Reimagining entrepreneurial skills for Viksit Bharat @2047

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Abstract

Entrepreneurship has emerged as a key driver of employment generation, innovation, self-reliance, and inclusive economic development in India. As the country advances towards the vision of Viksit Bharat@2047, there is a growing need to redesign the entrepreneurial skilling ecosystem in accordance with changing technological, industrial, and market requirements. The traditional framework of entrepreneurial training is increasingly becoming inadequate in the context of Artificial Intelligence, Industry 4.0, digital platforms, and rapidly evolving employment structures. In this background, the present study examines the need for reimagining entrepreneurial skills and restructuring India's skill infrastructure to create a future-ready and innovation-oriented workforce.

The study analyses the role of government initiatives, entrepreneurial training institutions, Rural Self Employment Training Institutes (RSETIs), digital learning systems, and community-based skilling models in promoting entrepreneurship and employability. It further highlights major challenges such as low employability, inadequate industry alignment, limited access to advanced digital skills, weak market linkages, and insufficient opportunities for re-skilling and up-skilling. Special emphasis has been placed on rural entrepreneurship, women participation, localised skill development, practical training, and digital marketing mechanisms.

The paper is based on secondary data collected from government reports, policy documents, journals, and institutional publications. The study concludes that India requires a flexible, technology-oriented, industry-aligned, and inclusive entrepreneurial skilling framework capable of transforming youth from job seekers into job creators in line with the developmental vision of Viksit Bharat@2047.

Keywords: Entrepreneurial skills, Skill development, Employability, Industry 4.0, Viksit Bharat@2047

Introduction

Entrepreneurship has become an important component of economic development, employment generation, innovation, and social transformation in the contemporary global economy. In developing countries like India, entrepreneurship is increasingly viewed not only as a source of self-employment but also as a mechanism for productive utilisation of human resources, regional development, technological advancement, and inclusive growth. As India moves towards the vision of becoming a developed nation under Viksit Bharat@2047, the role of entrepreneurial skills assumes greater significance in shaping a future-ready workforce capable of responding to changing economic and technological realities.

India possesses one of the largest youth populations in the world. More than 660 million people in the country belong to the age group of 15–29 years, providing a significant demographic advantage. At the same time, this demographic potential also presents a major developmental responsibility. Every year, nearly eight million youth enter the labour market in search of employment and livelihood opportunities. In such a situation, conventional employment generation alone may not be sufficient to absorb the expanding workforce. Therefore, entrepreneurship development and entrepreneurial skilling have emerged as critical policy priorities for ensuring sustainable employment generation and economic productivity.

The importance of entrepreneurial skills has increased further in the context of rapid technological transformation associated with Artificial Intelligence (AI), Industry 4.0, digital platforms, automation, data analytics, and the platform-based economy. The nature of work, production systems, marketing practices, and enterprise management has undergone substantial change during the last two decades. Traditional skill development models are gradually becoming inadequate to meet the emerging demands of modern industries and digital enterprises. In this changing environment, entrepreneurial skills are no longer confined to basic enterprise management or vocational capabilities; rather, they increasingly include digital literacy, innovation capacity, problem-solving ability, technological adaptability, financial management, communication skills, and market-oriented competencies.

Recognising the importance of entrepreneurship and skill development, the Government of India has launched several programmes and institutional initiatives in recent years. Programmes such as the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Startup India, Skill India Mission, Prime Minister's

Employment Generation Programme (PMEGP), National Apprenticeship Promotion Scheme (NAPS), and various entrepreneurship development schemes under the Ministry of Micro, Small and Medium Enterprises (MSME) have attempted to strengthen employability and enterprise development across the country. Similarly, Rural Self Employment Training Institutes (RSETIs) have played a significant role in promoting rural entrepreneurship through short-term skill training and long-term handholding support. At present, more than 600 RSETIs are functioning across India, contributing towards self-employment generation among rural youth, women, and marginalised communities.

