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Skill Development in India After NEP 2020 Implementation

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Abstract: ***Skill development is one of the important aspects and plays a pivotal role for the development of a country. Skills are essential for the economic growth of a nation, so the provision of skill development in educational policy plays a significant role. India is a developing country but in India there is gap in skill development. Skill gaps are pressing and critical issue. Skills helps and improves employability. It is important to focus and advancement of skills that are relevant to the economic development of the country. However, The National Education Policy 2020 (NEP-2020) is the recent educational reform policy that came into existence after a long gap in policy reform and was implemented in the year 2020.Global market needs advanced skilled people and to fit in the dynamic world we need to develop and bring advancement in our skills. NEP-2020 aims to foster and promote global opportunities. NEP-2020 mandates the inclusion of skill education in the curriculum from primary to higher education. By addressing this research gap, the study offers insights into policy effectiveness and economically relevant skills.***

Keywords: Skill, Skill Development, NEP-2020, Economic Growth, Reform, Policy Implementation

1. Introduction

In 21st Century Skills became one of the important aspect of our life and plays a significant role to shape our society. Every skill have their own responsibility. Skills not only develop the person skills also have direct impact on our society's development. For developing society skilled persons are very needed. Skills helps nations in their economic growth. Skills bridge the gap of unemployment by generating employment. Today, five years have passed since the implementation of NEP-2020, so the reform should reflect in the system; thus, an analysis of skill development in India after NEP-2020 implementation is needed. NEP-2020 targeted 50% coverage to learners in vocational education by 2035 and mentioned experiential learning like Internships, apprenticeships, hands-on training. Despite the focus on digital India initiative the country facing shortage in skilled person. Skill development is not crucial for empowerment of an individual its important for the overall economic growth of the nation. Today, five years have passed since the implementation of NEP-2020, so the reform should reflect in the system; thus, an analysis of skill development in India after NEP-2020 implementation is needed. NEP-2020 targeted 50% coverage to learners in vocational education by 2035 and mentioned experiential learning like Internships, apprenticeships, hands-on training. By viewing the need and research gap, this study was conducted. This study will identify the direct provisions for skill development and their implementation status. This study will also identify the changes and programs in skill development in India after the implementation of NEP-2020.

Skill

Skills are ability, knowledge and expertise that are needed to carry out specific task. Individuals can develop these abilities through structured education, training, and experiences obtained in various environments like employment, volunteer roles, and personal passions. In the rapidly evolving and competitive job market of today, skills have emerged as a crucial factor that employers assess when selecting candidates for positions, and therefore, they must be a priority for educators when developing curricula. Consequently, we need to have a clear comprehension of what skills are, their significance, and the ways in which skill sets can be enhanced and refined over time.

NEP-2020-

The National Education Policy, 2020 (NEP) is the latest educational policy in India which aims for a substantial change in education by establishing "an educational framework grounded in Indian values that directly aids in the sustainable transformation of India, or Bharat, into an equitable and dynamic knowledge society, offering high-quality education to everyone, thus positioning India as a global knowledge superpower." The NEP 2020 is based on the five core principles of Access, Equity, Quality, Affordability, and Accountability.

2. Review of Related Literature

Scholarly work underscores skills as a driver of economic resilience. Maslow's hierarchy, extended to workforce contexts, positions skills as foundational for self-actualization and national productivity (McClelland, 1973). In India, pre-NEP studies highlighted gaps: the India Skills Report 2019 noted 47% youth unemployable due to poor skills (Wheebox, 2019).

UNESCO's (2020) framework advocates embedding vocational training early, as seen in Germany's dual system, which boasts 50% youth in apprenticeships. Post-NEP analyses reveal mixed progress. The Annual Status of Education Report (ASER 2023) shows a 15% rise in vocational exposure in rural schools, but urban-rural disparities persist. (Ministry of Skill Development and Entrepreneurship) MSDE's Skill India Impact Report (2024) credits NEP for scaling programs like Pradhan Mantri Kaushal Vikas Yojana (PMKVY), training 1.5 crore youth by 2025, yet only 30% placement rates.

