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Multidisciplinary Universities in India- Vision of Nep 2020 and the Historical Legacy



Abstract: The transformation of higher education in India through multidisciplinary universities is a central vision of the National Education Policy 2020. This vision draws deeply from India's rich educational heritage, exemplified by ancient centres of learning such as Nalanda University and Takshashila. Multidisciplinary education has been a cornerstone of India's historical academic legacy, exemplified by ancient institutions like Nalanda University and Takshashila, where learners engaged in diverse fields of study and holistic knowledge development. The National Education Policy 2020 emphasizes the revival of such multidisciplinary approaches in modern higher education through the establishment of multidisciplinary universities. These universities aim to provide academic flexibility, integration of vocational education, emphasis on research, and learner-centered pedagogical strategies. The NEP 2020 envisions a system that fosters critical thinking, creativity, and experiential learning, supported by ICT-enabled teaching and continuous assessment. By connecting India's historical academic traditions with contemporary educational reforms, multidisciplinary universities are positioned to create holistic, adaptable, and skilled graduates capable of addressing complex societal and global challenges. This paper presents a comprehensive analysis of the multidisciplinary approach envisioned in NEP 2020, its philosophical foundations, structural reforms, pedagogical implications, and its strong resonance with ancient Indian educational traditions. It also critically examines implementation challenges and prospects.

Keywords: Education, NEP 2020, Multidisciplinary Universities

Introduction

Higher education in India is undergoing a paradigm shift. For decades, the system has been characterized by rigid disciplinary silos, exam-oriented teaching, and limited flexibility. However, in an era defined by complexity, innovation, and interdisciplinary problem-solving, such a system is increasingly inadequate. "The main thrust of this policy regarding higher education is to end the fragmentation of higher education by transforming higher education institutions into large multidisciplinary universities, colleges, and HEI clusters/Knowledge Hubs, each of which will aim to have 3,000 or more students (NEP, 2020; 10.1, Page 34). The National Education Policy 2020 addresses this concern by advocating a transition towards multidisciplinary universities that foster holistic and integrated learning. Interestingly, this reform is not merely futuristic but also restorative—reviving India's ancient educational ethos where knowledge was viewed as interconnected and holistic. In a rapidly evolving global knowledge economy, the traditional model of fragmented and discipline-specific education is increasingly inadequate to address complex real-world challenges. There is a growing need for an integrated approach that fosters critical thinking, creativity, collaboration, and holistic development among learners.

The concept of multidisciplinary education, as emphasized in NEP 2020, seeks to break down rigid academic boundaries by promoting the integration of sciences, humanities, arts, and vocational studies within a single institutional framework. This approach aims to provide learners with flexibility in choosing their academic pathways and encourages a broader understanding of knowledge across domains. Interestingly, this vision is deeply rooted in India's own educational heritage. Ancient centres of learning such as Nalanda University and Takshashila exemplified a holistic and multidisciplinary approach to education centuries ago. These institutions attracted scholars from across the world and offered diverse fields of study, fostering intellectual inquiry, debate, and global exchange of knowledge.

Against this backdrop, the present article explores the vision of multidisciplinary universities as articulated in NEP 2020 and examines its connection with India's historical legacy. It aims to highlight how

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contemporary educational reforms are, in many ways, a revival and modernization of ancient Indian educational practices, thereby bridging tradition and innovation in the pursuit of quality higher education.

Concept of Multidisciplinary Education

Meaning and Scope

Multidisciplinary education refers to an approach where students engage with multiple disciplines, gaining knowledge, skills, and perspectives from diverse fields. It contrasts with narrow specialization by encouraging:

- Breadth of knowledge across domains
- Integration of concepts
- Application of knowledge in real-world contexts

Multidisciplinary education refers to an approach to learning in which knowledge from multiple disciplines is brought together to provide a broader, more integrated understanding of a subject or problem. Instead of studying subjects in isolation, learners engage with different fields such as sciences, humanities, arts, and vocational areas simultaneously, thereby gaining diverse perspectives. In the context of the National Education Policy 2020, multidisciplinary education is emphasized as a key strategy for transforming higher education. It aims to break rigid academic boundaries and promote flexibility in curriculum design, enabling students to choose courses across disciplines according to their interests and career goals.