Despite these initiatives, India's entrepreneurial skilling ecosystem continues to face several structural and operational challenges. The present framework of skill development often suffers from limited industry alignment, inadequate practical exposure, weak market linkage, shortage of advanced digital skills, low participation of women and vulnerable groups, and insufficient opportunities for re-skilling and up-skilling. According to available estimates, only around 4.7 per cent of India's workforce has received formal skill training, whereas the corresponding figures are significantly higher in countries such as Germany and South Korea. This gap reflects the urgent need for restructuring India's skill infrastructure in line with emerging industrial and technological requirements.

Another important challenge relates to the mismatch between educational qualifications and employability. A large section of educated youth continues to face difficulties in securing productive employment due to the absence of industry-oriented skills and entrepreneurial competencies. Simultaneously, industries are increasingly reporting shortages of skilled manpower in sectors such as information technology, digital services, engineering, manufacturing, renewable energy, logistics, healthcare, and artificial intelligence. This situation highlights the need for a more integrated and demand-driven approach towards entrepreneurial skill development.

The concept of "Reimagining Entrepreneurial Skills" therefore becomes highly relevant in the present context. It suggests a shift from conventional training-oriented approaches towards a more flexible, technology-enabled, innovation-driven, and market-oriented entrepreneurial ecosystem. Such an approach requires stronger collaboration among educational institutions, industries, financial institutions, local communities, digital platforms, and government agencies. It also demands greater emphasis on practical learning, digital entrepreneurship, incubation support, mentoring systems, cluster-based development, and localised skilling strategies.

Special attention is also required for promoting inclusive entrepreneurship among women, rural youth, tribal communities, differently abled individuals, and economically weaker sections of society. Community-based training models, digital marketing mechanisms, local enterprise clusters, and decentralised skilling centres can play an important role in improving accessibility and participation in entrepreneurial development programmes. In addition, the growing importance of e-commerce, social media marketing, online service delivery, and digital financial systems has created new opportunities for small entrepreneurs and self-employed youth in both rural and urban areas.

In the broader context of Viksit Bharat@2047, entrepreneurial skills must be viewed not merely as employability tools but as instruments of economic transformation, innovation, self-reliance, and social development. India's aspiration to become a developed economy will depend significantly upon its ability to create a skilled, productive, adaptable, and entrepreneurial workforce capable of generating employment opportunities rather than depending entirely on formal jobs. Therefore, there is an urgent need to redesign the entrepreneurial skilling ecosystem in a manner that aligns with future industrial demands, technological advancement, and the developmental aspirations of Young India.

Objectives of the study

The present study aims to examine the importance of entrepreneurial skills in achieving the vision of Viksit Bharat@2047 and to analyse the changing nature of India's entrepreneurial skilling ecosystem in the era of digital transformation and Industry 4.0. The study also focuses on identifying the major challenges related to employability, industry-oriented training, technological adaptation, and skill infrastructure in India. In addition, the research attempts to suggest suitable measures for strengthening entrepreneurial skills and promoting innovation-driven, inclusive, and employment-oriented development.

The specific objectives of the study are as follows:

- To analyse the role of entrepreneurial skills in employment generation and inclusive economic development in India.
- To examine the challenges and gaps in the existing entrepreneurial skilling ecosystem in the context of digitalisation and Industry 4.0.
- To suggest policy measures for reshaping entrepreneurial skills and skill infrastructure in line with the vision of Viksit Bharat@2047.

Research methodology

The study is primarily based on secondary data and adopts a descriptive and analytical research approach. Relevant information has been collected from government reports, policy documents, research journals, Yojana publications, Ministry reports, NSDC reports, and publications of national and international institutions. The collected data have been analysed to examine recent trends, challenges, and policy initiatives related to entrepreneurial skilling, employability, and digital transformation in India.

