

# From Gurukul to Gig Economy: The Evolution of Skills in India

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**Abstract:** *Skill development has been an integral part of India's socio - economic fabric since ancient times, evolving from the traditional Gurukul system and apprenticeship models to the modern - day focus on technical and vocational training. This paper traces the historical trajectory of skill development in India, highlighting the legacy of ancient craftsmanship, the impact of colonial rule, and the post - independence efforts to build a skilled workforce. It examines the importance of skill development in contemporary India, emphasizing its crucial role in harnessing the demographic dividend, driving economic growth, and promoting social inclusion. The paper discusses the significance of skills in the current era of rapid technological advancements and globalization, where a continuously evolving skill set is essential for employability and competitiveness. It also explores various government initiatives and schemes, such as the Skill India Mission, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), and others, aimed at equipping individuals with market - relevant skills. Furthermore, the abstract acknowledges the contributions of scholars and visionaries who have championed skill development in India. The paper concludes by emphasizing the need for a holistic and integrated approach to skill development, involving collaboration between government, industry, and educational institutions, to ensure India's continued progress and prosperity in the 21st century and beyond.*

**Keywords:** skill, ancient, modern, development, technology, employment, relevance, transaction

## 1. Introduction

Skill development has always been a cornerstone of human progress, driving innovation, economic growth, and societal transformation. From ancient civilizations that laid the foundation for modern societies to the contemporary era, where technological advancements continuously redefine industries, the value of skill development remains unparalleled.

On a global scale, the Great Pyramids of Egypt and the Colosseum in Rome stand as enduring testaments to the exceptional skills of ancient civilizations. Built with sophisticated techniques and expertise around 2580–2560 BCE and 80 CE respectively, these monumental structures have stood the test of time. Similarly, India's ancient skills were honed through the Gurukul system, where education extended beyond academics to include practical training in various crafts, arts, and trades. This holistic approach ensured that individuals were not only proficient in their trades but also possessed strong ethical values and a deep understanding of their roles in society.

In India, where skill has been an intrinsic part of its cultural and historical heritage, the focus on skill development has become even more critical in addressing contemporary issues such as unemployment and economic inequality. The fast - paced global economy demands a skilled workforce, and the vast and diverse population of India presents immense potential for growth. Equipping individuals with relevant skills is fundamental for achieving sustainable development, fostering innovation, and driving socio - economic transformation.

As societies evolved and technological innovations emerged, the nature of skill development transformed significantly. The Industrial Revolution marked a pivotal shift, necessitating new skills and leading to the establishment of formal technical and vocational education systems. In India, this

transformation was exemplified by the creation of institutions like the Indian Institutes of Technology (IITs) in the mid - 20th century, which played a crucial role in fostering a skilled and innovative workforce capable of contributing to global advancements.

Technological advancements, automation, and globalization have significantly altered the landscape of work, necessitating continuous learning and adaptability. In this context, skill development becomes a vital component in ensuring economic growth and social stability. India has responded to these changes with initiatives such as the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and the Skill India Mission, aimed at bridging the skill gap by providing individuals with the competencies needed for the modern workforce. These programs underscore the government's dedication to creating an employable and skilled population, essential for the nation's progress and competitive edge on the global stage.

As India strives for a brighter and more inclusive future, the focus on skill development remains a crucial driver of progress and prosperity. By nurturing a skilled workforce, India can harness the potential of its population, fostering innovation, entrepreneurship, and sustainable development. This ongoing commitment to skill development reflects the nation's enduring dedication to nurturing talent and building a robust, skilled workforce capable of propelling the country towards greater heights.

The journey from ancient traditions to modern initiatives highlights the enduring significance of skill development in shaping the future and addressing contemporary challenges. This article delves into the rich history of skill development in India, its current initiatives, and future prospects, showcasing the nation's unwavering dedication to nurturing talent and building a robust, skilled workforce that can propel the nation towards greater heights.