Barriers identified include infrastructure deficits and teacher training gaps (NITI Aayog, 2023). World Bank (2024)

praises NEP's flexibility but warns of implementation hurdles in federal systems. This literature reveals a research gap: while provisions are documented, five-year outcomes remain underexplored, justifying this descriptive study.

Historical analysis identifies three major policy pillars: the NPE 1968, which emphasized national integration and the Kothari Commission's recommendations; the NPE 1986 (revised in 1992), which focused on universalizing elementary education and modernization; and the NEP 2020, which represents a shift toward a holistic, multidisciplinary, and skill-based vision. Scholars argue that while early policies succeeded in expanding access, they struggled with implementation bottlenecks and rote learning. Aithal & Aithal (2020) underscore that NEP 2020 introduces a paradigm shift by bridging the gap between academia and industry through integrated skill-based learning.

Literature focusing on vocational education highlights a historical perception of it being a "secondary" path, leading to only 5% of the workforce receiving formal training prior to 2020. Sharma (2022) examined the necessity of introducing vocational training from school levels to ensure sustainable youth employability. Lukose and Sharma (2023) evaluated the role of school-based vocational tracks in building student capacity. Recent studies, such as Vats and Malik (2024), analyze the challenges of aligning vocational streams with existing secondary frameworks, while Patil (2024) emphasizes the policy's role in aligning education with the demands of a dynamic 21st-century job market.

The rise of Digital India initiatives has prompted research into the effectiveness of platforms like DIKSHA and SWAYAM in democratizing knowledge. Joshi (2023) found that while these platforms expand reach, rural connectivity and digital literacy remain significant barriers. Kumar & Singh (2021) assessed blended learning, finding that combining traditional methods with online tools increases student retention.

Ajit Mondal (2024) reviews the internationalization of higher education, noting it as a means to enhance academic credibility and produce "global citizens". Literature highlights the imbalance between inbound and outbound student mobility, with India being a major source of students for foreign institutions while struggling to attract international learners. Bhushan (2023) and Sharma & Gupta (2022) examine the role of the National Research Foundation (NRF) in catalyzing a robust research culture and addressing the "mediocrity" often found in institutional research output.

Empirical studies and theses focus on the impact of skill development on marginalized groups and economic sectors. This includes sociological studies on women in Jorhat, the tribal population in Idukki, and the effectiveness of programs in empowering SMEs in Telangana to contribute to the national GDP. Venkateshwarlu (2021) links higher education reforms directly to economic growth, arguing that entrepreneurial training drives innovation across sectors.

A significant body of literature identifies persistent obstacles to the successful execution of NEP 2020. Bhattacharya (2021) highlights challenges in rural implementation, specifically infrastructure readiness. Kusum (2025) and Dhingra & Rani (2024) point to a "confidence gap" where students recognize the usefulness of vocational education but lack confidence in their practical skills due to insufficient hands-on exposure.

Statement of the Problem

The present study is entitled as “Skill Development in India After NEP 2020 Implementation”

Significance of the Study

India is a Developing country for developing country skilled persons is important. India, as a developing nation, relies on skilled human capital for growth. With 65% of the population under 35 (Census 2021 projections), harnessing this demographic dividend is crucial. NEP-2020's skill focus could add $1 trillion to GDP by 2030 (NITI Aayog, 2022). This study informs educators, policymakers, and stakeholders on implementation realities, aiding targeted reforms for inclusive development.

Objectives of the Study

1) To identify the changes in skill development in India after NEP-2020 implementation
2) To identify the key challenges in the implementation of Skill development programs.
3) To identify the key provisions for Skill development in NEP-2020

Delimitation of the Study

The findings of the study is delimited secondary data analysis of national-level programs and reports up to 2025, by focusing on India's wide trends post-NEP-2020. It excludes primary data, state-specific case studies, or non-educational skill initiatives.