This approach helps in the development of critical thinking, creativity, problem-solving ability, and adaptability—skills that are essential in the 21st century. It also encourages learners to connect theoretical knowledge with real-life applications, making education more meaningful and relevant. Historically, multidisciplinary learning was a hallmark of ancient Indian institutions such as Nalanda University and Takshashila, where students studied a wide range of subjects under a holistic framework. Thus, the modern concept of multidisciplinary education represents both an innovation and a revival of India's rich educational tradition.

Types of Integration

- **Multidisciplinary:** Parallel study of multiple subjects
- **Interdisciplinary:** Integration across disciplines
- **Transdisciplinary:** Creation of new knowledge beyond traditional boundaries

NEP 2020 primarily promotes a multidisciplinary and interdisciplinary approach, aiming to break traditional academic barriers.

Vision of Multidisciplinary Universities in NEP 2020

The National Education Policy 2020 envisions a transformative restructuring of higher education through the establishment of large, vibrant, and multidisciplinary universities. This vision aims to move away from fragmented, discipline-specific institutions towards holistic learning environments that integrate diverse fields of knowledge. At the core of this vision is the idea that universities should offer a wide spectrum of disciplines, including sciences, social sciences, arts, humanities, languages, and vocational education, within a single institutional framework. Such integration enables students to develop a well-rounded understanding and the ability to approach problems from multiple perspectives.

A key feature of this vision is academic flexibility, allowing students to choose courses across disciplines, supported by a Choice-Based Credit System (CBCS) and multiple entry and exit options. This ensures that learning is learner-centered and adaptable to individual interests and career aspirations. The policy also

emphasizes holistic and liberal education, aiming to nurture not only cognitive skills but also ethical values, creativity, communication abilities, and social responsibility. Universities are expected to foster critical thinking, innovation, and research culture, supported by initiatives such as the National Research Foundation.

Furthermore, NEP 2020 proposes the transformation of all higher education institutions into either research-intensive universities, teaching-intensive universities, or autonomous degree-granting colleges, all functioning within a multidisciplinary framework. It also promotes internationalization, encouraging global collaborations and positioning India as a global hub of knowledge. Overall, the vision of multidisciplinary universities in NEP 2020 seeks to create dynamic, inclusive, and future-ready institutions that align with both global standards and India's rich educational heritage.

The National Education Policy 2020 envisions higher education institutions as:

- Large, multidisciplinary institutions with at least 3,000 students
- Offering a wide range of disciplines including sciences, arts, humanities, vocational studies
- Encouraging flexible curricula and credit-based systems
- Promoting holistic and research-oriented education

Key Features

a) Holistic and Liberal Education

Students are encouraged to explore subjects beyond their core discipline, fostering well-rounded personalities. Holistic and liberal education is a central feature of the National Education Policy 2020, emphasizing the overall development of learners rather than mere acquisition of subject-specific knowledge. It aims to nurture intellectual, emotional, ethical, and social dimensions of students, thereby preparing them for life and not just for examinations or employment. Under this approach, students are encouraged to study a broad range of subjects across disciplines such as sciences, arts, humanities, and vocational fields. This promotes a well-rounded personality and enables learners to develop critical thinking, creativity, communication skills, and problem-solving abilities.

Liberal education also focuses on freedom of choice, allowing students to explore their interests and passions through flexible curricula. It supports interdisciplinary learning and helps learners make meaningful connections between different areas of knowledge.