**Ancient India: A Legacy of Skill Mastery**

Today, technological progress continues to reshape industries, making the need for skill development more crucial than ever. In India, where skill has been deeply embedded in its cultural and historical fabric, this focus has become essential in addressing contemporary challenges such as unemployment and economic disparity. Equipping individuals with relevant skills is vital for sustainable growth, fostering innovation, and achieving socio - economic transformation. Throughout history, the emphasis on skill mastery has shaped civilizations, laying the groundwork for modern advancements.

The ethos of skill development can be traced back to the ancient Gurukul system, where it epitomized the holistic approach to education and skill development. The Gurukul system, central to this tradition, served as residential schools where students acquired a holistic education through hands - on experiences and mentorship. With their teachers they learned a wide range of skills, from agriculture and metallurgy to medicine and philosophy. These institutions emphasized not only academic learning but also practical skills in various crafts, arts, and trades. The comprehensive approach extended beyond technical proficiency to encompass character building, ethical conduct, and a deep understanding of their roles in society. This tradition of imparting skills laid the foundation for a skilled workforce and contributed to India's rich heritage of craftsmanship, science, and art.

One of the most notable examples of skill development in ancient India is the Sushruta Samhita, a significant treatise on surgery written by Sushruta around 600 BCE. This text not only highlights the advanced surgical skills and medical knowledge of that era but also details over 300 surgical procedures and 120 surgical instruments. Sushruta is often referred to as the "Father of Surgery, " and his work laid the foundation for medical practices that are still relevant today. Other prominent figures in ancient Indian medicine include Charaka, known as the "Father of Medicine, " who authored the Charaka Samhita, a comprehensive text on internal medicine, and Vagbhata, known for his work Ashtanga Hridayam.

Similarly, the construction of the iconic Iron Pillar of Delhi, dating back to the Gupta period (around 400 CE), exemplifies the metallurgical skills and engineering prowess of ancient Indian craftsmen. The pillar, made of wrought iron, stands over 7 meters tall and has withstood corrosion for over 1, 600 years. The iron used in the pillar contains a high phosphorus content, which forms a protective layer of iron (III) hydrogen phosphate hydrate, preventing rusting. This remarkable preservation has puzzled scientists and showcases the advanced metallurgical techniques of the time.

The art of Ayurveda, an ancient system of medicine, is another testament to the advanced medical knowledge and skills developed in India. Ayurveda focuses on balancing the body, mind, and spirit to promote overall health and well - being. Ancient Ayurvedic texts detail various surgical procedures, herbal treatments, and lifestyle practices that continue to influence modern medicine. Prominent figures in Ayurveda include Charaka, who authored the Charaka Samhita, and

Sushruta, who wrote the Sushruta Samhita. Their works have laid the foundation for Ayurveda and continue to be studied and respected today.

Mathematicians and astronomers in ancient India made groundbreaking discoveries that have had a lasting impact on the world. Scholars like Aryabhata and Brahmagupta developed sophisticated mathematical concepts, including the concept of zero, the decimal system, and algebra. Aryabhata's work in astronomy, including accurate calculations of the Earth's circumference and the periods of the planets, showcases the advanced scientific knowledge of the time. Varahamihira, another prominent astronomer and mathematician, made significant contributions to trigonometry and astrology. His work, the Brihat Samhita, is an encyclopedic treatise on astronomy, astrology, and various other subjects.

Philosophers and spiritual leaders also contributed significantly to the rich tapestry of skill mastery in ancient India. Chanakya, who wrote the Arthashastra, provided insights into political strategy, economics, and governance, laying the groundwork for administrative practices that are still studied today. Spiritual leaders like Gautama Buddha explored profound truths about human existence, ethics, and spiritual development, teachings that continue to inspire millions around the world. Adi Shankaracharya, a key figure in the consolidation of the doctrine of Advaita Vedanta, also played a crucial role in shaping Indian philosophical thought. His works, such as the Brahma Sutras and commentaries on the Upanishads, have had a lasting impact on Indian spirituality and philosophy.

