

Bridging Education and Employability: A Comparative Policy Analysis of India's Ministry of Education and Ministry of Skill Development in Advancing Human Capital for Economic Growth

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Abstract:

The suitability of alignment between skill development ecosystems and formal education systems is a crucial event in the transformation of India into a knowledge-driven economy. In this study, the comparative policy review of the Ministry of Education (MoE) and the Ministry of Skill Development and Entrepreneurship (MSDE) is being conducted with the purpose of assessing their contribution to the human capital formation and developing employability. The research is based on a qualitative approach of doctrinal and policy analysis and explores such flagship initiatives as the National Education Policy (2020), Skill India Mission, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), and National Skill Qualification Framework (NSQF). The results indicate structural fragmentation, institutional convergence of limited nature and misalignment of academic programs and labor market needs. Nevertheless, the recent changes point to the paradigm shift towards competency-based learning, digital skilling, and industry collaboration. The paper suggests a combined policy framework to overcome the education-employment gap and achieve inclusive economic growth faster.

Keywords: Human capital, Employability, Skill development, Education policy, NSQF, NEP 2020, India, Economic Growth.

1. INTRODUCTION

Sustainable economic growth is based on human capital formation, especially in the emerging economies like India. Even with great development of educational infrastructure, the paradox of increasing unemployment and lack of skilled labor remains, which is experienced in India. This disengagement points to disconnectivity between the education and employability systems. Ministry of Education (MoE) is mainly concerned with academic education and the Ministry of Skill Development and Entrepreneurship (MSDE) is more concerned with vocational training and industry preparedness. Traditionally these areas have been developed in silos and duplication, inefficiencies and sub optimal results have been witnessed in workforce development. The emergence of the National Education Policy (2020) is a step in a new direction with regards to making vocational education a part of regular school curricula. At the same time, there are MSDE programs like Skill India that aim to help to improve the capabilities of the workforce. Nevertheless, little has been done to analyze how far the policy convergence goes. This paper will give a critical analysis and comparison of these policy structures to determine their role in developing human capital and transforming the economy. Moreover, the criticality of the education-employability fit is enhanced by the fact that India is a country that is facing the demographic dividend, with a large percentage of inhabitants falling within the working-age bracket. Nevertheless, this possible gain may turn into a

demographic crisis in case the workforce will be under-supplied in terms of skills and under-utilized. The demands of the labor market are constantly changing due to the rapid technological progress, such as automation, artificial intelligence, and the digital transformation, requiring the transition of the traditional system of rote-based learning to competency-based, flexible, and life-long learning. The public policy role in this context comes in important to see that the institutional structures do not only react to the present needs in the industry, but also predict the future skills. Thus, comparative analysis of the MoE and MSDE policies is necessary to know whether India has a human capital development strategy that is flexible, inclusive, and oriented towards the changing global economic environment.

2. LITERATURE REVIEW

Debate on the relation between education and employability in India has been a major scholarly interest over the last few years especially in the realms of human capital building and economic change. Modern literature exudes a continued structural mismatch between the formal education systems and the labor market demands which lead to an ever-growing skills gap. Research has shown that even with the fast growth of higher education, employability has not been ideal because of archaic curricula, lack of industry connectivity and insufficient vocational training integration in mainstream education systems (Kumari, 2025; Unni, 2025) . This unfit is further worsened by the fact that the technological intensiveness of industries is rising, and requires specialized and versatile skills that a traditional academic model frequently does not offer.

Empirical findings in the recent past have indicated the magnitude of the employability crisis in India. According to the Economic Survey (2024–25), a very minimal percentage of graduates face employment opportunities in fields that are corresponding to their qualification as the research found that only 8.25% of the graduates got jobs that matched their educational abilities. Moreover, research has indicated that almost half of the graduates do not have any basic employability skills needed to work at entry-level roles, which are indicators of inefficiency in the education-to-employment pipeline (Vishwakarma et al., 2025) . This has been commonly referred to as education without employment whereby the greater the access to education the greater the chances that it does not translate into productive participation in the labor force hence nullifying the potential of demographic dividend in India.

The scholars have also highlighted the importance of policy frameworks in these structural gaps. The National Education Policy (NEP) 2020 is generally considered a revolutionary change that facilitates the closure of the education-employability gap by introducing the principles of multidisciplinary education, vocational engagements, and computer skills (Dutta and Sharma, 2023) . The policy aims at entrenching skill based education in the formal system that promotes flexibility, experiential learning and industry partnership. Nevertheless, according to literature, the application of NEP is not even, as institutional capacity, infrastructure, and teacher readiness are the factors that hinder its performance (Education World, 2025)). Moreover, although NEP focuses on structural changes, its opponents believe that a more profound pedagogical change and curricular alignment are necessary to gain meaningful deliverables in terms of employability .