Furthermore, holistic education integrates values such as empathy, responsibility, and ethical reasoning, ensuring that education contributes to the development of socially responsible and informed citizens. Thus, it aligns with the broader goal of creating balanced individuals capable of contributing effectively to society.

b) Academic Flexibility

- Multiple entry and exit options
- Choice-based credit system
- Interdisciplinary electives

Academic flexibility is a key feature of the National Education Policy 2020, aimed at making higher education more learner-centered and adaptable to individual needs. It allows students to design their own academic pathways by choosing courses across different disciplines, rather than being confined to a single stream. This flexibility is facilitated through mechanisms such as the Choice-Based Credit System (CBCS), which enables students to earn and transfer credits from various courses and institutions. Additionally, the policy introduces multiple entry and exit options, allowing learners to enter and leave a program at different stages with appropriate certification—such as a certificate, diploma, or degree—based on the duration of study. Academic flexibility also encourages interdisciplinary and multidisciplinary learning, helping students explore diverse interests and develop a broader skill set. It supports lifelong learning by providing opportunities for students to re-enter education and upgrade their knowledge and skills at different points in their lives.

c) Integration of Vocational Education

Bridging the gap between academic knowledge and practical skills.

The integration of vocational education is a significant feature of the National Education Policy 2020, aimed at bridging the long-standing gap between academic learning and practical skills. It seeks to remove the rigid separation between “academic” and “vocational” streams, thereby promoting the dignity of labour and enhancing employability. Under this approach, vocational courses such as carpentry, coding, electrical work, agriculture, and entrepreneurship are integrated into mainstream education. Students are provided opportunities for hands-on training, internships, and skill-based learning, enabling them to apply theoretical knowledge in real-life contexts. The policy also emphasizes early exposure to vocational skills, encouraging students to explore various trades and professions from school level onwards. This helps learners identify their interests and develop practical competencies alongside academic knowledge. Furthermore, collaboration with industry and local communities is encouraged to ensure that vocational education remains relevant to current market needs. By integrating vocational education within multidisciplinary institutions, NEP 2020 aims to create a skilled, self-reliant, and versatile workforce suited to the demands of the modern economy.

d) Emphasis on Research

Promotion of research culture through institutions like the National Research Foundation.

A key feature of the National Education Policy 2020 is its strong emphasis on promoting a robust research culture across higher education institutions. The policy recognizes research as essential for knowledge creation, innovation, and national development. NEP 2020 proposes the establishment of the National Research Foundation (NRF) to fund, support, and coordinate high-quality research across disciplines. It encourages universities to become hubs of inquiry where students and faculty actively engage in research, critical analysis, and problem-solving. The policy also promotes undergraduate research, enabling students to develop analytical thinking, creativity, and scientific temper from an early stage. Interdisciplinary research is particularly emphasized, allowing scholars to address complex real-world issues that require insights from multiple fields. Furthermore, institutions are encouraged to collaborate with industries, government agencies, and international organizations to enhance the relevance and impact of research. By fostering a strong research ecosystem, NEP 2020 aims to position India as a global leader in knowledge production and innovation.

Philosophical Foundations of NEP 2020

The policy is rooted in several educational philosophies:

- Constructivism: Learning as an active process
- Humanism: Focus on holistic development
- Progressivism: Emphasis on experience and inquiry

These philosophies resonate strongly with ancient Indian thought, where education aimed at the development of the whole individual—intellectual, moral, and spiritual.

Historical Legacy of Multidisciplinary Education in India

“The ancient Indian universities Takshashila, Nalanda, Vallabhi, and Vikramshila, which had thousands of students from India and the world studying in vibrant multidisciplinary environments, amply demonstrated the type of great success that large multidisciplinary research and teaching universities could bring”(NEP, 2020; 10.2, Page 34). India has a rich and profound tradition of multidisciplinary education that dates back to ancient times. Long before the modern concept of interdisciplinary learning emerged, Indian systems of education emphasized a holistic approach in which knowledge from various fields was interconnected and taught as a unified whole. Ancient centres of learning such as Nalanda University and Takshashila stand as remarkable examples of this tradition. These institutions attracted students and scholars from across the world and offered a wide range of

subjects, including philosophy, mathematics, astronomy, medicine, linguistics, political science, and arts. Learning was not restricted to a single discipline; instead, students were encouraged to explore diverse areas of knowledge.