The legacy of skill mastery in ancient India is a testament to the nation's rich cultural heritage and its enduring commitment to knowledge and excellence. The skills honed in ancient times laid the foundation for innovations and advancements that have propelled human civilization forward. This timeless tradition of skill development remains a cornerstone of India's cultural identity and continues to inspire contemporary efforts to foster a skilled and capable society.

By nurturing a skilled workforce, India can harness the potential of its population, fostering innovation, entrepreneurship, and sustainable development. The journey from ancient traditions to modern initiatives highlights the enduring significance of skill development in shaping the future and addressing contemporary challenges. As the nation strives for a brighter and more inclusive future, the focus on skill development remains a key driver of progress and prosperity. This article delves into the rich history of skill development in India, its current initiatives, and future prospects, showcasing the nation's unwavering dedication to nurturing talent and building a robust, skilled workforce that can propel the nation towards greater heights.

**Modern India: Adapting to a Changing World**

Over the last five years, India has undergone a transformative journey to adapt to the rapidly evolving global landscape, especially in the realm of skill development. As the nation strides towards progress, it faces a slew of new challenges and

opportunities that demand innovative approaches and proactive government initiatives.

### ***The Critical Role of Skilled Manpower***

India's development trajectory is intrinsically linked to the capabilities of its people. As one of the world's fastest - growing economies, the country's socio - economic progress hinges on its diverse and vast population. Boasting the largest pool of scientists, engineers, and doctors globally, India has the potential to rise to the forefront of developed nations. More than 50% of its population is under the age of 25, making the skill development of this young demographic crucial for national growth. Reskilling and upskilling not only fuel economic development but also ensure the sustainability of the economy.

The United Nations' 2015 summit on 'Transforming our World: the 2030 Agenda for Sustainable Development' emphasized 17 Sustainable Development Goals (SDGs), highlighting the importance of skill development for achieving sustained economic growth and decent work for all. The SDGs report 2018 pointed out that 42% of the global population is young, with a youth unemployment rate of 13%. Effective skill development can significantly reduce this rate. In India, the unemployment rate, as reported by the Centre for Monitoring Indian Economy (CMIE), stood at 6.32% in 2018, exceeding the global rate of 5.6%. This scenario underscores the need for accelerated skill development through public - private partnerships (PPP).

### ***Technological Advancements***

The technological revolution has catalyzed the demand for new skill sets in areas such as artificial intelligence (AI), data science, and cybersecurity. With the global AI market expected to reach \$1.81 trillion by 2030, the demand for skilled professionals in this field is surging. In response, the Indian government introduced over 400 new courses focusing on AI, 5G technology, cybersecurity, green hydrogen, and drone technology. Launched in 2023, the Pradhan Mantri Kaushal Vikas Yojana 4.0 (PMKVY 4.0) aims to provide industry - aligned training and real - world exposure through on - the - job training (OJT), ensuring that India's workforce is prepared for the future by focusing on emerging technologies.

### ***Enhancing Employability***

Focusing on employability, the Indian government has shifted its strategy towards equipping individuals with skills that directly align with job market requirements. From 2024 to 2025, the national employability rate improved from 51.25% to 54.81%, reflecting significant progress. The Prime Minister's Internship Scheme 2024 was initiated to provide extensive internship opportunities to one crore youth over the next five years. This scheme offers 12 - month internships in India's top 500 companies, enabling young individuals to gain practical experience and bridge the gap between academic learning and industry demands.

