Critical thinking and inclusive approach are the key determinants for the problem-solving research aptitude in the context of stratified Indian society.

**f) Ethical awareness**

Various ethical issues are considered by the graduates of the program that may otherwise lead to dilution in the rigor of the research apart from other issues such as plagiarism, breach of trust, etc. usually responsible for the credibility of doing social research in the discipline of education.

**g) Usage of ICT and data analysis software**

The graduate demonstrates qualified usage of the ICT skills and different software aiding the data analysis for the collected education related information from either primary or secondary sources or combination of both.

**h) Contribution to the existing pool of knowledge**

The graduate is instrumental in making academic contribution through creation of new knowledge in the discipline of education. Innovative scientific research individually or collectively done forms the basis of new knowledge.

**i) Presentation and publication**

The competence of the graduate is established through the ability to disseminate information in the form of presentation and strong publication at renowned platforms in the education discipline.

#### **4. Program Outcomes**

*After completion of Ph.D. in Education programme the graduates will:*

**PO1:** Develop holistic understanding of research paradigms in education and master the methodological and analytical skills required to conduct research in the discipline of education.

**PO2:** Demonstrate comprehensive knowledge of available literature in the chosen area of education discipline and conduct an original research work addressing the research gaps identified from the critical review of the literature.

**PO3:** Make innovative use of ICT skills (including usage of statistical software) in carrying out their research work with an aim to add rigor to the research and lucidity in presentation of the analysis.

**PO4:** Develop effective oral and written communication skills needed for dissemination (through presentation and publication) of the (created) knowledge at national as well as international platforms.

**PO5:** Carry out independent as well as collaborative research project for the knowledge creation in the discipline of education and towards formulation of educational policies in different contexts.

### 5. Programme Structure

**Programme Name: Ph.D. in Education**

**Total credits: 18**

**Structure of the Curriculum**

Course category	No. of Courses	Credits per Course	Total credits
Core Courses	4	2 to 4	14
Elective Course	1	4	4
<b>Total Course Credits</b>			<b>18</b>

### 6. Detail Course Structure for Coursework in Ph.D. in Education\*

Course Type	Course Code	Course Title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour (CH)	Credits (CR)
Core	ED708	New Trends in Education and Curriculum studies	3	0	1	5	4
Core	ED709	Advance Statistics in Education	3	0	1	5	4
Core	ED710	Research Methodology in Education	3	0	1	5	4
Core	RP799	Research and Publication Ethics	2	0	0	2	2
<b>*Elective Courses</b>							
EC	ED711	Educational Planning & Management	3	0	1	5	4
EC	ED712	Inclusive Education	3	0	1	5	4

EC	ED713	Mathematics Education	3	0	1	5	4
EC	ED714	Cognitive Psychology	3	0	1	5	4
EC	ED715	Research and Innovation in Teacher Education	3	0	1	5	4
EC	ED716	Educational Technology: Theories, Trends and Applications	3	0	1	5	4
EC	ED717	Gender and Education	3	0	1	5	4
			<b>Total Credits - 18</b>				

\*Students must choose any one course of their interest out of seven available elective courses.

#Coursework for Ph.D. in Education programme is completed in the first semester only.

### 7. Mapping of the courses with programme outcomes (POs)

Course Code	Course Title	Programme Outcomes (POs)				
		PO1	PO2	PO3	PO4	PO5
ED708	New Trends in Education and Curriculum studies		√	√		√
ED709	Advance Statistics in Education	√	√	√		√
ED710	Research Methodology in Education	√	√	√	√	√
RP799	Research and Publication Ethics			√	√	
ED711	Educational Planning & Management		√	√		√
ED712	Inclusive Education	√	√	√	√	√
ED713	Mathematics Education	√	√	√	√	√
ED714	Cognitive Psychology	√	√		√	√
ED715	Research and Innovation in Teacher Education	√		√	√	√
ED716	Educational Technology: Theories, Trends and Applications	√	√	√	√	√

<b>ED717</b>	<b>Gender and Education</b>	√	√		√	√
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### **8. Evaluation Plan**

The enrolled research scholars shall be evaluated as per the examination guidelines of Tezpur University which follows a ‘Continuous and Comprehensive Evaluation (CCE) system. The CCE system comprises of both formative and summative assessments for each course whereby research scholars shall be evaluated through sessional tests (minimum 2) and written examinations (minimum 2) spanning over a semester. At the end of the semester the research scholars shall be awarded a cumulative grade point average for the coursework summing up scores of all sessional tests and written examinations conducted in the semester.

#### **Detail Evaluation Plan for the Coursework in Ph.D. in Education programme:**

Sessional Test/Examination		Course Credit ≤ 2		Course Credit ≥ 3		Semester period
Nomenclature	Type	Marks	Duration	Marks	Duration	
Sessional Test - I	Written	20	30 mins.	25	45 mins.	Within 5 <sup>th</sup> week
Mid-Term	Written	30	90 mins	40	2 hours	Within 10 <sup>th</sup> week
Sessional Test– II	Written/ Assignme nt/Seminar etc.	20	XX	25	XX	Within 14 <sup>th</sup> week
End-Semester	Written	50	2 hours	60	3 hours	Within 18 <sup>th</sup> week



## 9. Detailed Syllabus

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**PH.D. in Education**  
**Tezpur University, Assam**

**Course Code: ED708**

**Course Title: New Trends in Education and Curriculum Studies**

L	T	P	CH	CR
3	0	1	5	4

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### **LEARNING OUTCOMES OF THE COURSE:**

*On completion of this course, it is expected that the research scholars will be able to -*

1. Critically analyze emerging trends in education and curriculum development.
2. Identify and apply various 21<sup>st</sup> century learning skills in teaching-learning process.
3. Discuss the innovative use of Information and Communication Technology in education and research.
4. Explain the process of Curriculum Development and Evaluation.
5. Identify relevant research problems in education and development.

### **COURSE CONTENT:**

#### **Unit I: New trends in Education**

- a) Inclusive Education
- b) Human Rights Education: Problems and Prospects
- c) Continuous and Comprehensive Evaluation System

#### **Unit-II: Continuing Professional Development in Education**

- a) 21<sup>st</sup> Century Learning Skills
- b) Professional Development through interpersonal relationship
- c) Publishing: design of research paper, citation and acknowledgement, plagiarism tools

#### **Unit III: ICT and Communication in Educational Research**

- a) Innovative use of ICT in Educational Research and Teaching
- b) Evaluating internet resources: Authority, Accuracy and objectivity
- c) E- learning: scope, trends, attributes, opportunities

#### **Unit IV: Curriculum Development**

- a) Understanding the meaning and nature of curriculum
- b) Curriculum Planning
- c) Process of curriculum development
- d) Curriculum Evaluation

#### **PRACTICUM/ASSIGNMENT:**

- i. Identify suitable research areas in inclusive education.
- ii. Analyse the Ph.D. curriculum of any university in the light of organization, transaction, and evaluation of different components.
- iii. Critically review the educational issues by compiling articles from newspapers, magazines, or internet sources and prepare a report.
- iv. Critical analysis of an ICT tools with reference to its use in teaching learning process.
- v. Any other activity

#### **TEXTBOOKS:**

1. Bartlett, L.D. and Weisentein, G. R. (2003). Successful Inclusion for Educational Leaders, New Jersey: Prentice Hall.
2. Mishra, B. K., Mohanty, R. K. (2008). Trends in Education: R. Lall Book Depot, Near Govt. Inter College, Meerut U.P.
3. Mohit Chakrabarti, (2005). Education in the 21st Century, Delhi, Kalpar publication

#### **SUGGESTED READINGS:**

1. Anand, C. L. et al. (1983). The Teacher and Education in Emerging Indian Society, New Delhi, NCERT.
2. Hegarthy, S. & Alur, M. (2002) Education of Children with Special Needs: from Segregation to Inclusion, Corwin Press. Sage Publishers
3. Mason Robin & Frank R. (2006). E-learning - The key concepts. Routledge, New York.
4. Pathak, R.P. & Chaudhary, J (2012). Educational Technology, Pearson, New Delhi.
5. Richard Andrews & Caroline (2007). E-learning Research - A handbook of, SAGE, New Delhi.