The pedagogy followed in these institutions was highly interactive and learner-centered. Methods such as debates, discussions, inquiry, and critical thinking were integral to the teaching–learning process. The guru–shishya tradition further supported personalized and value-based education, focusing on the overall development of the learner. Moreover, education during this period was closely linked to real-life applications, ethical values, and societal needs. Knowledge was seen not merely as information but as a means for personal growth and social well-being. This historical legacy clearly reflects that multidisciplinary education is deeply rooted in Indian tradition. The modern emphasis on such an approach, as seen in contemporary educational reforms, is therefore not entirely new but rather a revival and adaptation of India’s ancient and holistic vision of education.

Nalanda University

Nalanda University was one of the earliest and most prestigious centres of higher learning in the world, flourishing between the 5th and 12th centuries CE. It was a fully residential, international university that attracted scholars from across Asia and offered a wide range of subjects such as philosophy, mathematics, astronomy, medicine, and linguistics, reflecting a strong multidisciplinary approach. The teaching–learning process at Nalanda emphasized debate, discussion, and critical inquiry, fostering deep intellectual engagement among students. Its holistic and integrated system of education closely aligns with the modern vision of multidisciplinary learning promoted in the National Education Policy 2020. Nalanda was a global hub of learning, attracting students from China, Korea, Tibet, and Southeast Asia. It offered diverse disciplines such as:

- Philosophy (Buddhist and non-Buddhist)
- Medicine
- Astronomy
- Mathematics
- Grammar and linguistics

Key Features:

- Residential system
- Library with vast manuscripts
- Debate-based pedagogy
- International collaboration

Takshashila University

Takshashila was one of the earliest known centres of higher learning in the world, dating back to at least the 6th century BCE. It functioned as a vibrant hub of multidisciplinary education where students studied a wide range of subjects such as medicine, political science, economics, warfare, grammar, and arts under renowned teachers. Unlike modern formal universities, education at Takshashila was flexible and teacher-centered, allowing students to choose their fields of study based on interest. The emphasis on practical knowledge, critical thinking, and holistic development reflects a strong tradition of integrated learning, which resonates with the multidisciplinary vision of the National Education Policy 2020. Takshashila is often regarded as one of the earliest universities in the world.

Disciplines Offered:

- Political science
- Warfare
- Medicine
- Economics
- Arts and crafts

Distinct Characteristics:

- Personalized learning
- Guru–shishya tradition
- Practical and vocational orientation

Pedagogical Implications

The shift towards multidisciplinary universities, as envisioned in the National Education Policy 2020, has significant implications for teaching–learning practices. It calls for a transition from traditional, teacher-centered approaches to more learner-centered, interactive, and experiential methods. Teachers are expected to act as facilitators who guide students in exploring knowledge across disciplines rather than merely delivering content.

Pedagogy must emphasize experiential learning, including projects, case studies, fieldwork, and problem-solving activities that connect classroom learning with real-life situations. The integration of Information and Communication Technology (ICT) plays a crucial role in enhancing engagement, accessibility, and collaborative learning. Additionally, interdisciplinary teaching strategies should be adopted to help students make meaningful connections between different subjects. Assessment practices also need to shift towards continuous and comprehensive evaluation, focusing on understanding, application, and skill development rather than rote memorization. Overall, these pedagogical changes aim to foster critical thinking, creativity, collaboration, and lifelong learning among students, aligning education with the demands of the modern world.

