

CENTRAL UNIVERSITY OF PUNJAB, BATHINDA



**Ph.D. Education
(International Mentorship)**

Session - 2020-21

Department of Education

Programme Learning Outcomes

The programme focuses on

- developing research skills on different advanced aspects of research methodology and application of digital technologies in the field of research and teaching
- analysing the community related problems and conducting research for their solutions
- developing scientific attitude and global outlook

Course Structure of the Programme

Course Code	Course Title	Course Type	Credit Distribution			
			L	T	P	Total
EDU712	Research Process and Statistics in Education	Core Course	4	0	0	4
EDU707	Computer Applications and Digital Technology (Practical)	Skill Based	0	0	4	2
EDU708	Research Competencies (Practical)	Skill Based	0	0	4	2
EDU 709	Thematic Paper (Practical)	Skill Based	0	0	0	2
EDU710	Extension Project	Skill Based	0	0	0	2
EDU711	International Mentoring	Value added	0	0	0	0
EDU751	Research and Publication Ethics	Core Course	2	0	0	2
	Total		6	0	8	14

***International mentoring will be of total 10 hours duration through online sessions with international mentors**

Course Title: RESEARCH PROCESS AND STATISTICS IN EDUCATION

Course Code: EDU712

L	T	P	Credits
4	0	0	4

Learning Outcomes

After completion of the course the students will be able to

- Explore the different approaches to research
- Review the related literature
- Develop a research proposal
- Select appropriate sampling design for different types of research study
- Construct tools for different types of research
- Document and disseminate research findings in education
- Develop skills in applying SPSS in data analysis and interpretation

Course Content

Unit I

16 hours

1. Research approaches: Logical positivism, phenomenology, ethnography, and triangulation, quantitative, qualitative; types of research and their applications: according to purpose and method
2. Historical Research: Primary and secondary sources of information, external and internal criticism of the source
3. Descriptive Research: Assessment studies, evaluation studies, ex-post facto studies, replication and meta-analysis.
4. Experimental research: Types of experimental research designs: designing and developing appropriate experimental designs for research problems.

Unit II

12 hours

1. Process to select a problem and review of related literature
2. Sampling design: Selecting appropriate probability and non-probability sampling techniques for qualitative and quantitative research problems

Unit III

16 hours

1. Quantitative research methods and tools: Selection, types and application
2. Qualitative research methods and tools: Selection, types and application
3. Mixed Method: Meaning and characteristics, designs and their application

Unit IV

16 hours

1. Data analysis in quantitative & qualitative research: Content analysis, inductive, logical
2. Application of SPSS for data analysis and interpretation: t-test, F-test, chi-square test, ANCOVA, correlation, regression and prediction

Suggested Readings

- Adams, K. A., & Lawrence, E. K. (2015). *Research methods, statistics and applications*. Sage Publications.