Matrix of Course Outcomes with Programme Outcomes: <b>ED708: New Trends in Education and Curriculum Development</b>					
Course Outcomes	PO1	PO2	PO3	PO4	PO5
1		√			
2		√			
3			√		
4					√
5		√			

**PH.D. in Education**  
**Tezpur University, Assam**

**Course Code: ED709**

**Course Title: Advance Statistics in Education**

L	T	P	CH	CR
3	0	1	5	4

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**LEARNING OUTCOMES OF THE COURSE:**

*On completion of this course, it is expected that the research scholars will be able to:*

1. Explain the theory and practice of statistics for research in education.
2. Differentiate between parametric and non-parametric testing procedures.
3. Develop and standardize tools for their research study and analyse data using appropriate statistical techniques.
4. Apply advanced statistical techniques to comprehend data related to education.
5. Use statistical software for analysis of data.

**COURSE CONTENT:**

**Unit-I: Statistics and Statistical Thinking**

- a) Preliminary Understanding of Data, Types, Tabulation and Processes of Interpretation
- b) Quantitative data: Scales of measurement and Assessing normality
- c) Qualitative data: Content analysis; Interview and observation-based data analysis.
- d) Descriptive and Inferential Statistics- Meaning, scope, need and importance in educational research

**Unit-II: Statistical Techniques and Methods of Data analysis**

- a) Measures of Central Tendency: Concept and computation
- b) Measures of variability: Concept and computation
- c) Measures of statistics for relationships: Correlation and Regression
- d) Graphical Representation: Histograms, Bar / Line Graph, Scatter Plots, Box Plots

**Unit-III: Parametric Tests and its Application**

- a) Tests of significance – Concept, null hypothesis, and testing of null hypothesis – directional (one tailed) and non-directional (two tailed) test of significance, significance of Mean, Type I error, and Type II error.
- b) Test of significance of the difference between the statistics for independent and correlated samples (large and small samples) Sampling Distribution of Means
- c) Parametric Statistics: Z-Test and T-Test

- d) Analysis of variance (ANOVA) and Analysis of Covariance (One Way ANCOVA):  
and Post-hoc- Concept and computation

#### **UNIT-IV: Non-Parametric Tests and its Application**

- a) Non-Parametric Tests: Concept and Computation, Assumptions, Importance, and Applications
- b) Chi-square: Use of Chi-square as a Test of ‘Goodness of Fit
- c) Contingency Coefficient, Sign Test, Sign- Rank Test of Differences, Median Test, Composite – Rank, Method, K- S Test with small samples and large samples.
- d) Use of computer for research work.

#### **PRACTICUM/ASSIGNMENT:**

Each Scholar must undertake at least two of the following activities and present reports in the classroom.

- i. Review two published research papers (one quantitative and other qualitative) and report different statistical technique and decision-making process carried out in the paper.
- ii. Analyse the HSLC results of a particular year of four schools in terms of gender and type of management.
- iii. Download a panel data/longitudinal or cross-sectional time-series data from internet and analyse and report the data.
- iv. Download a micro panel data set from internet and interpret the report in the form of graphical representation.
- v. Prepare a synopsis on a research proposal and elaborate the significance of the selected statistical techniques.
- vi. Conduct a detailed survey on educational status of a street/village of not less than 50 households.
- vii. Conduct small study on your institution of selected topic and analyse the data using statistical technique.
- viii. Review a research thesis and report different statistical technique and decision-making process carried out in the paper.

**TEXTBOOKS:**

1. Garret, H.E. (2006). Statistics in Psychology and Education. Delhi:Surjeet Publications.
2. Gupta.S.P.(2004). Statistical Methods (3<sup>rd</sup> edition), Sultan Chand & Sons, Educational Publishers, New Delhi.
3. Sharma, T.R. and Bhargava, V. (2005) Elementary Statistics in Education and Psychology Agra: Bhargava Book House. New Delhi.

**SUGGESTED READINGS:**

1. Elhance, D.N. and Elhance, V.(2002).Practical Problems in Statistics. Allahabad: KitabMahel.
2. Henry.E.Garrett.(2009). Statistics in Psychology and Education (6<sup>th</sup> edition). Paragon International Publishers
3. Herschel E.Knapp. (2013). Introductory statistics using SPSS. (1<sup>ST</sup> Edition). Sage Publications, Inc
4. Mangal, S.K. (2002) Statistics in Psychology and Education, Prentice Hall of India, New Delhi Publications Pvt. Ltd.
5. Tabachnick, B.G., & Fidell, L.S. (2001). Using Multivariate Statistics (4th edn). New York: HarperCollins.
6. William E.Wagner.(2012). Using IBM-SPSS –Statistics for Research Methods and Social Science Statistics, (4th Edition). Sage Publications, Inc

Matrix of Course Outcomes with Programme Outcomes:					
<b>ED709: Advance Statistics in Education</b>					
<b>Course Outcomes</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
1		√			
2					
3	√				√
4					√
5			√		

**PH.D. in Education**  
**Tezpur University, Assam**

**Course Code: ED710**

**Course Title: Research Methodology in Education**

<b>L</b>	<b>T</b>	<b>P</b>	<b>CH</b>	<b>CR</b>
<b>3</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>4</b>

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**LEARNING OUTCOMES OF THE COURSE:**

*On completion of this course, it is expected that the research scholars will be able to:*

1. Explain the paradigms of research in education and discuss the difference in epistemology, ontology, and methodology of quantitative and qualitative research.
2. Identify the complete process of designing a research study related to their area of specialization.
3. Select representative sample and develop tools/research instruments for their study.
4. Describe the inductive nature of qualitative analysis and generate theory from empirical data.
5. Use ICT for review of literature, analysis of data (software such as SPSS, ATLAS etc.) and check plagiarism through antiplagiarism tools such as Turnitin, Authenticat, Urkund etc.

**COURSE CONTENT:**

**Unit I: Research Methods**

- a) Experimental methods and Designs
- b) Descriptive: Survey, Normative, Co-relational, Evaluative Case Study
- c) Ethnographic Study
- d) Historical

**Unit II: Tools and Sampling**

- a) Tools of Educational Research: Questionnaire, interview, observation, psychological Tests & Inventories
- b) Sampling: Types and Methods of Sampling: Probability and Non-Probability Techniques
- c) Representativeness and Adequacy of Samples
- d) Sampling and Non-Sampling Errors

### **Unit III: Qualitative Analysis and Interpretation**

- a) Foundations of qualitative research in education; Inductive Logical Analysis
- b) Content Analysis, Coding and Categorization of Data
- c) Reliability and Validity of Data
- d) Theory Building

### **Unit IV: Modern Trends in Educational Research**

- a) Recent Trends in Educational Research
- b) Computer in Educational Research: use of computer in data analysis with special reference to SPSS,
- c) Introduction to UGC infonet, INFLIBNET and ERNET etc.
- d) Online Citation Tools: EasyLib, Biblio, Endnote etc.; Anti- Plagiarism Tools: Turnitin, Authenticat, Urkund etc.