In line with the policy of education, the studies of the programs aimed at the skill development focus on the impact of the Ministry of Skill Development and Entrepreneurship (MSDE) in increasing the workforce preparedness with the programs PMKVY and the National Skill Qualification Framework (NSQF). These programs are designed to standardize, encourage certification, and bring in participation in the industry. Nevertheless, the research shows that the skill development programs are frequently disconnected with the formal education frameworks, causing them to be more fragmented and not scalable (Skill Roadmap Report, 2025)). In addition, there are no clear routes between the academic education and the vocational qualifications, which inhibits the mobility and the lifelong learning.

The other area of important strand of literature is concerned with the notion of education-occupation mismatch and its economic consequences. Empirical evidence shows that a significant share of educated people in India do low-skilled jobs or in other unrelated jobs, which leads to low productivity and inefficiencies in wages (Bahl, 2024). This does not only have an individual level of career trajectory impact but also macroeconomic effects such as the underuse of human capital and a less fast growing economy. This is more so in the case of developing economies such as India where informal jobs are the order of the day and institutional connections between the education and labor market are poor.

In addition, current studies indicate that industry-academia and public-private collaboration and partnerships in dealing with employability challenges are important. The education-to-employment systems that have proven to be effective in the international arena involve robust integration of stakeholders, in which the employers actively engage in curriculum and training activities (Mourshed et al., 2024). In the Indian context, programs that encourage internship, apprenticeship and industry oriented programs are becoming an urgent tool to narrow the skill gap and increase workforce preparedness. Nevertheless, such initiatives are still small in scale and need to be supported by a set policy to be used more extensively.

Besides, the influence of the digital transformation and new technologies on the skills requirements redefinition are gradually accepted in literature. It is believed that the combination of artificial intelligence, data analytics, and digital platforms with the education and training systems is the key to developing workforce that will be ready to work in the future. Nevertheless, issues like the digital divide, lateral access to infrastructures and unequal access to technology still remain as a challenge to the development of inclusive skills especially in rural and semi-urban areas.

In general, the literature review demonstrates that there is a consensus on the necessity to consider the development of human capital in India in a more integrated and holistic manner. Even though the policy work on this has been done in a notable manner via NEP 2020 and Skill India programs, the inability to bridge the gap between education and skill development ecosystems is an essential impediment. The paper, thus, adds to the body of literature by offering a comparative policy insight into MoE and MSDE with the aim of analyzing organizational loopholes and offering a framework of a combination of education and employability in the dynamic environment of India.

3. RESEARCH OBJECTIVES

The current paper aims at critically analyzing the connection of education, skill building and employability within the wider context of human capital development in India. In this way, it seeks to offer a comparative and policy-based insight into the role of Ministry of Education (MoE) and Ministry of Skill Development and Entrepreneurship (MSDE).

1. The research will be conducted in a systematic way with the focus on the policy framework of the Ministry of Education and the Ministry of Skill Development and Entrepreneurship, along with flagship programs, which include the National Education Policy (2020), Skill India Mission, and the National Skill Qualification Framework (NSQF). The aim of this is to comprehend the philosophical underpinnings, structural design and strategies of implementation of these policies in developing human capital.
2. The study aims at comparatively assessing the roles and contributions of MoE and MSDE in promoting the development and employability outcomes in human capital. This entails the study of the way each ministry tackles knowledge acquisition, skill formation, and workforce readiness and the level to which they complement or differ in their approaches to national development agenda.
3. The research will aim at determining and critically evaluating the structural, institutional, and functional gaps in the alignment of education and labor market requirements. This involves an examination

of the problems like the lack of skills, the scarcity of industry-academia cooperation, the policies fragmentation, and socio-cultural obstacles that are related to vocational education of India.

4. The study will examine the extent of policy convergence/coordination of the education and skill development systems, especially amid the recent neutralization like NEP 2020, which propose the inclusion of vocational education in the primary academic learning systems. This goal determines whether the policy initiatives that are in place are adequate to establish a smooth education-employment pipeline.

5. The paper aims at introducing an integrated and holistic policy outlay towards addressing the disjuncture between education and employability based on comparative analysis, international good practices, and the local socio-economic realities of India. The recommendations are meant to help policymakers, academic institutions and industry stakeholders develop the more responsive, inclusive and future oriented human capital development system.

