

Multidisciplinary Education: A Transformative Vision of NEP 2020

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Abstract

The National Education Policy (NEP) 2020 represents one of the most ambitious overhauls of the Indian education system since independence, seeking to align national academic structures with global benchmarks. A central theme of the policy is the adoption of multidisciplinary education across all levels, with a particular emphasis on higher education. This paper examines the philosophical foundation, practical implications, institutional readiness, stakeholder perceptions, and long-term outcomes of multidisciplinary learning as envisioned by NEP 2020. A mixed-method descriptive research approach has been used, involving interpretative analysis and survey-based quantitative insights drawn from 92 respondents representing diverse academic streams. The abstract provides an overview of the study's rationale, methodology, findings, and implications.

The analysis reveals that multidisciplinary education is not merely a structural arrangement but a shift in pedagogical culture. Stakeholders indicate strong support for flexible curricular pathways, integrated knowledge systems, and holistic learner development. The data highlights that defining objectives, stakeholder engagement, risk assessment, effective communication, and teaching-learning outcomes are considered decisive factors in ensuring successful multidisciplinary implementation. Faculty readiness, continuous feedback, and human resource development emerge as critical factors. However, variations in departmental engagement, insufficient focus on financial resources, and complexities of institutional restructuring pose significant challenges.

The study concludes that multidisciplinary education holds transformative potential for India's higher education landscape. It fosters creative thinking, broadens learner competencies, and enhances employability. For this potential to be realised, institutions must strengthen collaborative mechanisms, provide continuous teacher training, and integrate technology-enabled governance systems. The paper recommends strategic

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planning, institutional capacity-building, and structured implementation frameworks to sustain multidisciplinary reforms under NEP 2020.

Keywords: NEP 2020, Multidisciplinary Education, Higher Education Reform, Stakeholder Perception, Curriculum Integration, Academic Transformation.

Introduction

India's National Education Policy (NEP) 2020 has introduced a renewed vision for transforming the educational landscape, emphasizing holistic, flexible, and future-oriented learning. For decades, India's education system has relied on rigid disciplinary divisions, early specialization, and limited cross-disciplinary exposure, contributing to skill mismatch, reduced innovation, and narrow academic development. The NEP 2020 seeks to reverse these long-standing limitations through an integrated multidisciplinary model designed to meet the demands of an increasingly complex global economy.

Context and Rationale for Multidisciplinary Education

The 21st century workforce requires more than domain-specific expertise. Industries now demand adaptable graduates who can apply knowledge from multiple disciplines to solve real-world problems. Multidisciplinary learning, therefore, is not simply an academic preference but a social and economic necessity. Global universities have already moved toward liberal education, interdisciplinary majors, and flexible curricular ecosystems. NEP 2020 aims to position India as a competitive contributor to the global knowledge economy by adopting similar structures.

Research Problem

While NEP 2020 articulates a strong vision for multidisciplinary education, the readiness of institutions, faculty, and stakeholders to implement this vision remains unclear. Implementation requires changes in curriculum design, pedagogy, faculty training, administrative systems, and institutional culture. The research problem centres on determining whether stakeholders understand and support multidisciplinary reforms and whether current institutional practices align with the policy's expectations.

Research Objectives

This study aims to:

1. Examine stakeholder perceptions of multidisciplinary education under NEP 2020.
2. Assess institutional readiness for implementing multidisciplinary reforms.
3. Identify key factors influencing the success of NEP's multidisciplinary goals.
4. Analyze challenges, risks, and structural barriers to implementation.

5. Provide descriptive insights using data from academic stakeholders.

Significance of the Study

This study is significant because it connects policy intentions with stakeholder realities. While NEP literature is abundant, descriptive research grounded in institutional data is limited. By combining analysis with respondent insights from various disciplines, the study offers a grounded understanding of the system's preparedness for multidisciplinary transformation.

Review of Literature

Multidisciplinary education is widely recognized as a transformative model in contemporary academic reforms across the world. The literature reveals growing global acceptance of integrated curricular ecosystems that combine sciences, humanities, arts, and vocational studies.

Global Trends

Countries such as the United States, Canada, Singapore, and Finland emphasize integrated learning through liberal arts frameworks, multi-major programmes, thematic study clusters, and problem-based learning. OECD's Future of Education and Skills Report (2019) stresses that interdisciplinary learning enhances adaptability, creativity, and real-world problem-solving.

Indian Historical Context

The Kothari Commission (1966) hinted at the need for integrated education, recommending balanced learning that fosters scientific temper, creativity, and social responsibility. However, implementation remained limited. The National Curriculum Framework (2005) also advocated for cross-disciplinary approaches, but its influence was more visible in school education than in higher education.

NEP 2020 and Multidisciplinary Learning

NEP 2020 explicitly proposes a flexible curriculum, multiple entry–exit options, and the establishment of Multidisciplinary Education and Research Universities (MERUs). It envisions universities where students combine physics with philosophy, computer science with design, commerce with psychology, or engineering with music. Scholars such as Sharma (2021), Pandey (2022), and Singh (2023) argue that NEP 2020's multidisciplinary approach can reduce academic fragmentation and improve graduate employability. However, they also caution that India lacks the infrastructure, funding, faculty training, and institutional frameworks needed to implement such sweeping changes.