### **PRACTICUM/ASSIGNMENT:**

Each scholar must undertake at least one of the followings. They will also prepare report and present in the seminar.

- I. Preparation of annotated bibliography.
- II. Designing research proposal as decided by the students and teachers mutually.
- III. Construction of research tools according to the given topics.
- IV. Any other activity that course-instructors will find suitable.

### **TEXTBOOKS:**

1. Best John, W. & Kahn, J.V. (2003): Research in Education (ninth edition) Pearson Prentice Hall.
2. Cohen, L., Manion, L & Morrison, K. (2018). *Research Methods in Education*. (8<sup>th</sup> ed.). London: Routledge.
3. Kothari.C.K.(2009). Research Methodology, Methods and Techniques. (2<sup>nd</sup> edition), New Age International (P) Limited Publishers, New Delhi.

### **SUGGESTED READINGS:**

1. Bridges, D. & Smith, R (2007).*Philosophy, Methodology and Educational Research*. Oxford: Wiley-Blackwell.



2. Bryman, A. (1998). *Quantity and Quality in Social Research*. London: Routledge.
3. Creswell, J. W. (2011). *Educational Research*. New Delhi: PHI Learning Pvt Ltd.
4. Fink, A., (2009). *Conducting Research Literature Reviews: From the Internet to Paper*. Sage Publications
5. Flick, U. (2007). *Designing Qualitative Research*. London: Sage Pub.
6. Gay, L. R., Mills, G. E., & Airasian, P. (2011). *Educational Research: Competencies for Analysis and Application*. (10th Ed.) Columbus, OH: Merrill.
7. Kerlinger, F.N. (1986). *Foundations of Behavioural Research*. Surjeet Publications, Delhi. 2005.
8. Kincheloe, J.L.& McLaren, Peter. (2011). *Rethinking Critical Theory and Qualitative Research*, *The Sage Handbook of Qualitative Research*, Norman K. Denzin and Yvonne S. Lincoln( Eds.), Fourth Edition, Sage Publications.
9. Walford, G. (Eds) (1998). *Doing Research about Education*. London: Falmer Press.

Matrix of Course Outcomes with Programme Outcomes:					
<b>ED710: Research Methodology in Education</b>					
<b>Course Outcomes</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
1	√				√
2	√				√
3	√				
4	√	√			
5			√	√	

**PH.D. in Education**  
**Tezpur University, Assam**

**Course Code: RP799**

**Course Title: Research and Publication Ethics**

L	T	P	CH	CR
2	0	0	2	2

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*The present two credit course is approved by University Grants Commission (UGC) and is mandatory for all Ph.D. research scholars. The syllabus has been designed by UGC to create awareness about publication ethics and publication misconducts to maintain intellectual honesty and research integrity.*

**LEARNING OUTCOMES OF THE COURSE:**

*After completion of the course, it is expected that the research scholars will be able to –*

1. Describe the philosophy of science and ethics.
2. Explain publication ethics and research integrity.
3. Differentiate between scientific conduct and misconduct and maintain intellectual honesty in their research work.
4. Use software such as Turnitin, Urkund etc. to check plagiarism and use other open-source software tools.
5. Identify predatory publications and explain indexing, citation databases, and research metrics.

**Overview**

- This course has total 6 units focusing on basics of philosophy of science and ethics, research integrity, publication ethics. Hands-on-sessions are designed to identify research misconduct and predatory publications. Indexing and citation databases, open access publications, research metrics (citations, h-index, Impact Factor, etc.) and plagiarism tools will be introduced in this course.

**Pedagogy:**

- Classroom teaching, guest lectures, group discussions, and practical sessions.

## Evaluation

- Continuous assessment will be done through tutorials, assignments, quizzes, and group discussions. Weightage will be given for active participation. Final written examination will be conducted at the end of the course.

## Course structure

- The course comprises of six modules listed in table below. Each module has 4-5 units.

Modules	Unit title	Teaching hour
	Theo	
RPE 01	Philosophy and Ethics	4
RPE 02	Scientific Conduct	4
RPE 03	Publication Ethics	7
	Practice	
RPE 04	Open Access Publishing	4
RPE 05	Publication Misconduct	4
RPE 06	Databases and Research Metrics	7
	Total	30

## COURSE CONTENT:

### THEORY

- **RPE 01: PHILOSOPHY AND ETHICS (3 hrs.)**
  1. Introduction to philosophy: definition, nature and scope, concept, branches
  2. Ethics: definition, moral philosophy, nature of moral judgements and reactions
- **RPE 02: SCIENTIFIC CONDUCT (5hrs.)**
  1. Ethics with respect to science and research
  2. Intellectual honesty and research integrity
  3. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
  4. Redundant publications: duplicate and overlapping publications, salami slicing.
  5. Selective reporting and misrepresentation of data

● **RPE 03: PUBLICATION ETHICS (7 hrs.)**

1. Publication ethics: definition, introduction, and importance
2. Best practices / standards setting initiatives and guidelines: COPE, WAME, etc.
3. Conflicts of interest
4. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types.
5. Violation of publication ethics, authorship and contributorship
6. Identification of publication misconduct, complaints, and appeals
7. Predatory publishers and journals

**PRACTICE**

● **RPE 04: OPEN ACCESS PUBLISHING (4 hrs.)**

1. Open access publications and initiatives
2. SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

● **RPE 05: PUBLICATION MISCONDUCT (4hrs.)**

A. Group Discussions (2 hrs.)

1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: examples and fraud from India and abroad

B. Software tools (2 hrs.)

Use of plagiarism software like Turnitin, Urkund and other open-source software tools.

● **RPE 06: DATABASES AND RESEARCH METRICS (7hrs.)**

A. Databases (4 hrs.)

1. Indexing databases
2. Citation databases: Web of Science, Scopus, etc.

B. Research Metrics (3 hrs.)

1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
2. Metrics: h-index, g index, i10 index, altmetrics

**SUGGESTED READINGS:**

1. Beall, J. (2012). Predatory publishers are corrupting open access. *Nature*, 489(7415), 179—179. <https://doi.org/10.1038/489179a>
2. Bird, A. (2006). *Philosophy of Science*. Routledge.
3. Indian National Science Academy (INSA), *Ethics in Science Education, Research and Governance* (2019), ISBN:978-81-939482-1-7. <http://www.insaindia.res.in/pdf/Ethics Book.pdf>
4. MacIntyre, Alasdair (1967) *A Short History of Ethics*. London.
5. National Academy of Sciences, National Academy of Engineering and Institute of Medicine. (2009). *On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition*. National Academies Press. Resnik, D. B. (2011). What is ethics in research & why is it important. *National Institute of Environmental Health Sciences*, 1—10. Retrieved from <https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>
6. P. Chaddah, (2018) *Ethics in Competitive Research: Do not get scooped; do not get plagiarized*, ISBN:9789387480865.

