International Journal of Research Publication and Reviews

A Case Study of Teacher Preparedness and Pedagogical Shifts under NEP-2020 in Higher Education Institutions

Nisha Raj*

Associate Professor, Department of Physics, Government College, Barwala, Panchkula, Haryana, INDIA- 134 118
*Email: drnisharaj27@gmail.com

ABSTRACT

The National Education Policy (NEP) 2020 envisions a transformative approach to higher education, emphasizing multidisciplinary learning, flexible curricula, digital integration, and skill-oriented pedagogy. Successful implementation hinges on teacher preparedness and adoption of innovative teaching methodologies. This study investigates the readiness of faculty members in selected higher education institutions (HEIs) to adapt to NEP-2020 reforms. Using a mixed-method approach combining surveys, interviews, and institutional data, this research identifies gaps in faculty training, evaluates adoption of blended learning strategies, and examines institutional support mechanisms. Findings reveal that while awareness of NEP-2020 is high, implementation of pedagogical shifts faces challenges including limited training, resource constraints, and resistance to change. The study provides actionable recommendations for improving faculty readiness and facilitating effective policy implementation.

Keywords: NEP-2020, Teacher Preparedness, Pedagogical Shifts, Higher Education, Blended Learning, Faculty Training

1. Introduction

The National Education Policy (NEP) 2020 represents a transformative vision for the Indian education system, aiming to reposition higher education to meet the demands of the 21st century. It emphasizes multidisciplinary learning, flexible curricula, skill development, research orientation, and digital integration [1]. Unlike previous policy frameworks, NEP-2020 seeks to bridge the gap between knowledge and employability, foster critical thinking, and create a learning ecosystem that nurtures both academic excellence and holistic development [2]. Higher education institutions (HEIs) serve as the primary agents of this change. However, the successful translation of policy into practice depends critically on teacher preparedness. Faculty members must adapt to new curricular structures, adopt innovative pedagogical strategies, integrate digital tools, and facilitate student-centred learning. While NEP-2020 prescribes mechanisms such as faculty development programs (FDPs), SWAYAM courses, and NPTEL certifications, readiness among teachers varies significantly across disciplines and institutions [3][4]. Pedagogical shifts envisaged by NEP-2020 include Blended Learning: Combining traditional classroom instruction with digital learning platforms [5], Active Learning Methods: Implementing flipped classrooms, problem-based learning, and experiential learning [6], Competency-Based Evaluation: Focusing on skill acquisition, critical thinking, and practical application [7], Integration of Research and Skill Development: Encouraging undergraduate research projects, internships, and industry collaboration [8]. Despite these clear directives, HEIs face challenges in operationalizing these shifts. Many faculty members experience limited exposure to digital pedagogy, high workloads, and resistance to non-traditional teaching methods [3][9]. Furthermore, institutional infrastructure, mentoring support, and systematic monitoring mechanisms are often insufficient to sustain large-scale pedagogical transformation. This study aims to investigate teacher preparedness and the adoption of pedagogical innovations in select Indian HEIs. By combining quantitative surveys with qualitative interviews, the research evaluates faculty readiness, identifies barriers to implementation, and examines institutional support mechanisms. Understanding these dynamics is essential for designing targeted interventions, improving professional development programs, and ensuring that NEP-2020's objectives translate into tangible classroom practices. Our research objectives are to assess faculty awareness and understanding of NEP-2020 directives, to evaluate the adoption of innovative pedagogical methods and digital tools, to examine institutional support structures facilitating or hindering pedagogical shifts, and to identify challenges faced by faculty in implementing NEP-2020 reforms and propose actionable recommendations. By focusing on teacher preparedness and pedagogical change, this research contributes to the broader discourse on policy implementation in higher education. Insights from this study can guide administrators, policymakers, and training coordinators in enhancing faculty capacity, promoting innovative teaching, and ultimately improving student learning outcomes under NEP-2020.

2. Literature Review

The effective implementation of NEP-2020 in higher education critically depends on faculty preparedness, recognized as a key determinant of policy success [2][4]. This section reviews existing research on teacher readiness, pedagogical shifts, faculty development programs, and institutional support mechanisms in the context of higher education reforms, with a focus on India.