Literature review

Entrepreneurship and skill development have received considerable attention in recent academic and policy discussions related to employment generation and economic development in India. Agrawal (2013) [1] observed that vocational education and entrepreneurial training play an important role in improving employability and labour productivity in developing economies. Pradhan (2018) [12] highlighted that entrepreneurship contributes significantly to economic transformation by promoting innovation, self-employment, and regional development. Similarly, Singh

(2020) [15] emphasised the importance of rural entrepreneurship and pointed out that inadequate access to modern training, finance, and markets remains a major challenge for small entrepreneurs in India.

Recent studies have also focused on the growing significance of digital skills and Industry 4.0 in reshaping the entrepreneurial ecosystem. Sharma and Sharma (2021) [14] noted that digital skilling and technology-oriented training are becoming essential for youth employability in the modern labour market. Reports of NITI Aayog (2021) [10] and NSDC (2022) further highlighted the expansion of gig economy, platform-based employment, and AI-driven industries, which require continuous up-skilling and entrepreneurial adaptability.

The existing literature indicates that while India has launched several skill development and entrepreneurship programmes, there remains a need for industry-aligned, technology-driven, and inclusive entrepreneurial skilling frameworks capable of supporting the vision of Viksit Bharat@2047.

Skilling for Viksit Bharat @2047: reshaping the skill infrastructure

India's vision of becoming a developed nation under Viksit Bharat@2047 depends significantly upon the strength of its human capital and skill infrastructure. With one of the world's largest youth populations, India possesses a major demographic advantage that can contribute towards economic growth, innovation, and global competitiveness. However, the rapidly changing technological and industrial environment requires a substantial transformation in the existing skilling ecosystem.

The emergence of Artificial Intelligence, Industry 4.0, digital platforms, automation, robotics, and data-driven economies has altered the nature of employment and enterprise development. In this context, traditional skill development approaches based mainly on theoretical learning and short-term training programmes are becoming inadequate. There is a growing need for industry-oriented, technology-driven, and practical skill development systems capable of preparing youth for emerging economic opportunities.

Government initiatives such as Skill India Mission, PMKVY, Startup India, and National Apprenticeship Promotion Scheme have contributed towards strengthening employability and entrepreneurship. Nevertheless, challenges such as low formal skill training, limited digital competencies, inadequate industry linkage, and weak employability continue to affect the overall effectiveness of the skilling ecosystem.

Therefore, India requires a flexible, inclusive, and future-oriented skill infrastructure focused on digital literacy, innovation, entrepreneurship, practical exposure, and continuous re-skilling. Strengthening collaboration among industries, educational institutions, training centres, and local communities will play an important role in creating a productive and future-ready workforce capable of contributing towards the vision of Viksit Bharat@2047.

Entrepreneurial and skilling ecosystem

India's entrepreneurial and skilling ecosystem has undergone substantial transformation during the last decade due to policy interventions, digital expansion, and increasing emphasis on self-employment and innovation-driven growth. Government initiatives such as PMKVY, Startup India, NAPS, and RSETIs have contributed significantly towards improving employability and entrepreneurial participation, particularly among youth and rural populations.

One of the important indicators of India's demographic and labour potential is the Employment Population Ratio (EPR). India's EPR in 2023 stood at 53.4 per cent, which is approaching levels observed in several developed economies. However, sectoral distribution of workforce still reflects heavy concentration of low-skilled labour in agriculture and construction sectors.

Table 1: Employment Population Ratio (EPR), 2023

Country	EPR (%)
India	53.4
United States	60.3
United Kingdom	59.7
Germany	59.6

The educational composition of the workforce further reflects the need for stronger entrepreneurial and technical skilling. A large proportion of workers with education up to primary and middle-school level continue to remain concentrated in labour-intensive sectors.

Table 2: Workforce Distribution by Educational Level

Sector	Workforce with education up to primary/middle school (%)
Agriculture	76.7
Trade, Hotels & Restaurants	44.2
Construction	76.1

India's labour market has also expanded significantly in recent years. Between 2017–18 and 2023–24, nearly 15 crore workers were added to the workforce, indicating an average annual increase of approximately 2.5 crore workers. This highlights the growing need for entrepreneurial opportunities and skill-oriented employment generation.