Matrix of Course Outcomes with Programme Outcomes:					
<b>RP799: Research and Publication Ethics</b>					
Course Outcomes	PO1	PO2	PO3	PO4	PO5
1				√	
2				√	
3				√	
4			√		
5				√	

## Elective Courses

**Ph.D. in Education  
Tezpur University, Assam**

**Course Code: ED711**

**Course Title: EDUCATIONAL PLANNING & MANAGEMENT**

L	T	P	CH	CR
3	0	1	5	4

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### **LEARNING OUTCOMES OF THE COURSE**

*On completion of this course, it is expected that the research scholars will be able to -*

1. Enable the researcher to become effective manager of teaching /Administration of Education.
2. Enable researcher to become & agents of change in various aspects of education i.e. classroom management, curriculum construction, examination systems, Educational policies.
3. Acquaint the researcher with the Central and State machinery for educational administration and management.
4. Development an understanding of the planning of education in India and its Socio-economic context.

### **COURSE CONTENT:**

#### **Unit I: Concept and Trends in Educational Management**

- a) Management – concept, Need of Management, Characteristics of good Management.
- b) Management at different levels-Elementary Higher, secondary Higher Education, Time Management.
- c) Decision Making – Nature, division of work, Centralization action and Decentralization of decision making, their merits and limitations.
- d) Organizational compliance, Organizational Development.
- e) Modern trends in Educational Management

#### **Unit II: Management functions**

- a) Leadership –Meaning and nature of Leadership,

- b) Theories of Leadership,
- c) Styles of Leadership and Measurement of Leadership.
- d) Role of Management/Principal characteristics of effective Educational leadership, Time management techniques, manager as a good leader, group dynamics and motivation.

**Unit III: Application of Management concept in Academic areas of the educational systems-**

- a) Curriculum development /Evaluation
- b) Teaching Learning Processes
- c) Evaluation Assessment (Management, Manager, Teacher, student, Parents)-Self Appraisal.
- d) Professional Growth- In service Training

**Unit IV: Planning and Financial Management**

- a) Meaning and Approaches to Educational Planning
- b) Perspective Planning: Institutional planning, its importance, Man Power planning, Man power forecasting.
- c) Principles of Educational finance
- d) Source of Income Govt. Private and co-operative patterns of investment in education- past, present and future.
- e) Grant – in-aid principles, practices, types and procedure in- respect of University level.

**PRACTICUM/ASSIGNMENT:**

- I. Preparation of plan for instructional management in a secondary school.
- II. Preparation of an institutional plan.
- III. Critical of an educational project.
- IV. Evaluation of management of DPEP activities in a district
- V. Study of conflict resolution studies adopted by Heads in two schools.
- VI. Panel discussion on corporate punishment in schools.
- VII. Prepare a plan for the mobilization of different types of resources form the community.
- VIII. Analysis of School Education Act of a state.

- IX. Case studies of School Education Act of state high results at the secondary/senior secondary levels.

**TEXTBOOKS:**

1. Ayyar, R.V. Vaidyanathan (1993). Educational Planning and Administration in India: Retrospect and Prospect. Journal of Educational Planning and Administration. VII (2). April.
2. Naik, J.P. (1965): Educational Planning in India. New Delhi: Allied.

**SUGGESTED READINGS:**

1. Blaug, Mark (1972): An Introduction to Economics of Education. Allen Lane the Penguin, London.
2. Chau, Ta-Ngoc (2003): Demographic Aspects of Educational Planning. Paris: International Institute for Educational Planning.
3. Hallack, J. (1977): Planning the Location of schools: An Instrument of Educational Policy. Paris: International Institute for Educational Planning.
4. Bhagia, N.M. (1990): Educational Administration in India and other developing countries. Commonwealth Publishers, New Delhi
5. Luthens, Fred. (1981), Organizational Behavior, Mcgraw Hill, Tokyo. Milton, Charles R. (1989). Human Behavior in Organizations, Prentice Hall, Inc, USA.
6. Mahajan, Baldev and Khullar, K.K. (2002): Educational administration in Central government: structures, processes, and future prospects. Vikas Publication house Pvt. Ltd. New Delhi.
7. Musaaazi, J.C.S. (1982): The Theory & Practice of educational administration. London: The Macmillan Press.

Matrix of Course Outcomes with Programme Outcomes:					
<b>ED711: EDUCATIONAL PLANNING &amp; MANAGEMENT</b>					
<b>Course Outcomes</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
1			√		
2		√			
3			√		



4					√
5		√			

**Ph.D. in Education**  
**Tezpur University, Assam**

**Course Code: ED712**

**Course Title: INCLUSIVE EDUCATION**

<b>L</b>	<b>T</b>	<b>P</b>	<b>CH</b>	<b>CR</b>
<b>3</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>4</b>

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**LEARNING OUTCOMES OF THE COURSE:**

*On completion of the course, the research scholars will be able to:*

1. Explain the philosophical, sociological, and human rights perspective of inclusive education.
2. Identify the ways and means of inclusion of the excluded categories to minimize the existing inequalities.
3. Implement a wide range of instructional strategies to assist every student to learn effectively.
4. Apply appropriate framework while investigating inclusion issues in education.
5. Design models of Inclusive School.

**COURSE CONTENT:**

**Unit I: Understanding Diversity**

- a) Theoretical Perspectives and Approaches - Historical, Dialectical, Subaltern, Social Justice
- b) Poverty, Religion, Race, Caste, Ethnicity, Gender, Disability, Class, Region, Culture, Language, Disability, Migrants and Refugees as a dimension of social exclusion

**Unit II: Understanding Inclusive Education**

- a) Concept, principles, and importance of inclusive education.
- b) Difference between special education, integrated education, and inclusive education.

- c) Inclusive School: Concept, Characteristics and Models
- d) Role of different stakeholders (Role of the parent, community, peers, resource person, teachers) towards the process on inclusion
- e) Research on best practices associated with inclusive education globally and in India.

### **UNIT III: Policies Promoting Inclusive Education**

- a) International Declarations: UNESCO, WHO, UNICEF
- b) National Policies, Acts and Programs: National Policy on Education 2020, RCI Act (2000), RPWD Act (2016), National Trust Act (1999), RTE (2009) RMSA (2009), IEDSS (2013)

### **Unit IV: Process of Inclusion**

- a) Curriculum Adaptation in Inclusive Education
- b) Pedagogical strategies: Individualized Educational Program, cooperative learning strategies in the classroom, peer tutoring, social learning, buddy system, reflective teaching, multisensory and multidisciplinary approach, use of assistive technologies
- c) Assessment and Evaluation in Inclusive setup
- d) Barriers to Inclusion- Attitudinal, Systemic and Structural
- e) Current issues: Identification, Labelling, Advocacy, Empowerment

### **PRACTICUM/ASSIGNMENT**

- I. 1. Critically review the educational issues by compiling articles from newspapers, magazines, or web-based resources and prepare a report.
- II. Conduct a survey in the local area to ascertain the prevailing attitudes and practices towards social and academic inclusion of children with diverse needs.
- III. Visit the family of a child with disability and briefly describe her/his problems and suggest remedies also.
- IV. Design a blueprint of Inclusive School.
- V. Seminar presentation on various issues related to inclusion.

### **TEXTBOOKS:**

1. Alur, M. & Bach, M. (2012). *The Journey for Inclusive Education in the Indian Sub-Continent*. Routledge

2. Alur, M. & Timmons, V. (2009). *Inclusive Education Across Cultures: Crossing Boundaries, Sharing Ideas*. Sage India
3. Jha. M.( 2002) *Inclusive Education for All: Schools Without Walls*, Heinemann Educational Publishers, Multivista Global Ltd, Chennai: India.