3. Method of the Study

The present study adopt a Descriptive research approach, relying on secondary data.Data from 2020-2025 was thematically analyzed to assess provisions, changes, barriers, and outcomes, ensuring objectivity and reliability.

4. Result and Analysis

4.1 Key Provisions in NEP-2020-

1) Integration of Vocational Education

a) Early Exposure: Vocational exposure begins at the Middle Stage (Grades 6-8) where students take a "fun course" providing hands-on experience in crafts such as carpentry, electric work, metalwork, and pottery.
b) 10-Day Bagless Period: All students in Grades 6-8 will participate in a 10-day "bagless" period to intern with local vocational experts.
c) Targeted Reach: The policy aims for at least 50% of learners in the school and higher education system to have exposure to vocational education by 2035.
d) Hub and Spoke Model: To maximize resources, "skill labs" will be established in schools using a hub-and-spoke model, allowing multiple schools to share facilities.

2) Cultivating 21st-Century Skills

The policy shifts the focus from rote learning to the development of "higher-order" cognitive capacities.

a) Digital Literacy and Coding: Mathematics and computational thinking are prioritized, with coding activities introduced as early as the Middle Stage to prepare students for leadership in fields like data science.
b) Ethical and Soft Skills: Skill development extends to "life skills" such as communication, teamwork, resilience, and ethical reasoning, which are deemed essential for productive citizenship.

3) Higher Education and Professional Skilling

NEP 2020 envisions higher education institutions (HEIs) as hubs for advanced skill acquisition.

a) Multidisciplinary Approach: HEIs will offer vocational courses alongside academic degrees, including the Bachelor of Vocation (B.Voc.) and short-term certificate courses in soft skills.
b) Disruptive Technologies: Professional education will be re-envisioned to include cutting-edge areas such as 3-D machining, Artificial Intelligence (AI), and Big Data analysis to enhance youth employability.

4) Regulatory and Framework Support

To ensure quality and standardization, several new bodies and frameworks are proposed:

a) NCIVE: The National Committee for the Integration of Vocational Education (NCIVE) will oversee the integration efforts across ministries and industry.
b) NSQF and NHEQF:The National Skills Qualifications Framework (NSQF) will be further detailed to facilitate the Recognition of Prior Learning (RPL), helping dropouts re-enter the system based on their practical experience .The National Higher Education Qualification Framework (NHEQF) will be aligned with the NSQF to ease vertical mobility.
c) NETF: The National Educational Technology Forum (NETF) will be established to provide evidence-based advice on using technology to enhance skilling and assessment.

4.2 Changes in Skill Development Post-NEP-2020

Secondary data shows notable shifts. Enrollment in Vocational Education rose from 1.8% in 2020 to 12.5% by 2024 (UDISE+ 2024), driven by curriculum tweaks in 1,500+ schools. PMKVY 4.0 trained 14 million youth by 2025, with short-term courses in emerging sectors like AI, green energy, and logistics (MSDE, 2025). Apprenticeships surged 40% under NAPS, engaging 20 lakh youth (2024 data).

ASER 2023 reports 25% rural students exposed to vocational subjects, up from 5% pre-NEP. Higher education saw 30% institutions adopting NCrF for skill credits (UGC, 2025). Digital platforms like Skill Hub (launched 2022) bridged access, serving 5 crore users. Economically, skilled youth employability improved from 42% to 55% (India Skills Report 2025). These changes reflect NEP's push for relevance, aligning with Industry 4.0 demands.