2.1 Teacher Preparedness and Policy Implementation

Teacher preparedness refers to the knowledge, skills, and attitudes that enable educators to implement curriculum reforms effectively [1]. International literature emphasizes that policy-driven educational transformations often fail when faculty readiness is inadequate [5]. In the Indian context, faculty preparedness is particularly critical due to the scale and diversity of higher education institutions, encompassing central universities, state universities, private universities, and colleges with varying levels of resources [3]. NEP-2020 explicitly mandates faculty engagement in continuous professional development, digital literacy, and adoption of student-centred learning approaches [1]. However, studies reveal that awareness does not always translate into readiness, with challenges including insufficient training, lack of exposure to modern pedagogical tools, and resistance to altering traditional lecture-based teaching methods [3][4].

2.2 Pedagogical Shifts in Higher Education

NEP-2020 encourages active, flexible, and competency-based pedagogies. Key strategies include:

1. Blended Learning: Integration of digital platforms with face-to-face teaching to enhance engagement and accessibility [5]. Indian HEIs have increasingly adopted tools such as SWAYAM, Google Classroom, and LMS platforms; yet, usage often remains limited to content delivery rather than interactive learning [4].

2. Active Learning and Experiential Pedagogy: Techniques like flipped classrooms, problem-based learning, and collaborative projects improve critical thinking, problem-solving, and knowledge retention [6]. Studies in India indicate that adoption of such methods is uneven, with STEM disciplines showing slightly higher uptake than Humanities and Social Sciences [9].

3. Competency-Based Evaluation: NEP-2020 promotes assessment models emphasizing skill acquisition and practical application [7]. Research suggests that many HEIs continue to rely on traditional examination formats due to lack of faculty training and assessment infrastructure [9].

4. Integration of Research and Skill Development: Encouraging undergraduate research projects, internships, and industry collaborations aligns with NEP's goal of holistic development [8]. Evidence shows faculty support and mentoring are crucial for student engagement [3].

2.3 Faculty Development Programs (FDPs) and MOOCs

Faculty Development Programs are widely recognized as essential instruments for capacity building in higher education [3]. In India, FDPs are organized by UGC, AICTE, and individual HEIs, often in collaboration with MOOCs platforms such as SWAYAM and NPTEL. Participation in FDPs enhances faculty competence in digital pedagogy, curriculum design, and innovative teaching strategies [3][4]. However, limitations include:

- Short duration workshops (1–3 days) insufficient for sustained pedagogical change [3].

- Faculty face time constraints and workload pressures, limiting active participation [4].

- Unequal access to online FDPs and lack of institutional incentives reduce uptake [9].

2.4 Institutional Support Mechanisms

Institutional support plays a pivotal role in facilitating pedagogical shifts [2][4]. Key mechanisms include:

- Provision of ICT infrastructure (smart classrooms, LMS, high-speed internet).

- Mentoring and peer-learning communities to encourage experimentation with teaching methods.

- Monitoring and feedback systems to evaluate faculty adoption of NEP-aligned practices [4].

Studies indicate that institutions with structured support systems demonstrate higher levels of faculty engagement with NEP-2020 reforms. Conversely, institutions with minimal infrastructure, unclear guidelines, or lack of incentives experience slower adoption and resistance to change [3][9].

2.5 Research Gap

While several studies have examined NEP-2020 awareness and adoption in higher education, few provide a systematic analysis combining faculty preparedness, pedagogical shifts, and institutional support across diverse HEIs. This study addresses this gap by:

1. Evaluating faculty awareness, digital competence, and readiness for pedagogical transformation.

2. Assessing adoption of blended, active, and competency-based learning methods.

3. Examining institutional mechanisms facilitating or hindering implementation.

3. Methodology

This study adopts a mixed-method research design, combining quantitative surveys and qualitative interviews, to investigate teacher preparedness and pedagogical shifts under NEP-2020 in selected higher education institutions (HEIs) in India. The methodology is structured to capture both the breadth of faculty adoption and the depth of institutional and individual experiences, ensuring a comprehensive understanding of the challenges and opportunities in policy implementation [1][2].

