



National Education Policy 2020: A make in India Initiative

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ABSTRACT

After a gap of 34 years following the last National Education policy in 1986, Indian national system of education has witnessed a novel change in education premises with new thoughts immersion triggered with a make in India spirit all across through innovations and entrepreneurial research behavior generation among the students. The policy aims at training up the young and aspiring minds in research and innovations rather than mere adapting to the existing store of knowledge and for the purpose in mind, a policy initiative has been envisaged in the NEP-2020, and a drastic emphasis has been given to develop entrepreneurial mindset of the young generation and the underlying skills creating a sustainable workforce who can contribute their best of talents towards making India self reliant and a dominating economy in the world of today. The concept of “Make in India” focuses on promoting domestic manufacturing, innovation, entrepreneurship, and self-reliance. NEP 2020 complements this vision by preparing a skilled workforce, encouraging research and innovation, and connecting education with India's economic and social development. This article examines the relationship between NEP 2020 and Make in India, focusing on skill development, vocational education, higher education reform, research and innovation, entrepreneurship, and indigenous knowledge. It also

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discusses the challenges of implementation, including inadequate infrastructure, unequal access to quality education, the digital divide, funding constraints, and the need for stronger collaboration between educational institutions and industry.

Introduction

Education always seems assuming the status of a non productive sector commodity in the third world countries of south Asia. The national education system of all the states within the definition appears to have structured on the bases of their national cultural heritage and expectations without caring much of their national urges. So is the case of our India's national education policies. The formerly national education policies of India had drastically failed to cater to its national urges except a little in exercising the vocational practices in academic curricula.

The New Education Policy (NEP) 2020, however has evolved as an exception to the previous national policies of education in as much as the fascination of new thoughts and novel concepts redefining the national needs and urges in the light of the emerging trend of global move towards a digitized world in every respect modern life. The NEP- 2020 has envisaged policy initiatives for redefining the national goals based on its national pledge, challenges and pathways to build a future India, a dominating economy of the world and a '*Vishwa Guru*' in all respect of world governance.

With the objective in mind, the NEP 2020 has taken in to account all essential components inclusively in concise manner and underlying principles and necessary guidelines. The objective of this paper, however, is held constrained only within the 'make in India initiative'; hence, attempt has been made to limit the study within the definition.

The policy seeks to bring into action the spirit of independent India in respect of economic sovereignty and self reliance in economic products as well as services lowering the foreign import index as much as possible, also encouraging and aiding to the growth entrepreneurial behavior among the students. Following are some landmark steps of the NEP2020 towards realizing the vision of make in India initiatives.

Objectives of the Study: The study has the following objectives-

1. To examine the major features of NEP- 2020 relevant to the Make in India initiative.
2. To analyse the role of vocational education and skill development in strengthening domestic industries.



3. To explore the contribution of higher education, research, and entrepreneurship to indigenous innovation.
4. To identify the major challenges in integrating education with industrial and economic development.
5. To suggest measures for improving coordination between educational institutions, government, and industry.

Research Methodology

This article adopts a qualitative, descriptive, and analytical approach. It is based on secondary sources, including the National Education Policy 2020, official Government of India publications on Make in India, and documents relating to vocational education and skill development.

The analysis compares the objectives of education reform with the requirements of industrial development and identifies opportunities, limitations, and policy implications. As the article is based on documentary analysis rather than primary fieldwork, its findings represent a conceptual interpretation of policy alignment, not an empirical measurement of the economic impact of NEP 2020.

NEP- 2020: A New Vision for Indian Education: NEP 2020 seeks to transform India's education system by making it more inclusive, flexible, multidisciplinary, and responsive to present social and economic requirements. It replaces the National Policy on Education of 1986, as modified in 1992, and proposes reforms across school education, higher education, teacher preparation, vocational learning, and educational governance and in general to all respective domain of education.

One of its major changes is the proposed curricular and pedagogical structure of 5+3+3+4, covering children aged 3-18 years. This structure places greater emphasis on early childhood care and education, foundational literacy and numeracy, experiential learning, and age-appropriate teaching methods. The policy also seeks to reduce rigid divisions between academic and vocational subjects, arts and sciences, and curricular and extracurricular activities.