Table 1: Shifts in Vocational and Skill Development (2020–2025)

Indicator / Program	Data / Change Observed	Source (Year)
Enrollment in Vocational Education	Increased from **1.8% (2020)** to **12.5% (2024)**; curriculum tweaks in 1,500+ schools	UDISE+ (2024)
PMKVY 4.0 Training	Trained **14 million youth** with short-term courses in AI, green energy, logistics	MSDE (2025)
Apprenticeships under NAPS	Surged **40%**, engaging **20 lakh youth**	NAPS (2024)
Rural Student Exposure (ASER)	**25%** exposed to vocational subjects (2023), up from **5%** pre-NEP	ASER (2023)
Higher Education (NCrF Adoption)	**30% institutions** adopted NCrF for skill credits	UGC (2025)
Digital Platforms (Skill Hub)	Launched 2022; served **5 crore users**	Skill Hub (2022–25)
Employability (India Skills Report)	Skilled youth employability improved from **42% to 55%**	India Skills Report (2025)
Policy Alignment	Reflects NEP's push for relevance, aligning with **Industry 4.0 demands**	Synthesized Analysis

4.3 Key Challenges in Implementation Skill Development Programs

1) Infrastructural and Technological Barriers

a) **Infrastructure Deficits:** A primary obstacle is the lack of equipped laboratories, modern tools, and digital learning spaces necessary for hands-on training. Approximately 60% of teachers identify insufficient infrastructure as a significant challenge to delivering quality vocational education.
b) **Digital Divide:** Despite a high rate of device access in some areas, a severe digital divide persists. Rural India reports only 4.4% computer ownership and 14.9% internet access, compared to 23.4% and 42.0% in urban areas, respectively.
c) **Device and Resource Limitations:** Many students using digital tools for skill acquisition report that their devices are outdated, have limited memory, or are incompatible with necessary learning applications.

2) Teacher Preparedness and Faculty Constraints

a) **Lack of Specialized Training:** While awareness of NEP 2020 is universal among educators, 40% of teachers have not received specific training for vocational pedagogy. This leads to a continued reliance on traditional "chalk-and-talk" methods rather than the experiential learning mandated by the policy.
b) **Staff Shortages:** Many Higher Education Institutions (HEIs) face a severe staff crunch, with central universities reporting vacancy rates of at least 35% for teaching positions.
c) **Digital Literacy Gaps:** Many in-service teachers demonstrate infrequent usage of digital devices in classrooms—sometimes as low as once or twice a month—due to a fear of technology or lack of hands-on experience.

3) Curricular and Pedagogical Challenges

a) **Outdated Curricula:** Existing vocational programs often use curricula that are non-responsive to current market demands. 93% of Indian graduates with

professional degrees are reportedly deficient in the employability skills required by the industry.

b) **The "Confidence Gap":** A significant disparity exists between the perceived usefulness of vocational education and actual skill mastery; while 88% of students find vocational courses useful, only 29% express high confidence in the practical skills they have acquired.

c) **Lack of Industry Exposure:** Practical exposure remains limited, with a "mere 40% of students" participating in internships.

d) **Language Barriers:** Approximately 42% of students encounter difficulties understanding instructions on digital devices when they are provided only in English, highlighting the need for multilingual content.

4) Socio - economic and Perception Barriers

a) **Social Stigma:** Vocational education is historically perceived as a secondary and less prestigious path compared to traditional academic streams. This leads to a perception of inferiority and limits social mobility.

b) **Lack of Awareness:** Many individuals, particularly in marginalized or rural communities, remain unaware of the available skill development opportunities provided by government schemes.

5. Conclusion

Skill development in India one of the key factor for the economic development of the country and the NEP-2020 has the potential to bring out significant changes and fostering skill development in India. NEP - 2020 has improved a lot in our education system and there are many positive impact of it. For skill development NEP-2020 has made many provisions and there impact also positive. After NEP-2020 enrollment on vocational education is increased from **1.8% (2020)** to **12.5% (2024).** From India skilled report Skilled youth employability improved from **42% to 55.** NEP-2020 introduced many schemes and many provision to improve and proomote skill education among students. Skill development is a key transformer of India's socio-economic development because India lacked in skilled people. To ensure effectiveness of this policy we must ensure availability of proper infrastructure, trained teachers, curricular changes and awareness of skill courses. Besides this we need remove the social stigma of that Vocational courses are seen as a secondary course or subject.

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