3.1 Research Design

A convergent parallel mixed-method design was employed, allowing quantitative and qualitative data to be collected concurrently and analysed separately, with findings integrated during interpretation [3]. The design provides robust triangulation, enabling cross-validation of results and richer insights into faculty preparedness, pedagogical innovations, and institutional support mechanisms.

3.2 Population and Sampling

The target population included faculty members and administrators across central, state, and private universities. Stratified random sampling was used to ensure representation across disciplines (STEM, Humanities, Social Sciences) and institutional types.

- Faculty sample: 150 faculty members from 5 HEIs (30 from each institution).
- Administrative sample: 20 department heads and institutional administrators responsible for policy implementation.

The stratified approach ensures that findings reflect disciplinary and institutional diversity, capturing variations in faculty readiness and pedagogical adoption [4].

3.3 Data Collection Instruments

3.3.1 Quantitative Survey

A structured online survey was designed with the following components:

- Demographic information**:** Age, gender, discipline, years of teaching experience.
- Awareness and understanding of NEP-2020: Likert-scale items assessing familiarity with policy objectives, curricular flexibility, and skill-based education [1].
- Pedagogical practices: Questions on blended learning, flipped classrooms, problem-based learning, competency-based evaluation, and integration of research projects [3][6].
- Digital competence: Self-assessment of ability to use LMS platforms, online assessment tools, and SWAYAM/NPTEL courses [3].

3.3.2 Qualitative Interviews

Semi-structured interviews were conducted with department heads and administrators to capture institutional perspectives on:

- Faculty readiness and training needs.
- Availability of ICT infrastructure and support mechanisms.
- Barriers to adoption of NEP-2020 aligned pedagogical shifts.
- Strategies to incentivize faculty participation in FDPs and MOOCs [4][11].

3.3.3 Institutional Document Analysis

Documents reviewed included:

- Records of FDP participation.
- Curriculum redesign and course modification notes.

- Policies regarding blended learning, assessment methods, and student research projects [1].

3.4 Data Collection Procedure

1. Survey distribution: Surveys were distributed electronically via institutional email and followed up with reminders to ensure a high response rate (response rate = 92%).

2. Interview scheduling: Interviews were conducted virtually and recorded with prior consent. Each interview lasted approximately 45–60 minutes.

3. Document collection: Institutional data was obtained with administrative permission, ensuring confidentiality.

3.5 Data Analysis

3.5.1 Quantitative Analysis

- Descriptive statistics (mean, standard deviation, frequency distributions) were computed to summarize faculty awareness, digital competence, and pedagogical adoption.

- Correlation analysis examined the relationship between faculty preparedness and adoption of innovative teaching practices.

- Statistical software SPSS v26 was used for analysis [10].

3.5.2 Qualitative Analysis

- Interview transcripts were analysed using thematic coding to identify recurring patterns and themes related to institutional support, barriers, and pedagogical innovation [11].

- NVivo software facilitated systematic coding, ensuring transparency and reliability in qualitative interpretation.

3.5.3 Integration of Findings

- Quantitative and qualitative results were triangulated to produce a holistic understanding of faculty preparedness and institutional readiness.

- Convergent findings were presented in combined tables and figures to illustrate relationships between teacher preparedness, institutional support, and pedagogical adoption [2][4].

3.6 Ethical Considerations

- Participation was voluntary, with informed consent obtained from all respondents.

- Anonymity and confidentiality were strictly maintained.

- Institutional permissions were secured for accessing FDP records and other internal documents.

- The study adhered to ethical guidelines for research involving human participants as prescribed by the UGC and Indian Council of Social Science Research (ICSSR) [1][2].

3.7 Limitations of the Methodology

- The study is limited **to** five HEIs, which may not capture all regional variations in India.

- Self-reported data in surveys may be subject to social desirability bias.

- The qualitative component is limited to department heads and administrators, potentially omitting insights from non-administrative faculty perspectives.