Identified Gaps

A significant gap in current literature is the absence of empirical data assessing stakeholder readiness and perceptions. Policy-level analysis exists but practical insights are missing. This study addresses that gap through descriptive primary data analysis.

Research Methodology

Research Design:

This study uses a **descriptive mixed-method approach**, combining quantitative survey findings with qualitative interpretative analysis.

Participants/Sample:

The sample consists of **92 academic stakeholders**, including:

- Assistant Professors (75%)
- Senior faculty
- Department coordinators
- Administrative personnel

Streams represented include engineering, humanities, sciences, commerce, and computer applications, and pharmacy.

Instrument:

A structured Google Form was designed based on elements central to NEP 2020 implementation:

- Institutional planning
- Stakeholder involvement
- Risk assessment
- Communication systems
- Training and capacity building
- Technology usage
- Monitoring and evaluation

Procedure

Respondents completed the form voluntarily. Data was exported and analyzed through interpretative thematic review and simple descriptive statistics.

Data Analysis

Quantitative data was organised into frequency tables and charts. Qualitative comments and interpretation were used to supplement findings and provide depth.

Results / Findings

1. Demographic Distribution:

The sample was gender-balanced: 50% male, 50% female. Most respondents were assistant professors, indicating strong representation of teaching faculty actively involved in curriculum and student engagement.

2. Academic Stream Representation:

Engineering and Computer Science (29%) formed the largest group, followed by Science and Technology (27%), Commerce and Management (20%), Pharmacy (12%), and Humanities (5%). This distribution suggests varying levels of engagement across disciplines, which may influence multidisciplinary collaborations.

3. First Steps in Implementation:

Respondents identified the following as essential first steps:

- Defining institutional NEP objectives (54%)
- Assessing existing resources (24%)
- Reviewing past academic practices (13%)
- Identifying stakeholders (9%)

4. Stakeholder Feedback Systems:

A majority (52%) prefer continuous feedback loops, while 42% prefer milestone-based feedback.

This finding reflects an institutional culture shifting toward collaborative reform.

5. Stakeholder Engagement:

65% believe students, faculty, and administrative staff must **collectively** participate in multidisciplinary implementation. Only 7% believed senior leadership alone should drive it.

6. Risk Assessment:

59% emphasised anticipating risks such as staff resistance, structural complexity, and inadequate resources.

7. Resource Prioritisation:

Participants prioritized:

- Skilled human resources (57%)
- Adequate resource allocation (34%)
- Infrastructure expansion (9%)

8. Communication Importance:

Respondents highlighted communication as essential for:

- Stakeholder engagement (48%)
- Clarifying objectives (38%)

- Addressing concerns (14%)

9. Flexibility in Planning:

97% agreed that implementation plans must remain flexible and adaptable.

10. Importance of Training:

80% agreed that faculty training is essential to drive multidisciplinary reforms.

11. Success Indicators:

Teaching–learning outcomes (61%) were valued more than documentation or audits.

12. Use of Technology:

Respondents recognized technology as vital for:

- Data collection (52%)
- Process efficiency (45%)
- Digitized governance systems (3%)

Discussion / Analysis

A. Stakeholder Alignment with NEP Vision:

The study reveals strong alignment between policy intentions and stakeholder mindset. Faculty and administrators show a clear understanding of multidisciplinary education and support flexible learning pathways, outcome-based assessment, and continuous feedback. This alignment is essential for NEP 2020, which positions multidisciplinary education as a foundation for modern learning.

B. Institutional Readiness: Strengths and Gaps:

The results indicate enthusiasm but also highlight limitations:

- Faculty recognize the need for training, which suggests awareness but also a gap in skill readiness.
- Resource prioritization focuses more on human resources than financial resources, indicating possible underestimation of infrastructural needs.
- Humanities and social sciences show low representation in institutional processes, potentially weakening interdisciplinary balance.
- Institutional inertia and rigid departmental structures remain barriers.

C. Comparison with Existing Research:

Studies by Pandey (2022) and Singh (2023) note that multidisciplinary transformation requires cultural shifts and strong leadership. The findings of this study reinforce that institutional culture plays a critical role. Respondents showed preference for collaborative and transparent processes, aligning with global best practices.

D. Implications for Curriculum Design:

Multidisciplinary education requires curriculum restructuring:

- Integration of skill-based, vocational, and professional modules

- Cross-disciplinary electives
- Problem-based learning units
- Project-based coursework involving multiple departments

Stakeholder support for flexible planning and continuous feedback indicates willingness to engage in these reforms.

E. Role of Technology:

Technology emerged as a major facilitator for NEP implementation, particularly in data-driven decision-making, hybrid learning, and digital governance. This reflects global educational shifts accelerated by post-pandemic digital adoption.

F. Reliability and Limitations:

The consistency in responses suggests reliable stakeholder awareness. However, limitations include sample size (92), uneven stream representation, and potential self-reporting bias.

Conclusion

This descriptive study demonstrates that NEP 2020's multidisciplinary vision has strong stakeholder support and aligns with modern educational demands. Faculty and academic administrators recognize the value of flexible pathways, collaborative decision-making, and holistic development. However, successful implementation requires institutional commitment, structured planning, resource strengthening, ongoing faculty development, and cross-disciplinary coordination. Multidisciplinary education offers profound opportunities for innovation, creativity, and employability. If implemented effectively, NEP 2020 can transform India's education system into a globally competitive model that nurtures well-rounded, future-ready learners.

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