**SUGGESTED READINGS:**

1. Ainscow, M., Booth. T (2003): *The Index for Inclusion: Developing Learning and Participation in Schools*. Bristol: Center for Studies in Inclusive Education
2. NCERT (2006). *National Focus Group Report on Education of SC and ST*, New Delhi.
3. Sharma P.L. (2003) *Planning Inclusive Education in Small Schools*, R. I. E. Mysore
4. Armstrong, A. C., Armstrong, D., & Spandau, I. (2010). *Inclusive education: International policy and practice*. London: Sage.
5. Department for Education and Skills (DfES) (2001b) *Inclusive Schooling: children with special educational needs*, London, DfES.
6. Central Board of Secondary Education (2020). *Handbook of Inclusive Education*, New Delhi.

Matrix of Course Outcomes with Programme Outcomes:

**ED712: Inclusive Education**

Course Outcomes	PO1	PO2	PO3	PO4	PO5
1	√				
2		√			
3			√		
4				√	
5					√

**PH.D. in Education**  
**Tezpur University, Assam**

**Course Code: ED713**

**Course Title: Mathematics Education**

<b>L</b>	<b>T</b>	<b>P</b>	<b>CH</b>	<b>CR</b>
<b>3</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>4</b>

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**LEARNING OUTCOMES OF THE COURSE:**

*On completion of this course, it is expected that the research scholar will be able to:*

1. Identify a research problem in their area of specialization and put the statement of the problem clearly based on the holistic understanding of research paradigms.
2. Develop the conceptual framework for their respective study explaining the relationship among philosophical, psychological, historical perspectives of mathematics education
3. Develop the pedagogical concerns in Mathematics classroom related to their respective study and identify the research gaps.
4. Construct new knowledge by interlinking mathematics, technology, society and find solutions for real life problems exist in national and international levels
5. Identify the real research gaps in mathematics education by understanding the research trends and add rigor to the research community.

**COURSE CONTENT:**

**Unit I: Perspectives in Mathematics Education**

- a) Nature of Mathematics; Cognitive to Social; Knowing Mathematics Culture;
- b) History of Mathematics in Education and History of Mathematics Education: Origin and developments of Mathematical ideas
- c) Philosophies of Mathematics and Mathematics Education
- d) Perspectives on Mathematical Modeling: Trends in the evaluation of models and modeling perspectives on mathematical learning and problem solving

## **Unit II: Psychological Facets, Mathematics, Technology and Society**

- a) Psychological foundations of Mathematics Education
- b) Problems in Mathematics Education : Gender, Race, Ethnicity, Social classification, issues of equality & Language,
- c) Digital technology to enhance Mathematics Education: Learning Software (Geogebra, Graphic calculator, sketch pad, 3D, Captivate, Maple, Magma, Cabri etc.)
- d) Interlinking mathematics, technology, society and find solutions for real life problem

## **Unit III: Art of teaching Mathematics, Curriculum and Assessment Practice**

- a) Addressing pedagogical concerns in Mathematics classroom: Teaching Practices and Teachers' Beliefs and Knowledge
- b) Theories of teaching and learning of Mathematics
- c) Models and approaches to Curriculum Development; Perspectives and connecting Mathematics across the curriculum with reference to knowledge, power and society.
- d) Active and Alternative assessment techniques for Mathematics: Thinking, Learning and Assessment

## **Unit IV: Research Trends in Mathematics Education and its contribution**

- a) Trends, Direction and Key issues in mathematics Education Research
- b) Research trends in mathematics Education: Past, Present and future
- c) Research trends into mathematics teaching and learning, digital technologies and modelling in Mathematics Education – potential contribution to other disciplines
- d) Interdisciplinary research in Mathematics Education

### **PRACTICUM/ASSIGNMENT:**

Each Scholar must undertake at least two of the following activities and present reports in the classroom.

- i. Identify and work on real time problems that can be solved through mathematical modelling and problem solving
- ii. Preparing the timeline of Mathematics Education reforms and development taken place in India

- iii. Organization of Mathematics Curriculum based on NCF, NEP and position papers on Mathematics Education
- iv. Comparative analysis of International Mathematics Curriculum with Indian Curriculum
- v. Discuss the role of Technology, Innovation in Mathematics Education
- vi. Review and presentation through exemplary pieces of mathematical writing
- vii. Preparing E- content/E- resource/E- assessment/web- based classroom
- viii. Review and presentation -Trends and Issues in Mathematics Education Research

### **TEXTBOOKS:**

1. Kuzniak,A., Delgadillo,E.M and Richard, P.R.(2020).Mathematical Work in Educational Context: The Perspective of the Theory of Mathematical Working Spaces: 18 (Mathematics Education in the Digital Era). Springer International Publishing AG: Switzerland.
2. Shapiro, S.(2000). Thinking about Mathematics: The Philosophy of Mathematics. (1st edition), Oxford University Press: UK
3. Taylor ,R and Oldknow ,A. (2016).Teaching Mathematics Using ICT, (2<sup>nd</sup> edition), Continuum International Publishing Group Ltd.
4. Stylianides,A.J.(2018). Advances in Mathematics Education Research on Proof and Proving. (1st edition), Springer International Publishing AG: Switzerland.
5. Norton,A.(2022).The Psychology of Mathematics, Routledge Publishers, New York.

### **SUGGESTED READINGS:**

1. Bikner-Ahshahs,A., Vohns,A., Bruder,R., Schmitt,O.,and Dorfler .(2016). f Theories in and of Matematics Education, Springer International Publishing AG: Switzerland.
2. Crosswhite,R.S.,Joe,F., Higgins,J and Osborne, A.(1973).Teaching mathematics: psychological foundations. C. A. Jones Pub. Co
3. Howe,G.(2009). Mathematics for the Practical Man - Explaining Simply and Quickly All The Elements of Algebra, Geometry, Trigonometry, Logarithms, Coordinate Geometry, Calculus with answers to Problems, (Reprint), Sanborn Press: San Francisco.
4. Russell, B.(2017). Introduction to Mathematical Philosophy (7<sup>th</sup> edition Reprint of 1919 edition),Martino Fine Books

5. Thompso, D.R.,Burton, M., Cusi,A., AND Wright,D.,(editors) .(2016). Classroom Assessment in Mathematics: Perspectives from around the Globe, Springer International Publishing AG: Switzerland.
6. Walmsley, A.L.(2007). A History of Mathematics Education during the Twentieth Century, University Press of America.