4. POLICY FRAMEWORK ANALYSIS

The success of developing human capital in India is heavily dependent on how institutional policy frameworks in India to control education and skill development are developed, coherent and implemented. The Ministry of Education (MoE) and the Ministry of Skill Development and Entrepreneurship (MSDE) are two crucial pillars in this ecosystem focusing on two related but different parts of workforce preparation. Whereas the MoE concentrates on formal education, knowledge development and the development of cognitive skills, the MSDE concentrates on industry preparation, vocational training and development of employability.

Nevertheless, the existence of these parallel institutional forms has been a source of fragmentation in policy implementation in the past that has created little synergy between academic learning and acquisition of skills. Convergence, in turn, has become the target of recent changes, including the skilling of education through the introduction of vocational training into regular curricula via the National Education Policy (2020) and the encouragement of competency-based models of learning via the Skill India Mission.

This part will implement a comparative policy study of major initiatives under both ministries, their aims, modes of implementation and their roles in human capital formation. The evaluation is based on a thematic framework that analyzes policy direction, beneficiaries of the policy, institutional outlook and congruence with labor market requirements. Through this it will be able to determine whether current policy frameworks are sufficient to close the education to employability gap in the changing Indian economic environment.

Table 1 : Policy Framework Analysis of MoE and MSDE in India

Dimension	Ministry of Education (MoE)	Ministry of Skill Development & Entrepreneurship (MSDE)
Policy Orientation	Academic, knowledge-driven, holistic education	Skill-based, competency-driven, employment-oriented
Flagship Policies/Programs	National Education Policy (2020), Samagra Shiksha, SWAYAM, DIKSHA	Skill India Mission, PMKVY, NSQF, Apprenticeship Programs
Core Objective	Development of intellectual, cognitive, and analytical abilities	Enhancement of employability through technical and vocational skills
Target Beneficiaries	School students, higher education learners, researchers	Youth, job seekers, informal sector workers, school dropouts
Approach to Learning	Theoretical + multidisciplinary + research-oriented	Practical + hands-on + industry-aligned training

Skill Integration	Emerging focus through NEP 2020 (vocational integration)	Primary focus on skill certification and workforce readiness
Industry Linkages	Limited but growing (internships, academia-industry collaboration)	Strong industry participation through Sector Skill Councils
Certification Framework	Degrees, diplomas, academic credits	National Skill Qualification Framework (NSQF) levels and certifications
Implementation Mechanism	Schools, colleges, universities, digital platforms	Training centers, ITIs, PPP models, industry partnerships
Digital Initiatives	SWAYAM, DIKSHA, National Digital Education Architecture	e-Skill platforms, digital skill training modules
Outcome Focus	Knowledge creation, innovation, higher education outcomes	Employment generation, job readiness, entrepreneurship
Challenges	Curriculum rigidity, limited practical exposure, employability gap	Quality of training, low awareness, fragmentation with formal education
Policy Convergence Potential	Increasing through NEP reforms	Requires stronger integration with formal education system

5. RESEARCH METHODOLOGY

To explore the suitability of education and employability in the human capital development model of India, this research will follow a qualitative, exploratory, and comparative research design. Since the study is policy-based, a doctrinal and analytical method has been utilized to critically analyze the current institutional structures in the Ministry of Education (MoE) and the Ministry of Skill Development and Entrepreneurship (MSDE). The study is interpretative and aims at comprehending the intent of policies, structural design, and the effects of implementation instead of quantifying the cause and effect.

Such a comparative design will allow carrying out a systematized analysis of the similarities and dissimilarities between the two ministries, which will allow a more profound analysis of the role, complementarities and institutional gaps of both ministries in promoting employability and economic growth.

5.1 Data Collection Sources

The study is based entirely on secondary data, ensuring a comprehensive and policy-oriented analysis. Data has been collected from multiple credible and authoritative sources to maintain academic rigor and reliability.

Primary sources include:

- Official government documents such as the *National Education Policy (2020)*, *Skill India Mission reports*, and *NSQF guidelines*
- Annual reports and policy briefs from MoE and MSDE
- Reports from national institutions such as NITI Aayog

Secondary sources include:

- Peer-reviewed journal articles (2021–2025) focusing on education policy, skill development, and employability
- Reports from international organizations such as the World Bank, International Labour Organization (ILO), and OECD
- Industry reports and employability surveys

The use of recent literature aligns with contemporary academic standards and ensures relevance to current policy debates.