- Agarwal, Y. P. (2004). *Statistical Methods: Concepts, Application and Computation*. New Delhi: Sterling Publishers.
- Aiken, L.R., & Marnat, G. G. (2009). *Psychological testing and assessment*. Noida (U.P.): Pearson.
- Anastasi, A., & Urbina, S. (2014). *Psychological testing*. New Delhi: PHI Learning Private Limited.
- Best J.W. (1999). *Research in Education*. New Delhi: Prentice Hall of India Pvt. Ltd.
- Best, J.W., & Kahn, J. W. (2006). *Research in education*. New Delhi: PHI Learning Private Ltd.
- Bogdon, R., & Biklen, S. K. (2008). *Qualitative Research for Education: An Introduction to Theories and Practice*. New Delhi: PHI learning
- Borg, W.R., & Gall, M.D. (1983). *Educational Research – An Introduction*. New York: Longman, Inc.
- Check, J., & Jurs, S. G. (2009). *Research methods in education*. Pearson Publications.
- Creswell, J. W. (2015). *Educational Research: Planning, Conducting and Evaluating Quantitative and qualitative Research*. Boston: Pearson Publications.
- Curtis, W., Murphy, M., & Shields, S. (2013). *Research and Education*. New York & London: Routledge
- Efrat Efron, S., & Ravid, R. (2013). *Action Research in Education: A Practical Guide*, New York: Routledge
- Egbert, J., & Sanden, S. (2013). *Foundations of Education Research: Understanding Theoretical Components*. New York: Routledge.
- Fraenkel, J.R., & Wallen, N.E. (1996). *How to Design and Evaluate Research in Education*. New York: McGraw Hill.
- Gall, M. D., Gall, J. P., & Berg, W. R. (2007). *Educational research an introduction*. Pearson Publications.
- Gordon, P. (1996). *A Guide to Educational Research*. New York: Routledge
- Gregory, R. J. (2014). *Psychological testing: History, principles and applications*. New Delhi: Pearson.
- Gupta, S. (2010). *Research methodology and statistical techniques*. New Delhi: Deep & Deep Publications Pvt. Ltd.
- Kilkpatrick, D.L. (2005). *Evaluating training Programmes: The four Levels*. San Francisco: Brrett-Kochler.
- Koul, L. (1984). *Methodology of Educational Research*. New Delhi: Vikas Publications.
- Koul, L. (2009). *Methodology of educational research*. Noida: Vikas Publishing House Pvt. Ltd.
- Kress, T. (2013). *Using Critical Research for Educational and Social Change*. New York & London: Routledge.
- Lauren, B., Little, T. D., & Card, N. A. (2012). *Developmental Research Methods*. New York: The Guilford Press.
- Martella, R. C., Nelson, J. R., Morgan, R. L., & Martella, N. E. (2013). *Understanding and Interpreting Educational Research*, New York: Routledge Guilford Press
- Maykut, P., & Morehouse, R. (1994). *Beginning Qualitative Research- A Philosophic and Practical Guide*. London: The Falmer Press.

- Medhi, J. (2014). *Statistical methods- an introductory text*. New Delhi: New Age International (P) Ltd. Publishers.
- Miller, S. A. (2007). *Developmental Research Methods*. New Delhi: Sage Publications.
- Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods*. C.A: Sage Publications.
- Reynolds, C. R., Livingston, R. B., &Willson, V. (2009). *Measurement and assessment in education*. New Delhi: PHI Learning Private Limited.
- Sabo, R., & Boone, E. (2013). *Statistical research methods- a guide for non-statistician*. Springer Publications.
- Weirsmma. W., & Stephen G. (2009). *Research methods in Education*. New York: Pearson Education
- Wellington, J. (2015). *Educational Research*. New Delhi: Bloomsbury Academic.

IQAC

Course Title: COMPUTER APPLICATIONS AND DIGITAL TECHNOLOGY

L	T	P	Credits
0	0	4	2

Course Code: EDU707

Learning Outcomes

After completion of the course the students will be able to

- Examine the recent innovations and future perspectives of education technology
- Develop multimedia presentation
- Explore web as a teaching-learning resource
- Appraise security concerns related to interactive content
- Use appropriate techniques to analyse quantitative and qualitative data
- Apply e- learning tools in teaching learning, training and research

Course Content

UNIT I

16 hours

1. Knowledge, Organization and sharing tools: social bookmarking, reading online, databases, journals, encyclopaedia, browser, sharing/storage (Google drive, drop box etc.), presentations (slide share, TED talks etc.)
2. ICT Based Learning Processes and Resources: Using the web as a teaching-learning resource. Academic and Research content on the web: Online journals and abstraction services;

UNIT II

14 hours

1. Organizer tools: calendars, group manager, task manager, planner, mapping/mind mapping (google maps, navigators, mind master etc.)
2. Free websites and apps: Group me- discussion boards, voice thread groups to collaborate around any type of multimedia

UNIT III

16 hours

1. Animoto create collage, Jing screen capture, Google Ed apps, Bigmarker web conferencing etc.
2. Security concerns related to interactive content: Computer Hacking, Cyber Bullying and Cybercrimes

