

Nep, 2020 As A Driver for Transdisciplinary Learning

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Abstract—The National Education Policy (NEP) 2020 marks a paradigm shift in Indian education by promoting holistic, flexible, and learner-centered approaches. One of its core strengths lies in advancing transdisciplinary learning, which transcends traditional subject boundaries and fosters integrated knowledge creation. Unlike multidisciplinary or interdisciplinary models, transdisciplinary learning emphasizes the fusion of disciplines to address real world challenges through creativity, collaboration, and critical thinking. NEP-2020 encourages this vision through provisions such as multidisciplinary institutions, flexible subject choices, experiential and skill-based pedagogy, and the integration of Indian knowledge systems with global perspectives. By doing so, it prepares learners to tackle complex issues like climate change, healthcare, sustainability, and digital transformation. While challenges such as faculty training, curriculum restructuring, and assessment reforms remain, NEP-2020 provides a robust framework for building a knowledge-driven society. Thus, the policy acts as a true driver of transdisciplinary learning, equipping students with 21st-century skills for innovation, problem-solving, and nation-building. Our educational system's assessment culture will change from summative and mainly testing rote memorization skills to more regular and formative, competency-based, learning-and-development-promoting, and higher-order skills-testing, including analysis, critical thinking, and conceptual clarity. The main goal of assessment is, in fact, to facilitate learning; it will assist both the teacher and the student, as well as the educational system as a whole, in optimizing learning and development for every student. This will be the fundamental idea behind evaluation at all educational levels. Introduce Transdisciplinary Learning (TDL), Learning that goes beyond individual subjects to integrate knowledge from multiple disciplines and encourages problem-solving, critical thinking, and real-world application.

Index Terms—NEP-2020, transdisciplinary, Multidisciplinary, Holistic, SDG, DIKSHA

I. INTRODUCTION

In Indian educational history, the National Education Policy (NEP) 2020 represents a significant reform. It is a landmark reform in the history of Indian education. It seeks to reorient the learning system from rote memorization to holistic, integrated, and skill-based knowledge. One of its most significant contributions is its emphasis on transdisciplinary learning, which moves beyond the narrow confines of traditional subject boundaries and fosters creativity, innovation, and real-world problem-solving. This policy envisages that the extant 10+2 structure in school education will be modified with a new pedagogical and curricular restructuring of 5+3+3+4 covering ages 3-18.

II. KEY FEATURES OF NEP-2020 SUPPORTING TRANSDISCIPLINARITY

- a) **Multidisciplinary Institutions:** By 2040, all higher education institutions are to become multidisciplinary, offering diverse subjects under one roof.
- b) **Holistic and Multidisciplinary Education;** Higher education institutions are encouraged to become multidisciplinary by 2040, offering a variety of subjects under one roof.
- c) **Flexibility and Choice:** Students can choose subject combinations across science, humanities, commerce, arts, and vocational education.
- d) **Experiential and Skill-Oriented Learning:** Project-based, research-driven, and hands-on approaches integrate practical and theoretical learning.
- e) **Academic Flexibility:** Multiple entry and exit options with an Academic Bank of Credits allow learners to design personalized, transdisciplinary learning paths and

- f) Integration of Knowledge Systems: NEP promotes blending of traditional Indian knowledge systems (such as yoga, Ayurveda, performing arts) with modern sciences and technologies.

The below flowchart indicates NEP-2020 Supporting Trans disciplinary:



Diagram /Flowchart

III. NATIONAL CURRICULUM FRAMEWORK FOR SCHOOL EDUCATION (NCFSE)

The National Education Policy 2020, frontline curriculum needs, and state governments, ministries, relevant central government departments, and other expert bodies will all be taken into consideration as the NCERT develops a new and comprehensive National Curricular Framework for School Education, or NCFSE 2020-21. The framework will be made available in all regional languages. The NCFSE document will now be reviewed and updated every five to ten years, taking into account the curriculum for frontline schools.