5.2 Method of Analysis

The research utilizes qualitative content analysis to interpret policy documents and scholarly literature. This involves:

1. **Document Analysis** – Reviewing policy texts to identify key themes, objectives, and implementation strategies
2. **Thematic Coding** – Categorizing data into recurring themes such as employability, skill integration, and institutional coordination
3. **Comparative Evaluation** – Juxtaposing MoE and MSDE frameworks across predefined dimensions
4. **Critical Interpretation** – Assessing policy effectiveness, gaps, and implications for human capital development

This multi-layered approach ensures depth, rigor, and analytical clarity in evaluating policy frameworks.

6. Key Findings

The policy framework examination in the Ministry of Education (MoE) and the Ministry of Skill Development and Entrepreneurship (MSDE) provides important insights into the structural and functional aspects of human capital development in India. Although the two ministries are important in the development of the workforce in the country, they have both complementarities and divergences in their approaches that determine the employability outcomes.

The results show that institutional fragmentations, skills mismatch, and the absence of integration between graduate training and vocational training are persistent issues. Meanwhile, recent policy changes and especially the National Education Policy (2020) point to the gradual change toward convergence and comprehensive development of skills. The section summarizes the key findings of the research on the principal thematic levels, which gives a full picture of the gaps, opportunities, and new trends in the education-skill ecosystem in India.

Table 2: Key Findings from Comparative Policy Analysis

Thematic Area	Key Findings	Implications for Human Capital Development
Institutional Structure	MoE and MSDE operate in parallel with limited coordination	Leads to policy fragmentation and duplication of efforts
Policy Alignment	Weak integration between education and skill development frameworks	Hinders seamless transition from education to employment
Skills Mismatch	Curriculum often not aligned with industry requirements	Results in low employability of graduates
Vocational Education Status	Vocational training remains marginalized within formal education	Limits acceptance and scalability of skill-based careers
Industry Linkages	Strong in MSDE, relatively weak in MoE	Creates imbalance between theoretical knowledge and practical skills
Implementation Gaps	Variations in policy execution across regions and institutions	Reduces overall effectiveness of national initiatives
Digital Integration	Increasing use of digital platforms for education and training	Enhances accessibility but raises concerns of digital divide
Policy Convergence Trends	NEP 2020 promotes integration of vocational and academic pathways	Indicates positive shift toward holistic human capital development
Awareness and Accessibility	Limited awareness of skill development programs among youth	Restricts participation and outreach
Socio-Cultural Barriers	Social stigma associated with vocational education persists	Affects enrollment and acceptance of skill-based learning

Outcome Effectiveness	Education system produces degree holders, not job-ready professionals	Undermines productivity and economic growth potential
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7. CONCLUSION

This paper aimed at discussing the correspondence between education and employability in India by comparing the policy structures of the ministry of education (MoE) and the ministry of skill development and entrepreneurship (MSDE). The above findings indicate that both institutions though very important to the development of human capital, their initiatives are still very fragmented as they are functioning under parallel systems with very minimal institutional convergence. This fragmentation has given rise to enduring problems like lack of skills matching, poor employability of graduates and workforce preparedness inefficiencies.

As it has been highlighted in the analysis, the Ministry of Education remains focused on knowledge and theoretical-based learning, and the MSDE is focused on development of industry-based skills. Though these strategies are complementary by nature, lack of cohesive and integrated framework has impeded development of a smooth education to employment ladder. As a result, India is experiencing a paradox where the level of education has improved, but employability outcomes have not been good thus limiting the use of the demographic dividend.

Nevertheless, the research also reflects some positive dynamics, especially in the positive change in the national policy like the National Education Policy (2020), which promotes the inclusion of vocational education into the primary academic programs. The rising focus on digital learning environments, competency-based learning, and industrial partnership are signs of a slow transformation to a more holistic and futuristic model of human capital development. The developments suggest that there might be more alignment between education and skill ecosystems, assuming that the implementation issues are efficiently resolved.

Policy wise, the research points out a dire necessity of institutional coordination, curriculum change and industry-academia connections. Interoperability of the systems like credit mobility between academic and vocational system can be critical in closing the gaps that exist. Besides, it is necessary to discuss socio-cultural obstacles related to vocational education and the improvement of awareness about skill development programs to encourage inclusivity and engagement.

To sum up, the development of educational relevance to employability is not only a pedagogical issue but also a strategic necessity to the economic change in India. There is need to have a coordinated, integrated, and adaptive and integrated policy ecosystem that can tap the full potential of the human capital and position India as a globally competitive knowledge economy. A further advancement of this research in future studies can be done by including empirical evidence and stakeholders views to further confirm and refine policy interventions in this area.

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