These reforms are relevant to make in India self sufficient, because industrial development increasingly depends on a combination of theoretical understanding, practical competence, problem-solving ability, communication, and technological literacy.



The policy also promotes multidisciplinary and multilateral higher education, greater institutional autonomy, flexible learning pathways, research, and the use of educational technology. Such reforms can help students acquire transferable and innovative skills and adapt to changing occupational requirements.

Significantly, NEP-2020 pays attention to equity, inclusion, Indian languages, and knowledge traditions. This approach creates opportunities to connect modern scientific and technological education with local needs, indigenous practices, and traditional crafts. Its success, however, requires educational quality and economic opportunity to be accessible across different social groups and geographical regions.

Make in India: Objectives and Significance

The Make in India initiative was introduced to strengthen India's manufacturing capabilities and encourage domestic and international investment. It promotes innovation, skill development, infrastructure development, and a business environment conducive to entrepreneurship. The initiative's original framework identified four pillars: new processes, new infrastructure, new sectors and a new mindset.

The initiative is significant for several reasons. First, a stronger manufacturing sector can generate employment and create opportunities for small and medium-sized enterprises. Second, domestic production can encourage technological learning and the development of local supply chains. Third, investment in research, design, and advanced manufacturing can improve productivity and international competitiveness.

However, industrial expansion requires more than capital and infrastructure. It also requires a workforce capable of operating machinery, developing software, conducting research, managing production, and designing innovative products. Educational institutions must therefore respond to the changing needs of industry without reducing education to narrow job training.

NEP 2020 can contribute to this objective by improving foundational learning, encouraging practical experience, expanding vocational education, and supporting research and entrepreneurship. In this sense, education becomes an enabling factor for Make in India rather than a substitute for industrial policy.

NEP 2020 as an Educational Foundation for Make in India

Skill development is one of the strongest connections between NEP 2020 and Make in India. The policy advocates integrating vocational education into mainstream schooling and higher education. It envisages exposure to vocational activities from the school level, internships, practical learning, and collaboration with industrial training institutes, polytechnics, local industries, and other organisations.



NEP- 2020 established a target that at least 50% of learners in school and higher education should have exposure to vocational education by 2025. This was a policy target, not proof that the target was achieved.

Vocational education can prepare students for employment in sectors such as electronics, textiles, food processing, automobile manufacturing, renewable energy, construction, healthcare, and information technology. It can also introduce learners to traditional crafts, repair services, agricultural technologies, and other locally relevant occupations.

For example, partnerships between technical institutions and electronics manufacturers could provide students with practical training in circuit design, equipment maintenance, and quality control. Similarly, agricultural colleges could work with food-processing enterprises to develop skills in packaging, preservation, storage, and value addition.

To realise these benefits, vocational courses must be linked to recognised qualifications, apprenticeships, and genuine employment opportunities. They should also provide pathways for further education so that students are not permanently restricted to a particular occupational track.

Higher Education, Research, and Innovation

Modern manufacturing depends on continuous innovation. Countries seeking technological competitiveness must develop capabilities in research, product design, engineering, automation, artificial intelligence, biotechnology, and materials science.

NEP 2020 emphasises multidisciplinary education and a stronger research culture in higher education. These priorities can support Make in India by encouraging universities to address practical challenges faced by domestic industries.

For instance, engineering institutions can collaborate with manufacturers to improve energy efficiency, develop affordable machinery, or design components suited to Indian conditions. Universities can also support innovation in medical devices, electric mobility, agricultural equipment, and renewable energy.

Research partnerships can enable students and faculty members to move beyond theoretical learning and participate in solving industrial problems. Technology transfer, patent development, incubation centre's, and industry-sponsored research may further strengthen the connection between academic knowledge and production.



Nevertheless, research requires sustained funding, well-equipped laboratories, trained faculty, and institutional freedom. Universities should not be evaluated exclusively by immediate commercial returns, since fundamental research and socially valuable innovations may take years to produce measurable benefits.

Entrepreneurship and Start-up Development

Make in India seeks to encourage entrepreneurship and strengthen domestic productive capacity. NEP 2020 can complement this objective by fostering creativity, independent thinking, collaboration, and problem-solving from an early age.

An education system that encourages students to identify problems and develop solutions can help nurture future entrepreneurs. Project-based learning, design activities, business simulations, innovation competitions, and interdisciplinary coursework can introduce learners to entrepreneurial thinking.