IV. REAL WORLD EXAMPLES

- A project on sustainable agriculture may combine biology, economics, technology, and environmental studies.
- AI in healthcare integrates computer science, ethics, medicine, and sociology.
- A study of climate change draws upon science, politics, history, culture, and geography.
- These examples show how NEP-driven reforms encourage students to solve real-life problems with a holistic mindset.

V. NEP-2020- ADVANTAGES

The United Nations General Assembly in September 2015 adopted a global development vision called Transforming our World. The 2030 Agenda for Sustainable Development. The 2030 Agenda is ‘a plan of action for people, planet, and prosperity’. As part of this agenda, 17 new Sustainable Development Goals (SDGs). Below listed are the advantages/benefits of NEP-2020:

- Encourages critical and creative thinking
- Equips students with 21st-century skills
- Bridges the gap between theory and practice and
- Prepares learners to face global challenges like sustainability, digital transformation, and social equity
- SDG 4 - Quality Education Promoting inclusive, equitable lifelong education for all
- SDG 5 - Gender Equality Encouraging women’s access to learning through flexible systems.
- SDG 8 - Decent Work & Growth Up skilling and re skilling workforce for Employability
- SDG 10- Reduced Inequality Targeting marginalized, rural, and disabled populations and
- SDG 13- Climate Action Education for sustainable practices and environmental responsibility

SDG	Focus Area	Approx. %
SDG 4	Quality Education	30%
SDG 5	Gender Equality	15%
SDG 8	Decent Work & Growth	20%
SDG 10	Reduced Inequality	20%
SDG 13	Climate Action	15%

SDG’s



Source: SDG’s

VI. NEP-2020 CHALLENGES

The following challenges in implementing transdisciplinary learning in India

- Need for teacher training in transdisciplinary pedagogy.
- Curriculum and assessment reforms must support integration.
- Resistance from conventional academic structures.
- Balancing specialization with broad-based learning.
- Digital Divide: Uneven internet access across urban-rural and socio-economic groups.
- Low Adult Literacy Rates: As per Census 2011, 26% of adults in India are still illiterate.
- Limited Funding: Adult education receives less than 1% of total education budget.
- Language and Content Barriers: Learning materials are often not available in regional languages or accessible formats.
- Lack of Trained Educators: Most adult learning facilitators lack digital and pedagogical skills.
- Social Attitudes: Stigma around adult learning deters participation, especially among women and elderly.

VII. RECOMMENDATIONS FOR STRENGTHENING NEP 2020

- India must address various operational and systematic issues if it is to fully utilize NEP-2020 to promote harness the power of NEP 2020 in transdisciplinary learning. Listed below are the suggestions:
- Enhance Institutional Mechanisms, such as Universities, Diets and NGOs etc.
- Improve Digital Accessibility such as DIKSHA, SWAYAM, and e-Vidya,
- Promote Inclusive Policies eg. Give marginalized groups women, tribal populations, and senior citizens
- Adopt inclusive teaching methods- Teacher Training and Capacity Building such as Integrate learning ideals into teacher education curriculum.
- Promote professional development by implementing, digital pedagogy, and inclusive education practices.

- Private Sector and Industry Engagement eg. Encourage public-Private Partnerships to establish job oriented continuing education programs,
- Funding and Policy Commitment eg. Allocate specific funds and other centrally sponsored schemes and
- Monitoring and Evaluation Framework- Set up unequivocal indicators and regular evaluation to gauge lifelong learning results under NEP 2020,

VIII. CONCLUSION

NEP 2020 provides a solid framework for converting Indian education into a system that is adaptable, dynamic, and focused on the future. In addition to academic knowledge, promoting transdisciplinary learning gives students the creativity, problem-solving abilities, and global perspectives they need to succeed in the twenty-first century. This vision represents a real shift from disjointed learning to a unified, comprehensive education.

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