### ***Comprehensive Government Initiatives***

The Indian government has launched numerous programs to bolster skill development, including vocational training centres, apprenticeship programs, and initiatives to bridge the gap between academia and industry. The Skill India

Programme (SIP), extended and restructured until 2026, is central to these efforts. Under SIP, the Pradhan Mantri Kaushal Vikas Yojana 4.0, the Pradhan Mantri National Apprenticeship Promotion Scheme (PM - NAPS), and the Jan Shikshan Sansthan (JSS) Scheme provide structured skill development, on - the - job training, and community - based learning.

Micro - credential and National Occupational Standards (NoS) - based courses, ranging from 7.5 to 30 hours, focus on emerging technologies and future skills. Skill Hubs have also been established across premier academic institutions, including IITs, NITs, and Jawahar Navodaya Vidyalayas (JNVs), to optimize infrastructure use and expand access to quality training. These hubs facilitate collaboration between academia and industry, creating a seamless ecosystem for skill development.

### ***Policy Frameworks and Digital Initiatives***

Analytically, India's vast human resource base is undergoing a significant transformation. The National Skill Development Policy (NSDP), which aims to enhance skills at different levels across the nation, encompasses formal, non - formal, and informal learning, covering academics, vocational education, training, and skilling. The National Skills Qualifications Framework (NSQF), launched in 2013, standardizes skill training and aligns it with industry requirements, recognizing prior learning and certifying skills to facilitate suitable employment.

The Skill India Mission (SIM), launched in 2015, aims to train millions of people in industry - relevant skills through collaborations between industries and academic institutions to ensure curricula reflect current industry demands. The Jan Shikshan Sansthan (JSS) targets marginalized groups, offering community - based skill training to promote self - employment and local entrepreneurship with flexible training opportunities.

The Skill India Digital Hub (SIDH), launched in September 2023, offers upskilling, reskilling, and lifelong learning opportunities. It provides relevant skill courses, certification, jobs, and apprenticeships across sectors like IT, digital marketing, coding, and AI. As of June 2024, around 88 lakh candidates have registered on the platform, with 9.59 lakh mobile app downloads and 7.63 lakh enrolments for online courses. This platform leverages digital tools to create a dynamic and adaptable workforce.

### ***Financial Support for Skill Development***

Recognizing the importance of skill development in driving economic growth, the Union Cabinet has approved an allocation of ₹8, 800 crore to advance these initiatives. This funding is earmarked for various programs under the Skill India Mission, including the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), the Jan Shikshan Sansthan (JSS), and the establishment of Skill Hubs. The allocated funds aim to create a comprehensive skill development ecosystem that addresses the needs of different sectors and demographics. Additionally, a significant portion of the funding is dedicated to digital initiatives like the Skill India Digital Hub (SIDH), which focuses on providing online courses and certifications. By investing in these initiatives, the government aims to enhance



the employability of the Indian workforce, foster entrepreneurship, and ensure that the country remains competitive in the global market.

### **Skill Development: The Cornerstone of India's Future**

India stands at a critical juncture. With a burgeoning youth population, the nation holds immense potential for economic and social transformation. However, this demographic dividend can only be realized if these young minds are equipped with the right skills. Skill development is not merely a policy buzzword; it's the very cornerstone upon which India's future prosperity rests. Without a concerted effort to cultivate a skilled workforce, the nation risks squandering its potential and facing significant challenges.

The most pressing of these challenges is unemployment. While India boasts a large pool of young people, a significant portion lacks the skills necessary to secure meaningful employment. This translates to lost productivity, stifled innovation, and a potential breeding ground for social unrest. Unemployed youth represent not just individual hardship but a massive drain on the nation's economic engine. Skill development programs can bridge the gap between education and employment, equipping individuals with the practical skills demanded by industries, thus boosting employability and curbing unemployment.

Beyond addressing unemployment, skill development is the key to unlocking robust economic growth. A skilled workforce fuels innovation, drives productivity, and enhances India's competitiveness in the global marketplace. In an increasingly interconnected world, nations with highly skilled workers hold a distinct advantage. They attract foreign investment, drive technological advancements, and expand their share of the global economy. By investing strategically in skill development, India can transform its manufacturing sector, bolster its service industries, and emerge as a global hub for innovation and technological prowess.