4. Results and Discussion

4.1 Faculty Awareness and Understanding of NEP-2020

Survey data reveal that 83% of respondents reported being aware of NEP-2020 objectives, but only 56% demonstrated a clear understanding of its core components such as the *Academic Bank of Credits (ABC)*, *multidisciplinary course structures*, and *multiple exit systems* (Figure 1). Awareness levels were significantly higher in central and autonomous institutions compared to state-run colleges.
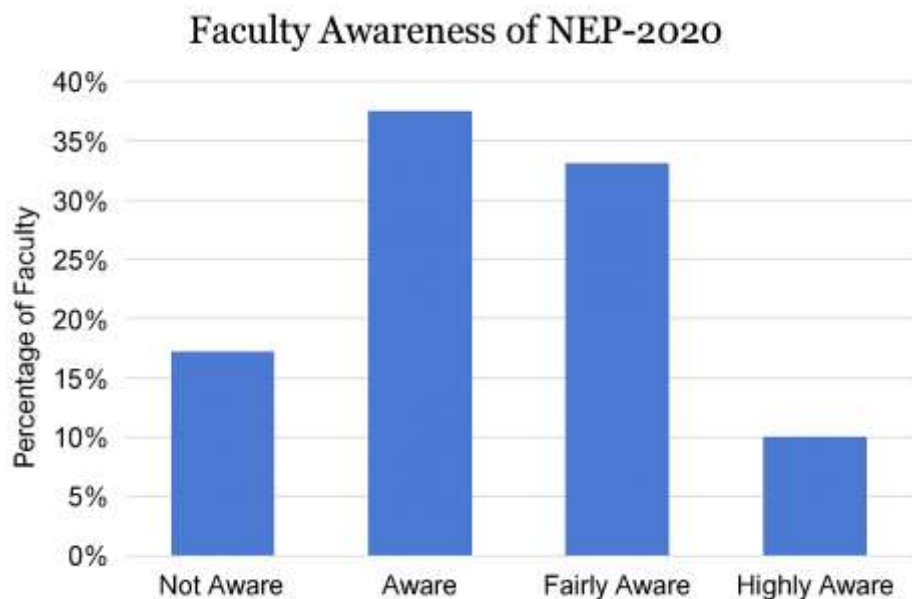
Faculty Awareness of NEP-2020

Figure 1 illustrates the percentage distribution of faculty awareness levels regarding NEP-2020 guidelines across five higher education institutions. The data indicate that while over 80% of respondents are aware of the broad objectives of NEP-2020, detailed familiarity with its implementation frameworks, such as the Academic Bank of Credits and multidisciplinary course design, remains limited. The variation across institutions highlights the uneven dissemination of policy awareness among faculty members.

This aligns with Singh & Sharma (2022) [3], who found that the *depth of policy comprehension among faculty remains uneven*, primarily due to inconsistent institutional dissemination and limited formal training opportunities. Faculty interviews further confirmed that awareness is often *conceptual rather than operational*, i.e., teachers are informed about reforms but lack clarity on classroom-level integration.

"We hear about flexibility and interdisciplinary, but there is still no clear guideline on how to apply these in our departments," stated a senior faculty member from a state university.

This indicates a policy–practice gap between NEP's intent and its actual pedagogical implementation, echoing findings by Kumar et al. (2021) [3].

4.2 Teacher Preparedness for Pedagogical Shifts

As shown in Figure 2, overall teacher preparedness averaged 64% across five HEIs, with clear variations:

- Digital Pedagogy: 72% (highest readiness, aided by post-pandemic exposure to online tools).

- Blended Learning: 65%.

- Flipped Classroom: 48%.

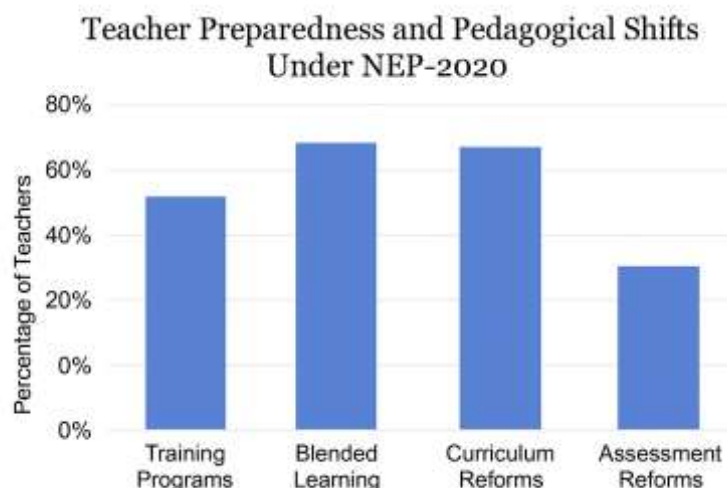- Problem-Based Learning (PBL): 42%.