Table 3: Trends in India's labour market

Indicator	Value
Total Workers Added (2017–18 to 2023–24)	15 Crores
Average Annual Addition of Workers	2.5 Crores

At the same time, employability remains a major concern despite increasing educational participation. Reports indicate that overall employability among youth stands at around 54.8 per cent, while nearly 63 per cent of Indian companies report talent shortages in sectors such as IT, engineering services, and sales.

Table 4: Employability and skill gap indicators

Indicator	Value
Youth employability rate	54.8%
Companies reporting talent shortage	63%
Major skill shortage areas	IT, Engineering Services, Sales

The demand for entrepreneurial and digital skills is increasing rapidly in emerging sectors such as Artificial Intelligence, robotics, cybersecurity, renewable energy, logistics, defence production, healthcare, and platform-based services. This changing economic environment highlights the urgent need for re-skilling, up-skilling, digital entrepreneurship training, and industry-oriented entrepreneurial education.

The analysis indicates that India possesses strong demographic and entrepreneurial potential; however, the existing skill ecosystem requires restructuring to improve employability, technological adaptability, innovation capacity, and market-oriented entrepreneurial competencies in line with the vision of Viksit Bharat@2047.

Entrepreneurial Skilling and Employment Trends in India (2014–2024)

India's entrepreneurial and skilling ecosystem has expanded considerably during the last decade due to increasing policy focus on employability, digitalisation, self-employment, startup development, and Industry 4.0-oriented skills. Programmes such as Skill India Mission, PMKVY, Startup India, PMEGP, and RSETIs have contributed towards improving entrepreneurial participation and workforce preparedness. At the same time, rapid technological transformation has increased the demand for digital, technical, and innovation-oriented entrepreneurial skills across sectors.

The following table presents selected indicators related to entrepreneurial skilling, startup growth, employability, and workforce expansion during the period 2014–2024.

Table 5: Entrepreneurial skilling and employment trends in India (2014–2024)

Year	Major development / Indicator	Estimated data / Progress
2014	Expansion of entrepreneurship and MSME promotion initiatives	Startup ecosystem at early growth stage
2015	Launch of Skill India Mission and PMKVY	Large-scale national skilling initiative introduced
2016	Startup India initiative launched	Rise in startup registrations and innovation support
2017	Digital entrepreneurship and online platforms expanded	Growth in e-commerce and platform-based work
2018	Increasing focus on Industry 4.0 skills	AI, robotics, and automation training initiatives expanded
2019	Growth in self-employment and startup ecosystem	More than 50,000 recognised startups
2020	COVID-19 accelerated digital skill demand	Sharp rise in online learning and digital enterprises
2021	Skill Impact Bond and digital skilling initiatives strengthened	Focus on women and marginalised youth
2022	Expansion of gig and platform economy	Rapid increase in flexible and digital employment
2023	Youth employability reached around 54.8%	Rising demand for AI and digital skills
2024	Workforce expansion and advanced skilling focus	Approximately 15 crore workers added since 2017–18

***Source*:** From the Reports of MSDE, NSDC, PLFS, Economic Survey, and NITI Aayog

Analysis

The data indicate that India's entrepreneurial skilling ecosystem has undergone substantial transformation during the last decade. The launch of the Skill India Mission and PMKVY in 2015 marked a major shift towards structured national-level skill development. Subsequently, initiatives such as Startup India and digital entrepreneurship programmes encouraged innovation, self-employment, and startup culture among youth. From 2017 onwards, the rapid expansion of digital platforms, e-commerce, and platform-based employment significantly changed the nature of entrepreneurial opportunities. The increasing adoption of Artificial Intelligence, automation, robotics, and data-driven technologies further increased the demand for advanced technical and entrepreneurial skills.