Matrix of Course Outcomes with Programme Outcomes:					
<b>ED713: Mathematics Education</b>					
<b>Course Outcomes</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
<b>1</b>	√				
<b>2</b>				√	
<b>3</b>			√		
<b>4</b>		√			√
<b>5</b>					√

**PH.D. in Education  
Tezpur University, Assam**

**Course Code: ED714**

**Course Title: Cognitive Psychology**

<b>L</b>	<b>T</b>	<b>P</b>	<b>CH</b>	<b>CR</b>
<b>3</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>4</b>

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**LEARNING OUTCOMES OF THE COURSE:**

*On completion of this course, it is expected that the research scholar will be able to:*

1. Develop an enhanced understanding about major developments and contributions in cognitive psychological science to human development and the research.
2. Demonstrate the appropriate use of psychological concepts, terminology; theories related to cognitive processes in everyday context and in their research
3. Identify the suitable research problem and execute their research by providing psychological, conceptual and theoretical justification
4. Appreciate the individual inter- and intra- variability in cognition process and identifying connections and interconnections between the parameters would help the researcher to enhance efficiency, effectiveness and excellence in the research contribution.
5. Familiarize with various dimensions, practical implications of various theories with the relevant literature in cognitive psychological process provide a critical and analytical manner changes in the researcher to carry out work in the national and international platforms

**COURSE CONTENT:**

**Unit I: Introduction to Cognitive Psychology**

- a) Cognitive Psychology: Basics, History, Cognition as the study of information processing, Approaches of studying learning and Cognition
- b) Mental representations and transformations; Characterizing mental operations; Constraints on information processing, Stages of Cognitive information Development
- c) Intelligence : Concepts, theories of Intelligence, Cognitive theories of Intelligence, Cognitive Intelligence, Implications
- d) Language: Cognitive process involved in reading and language comprehension, Basic Issues in Language and Speech processing



## **Unit II: Perception, Consciousness, Recognition and Attention**

- a) Perception: Concept, Factors, Theoretical Models of Attention, Cognitive Control Gestalt laws of Perception, Visual Perception and Auditory /Speech Perception
- b) Consciousness: Concept, Function and Theory of consciousness
- c) Object Recognition: Concepts, Categories, Complexity/ difference in process of the Recognition, Theories of object recognition, Visual Imaginary: Concepts and theories
- d) Attention: Major Perspectives, Selective Attention: Auditory and Visual, Mechanisms of Attention, Phenomenal of Changes of inattention and the involved cognitive operations

## **Unit III: Thinking, Reasoning, Problem Solving and Learning**

- a) Thinking: Meaning; Types; Theories on thinking process, educational Implications
- b) Reasoning: Concepts, Types, Bias in reasoning Process, Theories of Reasoning including mental models and heuristic- analytical theory
- c) Problem Solving, Judgment and decision Making: Concept, Differences, Blocks in Problem solving, Strategies and Theories
- d) Learning Process: Laws of learning, Theories of Learning, Learning and Forgetting, educational Implications

## **Unit IV: Memory, Emotions and Individual Differences**

- a) Memory: Concept, Functions, Reconstructive nature and psychological basis, Types: Working Memory, Sensory Memory, Short term Memory and Long term Memory, Theories of Memory, Models of Memory
- b) Emotions and Cognition: Relationship, Theories, Components of Emotional regulations, Emotional Intelligence, Importance and Influence on thinking process
- c) Individual Differences: Concept, Theories, Cognitive style and Multiple Intelligence theory

### **PRACTICUM/ASSIGNMENT:**

The research scholars may undertake any one of the following activities:

1. Visit your library (or you can search internet also) and examine the major journals in the field of Psychology/ Cognitive Psychology. Select at least 3 journal & examine

current issues; then compare those issues with the ones discussed 10 years back/or ago. What changes do you see in the contents?

2. What are the basic thinking processes that pupils need in our rapidly changing and information-rich world? Classroom questions have traditionally focused on testing at the lower level of thinking. These do little for helping pupils to think flexibly about possibilities and to make independent judgements about information, when they leave school. Hence the need for constant practice questions that demand higher forms of thinking, if an individual is to reach his or her intellectual potential. As a Researcher frame some questions or exercises in your own area of specialization to test thinking processes or different forms of thinking for the 21<sup>st</sup> century explicitly.
3. Talk to some professionals, lay people, and ask them “What are the characteristics of an intelligent person?” Identify the similarities and differences in their understanding of intelligence and compare it with professional literature. How has the notion of intelligence changed over the years? Why is the concept of IQ scores misleading in many context evidenced in the literature? Discuss the issues related to intelligence testing. Prepare a brief report on aforementioned aspects using latest research evidence.
4. Visit some schools in your locality. Ask at least five to ten teachers whether they have heard about ‘thinking’, ‘memory’ and ‘learning’. If they say ‘yes’ then ask them as to what they understand by the term ‘thinking’, ‘memory’ and ‘learning’. After you have collected the responses, try to compare these answers with the formal meaning of thinking, memory and learning. Also analyse the content and try to identify some misconceptions and distortions, if any. After doing this small research, review some latest literature on strategies & techniques to improve thinking, memory and learning of students. Prepare a brief report on aforementioned aspects related to thinking, memory and learning.

#### **TEXTBOOKS:**

1. Dandapani, S. (2016). *General Psychology*. Hyderabad: Neelkamal Publications
2. Dharma Raja, B. William (Ed.). (2014). *Cognitive science initiative in education*. Tirunelveli: Manonmaniam Sundarnar University.
3. Stemberg, Robert, J. (2006). *Cognitive psychology* (4thed.). USA: Vicki Knight Publisers.

4. Woolfolk, A. & Shivani, V. (2017). *Educational Psychology, (13th ed)*. Pearson Education Publishers.
5. Galoti, K. M. (2015). *Cognitive Psychology: In And Out Of The Laboratory*, SAGE Texts; Fifth edition
6. Eysenck, M.W and Brysbaert, M. (2018). *Fundamentals of Cognition*, Routledge; 3rd edition

**SUGGESTED READINGS:**

1. Goldstein, B. E. (2010). *Cognitive Psychology: Connecting Mind, Research and Everyday Experience*. 3rd Ed. *Cengage Learning Inc*.
2. Groome, D. (2014). *An Introduction to Cognitive Psychology: Processes and Disorders*. 3rd Ed. *Psychology Press*.
3. Quinlan, P. and Dyson B. (2008). *Cognitive Psychology*. 1st Ed. Pearson Education Ltd.
4. Edward E. Smith and Stephen M. Kosslyn (2009). *Cognitive Psychology: Mind and Brain*. PHI Press.
5. Ciccarelli, S.K. & White, J.N. (2017). *Psychology*. Pearson India Education Services Pvt. Ltd.
6. Hockenbury, D.H. and Hockenbury, S.E. (2003). *Psychology (3<sup>rd</sup> Edition)*. Worth Publisher, New York.
7. Baron, R.A. & Misra, G. (2016). *Psychology (5<sup>th</sup> Edition)*. Pearson India Education Services Pvt. Ltd.

Matrix of Course Outcomes with Programme Outcomes:					
<b>ED714: Cognitive Psychology</b>					
<b>Course Outcomes</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
<b>1</b>		√			
<b>2</b>		√			
<b>3</b>					√
<b>4</b>	√				
<b>5</b>					√

**PH.D. in Education**  
**Tezpur University, Assam**

**Course Code: ED715**

**Course Title: Research and Innovation in Teacher Education**

<b>L</b>	<b>T</b>	<b>P</b>	<b>CH</b>	<b>Credit</b>
<b>3</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>4</b>

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**LEARNING OUTCOMES OF THE COURSE:**

On completion of this course, it is expected that the research scholars will be able to:

- 1 Comprehend the concept of Teacher Education and its historical perspective and Teacher Education programmes at different levels.
- 2 Critically understand and apply the concept of innovation in teacher education programme
- 3 Explain the importance of in-service programmes and recognize agencies and institutions of in-service Teacher Education at different levels
- 4 Reflect on the need and modalities for continuing professional development of a teacher.
- 5 Critically discuss and review the effectiveness of Teacher Education Programmes

**COURSE CONTENT:**

**Unit I: Concept and Historical Perspectives of Teacher Education**

- a) Teacher Education: Concept, Nature, Aims and Scope.
- b) Teacher Education in post-independence period (Policy perspective, recommendation of various commissions and committees and NPE, 1986, NCF-2005, NCFTE-2010).