UNIT IV

14 hours

1. Online Learning, online courses and learning management system. Using tools of ICT in classroom- Edmodo, Padlet, Prezi, Socrative, Google classroom, Dojo, Seesaw, Peardeck, Nearpod, Sutori, Video cutting and editing tools: Bandicut, Binumi, Clipchamp and Biteable

Evaluation Criteria

Content	Marks
Skill Assessment	50
Viva Voce	20
Practical Record	30
Total	100

Suggested Readings

- Adam, D.M. (1985): *Computers and Teacher Training: A Practical guide*, The Haworth Pren, Inc., N. Y.
- Behera, S.C. (1991): *Educational Television Programmes*, Deep and Deep Publications, New Delhi.
- Coburn, P. et. al. (1985): *Practical Guide to Computers in Education*, Addison – Wesley Publishing Company, Inc.
- Das, R.C. (1993): *Educational Technology – A Basic Text*, Sterling Publishers Pvt. Ltd.
- Haas, K.B. and Packer, H.Q. (1990): *Preparation and Use of Audio Visual Aids*, 3rd Edition, Prentice Hall, Inc.
- Kumar, K.L. (2008): *Educational Technology*, New Age International Pvt. Ltd. Publishers, New Delhi (Second Revised Edition).
- Kumar, T. P. (2015). *Web based technology in education*. New Delhi: APH Publishing Corporation.
- Mukhopadhyay, M. (1990): *Educational Technology – Challenging Issues*, Sterling Publishers Pvt. Ltd., New Delhi.
- Mukhopadhyay, M. (1990): *Educational Technology – Year Book 1988*, All India Association for Educational Technology, New Delhi.
- Orey et.al.(2009). *Educational media and technology*. New York: Springer Science Business Media.
- Parmaji, S. (1994): *Distance Education*, New Delhi: Sterling Publishers.
- Purayil, A. (2015). *Educational technology*. New Delhi: APH Publishing Corporation.
- Rana, S. (1994): *Open Learning in India*, Commonwealth Publishers, New Delhi.
- Sankhala, D. P. (2014). *Educational technology*. New Delhi: Adhyayan Publishers and Distributors.

Suggested links

- <http://www.encyclopedia.com/doc/1G2-3401801216.html>
- <http://www.k2bindia.com/educational-benefits-of-social-networking-sites/>
- <http://www.k2bindia.com/educational-benefits-of-social-networking-sites/>
- <http://www.k2bindia.com/educational-benefits-of-social-networking-sites/>
- http://home.mcafee.com/advicecenter/?id=ad_ost_htpycavawa&ctst=1

Course Title: RESEARCH COMPETENCIES
Course Code: EDU708

L	T	P	Credit
0	0	4	2

Learning outcomes:

After completion of the course the students will be able to

- develop competencies in exploring appropriate research areas and review various articles
- develop skills to construct and standardize different tools for research
- acquire skills to identify research gaps, formulate research questions, objectives and hypothesis
- use software to check plagiarism

Contents

- Identify research gaps on a selected research area
- Formulate research questions, objectives and hypothesis
- Select appropriate approach and design for different research topics
- Evaluation of different standardized tools
- Construction of tools
- Check plagiarism using software
- Write references and webliography using APA format
- Conduct action research

Evaluation Criteria

Content	Marks
Practical Record	30
Skill Assessment (Analysis of articles, abstract writing, preparing test items etc.)	50
Viva Voce	20
Total	100

Evaluation will be done by course coordinator and two members from the department, nominated by HOD

Suggested Readings

- Anastasi, A. & Urbina, S. (2014). *Psychological Testing*. New Delhi: PHI learning Pvt. Ltd.
- Bel, J. (2004). *Doing Your Research Project*. Open University Press: Berkshire
- Best J.W. (1999). *Research in Education*. New Delhi: Prentice Hall of India Pvt. Ltd.
- Borg, W.R., & Gall, M.D. (1983). *Educational Research – An Introduction*. New York: Longman, Inc.
- Chandra, S. S., & Sharma, R.K. (2010). *Research in education*. New Delhi: Atlantic Publishers and Distributers (P) LTD.
- Christensen, L. (2007). *Experimental Methodology*. Boston: Allyn& Bacon.
- Creswell, J. W. (2015). *Educational Research: Planning, Conducting and Evaluating Quantitative and qualitative Research*. Boston: Pearson Publications.