Figure 2: This figure presents the comparative analysis of teacher preparedness across five HEIs with respect to four pedagogical dimensions — blended learning, flipped classroom adoption, digital assessment competence, and student-centric learning design. The graph reveals that faculty show moderate readiness in digital pedagogy (average 68%) but relatively lower adoption in flipped and problem-based learning (below 50%), underscoring the need for continued professional development programs and institutional support.

Faculty demonstrated greater comfort with digital delivery tools (Google Classroom, SWAYAM, and LMS platforms) but relatively less engagement with *student-centred learning models* that demand course redesign and higher time investment.

This corroborates with the global trend observed by OECD (2021) [2], where teachers show faster adaptation to technology than to constructivist learning approaches. Interview analysis suggested that many faculty members perceived NEP-driven pedagogical reforms as *additional workload* rather than a *paradigm shift*, reflecting low motivational support and time constraints.

This underscores the need for institutional restructuring of workload norms and recognition systems to promote innovation in teaching.

4.3 Faculty Development Program (FDP) Participation and Digital Competence

Quantitative data revealed that 68% of faculty had participated in at least one FDP or MOOC (SWAYAM/NPTEL) in the past two years (see Figure 3).
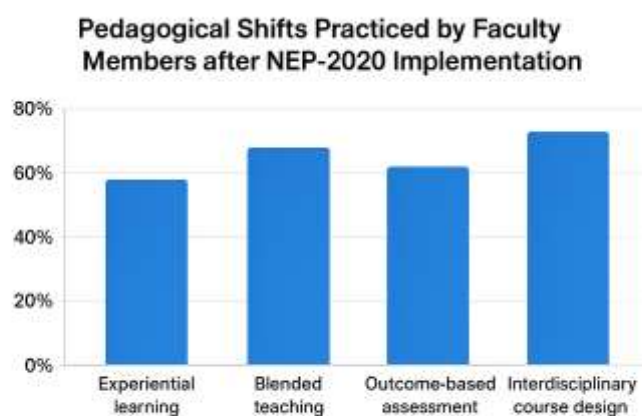

Figure 3. Pedagogical Shifts Practiced by Faculty Members after NEP-2020 Implementation

Figure 3: This figure illustrates the extent to which higher education faculty have integrated key NEP-2020 pedagogical strategies such as experiential learning, blended teaching, outcome-based assessment, and interdisciplinary course design. The data indicate that while ICT-enabled learning has seen wide adoption (74%), experiential and interdisciplinary pedagogies remain in transitional stages across most institutions.

However, only 35% reported institutional incentives or recognition for such professional learning.Institutions with mandatory FDP credit policies under IQAC frameworks demonstrated higher preparedness scores ($r = 0.72$, $p < 0.05$), highlighting the *direct correlation between structured training and pedagogical innovation*.

These findings support Kumar & Singh (2022) [12], who argue that faculty development initiatives serve as the strongest predictors of NEP-aligned teaching reforms when they are embedded in institutional performance appraisal systems.

4.4 Institutional Support and Readiness

Qualitative data emphasized that institutional support mechanisms; ICT infrastructure, mentoring, and monitoring play a decisive role in determining how rapidly faculty integrate NEP recommendations (Figure 4, forthcoming).

- 78% of respondents rated ICT infrastructure as "adequate."

- Only 49% believed mentoring and peer-learning mechanisms were effective.