- c) The Structure of Teacher Education Curriculum and its Vision in Curriculum Documents of NCERT and NCTE at Elementary, Secondary and Higher Secondary Levels.
- d) Institutions and Agencies of Teacher Education MHRD, UGC, NCTE, NCERT and SCERT and other state level agencies of Teacher Education (IASE, CTE, DIET, DRC).

### **Unit II: Professional Preparation of Teachers**

- a) Concept of Professionalism in teaching, Professional Ethics of Teachers.
- b) Meaning of Reflective Teaching and Strategies for Promoting Reflective Teaching.
- c) Quality Enhancement for Professionalization of Teacher Education
- d) Use of Technology and Media in Teacher Education.

### **Unit III: Innovative Practices in Teacher Education**

- a) Concept of innovation in teacher education programme
- b) incentive & award for innovative practice
- c) Microteaching & its steps
- d) Interaction analysis technique

### **Unit IV: Effectiveness of Teacher Education Programmes**

- a) Assessment of teaching learning process
- b) Type of evaluation
- c) Objective & criteria of evaluation of teacher education programmes
- d) Technique of evaluation of teacher education programmes

### **PRACTICUM/ASSIGNMENT:**

- I. A comparative study of state and national curricula of pre-service teacher education in terms of their components, weightages, duration, organisation, transaction and assessment – document analysis.
- II. Critical study of an in-service teacher education program in terms of their need and relevance, duration, planning organization & out comes – document analysis.
- III. A review of a research article in teacher education and write implications for practitioner.

**TEXTBOOKS:**

- 1 Mohanty, J.( 2003).Teacher education. Deep & Deep publication, New Delhi.
- 2 Saxena, N.R., Mishra, B.K., & Mohanty, R.K. (1998). Teacher Education, R-Lall Book Depot, Meerut.
- 3 Sharma, R.A. (2002). Teacher Education, International Publication House, Meerut.
- 4 Rao, D. (2002). Teacher Education in India. New Delhi: Discovery Publishing House.
- 5 Sharma, Shashi Prabha, (2003). Teacher education, Kanishka Publication, New Delhi.
- 6 Singh L.C. (1990): Teacher Education In India –A Source Book ,New Delhi ,NCERT.

**SUGGESTED READINGS:**

- 1 Marsh, C. (2000).Handbook for Beginning Teachers. Second Edition, Pearson Education, Australia.
- 2 McClelland V. A. and Varma V. P. (1989). Advances in Teacher Education. Routledge: London.
- 3 NCTE (2009) Curriculum Frame Work of Teacher Education, NCTE, New Delhi
- 4 Kundu, C.L. (Ed) (1984) Indian year Book on Teacher Education, Sterling Publishers Pvt. Ltd., New Delhi.

Matrix of Course Outcomes with Programme Outcomes:

**ED715: Research and Innovation in Teacher Education**

<b>Course Outcomes</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
<b>1</b>	√				
<b>2</b>	√		√		
<b>3</b>				√	
<b>4</b>	√			√	
<b>5</b>	√				√

**PH.D. in Education  
(Tezpur University, Assam)**

**Course Code: ED716**

**Course Title: Educational Technology: Theories, Trends and Applications**

<b>L</b>	<b>T</b>	<b>P</b>	<b>CH</b>	<b>Credit</b>
<b>3</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>4</b>

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**LEARNING OUTCOMES OF THE COURSE:**

**On completion of this course, it is expected that the research scholars will be able to -**

1. To understand the concept and theories of Educational communication and Technology, and Technology Enhanced Learning.
2. To apply different kinds of information and communication Technologies (ICT) and apprise them with their use in teaching-learning process.
3. To explore the tools of ICT and to enable the researcher to develop necessary skill of current and future trends in Educational technology.
4. To become a critical user of ICT and to get equipped with various presentation tools.
5. To discuss recent innovations and future perspectives of Education Technology.

**COURSE CONTENT:**

**Unit- I: Educational communication and technology, and its theoretical foundations**

- a) Educational communication and Technology- Principles and Examples in a Variety of Contexts
- b) Behaviourism and Instructional Technology
- c) Communication Effects of Non-interactive Media: Learning in Out-of-School Contexts
- d) Sociology and Psychology of educational technology
- e) Everyday Cognition and Situated Learning

**Unit-II: Technology Enhanced Learning : Concept and theories**

- a) Technology-Enhanced Learning: Applied ICTs for Effective Learning.
- b) Technology-Enhanced Learning: The Theories
  - Pedagogical theories and models of Technology-Enhanced Learning
  - Constructivist approaches to Technology-Enhanced Learning.
  - Collaborative, context-aware, personalized Technology-Enhanced Learning approaches
- c) Deployment of ICTs in education, policy issues of Technology-Enhanced Learning, integration issues, extensibility, interoperability.

### **Unit-III: Applications of Educational Technology in Teaching Learning and Research**

- a) Microsoft Word and its uses, Microsoft excel and its uses, Microsoft PowerPoint, Prezi – how to make a presentation and execute it.
- b) SPSS and its uses.
- c) Reference manager (Zotero, Mendeley & EndNote) and its uses
- d) Massive Open Online Courses - Stanford Online, Coursera, edx, Khan Academy, OpenSAP, NPTEL and SWAYAM.
- e) Educational Softwares – Hot potato, Google classroom, Survey Monkey, Moodles, Researcher (Mobile App).

### **Unit-IV: Current Trends in ICT**

- a) Social Media as a Teaching and Learning tool , iPads / tablets , Use of video to create global connections, Blended learning, The Flipped Classroom; Innovative Apps for Parent-Teacher Communication.
- b) Artificial Intelligence and Machine Learning, Virtual Reality and Augmented Reality.
- c) Web 2.0 and Web 3.0 technologies for classroom –concept, advantages, educational responses.
- d) Critical analysis and contributions of current researches in Educational and Instructional Technology.
- e) Analysis of ICT integration models in educational Institutions and research contribution in the field of Educational and Instructional Technology to enhance teaching and learning.

### **ACTIVITIES/PRACTICUM/ASSIGNMENT:**



- I. Review and analyse e-learning content and courses.
- II. Based on the area of research the practicum will be designed by the teacher along with assignment on SPSS and video modules development.
- III. Paper/article writing on recent trends of educational technology.
- IV. Enlisting and analysing the activities showing the integration of technology in educational institutions.
- V. Critical analysis of e-learning content and courses.

#### **TEXTBOOKS:**

1. Spector, J.M. (2015). Foundations of Educational Technology: Integrative Approaches and Interdisciplinary Perspectives (2nd ed.). Routledge.  
<https://doi.org/10.4324/9781315764269>
2. Aggarwal.J.C (2006): Essentials of Educational Technology, teaching, learning & Innovation in education, Vikas Publishing House Pvt .Ltd. New Delhi.
3. Mangal, S.K. (2009). Fundamentals of Educational Technology. Ludhiana: Prakash Brothers.
4. Bharihok Deepak. (2000). Fundamentals of Information Technology. Pentagon Press: New Delhi.

#### **SUGGESTED READINGS:**

1. Jonassen, D., & Driscoll, M. (Eds.). (2004). Handbook of Research on Educational Communications and Technology: A Project of the Association for Educational Communications and Technology (2nd ed.). Routledge.  
<https://doi.org/10.4324/9781410609519>
2. Vanaja, S. & S. Rajasekar, (2006).Educational Technology & Computer Education, Neelkamal Publications Pvt., Hyderabad.
3. Y.K.Singh.2008. Educational Technology: Teaching and Learning.APH publishing.
4. Bhushan, A. and Ahuja, M. (1992). Educational Technology. Patiala: Bawa Publishers.
5. Sampath K. et al (2009). Introduction to Educational Technology (Sterling Publishers, New Delhi.
6. Sharma, Y.K. and Sharma, M. (2006): Educational Technology and Management. New Delhi: Kanishka Publishers, Distributors.
7. Jolliffe, A., Ritter J. & Stevens D. (2003). The Online Learning Handbook. London: Kogan Page.