The COVID-19 pandemic accelerated digital transformation across sectors and highlighted the importance of digital entrepreneurship, remote work, and online business models. During this period, online skilling platforms, digital marketing, and technology-based enterprises expanded rapidly. t the same time, the data also reveal continuing challenges related to employability, skill gaps, and industry alignment. Although employability among youth has improved gradually, industries continue to report shortages of skilled manpower in emerging sectors such as AI, cybersecurity, engineering services, renewable energy, logistics, and healthcare. This indicates the need for continuous re-skilling, up-skilling, and restructuring of India's entrepreneurial skill infrastructure in line with the vision of Viksit Bharat@2047.

Findings

The study finds that entrepreneurial skills have emerged as an important factor in promoting employment generation, self-reliance, innovation, and inclusive economic development in India. During the last decade, government initiatives such as Skill India Mission, PMKVY, Startup India, PMEGP, and RSETIs have significantly strengthened the entrepreneurial and skilling ecosystem, particularly among youth and rural populations. The expansion of digital platforms, e-commerce, and startup culture has further increased opportunities for self-employment and technology-driven enterprises.

The analysis also reveals that India possesses a strong demographic advantage with a rapidly expanding workforce; however, the existing skill infrastructure is still inadequate to meet the changing industrial and technological demands of Industry 4.0. Low employability, limited industry-oriented training, insufficient digital skills, and weak market linkage continue to remain major challenges within the entrepreneurial ecosystem. The study further observes that participation of women, marginalised communities, and rural youth in advanced entrepreneurial training programmes remains comparatively low due to accessibility and socio-economic constraints.

Another important finding is that the growing demand for Artificial Intelligence, digital marketing, platform-based employment, and innovation-driven enterprises requires continuous re-skilling and up-skilling. Therefore, the study

concludes that India needs a flexible, technology-oriented, practical, and industry-aligned entrepreneurial skilling framework to achieve the broader developmental vision of Viksit Bharat@2047.

Suggestions

India's entrepreneurial skilling ecosystem requires comprehensive restructuring to align with the changing demands of Industry 4.0, digital economy, and innovation-driven development. Greater emphasis should be placed on industry-oriented, practical, and technology-based training rather than conventional theoretical approaches. Skill development programmes must incorporate digital literacy, Artificial Intelligence, financial management, e-commerce, and digital marketing as essential components of entrepreneurial education.

There is also a need to strengthen collaboration among industries, educational institutions, financial agencies, and training centres to improve employability and enterprise development. Community-based and localised skilling models should be promoted to increase participation of rural youth, women, and marginalised communities. Further, continuous re-skilling and up-skilling opportunities must be provided to address rapidly changing technological requirements.

Government initiatives should focus on improving market linkage, mentorship support, startup incubation, and digital infrastructure for small entrepreneurs. A flexible, inclusive, and demand-driven entrepreneurial skilling framework will play a significant role in achieving the vision of Viksit Bharat@2047.

Conclusion

Entrepreneurial skills have become increasingly important for achieving sustainable economic growth, employment generation, innovation, and self-reliance in India. In the context of Viksit Bharat@2047, the traditional framework of entrepreneurial training is no longer sufficient to meet the demands of a rapidly changing technological and industrial environment. The study highlights that digital transformation, Industry 4.0, Artificial Intelligence, and platform-based economies have significantly altered the nature of entrepreneurship and employability.

Although several government initiatives have strengthened the skilling ecosystem during the last decade, challenges such as low employability, inadequate industry alignment, limited digital competencies, and weak market linkage continue to persist. The study concludes that India requires a flexible, inclusive, technology-oriented, and industry-driven entrepreneurial skilling framework capable of transforming youth from job seekers into job creators. Strengthening entrepreneurial education, practical training, digital skills, and innovation-oriented learning will play a vital role in realising the vision of Viksit Bharat@2047.

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