Higher education institutions can strengthen this process by providing incubation facilities, mentorship, access to laboratories, and connections with investors and local businesses. Students may develop enterprises in areas such as educational technology, agricultural processing, sustainable packaging, digital services, and low-cost engineering solutions.

Entrepreneurship education should also include financial literacy, ethical business practices, intellectual property awareness, and an understanding of market demand. Not every student will establish a start-up, but entrepreneurial competencies can help graduates become more adaptable and innovative employees.

Digital Education and Technological Self-Reliance

Digital technologies are transforming education and industrial production. NEP 2020 recognises the potential of educational technology, digital resources, and online learning to improve access and support teaching and research.

Digital learning can expand access to technical courses, simulation tools, professional training, and educational resources. Students in remote areas may benefit from online materials and virtual laboratories where adequate connectivity and institutional support are available.

Digital competence is also increasingly important in manufacturing. Computer-aided design, robotics, data analytics, industrial automation, and digital quality-control systems require workers with appropriate technological skills.



India can strengthen technological self-reliance by developing domestic expertise in software, electronics, semiconductor technologies, digital platforms, and advanced engineering. Educational institutions have a role in building this expertise through updated curricula and practical training.

Indian Knowledge Systems and Local Production

An important feature of NEP 2020 is its emphasis on Indian languages, cultural heritage, traditional knowledge, and local contexts. These priorities can support the Make in India vision by encouraging the study and improvement of indigenous skills and production practices.

Traditional textiles, handicrafts, pottery, metalwork, food preservation, herbal knowledge, and other local practices represent valuable cultural and economic resources. Educational institutions can document these practices, study their technical foundations, and explore ways to improve their productivity and market reach.

Challenges in Implementing NEP 2020 as a Make in India Enabler

First, inadequate infrastructure and funding remain concerns for institutions that lack laboratories, workshops, libraries, trained teachers, and reliable digital connectivity. Vocational education cannot be effective if students receive theoretical instruction without adequate practical experience.

Second, the gap between education and industry can reduce the employability of graduates. Rapid technological changes require curricula to be updated regularly.

Third, unequal access to quality education may prevent the benefits of reform from reaching disadvantaged communities. Rural learners, students from low-income households, persons with disabilities, and learners in geographically isolated regions may face additional barriers.

Fourth, the social perception of vocational education remains important. If vocational courses are regarded as inferior to academic programmes, students may avoid them regardless of their employment potential.

Finally, educational reform alone cannot guarantee industrial growth. Manufacturing also depends on investment, infrastructure, market access, technological capabilities, reliable supply chains, and supportive economic policies.

Suggestions for Effective Implementation



To strengthen the relationship between NEP 2020 and Make in India, the following measures are recommended:

- (i) Strengthen industry: institution partnerships: Establish structured collaborations involving universities, schools, industrial training institutes, and manufacturers for internships, apprenticeships, curriculum development, and applied research.
- (ii) Modernize vocational education: Equip institutions with relevant tools, laboratories, and workshops, and ensure that qualifications are recognised by employers and allow progression to higher education.
- (iii) Increase research investment: Support university laboratories, technology-transfer offices, interdisciplinary research, and innovation centres addressing domestic industrial and social needs.
- (iv) Promote regional innovation: Encourage institutions to develop solutions based on local resources and economic strengths, including agriculture, tourism, handicrafts, food processing, and renewable energy.
- (v) Ensure Encourage entrepreneurship: Integrate financial literacy, design thinking, business planning, intellectual property awareness, and mentorship into educational programmes.
- (vi) Establish measurable indicators: Evaluate implementation through indicators such as practical training opportunities, completion rates, employment outcomes, research collaboration, start-up development, and access across social groups.

Conclusion

The National Education Policy 2020 can be understood as an important educational foundation for the broader vision of Make in India. By promoting skill development, vocational training, innovation, research, and entrepreneurship, it seeks to prepare young Indians for the changing needs of the economy.

NEP 2020 focuses on developing India's human capital, while Make in India focuses on strengthening domestic production, manufacturing, and innovation. Their objectives are complementary, but the extent to which education translates into industrial growth depends on effective implementation, adequate resources, and the availability of employment opportunities.

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