- EfratEfron, S., & Ravid, R. (2013). *Action Research in Education: A Practical Guide*, New York: Routledge
- Kaul, L. (1984). *Methodology of Educational Research*. New Delhi: Vikas Publications.
- Maykut, P., & Morehouse, R. (1994). *Beginning Qualitative Research- A Philosophic and Practical Guide*. London: The Falmer Press.
- Miller, S. A. (2007). *Developmental Research Methods*. New Delhi: Sage Publications.
- Opie, C. (2004). *Doing Educational Research: A Guide for First time researchers*. New Delhi: Vistar Publications.
- Reason, P., & Bradbury, H. (Eds) (2006). *Handbook of action research: Concise paperback edition*. CA: Sage Publications.
- Scott, D., & Usher, R. (1996). *Understanding Educational Research*. New York: Routledge.
- Tolmie, A., McAteer, E., & Muijs, D. (2012). *Quantitative Methods in Educational and Social Research Using SPSS*. Maidenhead: Open University Press
- Weirsmas, W., & Stephen G. (2009). *Research methods in Education*. New York: Pearson Education
- Wellington, J. (2015). *Educational Research*. New Delhi: Bloomsbury Academic.

Suggested

http://library.victoria.ac.nz/ebooks/APA_APAStyleGuide.pdf

Course Title: THEMATIC PAPER
Course Code: EDU709

L	T	P	Credit
0	0	0	2

Learning outcomes:

After completion of the course the students will be able to

- Select a research area of their interest
- Identify variables relevant to the selected research area
- Summarize the findings of different research studies
- Write a thematic paper on any contemporary issue
- Present thematic paper

The students will select an area of their choice with the direction of their supervisor within first two weeks from the start of the semester. They will write a theme paper selecting few variables from that area. There will be two presentations on the theme selected.

First presentation will be held during 6-7 week of the semester. Two examiners from the department will evaluate it on the following criteria.

- Content
- Significance of the area
- Presentation
- Response to questions asked by examiners

Presentation will be of 30-45 min. duration. First evaluation will consist of 20 marks. Second presentation will be held during 12-13 weeks of the semester and will consist of 30 Marks. The criteria of evaluation and duration of presentation will be same as mentioned above.

Course Title: EXTENSION PROJECT

Course Code: EDU710

L	T	P	Credit
0	0	0	2

The course aims at identifying local needs and issues involving research to solve problems for making a contribution to the local community.

Learning Outcomes

After completion of the course the students will be able to

- Establish a link between the community and profession
- Identify community needs, issues and aspirations
- Analyse and suggest solutions to problems of community
- Apply contribution of their professional learning to the society

Course Content

1. Identification of problem (within 4 weeks)
2. Submission of research proposal (5th -8th week)
3. Submission of research report (last week of semester)
4. Presentation of work
5. Submission of Paper for Publication

Evaluation Criteria

Content	Marks
Project proposal	20
Project work report	50
Submission of paper for publication	10
Viva Voce	20
Total	100

Course Title: INTERNATIONAL MENTORING

Course Code: EDU711

L	T	P	Credit
0	0	0	0

The course aims at providing international exposure on various areas, methods and recent trends in educational research

Learning Outcomes

After completion of the course the students will be able to

- Establish a link with international learning community for developing global vision
- Identify thrust areas of global research
- Analyse and suggest solutions to problems at global level