➤ **Shift from Teacher-Centered to Learner-Centered**

The National Education Policy 2020 emphasizes a fundamental shift from traditional teacher-centered approaches to learner-centered pedagogy. In the teacher-centered model, the teacher acts as the primary source of knowledge, and students are passive recipients. In contrast, a learner-centered approach places students at the core of the teaching–learning process, encouraging active participation, inquiry, and self-directed learning. Under this approach, teachers function as facilitators and mentors who guide students in constructing their own knowledge through exploration, discussion, and collaboration. Learning becomes more interactive and meaningful, as students engage in activities such as problem-solving, projects, group work, and experiential tasks. This shift also recognizes the diverse needs, interests, and learning styles of students, promoting differentiated instruction and personalized learning pathways. It fosters critical thinking, creativity, and autonomy, enabling learners to take responsibility for their own learning. Teachers become facilitators rather than mere transmitters of knowledge.

➤ **Experiential Learning**

Experiential learning is a core principle emphasized in National Education Policy 2020 to make education more practical, relevant, and engaging. Unlike traditional rote-based methods, experiential learning focuses on learning through direct experience, reflection, and application. Students actively participate in real-world tasks, experiments, projects, internships, field visits, and simulations, which helps them connect theoretical knowledge with practical situations. This approach encourages critical thinking, problem-solving, and decision-making skills, allowing learners to internalize concepts more effectively. It also fosters creativity, collaboration, and adaptability, as students navigate challenges and learn from successes and failures. By integrating experiential learning into

multidisciplinary education, institutions ensure that students not only acquire knowledge but also develop competencies and values essential for personal, professional, and societal growth.

- Projects
- Internships
- Fieldwork
- **Integration of ICT**

Digital tools enhance accessibility and engagement. The integration of Information and Communication Technology (ICT) in multidisciplinary universities is a vital component of National Education Policy 2020. ICT facilitates modern teaching and learning practices, enabling students to access digital resources, online courses, virtual labs, and multimedia tools that enhance understanding across disciplines. It supports blended learning, flipped classrooms, and collaborative online projects, making education more flexible, interactive, and student-centered.

ICT also aids in research, data analysis, and dissemination of knowledge, allowing learners to engage with global academic communities. By embedding technology into curricula, universities can promote digital literacy, critical thinking, and problem-solving skills, ensuring students are prepared for the demands of the 21st-century workforce while fostering innovation and creativity across multidisciplinary fields.

➤ **Continuous Assessment**

Focus on formative assessment rather than rote-based exams. Continuous assessment is a crucial pedagogical strategy in multidisciplinary universities, aligning with the goals of National Education Policy 2020. Instead of relying solely on end-of-term examinations, continuous assessment emphasizes regular evaluation of students' understanding, skills, and application of knowledge through assignments, projects, presentations, quizzes, peer assessment, and practical work. This approach provides timely feedback to both learners and teachers, helping identify learning gaps and enabling personalized support. It encourages active engagement, critical thinking, and consistent effort, rather than rote memorization. Continuous assessment also aligns with learner-centered pedagogy, promotes holistic development, and ensures that students are evaluated on a broader spectrum of competencies, including cognitive, practical, and collaborative skills across multiple disciplines.

Challenges in Implementation

Despite its visionary nature, several challenges exist:

- *Institutional Constraints*- Lack of infrastructure, Shortage of trained faculty
- *Curriculum Redesign* - Transitioning to flexible curricula requires careful planning.
- *Resistance to Change*- Traditional mindsets may resist interdisciplinary approaches.
- *Resource Allocation*- Significant investment is required for transformation.

Opportunities and Future Prospects

- ✓ *Global Recognition* -India can emerge as a global education hub.
- ✓ *Innovation Ecosystem* -Multidisciplinary institutions can drive research and innovation.
- ✓ *Inclusive Education* -Broader access to diverse learning opportunities.

Conclusion

The vision of multidisciplinary universities under the National Education Policy 2020 represents a transformative shift in Indian higher education. By drawing inspiration from ancient centres like Nalanda University and Takshashila, the policy bridges tradition and modernity. This approach not only enhances academic learning but also prepares students to navigate the complexities of the modern world. If implemented effectively,

it can redefine India's educational landscape and restore its historical position as a global leader in knowledge and learning.

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