The impact of skill development extends beyond economics; it plays a crucial role in social empowerment. Skills provide individuals with the means to achieve financial independence, break the cycle of poverty, and contribute meaningfully to their communities. Acquiring new skills fosters self-confidence and empowers individuals to take control of their lives. Moreover, targeted skill development initiatives can uplift marginalized communities, including women and rural populations, promoting social inclusion and reducing inequalities. When individuals are empowered, they become active participants in society, contributing to positive change and building a more equitable nation.

Realizing the transformative potential of skill development requires a multi-faceted approach. Sustained government investment in programs like Skill India, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), and Jan Shikshan Sansthan (JSS) is essential. Crucially, these efforts must be coupled with strong industry partnerships. Collaboration with businesses is vital to identify existing skill gaps and develop training programs tailored to specific industry needs. Furthermore, a strong emphasis on quality assurance is paramount. Skill development programs must meet rigorous standards and lead to recognized certifications, ensuring that

individuals acquire valuable and transferable skills. Finally, fostering a culture of lifelong learning is crucial. In a rapidly evolving world, individuals must be encouraged to continuously upskill and adapt to changing industry demands.

Skill development is not a quick fix; it's a long-term investment in India's future. By prioritizing skill development, the nation can harness its demographic dividend, accelerate economic growth, and build a more inclusive and prosperous society for all its citizens. It's not just about creating jobs; it's about empowering individuals, strengthening communities, and building a stronger, more resilient India.

## **2. Conclusion**

From the intricate craftsmanship of ancient artisans to the cutting-edge technological advancements of today, India has a rich history of skill mastery. This legacy, woven through centuries of innovation and adaptation, serves as a powerful reminder of the enduring importance of skill development. As we've explored, ancient India's emphasis on specialized skills laid the foundation for its economic and cultural flourishing. Modern India, facing a rapidly changing world, must now build upon this foundation, adapting its approach to skill development to meet the demands of a dynamic global landscape. The challenges are significant, but so too is the potential.

We've seen how skill development is not just a solution to unemployment or a driver of economic growth; it's the cornerstone of India's future. It empowers individuals, strengthens communities, and fuels the nation's progress. By bridging the gap between education and employment, skill development unlocks the potential of India's demographic dividend and paves the way for a more prosperous and equitable society. However, this transformation requires more than just policy pronouncements. It demands a concerted effort from all stakeholders – government, industry, educational institutions, and individuals themselves.

The journey ahead requires a multi-pronged approach. We must invest in high-quality training programs, foster stronger industry partnerships, and promote a culture of lifelong learning. We must also ensure that skill development initiatives reach all segments of society, particularly marginalized communities, empowering them to participate fully in India's growth story. This is not merely an economic imperative; it's a social and moral one.

In conclusion, skill development is not a passing trend; it's a timeless endeavor. It's an investment in our people, our economy, and our future. By embracing skill development as a national priority, India can not only address its present challenges but also unlock its immense potential, reclaiming its position as a global leader in innovation, productivity, and inclusive growth. The legacy of skill mastery is ours to inherit; the future of skill development is ours to shape. Let us rise to the challenge and build a brighter tomorrow for India, one skilled individual at a time.

