



தமிழ்நாடு ஆசிரியர் கல்வியியல் பல்கலைக்கழகம்
TAMILNADU TEACHERS EDUCATION UNIVERSITY

(with UGC 2(f) & 12(B) status and NAAC Accredited with 'A' Grade (GPA 3.17) in 1st Cycle)

(Established under Tamil Nadu Act 33 of 2008)

Gangaiamman Kovil Street, Karapakkam, Chennai - 600 097.

Telephone No: 044 - 28389045 Website: www.tnteu.ac.in

Date: 09.02.2024

No.TNTEU/COE/Ph.D./Course Work/2024/1099

Dr. P.Ganesan, Ph.D
Controller of Examinations i/c

WEB POSTING

To

The Principal of all the Affiliated Colleges /
Heads of the University Departments
(Offering Ph.D Degree Programme)

Sub: TNTEU – Ph.D Course Work Examination – Reg.

This is to inform that the Research supervisors have to conduct the Ph.D Course Work Examinations for their Ph.D scholars those who joined in the session of July 2022. In this Connection, the research supervisors have to prepare the syllabus for **Specific Area of Research Course**. The syllabus for the above said course should be approved by the Research Advisory Committee.

The research supervisors are informed to prepare the question paper for a maximum of 100 marks for the above mentioned course and to conduct the examination. The Research Supervisors are requested to send the Student's Examination Attendance Report, Answer Scripts and the marks obtained by them along with the Minutes of the Research Advisory Committee meeting to the Controller of Examinations on or before **06.03.2024**.

It is further informed that University will conduct common examinations for the following two courses in the University Campus.

S.No	Name of the Courses	Date & Time
1.	Research and Publication Ethics	26.02.2024 & 10.00 am
2.	Research Methodology and Statistics	26.02.2024 & 02.00 pm

Note:

1. The Ph.D Course work Examinations will be conducted only for the Ph.D Scholars those who have submitted atleast one Doctoral Committee Meeting report to the University.
2. The candidates with M.Phil. Degree (Education) awarded in accordance with UGC Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree Regulations of 2009, 2016 and 2018 are exempted from undergoing the course work on Research Methodology and Statistics only. However, the course work on Research and Publication Ethics, the Specific Area of Research are compulsory for all the candidates irrespective of their qualification and category of registration.


CONTROLLER OF EXAMINATIONS i/c

Encl: Syllabus for the above two courses

Copy to:

1. Ph.D. Section
2. Research Supervisors

Appendix-M(i)

RESEARCH AND PUBLICATION ETHICS (RPE)

About the Course:

Overview: This course has 6 modules mainly 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 and metrics and plagiarism tools introduced in the course.

THEORY

RPE 01: PHILOSOPHY AND ETHICS (4 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 (4 hrs)

1. Ethics with respect to science and research
2. Intellectual honest and research integrity
3. Scientific misconducts: Falsification, fabrication, and plagiarism
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
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 and 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 (4 hrs)

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)

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

RPE 06: DATABASES AND RESEARCH METRICS (7 hrs)

A Databases (4 hrs)

1. Indexing detabeses
2. Citation detabases: 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.

COURSE OUTCOME

On successful completion of the course, the researchers will be able to:

CO1: gains knowledge on the Philosophy of Science and ethics.

CO2: develop a sense of honesty and integrity in research.

CO3: realise the importance of publication ethics.

CO4: identify the open access publications.

CO5: adopt positive behaviour on the publication process with right conduct.

CO6: understand the databases and research metrics.

Referces:

1. Beall, J. (2012). Predatory publishers and corrupting open access. *Nature*, 489 (7415), 179. doi: 10-1038/489179a. Retrieved from <https://www.nature.com/news/predatory-publishers-are-corrupting-open-access-1.11385>.
2. Bird, A. (2006). *Philosophy of science*. Routledge.
3. Chaddah, P. (2018). *Ethics in competitive research: Do not get scooped; do not get plagiarized*. ISBN: 9789387480865. Retrieved from: https://www.researchgate.net/publication/331470963_Ethics_in_Competitive_Research_Do_not_get_scooped_do_not_get_plagiarized/link/5cfb940a299bf13a3845c4cc/download.
4. MacIntyre, A. (1997). *A short history of ethics: A history of moral philosophy from the Homeric age to the twentieth century (2nd edn.)*. University of Notre Dame Press.
5. Lakhota, S.C., & Chandrasekaran, S. (2019). *Ethics of publication*. In Muralidhar, K., Ghosh, Amit., & Singhvi, A.K. (eds.). *Ethics in science education, research and governance*. National Science Academy. ISBN: 978-81-939482-1-7 Retrieved from: https://www.researchgate.net/publication/331399321_Ethics_of_Publication
6. National Academy of Sciences, National Academy of Engineering, and Institute of Medicine. (2009). *On being a scientist- A guide to responsible conduct in research (3rd edn.)*. The National Academies Press. Retrieved from: <https://doi.org/10.17226/12192>
7. Resnik, D. B. (2015). *What is ethics in research & why is it important?* National Institute of Environmental Health Sciences. Retrieved from: <https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>
8. https://www.elsevier.com/data/assets/pdf_file/0008/653885/Ethics-in-research-and-publication-brochure.pdf
9. <https://www.mdpi.com/ethics>
10. https://authorservices.wiley.com/asset/Ethics_Guidelines_7.06.17.pdf

