

Original Article

Advancing Research Competencies in the NEP 2020 Framework

Sujata Nadargi Macharla

Assistant Professor

St. Mary Centenary Degree College, Hyderabad, Telangana, India.

Email: sujata.nadargi@gmail.com

Manuscript ID:

JRD -2026-180320

ISSN: 2230-9578

Volume 18

Issue 3(B)

Pp. 82-83

March - 2026

Submitted: 18 Feb. 2026

Revised: 28 Feb. 2026

Accepted: 19 Mar. 2026

Published: 31 Mar 2026

Abstract:

This paper examines the transformative vision of the National Education Policy (NEP) 2020 in advancing research competencies across higher education institutions in India. It explores structural reforms, multidisciplinary integration, innovation ecosystems, digital research tools, ethical governance, funding mechanisms, and industry-academia collaboration. Using descriptive and analytical methodology based on policy analysis and secondary data sources, the study evaluates the effectiveness of NEP 2020 in fostering research culture. The findings indicate that while the policy provides a comprehensive framework for strengthening research, successful implementation depends on institutional readiness, infrastructure development, faculty training, and equitable funding distribution.

Keywords: NEP 2020, Research Competencies, Higher Education, Innovation, IPR, Multidisciplinary Research, Research Ethics, SDGs

Introduction

Research is the backbone of knowledge creation and national development. In the global knowledge economy, research productivity determines technological advancement, innovation capacity, and socio-economic progress. India's higher education system has expanded significantly; however, research output and global ranking performance have remained areas of concern. The National Education Policy (NEP) 2020 introduces systemic reforms aimed at integrating research into the core of academic structure.

Objectives of the Study

1. To analyze NEP 2020 provisions promoting research-oriented higher education.
2. To evaluate multidisciplinary and interdisciplinary research integration.
3. To examine innovation, IPR, and patent culture in academia.
4. To assess ICT and AI tools in strengthening research competencies.
5. To identify challenges and provide policy recommendations.

Hypotheses of the Study

1. NEP 2020 significantly enhances research competencies among students and faculty.
2. Multidisciplinary education positively influences research innovation.
3. ICT and AI integration improves research productivity.

Industry-academia collaboration strengthens applied research outcomes

Research Methodology

The study adopts a descriptive and analytical research design. Secondary data sources including NEP 2020 policy documents, government reports, journal articles, and institutional publications were analyzed. Qualitative content analysis was used to interpret thematic dimensions of research competency development.

Multidisciplinary & Interdisciplinary Research

The policy promotes dismantling disciplinary silos and encourages collaboration across sciences, humanities, commerce, and technology. Multidisciplinary Education and Research Universities (MERUs) aim to replicate global best practices in research excellence.



Quick Response Code:



Website:

<https://jrdrvb.org/>

DOI: 10.5281/zenodo.21154550



Creative Commons (CC BY-NC-SA 4.0)

This is an open access journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International](https://creativecommons.org/licenses/by-nc-sa/4.0/) Public License, which allows others to remix, tweak, and build upon the work noncommercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Address for correspondence:

Sujata Nadargi Macharla St. Mary Centenary Degree College, Hyderabad, Telangana, India.

How to cite this article:

Macharla, S. N. (2026). Advancing Research Competencies in the NEP 2020 Framework. *Journal of Research and Development*, 18(3(B)), 82–83.

<https://doi.org/10.5281/zenodo.21154550>

Innovation, IPR & Patents in Academic Research

NEP 2020 encourages innovation through incubation centers, startup ecosystems, and IPR awareness programs. Universities are motivated to file patents, commercialize research outputs, and collaborate with industries.

Outcome-Based Research Learning

Outcome-Based Education ensures measurable research skills such as critical thinking, analytical reasoning, data interpretation, and ethical awareness. Research dissertations and publication-based assessments enhance competency development.

Use of ICT & AI Tools in Research

Digital transformation plays a critical role in modern research. Tools such as SPSS, R, Python, NVivo, and AI-based literature mapping systems enhance efficiency, accuracy, and predictive analytics.

Ethics, Transparency & Responsible Research

Research ethics include informed consent, data transparency, plagiarism prevention, and institutional review boards. Responsible research strengthens credibility and global acceptance.

Translating Research into Societal Impact

Research must address societal challenges such as rural development, healthcare innovation, climate resilience, and digital inclusion. Alignment with Sustainable Development Goals ensures measurable and global impact.

Career Opportunities in Research & Academia

NEP enhances research-based career pathways including academic researcher, policy analyst, data scientist, innovation consultant, and R&D specialist.

Funding Opportunities & Proposal Writing

Effective research requires competitive proposal writing, budget planning, and alignment with national priorities. Government grants, NRF funding, and industry partnerships play vital roles.

Industry–Academia Collaboration: Collaborative research enhances commercialization, employability, and applied innovation. Sponsored projects and joint patents strengthen knowledge transfer.

Research for Sustainable Development Goals (SDGs): Universities must integrate SDG mapping into research planning to promote sustainable and inclusive development.

Findings: The study finds that NEP 2020 provides a robust structural framework for advancing research competencies. However, disparities in funding, infrastructure gaps, and faculty shortages pose implementation challenges.

Suggestions and Recommendations

1. Increase research funding allocation.
2. Strengthen digital infrastructure and AI training.
3. Establish research incubation centers.
4. Promote global collaborations.
5. Ensure equitable access across rural and urban institutions.

Conclusion: NEP 2020 marks a paradigm shift in India's higher education system by embedding research as a central pillar. With proper implementation, funding support, and institutional readiness, the policy can significantly enhance India's global research standing.

References (UGC Format)

1. Government of India (2020). National Education Policy 2020. Ministry of Education, New Delhi.
2. Altbach, P. G. (2016). Global Perspectives on Higher Education. Johns Hopkins University Press.
3. Tilak, J. B. G. (2018). Research and Development in Indian Universities. Economic and Political Weekly.
4. Agarwal, P. (2019). Higher Education in India: Growth and Change. Journal of Educational Planning.