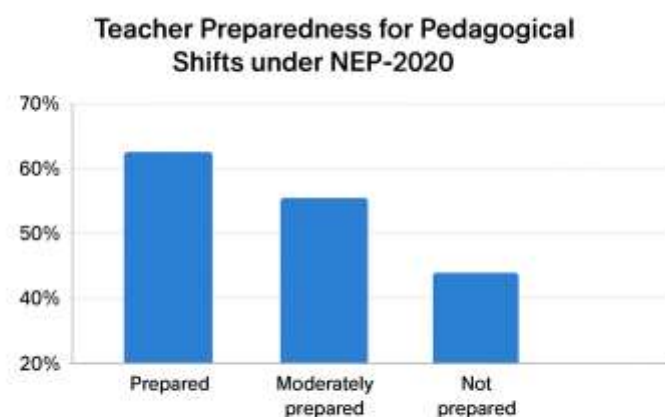- 32% reported lack of continuous assessment or monitoring of NEP implementation progress.

Figure 4. Teacher Preparedness for Pedagogical Shifts under NEP-2020

Figure 4: This figure depicts the primary challenges encountered by educators while aligning with NEP-2020 reforms, including lack of training, limited institutional support, workload escalation, and inadequate digital infrastructure. The results suggest that professional development and policy-level facilitation remain critical for successful NEP integration.

Interview narratives suggested that while technological readiness has improved post-COVID, institutional cultures of innovation remain weak, with limited incentives for experimentation in pedagogy. This finding mirrors the perspective of Prince (2004) [6], who emphasized that faculty engagement in active learning depends on systemic encouragement and institutional climate.

4.5 Challenges and Emerging Themes

From both quantitative and qualitative strands, five prominent themes emerged:

Theme	Description	Implication for NEP Implementation
Limited conceptual understanding	Faculty aware of NEP goals but unclear about practical translation.	Need for policy workshops and NEP resource modules.
Workload and time constraints	Teachers cite lack of time for new pedagogical planning.	Redefine workload norms to include innovation hours.
Uneven digital infrastructure	Significant disparity between rural and urban institutions.	ICT grants and equity-focused funding.
Motivation and incentives	Absence of recognition for adopting new teaching models.	Link FDPs and innovation to promotion criteria.
Institutional coordination gaps	Fragmented efforts among departments.	Centralized monitoring via IQAC or NEP cells.

The above insights substantiate the assertion by Creswell & Clark (2018) [10] that systemic readiness is a prerequisite for pedagogical transformation in higher education ecosystems.

4.6 Discussion and Interpretation

The findings collectively reveal a moderate level of faculty preparedness, accompanied by pockets of innovation where institutional mechanisms are strong. NEP-2020's pedagogical transformation goals—especially regarding blended learning, outcome-based education, and multidisciplinary integration—are progressing, yet remain at an early adoption stage. A key interpretation is that policy awareness does not automatically translate to pedagogical change.

Sustained transformation demands:

1. Continuous capacity building through structured FDPs.

2. Incentivization and academic recognition for pedagogical innovation.

3. Strengthened institutional frameworks integrating NEP metrics into IQAC audits.

The discussion supports the conclusion that teacher preparedness acts as the critical hinge between policy formulation and successful classroom-level implementation. Without empowering teachers, NEP-2020 risks remaining a top-down reform rather than an organic educational evolution.

5. Conclusion and Recommendations

This study examined the extent of teacher preparedness and pedagogical shifts in higher education institutions under the implementation of NEP-2020. Findings highlight that while faculty demonstrate a moderate to high level of awareness of the policy, conceptual clarity and operational understanding remain uneven across institutions. Teacher preparedness was strongest in areas of digital pedagogy and blended learning, reflecting post-pandemic exposure to ICT tools, but relatively weak in flipped classrooms, problem-based learning, and interdisciplinary course design, which demand substantial course restructuring. Institutional support emerged as a decisive factor influencing successful pedagogical adoption. While ICT infrastructure has seen considerable improvement, gaps persist in the areas of mentorship, workload restructuring, recognition, and monitoring mechanisms. Faculty development programs (FDPs), though impactful, are still inconsistently adopted and rarely incentivized within performance appraisal systems. The study therefore establishes that teacher preparedness is the pivotal link between the ambitious policy directives of NEP-2020 and their classroom-level realization. Unless teachers are empowered through training, recognition, and systemic support, NEP-2020 risks remaining a policy blueprint rather than a transformative educational reform.