**WEB REFERENCES:**

1. [https://www.researchgate.net/publication/272494060\\_Educational\\_Technology/link/54e695610cf277664ff62bf8/download](https://www.researchgate.net/publication/272494060_Educational_Technology/link/54e695610cf277664ff62bf8/download).
2. [https://ebooks.lpude.in/arts/ma\\_education/year\\_1/DEDU403\\_EDUCATIONAL\\_TECHNOLOGY\\_ENGLISH.pdf](https://ebooks.lpude.in/arts/ma_education/year_1/DEDU403_EDUCATIONAL_TECHNOLOGY_ENGLISH.pdf).
3. [https://www.researchgate.net/publication/272494060\\_Educational\\_Technology](https://www.researchgate.net/publication/272494060_Educational_Technology).

Matrix of Course Outcomes with Programme Outcomes:

**ED716: Educational Technology: Theories, Trends and Applications**

Course Outcomes	PO1	PO2	PO3	PO4	PO5
1		√			
2	√				
3			√	√	√
4			√	√	
5					√

**PH.D. in Education**  
**Tezpur University, Assam**

**Course Code: ED717**

**Course Title: Gender and Education**

L	T	P	CH	CR
4	0	1	5	4

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**LEARNING OUTCOMES OF THE COURSE:**

*On completion of this course, it is expected that the research scholars will be able to:*

1. Explain the social construction of gender and its dynamic relationship with the education system.
2. Identify various facets of development and the (relative) status of disadvantaged categories of gender.
3. Critically examine the dynamism of development and education with the lens of gender.
4. Describe the various issues, approaches, and challenges towards gender equality in education.
5. Analyse and choose appropriate methodology to undertake research pertaining to aspects associated with gender and education.

**COURSE CONTENT:**

**Unit I: Comprehending Gender**

- a) De-constructing gender: Knowing from what is known
- b) Gender and sex: Unravelling the difference beyond sameness
- c) Diversity of gender: Multiple and fluid

**Unit II: Gender as Analytical Category: Varied Approaches and Perspectives**

- a) Women in Development, Women and Development, Gender and Development, Human Capabilities Approach (Sen & Nussbaum)
- b) Theoretical approaches to gender socialization
- c) Feminist Theories – (Liberal, Radical, Socialist, Psychoanalytic)
- d) Queer Theory

**Unit III: Gender and Education: Issues and Challenges**

- a) Women in education: Trajectory of inclusion and exclusion
- b) Inequality in school education: Block for the system of higher education

- c) Scenario of higher education: perspectives of enrollment and participation
- d) Intersectionality: Emergent categories of disadvantages

#### **Unit IV: Gender and Development: Implications for education**

- a) Indices of development: Gender based analysis
- b) Economic and political participation: Continuity and change
- c) Policy based analysis of gender and development in India
- d) Researching gender in education: Issues and approaches

#### **PRACTICUM/ASSIGNMENT:**

Each scholar must undertake at least two activities from the followings.

- I. Book review – Scholar must choose one book in an area related to the present course and review it followed by discussion of the same in the classroom.
- II. Research report – Scholar is expected choose a topic and write a research report analysing available (verified) secondary information (data, literature, etc.) on gender-based issues in education
- III. Annotated bibliography – In this assignment, a scholar is expected to prepare an exhaustive annotated bibliography on an identified research issue in gender and education.
- IV. Seminar – Scholar is expected to write and present a paper on a contemporary issue in gender and education.

#### **TEXTBOOKS:**

- 1. Geetha, V. (2002). Gender. Calcutta: STREE
- 2. Ryle, R. (2018). Questioning gender: A sociological exploration. Thousand Oaks, California: Sage.
- 3. Manjerekar, N. (2021). (Ed.) Gender and education in India: A reader. Routledge: London & New York.

#### **SUGGESTED READINGS:**

- 1. Acker Sandra. (1987). Feminist theory and the study of gender and education. *International Review of Education*, 33(4), 419-435.
- 2. Bartholomaeus, C. & Riggs, D.W. (2017). *Transgender people and education*. US: Palgrave McMillan.

3. Bhattacharya, Sabyasachi., Bara, Joseph., Yagati, China Rao & Sankhdher, B.M. (2001). *Development of Women's Education in India 1850-1920*. New Delhi: Kanishka Publishers.
4. Bhog, D. (2002). Gender and Curriculum. *Economic and Political Weekly*, 37(17), 1638-1642.
5. Butler, J. (2011). *Bodies that matter: On the discursive limits of sex*. London & New York: Routledge Classics.
6. Carol Gilligan (1977) In a Different Voice: Women's Conceptions of Self and of Morality. *Harvard Educational Review*, 47(4), 481-517.
7. Chakravarti, U. (1993). Conceptualising Brahmanical patriarchy in Early India: Gender, caste, class and state. *Economic and Political Weekly*, 28(14), 579-585.
8. Dube, L. (1988). On the construction of gender: Hindu girls in patrilineal India. *Economic and Political Weekly*, 23(18), WS11-WS19.
9. Chanana, Karuna. (1993). Accessing Higher Education – The Dillema of Schooling Women, Minorities, Scheduled Castes and Scheduled Tribes in Contemporary India. *Higher Education*, 26(1), 69-92.
10. Geetha, V. (2007). *Patriarchy*. Calcutta: STREE.
11. Harding, S. (Ed.) (1987). *Feminism & Methodology: Social science issues*. Bloomington & Indianapolis : Indiana University Press.
12. Hamilton, R. (2007). Feminist theories. In C.D. Bryant & D.L. Peck (Eds.). *21st century sociology: A reference handbook* (pp. 43-53). Thousand Oaks, CA: Sage.
13. Hooks, B. (1983). *Feminist Theory from Margins to Centre*. Boston: South End Press.
14. Kumar, Krishna. 2010. Culture, State and Girls: An Educational Perspective. *Economic and Political Weekly*, 45(17), 75-84.
15. Menon, N. (2012). *Seeing like a feminist*. New Delhi: Zubaan.
16. Poonacha, V. (2005). Uncovering the Gender Politics of Science Policies and Education. *Economic and political Weekly*, 40(3), 241-247.
17. Rege, S. (2006). *Writing caste/Writing gender: Reading Dalit women's testimonios*. New Delhi: Zubaan.
18. Subrahmanian, Ramya. & Bandyopadhyay, Madhumita. (2008). Gender Equity in Education: A Review of Trends and Factors. CREATE PATHWAYS TO ACCESS. Research Monograph No-18.
19. Unterhalter, Elaine. (2005). Fragmented frameworks? Researching women, gender, education and development. In. Sheila Aikman & Elaine Unterhalter (Eds.) *Beyond*

access: *Transforming policy and practice for gender equality in education* (pp. 15-35). Oxford: Oxfam GB.

Matrix of Course Outcomes with Programme Outcomes: <b>ED717: Gender and Education</b>					
Course Outcomes	PO1	PO2	PO3	PO4	PO5
1		√			
2		√			
3				√	
4	√				√
5	√				√

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