Course content

- 1) Virtual session/face to face with international experts on various research areas
- 2) Virtual interaction/face to face with international students

Evaluation criteria

e-assessment (Report writing)- 50 marks

IQAC

Course Title: RESEARCH AND PUBLICATION ETHICS
Course Code: EDU751

L	T	P	Credit
2	0	0	2

Learning Outcomes

After completion of the course the students will be able to

- Demonstrate Intellectual honesty and research integrity
- Judge publication ethics, authorship and contributor ship
- Identify thrust areas of global research and Open access publications and initiatives
- Analyse Research Metrics

Course content

Unit I Philosophy and Ethics (3 hours)

- Introduction to Philosophy : definition, nature and scope, content, branches
- Ethics : definition, moral philosophy, nature of moral judgements and reactions

Unit II Scientific Conduct (5 hours)

- Ethics with respect to science and research
- Intellectual honesty and research integrity
- Scientific misconducts : Falsification, Fabrication, and Plagiarism (FFP)
- Redundant publications : duplicate and overlapping publications
- Selective reporting and misrepresentation of data

Unit III: Publication ethics (7 hours)

- Publication ethics : definition, introduction and importance
- Best practices/ standards setting initiatives and guidelines: Committee on publication Ethics (COPE). Salami Slicing
- Conflicts of interest
- Publication misconduct : definition, concept, problems that lead to unethical behaviour and vice versa, types
- Violation of publication ethics, authorship and contributor ship
- Identification of publication misconduct, complaints and appeals
- Predatory publishers and journals

Unit IV Open Access Publishing (4 hours)

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

Unit V Publication Misconduct (4 hours)

- Group Discussions: Subject specific ethical issues, FFP, authorship; conflicts of interest; complaints and appeals: examples and fraud from India and abroad

- Software tools: Use of plagiarism software like Turnitin Urkund and other open source software tools

Unit VI Databases and Research Metrics

(7 hours)

- Databases: Indexing databases; Citation database: Web of Science, Scopus etc.
- Research Metrics: Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score; Metrics : h-index, i10 index

Suggested Readings

- Best J.W. (1999). *Research in Education*. New Delhi: Prentice Hall of India Pvt. Ltd.
- Bogdon, R., & Biklen, S. K. (2008). *Qualitative Research for Education: An Introduction to Theories and Practice*. New Delhi: PHI learning
- Borg, W.R., & Gall, M.D. (1983). *Educational Research – An Introduction*. New York: Longman, Inc.
- Chandra, S. S., & Sharma, R.K. (2010). *Research in education*. New Delhi: Atlantic Publishers and Distributers (P) LTD.
- Creswell, J. W. (2015). *Educational Research: Planning, Conducting and Evaluating Quantitative and qualitative Research*. Boston: Pearson Publications.
- Curtis, W., Murphy, M., & Shields, S. (2013). *Research and Education*. New York & London: Routledge
- Gordon, P. (1996). *A Guide to Educational Research*. New York: Routledge
- Kaul, L. (1984). *Methodology of Educational Research*. New Delhi: Vikas Publications.
- Kilkapatrik, D.L. (2005). *Evaluating training Programmes: The four Levels*. San Francisco: Brett-Kochler.
- Kress, T. (2013). *Using Critical Research for Educational and Social Change*. New York & London: Routledge.
- Lauren, B., Little, T. D., & Card, N. A. (2012). *Developmental Research Methods*. New York: The Guilford Press.
- Martella, R. C., Nelson, J. R., Morgan, R. L., & Martella, N. E. (2013). *Understanding*
- Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods*. C.A: Sage Publications.
- Tolmie, A., McAteer, E., & Muijs, D. (2012). *Quantitative Methods in Educational and Social Research Using SPSS*. Maidenhead: Open University Press
- Wellington, J. (2015). *Educational Research*. New Delhi: Bloomsbury Academic.
- Weirsmas, W., & Stephen G. (2009). *Research methods in Education*. New York: Pearson Education