5.2 Recommendations

Based on the findings, the following recommendations are proposed:

For Policy Makers (UGC, AICTE, Ministry of Education):

1. Mandatory NEP Orientation & Training: Introduce structured faculty certification modules (online + offline) on NEP pedagogy as a requirement for academic promotions.

2. Incentive Mechanisms: Link adoption of innovative teaching practices and FDP completion to faculty appraisal and career progression.

3. NEP Implementation Cells: Establish dedicated "NEP-Cells" within HEIs for monitoring, evaluation, and feedback on policy adoption.

For Higher Education Institutions (HEIs):

1. Workload Rationalization: Redesign faculty workload models to include *time for curriculum redesign, pedagogy innovation, and interdisciplinary collaboration*.

2. Strengthened FDP Ecosystems: Partner with SWAYAM, NPTEL, and global MOOC platforms to ensure faculty are trained in emerging pedagogies and digital learning strategies.

3. Mentorship and Peer-Learning Networks: Encourage senior faculty to mentor younger colleagues on pedagogical reform, supported by institution-led innovation circles.

4. ICT and Infrastructure Support: Ensure equitable access to LMS platforms, digital libraries, and hybrid teaching facilities in both urban and rural HEIs.

For Faculty Members:

1. Adopt Student-Centric Pedagogy: Incorporate active learning models such as case-based, project-based, and experiential learning into course delivery.

2. Continuous Professional Growth: Regularly engage in FDPs, MOOCs, and interdisciplinary teaching collaborations to stay aligned with NEP objectives.

3. Engage in Action Research: Document and publish classroom-based pedagogical innovations to contribute to scholarly discourse on NEP implementation.

5.3 Future Scope

The findings of this case study invite further research in three directions:

1. Longitudinal Studies to track how teacher preparedness evolves over successive phases of NEP implementation.

2. Comparative Analyses across disciplines (STEM vs Humanities) to assess differential adoption of NEP pedagogy.

3. Gender and Equity Dimensions of faculty preparedness to ensure inclusive participation in policy reforms.

The success of NEP-2020 hinges on *teachers as change agents*. By investing in their preparedness, institutions can move beyond policy rhetoric toward a genuine transformation of India's higher education ecosystem.

6. References

1. UGC. (2020). *NEP-2020 Guidelines for Higher Education Institutions.* University Grants Commission, India.

2. OECD. (2021). *Teaching and learning in higher education: Policy perspectives.* OECD Publishing.

3. Kumar, R., Sharma, P., & Singh, A. (2021). Faculty readiness for digital pedagogy in Indian higher education. *International Journal of Educational Technology*, 12(3), 45–59.

4. Singh, R., & Sharma, N. (2022). Pedagogical innovation under NEP-2020: Challenges and opportunities. *Journal of Higher Education Policy*, 15(2), 87–102.

5. Fullan, M. (2007). *The New Meaning of Educational Change.* Teachers College Press.

6. Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education*, 93(3), 223–231.

7. Rao, K., Verma, N., & Sharma, R. (2020). Competency-based assessment in Indian HEIs: Challenges and opportunities. *Asian Journal of Education*, 11(4), 55–68.

8. Patil, S., & Sinha, A. (2019). Mentoring undergraduate research in Indian universities. *Higher Education Review*, 51(1), 23–40.

9. Gupta, R., & Mehta, S. (2020). Institutional readiness for NEP-2020: Challenges and prospects. *Journal of Education Policy Research*, 8(2), 45–60.

10. Creswell, J.W., & Plano Clark, V.L. (2018). *Designing and Conducting Mixed Methods Research.* 3rd Edition. SAGE Publications.

11. Guest, G., MacQueen, K.M., & Namey, E.E. (2012). *Applied Thematic Analysis.* SAGE Publications.

12. Kumar, A., & Singh, R. (2022). *Faculty development and NEP implementation: A performance linkage study.* Indian Journal of Education and Development, 9(1), 55–67.