## References

- [1] History of education in the Indian subcontinent [https://en.wikipedia.org/wiki/History\\_of\\_education\\_in\\_the\\_Indian\\_subcontinent](https://en.wikipedia.org/wiki/History_of_education_in_the_Indian_subcontinent)
- [2] Gurukul Education System in Ancient India <https://www.vidhyanjaliacademy.com/gurukul-education-system-in-ancient-india/#:~:text=Subjects%20taught%20in%20Gurukuls%20included,skills%20relevant%20to%20that%20era.>
- [3] Reviving Ancient Wisdom: The Bharatiya Concept of Education [https://www.researchgate.net/publication/383952934\\_Reviving\\_Ancient\\_Wisdom\\_The\\_Bharatiya\\_Concept\\_of\\_Education](https://www.researchgate.net/publication/383952934_Reviving_Ancient_Wisdom_The_Bharatiya_Concept_of_Education)
- [4] Skill India Mission: <https://www.skillindiadigital.gov.in/>
- [5] National Skill Development Corporation (NSDC): <https://nscindia.org/>
- [6] Value Education in Ancient India: A holistic Approach to Learning [https://www.researchgate.net/publication/384198079\\_VALUE\\_EDUCATION\\_IN\\_ANCIENT\\_INDIA\\_A\\_HOLISTIC\\_APPROACH\\_TO\\_LEARNING#:~:text=This%20study%20explores%20the%20holistic,and%20spiritual%20development%20with%20academic](https://www.researchgate.net/publication/384198079_VALUE_EDUCATION_IN_ANCIENT_INDIA_A_HOLISTIC_APPROACH_TO_LEARNING#:~:text=This%20study%20explores%20the%20holistic,and%20spiritual%20development%20with%20academic)
- [7] Eternal Artistry: The Legacy of Ancient Indian Craftsmanship [https://gosharpener.com/blogs/614037/Eternal-Artistry-The-Legacy-of-Ancient-Indian-Craftsmanship?lang=pt\\_br](https://gosharpener.com/blogs/614037/Eternal-Artistry-The-Legacy-of-Ancient-Indian-Craftsmanship?lang=pt_br)
- [8] Emerging Tech Skills in High Demand <https://timesofindia.indiatimes.com/city/hyderabad/emerging-tech-skills-in-high-demand-says-survey/articleshow/116379112.cms#:~:text=The%20India%20Technology%20Industry%20Compensation,technology%20advancements%20have%20given%20rise>
- [9] Skill India Digital Hub is a digital platform to synergize India's skill development, education, employment and entrepreneurship landscape, " Press Information Bureau, Ministry of Skill Development and Entrepreneurship, September 2023. <https://www.skillindiadigital.gov.in/about-us>
- [10] Union Cabinet approves ₹8, 800 crore for skill development initiatives, " Press Information Bureau, Ministry of Skill Development and Entrepreneurship, February 2024. <https://economictimes.indiatimes.com/news/india/cabinet-approves-rs-8800-crore-skills-india-programme-for-2022-23-to-2025-26/articleshow/118028297.cms?from=mdr>
- [11] Pradhan Mantri Kaushal Vikas Yojana 4.0 (PMKVY 4.0) launched with over 400 new courses, " Ministry of Skill Development and Entrepreneurship, 2023. <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2100845#:~:text=Pradhan%20Mantri%20Kaushal%20Vikas%20Yojana%204.0%3A&text=To%20keep%20pace%20with%20evolving,emerging%20technologies%20and%20future%20skills.>
- [12] National Skill Development Policy (NSDP) focuses on enhancing skills across different levels, " National Skill Development Corporation (NSDC), 2023. <https://nscindia.org/>
- [13] Prime Minister's Internship Scheme 2024 to provide extensive internship opportunities, " Press Information Bureau, 2024. <https://pib.gov.in/PressReleasePage.aspx?PRID=2080295#:~:text=Pilot%20Project%20launched%20under%20PMIS,in%20the%20FY%202024%2D25.&text=The%20Prime%20Minister's%20Internship%20Scheme,500%20companies%20in%20five%20years.>
- [14] The importance of skill development in achieving the Sustainable Development Goals (SDGs), " United Nations Development Programme (UNDP), 2018. <https://www.undp.org/sustainable-development-goals>
- [15] Unemployment rate in India as per CMIE report, " Centre for Monitoring Indian Economy (CMIE), 2018. <https://tradingeconomics.com/india/unemployment-rate>