11. <https://www.cambridge.org/core/services/aop-file-manager/file/5b44807ace5b3fca0954531e/CUP-Research-Publishing-Ethics-Guidelines-2019.pdf>
12. <https://www.springer.com/gp/authors-editors/editors/publishing-ethics-for-journals/4176>
13. https://publicationethics.org/files/International%20standard_editors_for%20website_11_Nov_2011.pdf
14. <https://www.springer.com/gp/authors-editors/authorandreviewertutorials/submitting-to-a-journal-and-peer-review/publication-ethics/10285588>
15. <https://www.ifcc.org/media/161822/IFCC%20Ethics%20in%20Science.pdf>
16. <https://www.emeraldgrouppublishing.com/our-services/authors/research-publishing-ethics>
17. https://brill.com/fileasset/downloads_static/static_publishingbooks_publicationethics.pdf
18. <https://www.biomedcentral.com/getpublished/writing-resources/publication-ethics>
19. <https://attend.ieee.org/argencon-2020/en/argencon-2020-en/call-for-papers-en/legal-information-en/ethics-code-for-authors-en/>
20. <https://www.igi-global.com/about/rights-permissions/ethics-malpractice/>
21. <https://authorservices.taylorandfrancis.com/ethics-for-authors/>
22. <https://publicationethics.org/about/our-organisation>
23. <https://publicationethics.org/about/our-organisation>
24. <https://publicationethics.org/about/our-organisation>
25. <http://www.futurejournals.org/journal-info/publication-ethics/>
26. <https://www.apa.org/ethics/code/manual-updates>
27. <https://journals.openedition.org/pistes/6149>
28. <https://www.springernature.com/in/editors/research-integrity>
29. <https://www.i3-journal.org/publication-ethics/>

RESEARCH METHODOLOGY AND STATISTICS

Objectives

- a. To orient students towards research in the field of education.
- b. To develop in students computational skills in educational statistics.
- c. To orient students in the application of statistical findings.
- d. To inculcate in students the skill of construction of tests & tools for data collection.
- e. To enable the students interpret educational research findings.

I. Introduction

Scope and need for educational - Problems faced in educational research - Strategies to approach them - Qualities of a research worker.

II. Major Steps in Research

Defining a research problem - Sources for research problem - Study of related literature - Criteria for selecting a problem - Statement of the research problem - Determining feasibility of the study - Hypothesis: meaning, types and formulation - Types of sampling procedure - Criteria for selection of sample - Research proposal: the need and format - Collection of data: Organising and analysing the data.

III. Research Methods

Historical - Normative survey - Experimental - Exploratory and descriptive - Case study - genetic method: Cross sectional and longitudinal - Analytic and comparative studies.

IV. Selection of Tools

Criteria for selection of tools - Factors related to construction of tools - Tools of different types: Observation, interview, questionnaire, check list, rating scale, attitude scale (Thurnstone method and Likert method) - Achievement test - Diagnostic test and prognostic test - Characteristic of research tools - Reliability, validity and objectivity - Standardisation of test and general procedure for item analysis.

V. Research Reporting

Organisation of data - Graphical and Statistical representation - Language and style of presentation - Chapterisation - Indexing - Footnote - Bibliography - Appendix - Format modification for short report.

VI. Educational Statistics

Organisation and tabulation of data - Classification and frequency distributions - Graphical representation - Frequency curve, ogive and overlapping distribution - Measures of central tendency and variability - Calculation, interpretation and uses - Elementary ideas of probability: the normal distribution - its properties and uses - Skewness and Kurtosis - Linear correlation: its meaning and uses - Calculation of the coefficient of correlation - Regression and prediction - Selected Non - Parametric Methods: Ranking procedure, percentile rank, Chisquare test; its computation and uses.

VII. Statistical Inference

The significance of statistical measures - concept of standard error and its uses - Testing of difference between two means - test for small large samples - Elementary ideas about F- test - one way analysis of variance.

References

1. Adishesiah, W.T.V., & Sekhar, S., Educational and Social Research, Coimbatore, Volume Pathipagam, 1977.
2. Best, John, W. Research in Education, Prentice Hall of India Pvt. Limited, 4th Edition, New Delhi, 1982.
3. Devadas, Rajammal, P. & Kulandaivel, K.A., Handbook of Methodology of Research, Coimbatore, Sri R.K. Mission Vidyalaya Teacher's College, 1976.
4. Fox, D. J., The Research Process in Education, New York: Holt, Rinehart and Winston, 1969.
5. Garrett Henry V., Statistics in psychology and Education, Vakils, Feffer & sons Pvt. Ltd., Bombay.
6. Good, Carter, V. Methodology of Educational Research, New York, Appleton Century Croft, Inc., 1972.
7. Guilford, J.P., Psychometric Methods, New York, McGraw Hill Book Co. Inc., 1954.
8. Guilford, J.P., Fundamental Statistics in Psychology and Education New York, McGraw Hill Book Co. 1965.
9. Kerlinger, F.N., Foundation of Behavioural Research, New York, Holt, Rinehart and Winston, 1973.
10. Lindquist, E.F., Statistical analysis in Educational Research Boston, Houghton Mifflin & Co., 1970.

11. Mouly, G.J., The science of Educational Research, New Delhi Eurasia publishing House Pvt. Ltd., 1964.
12. Shukia, S.P., Elements of Educational Research, Bombay, Allied publishers Pvt. Ltd., Third Edition, 1982.
13. Travers, Robert, M.W., Introduction to Educational Research, New York, Macmillan Co., 1964.
14. Van Dalen. D.B., Understanding Educational Research, New York, McGraw Hill Co., 1973.
15. Walker, Helen M., & Le. Joseph, Statistical Inference, Calcutta, Oxford & IBH Publishing Co., 1958.
16. Whitner, F.L., Elements of Research Bombay. Asia publishing House, 1950.
17. young, Paulino, V. Scientific Social Surveys and Research Bombay, Asia publishing House, 1968.