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## Future of Work and Skill Development

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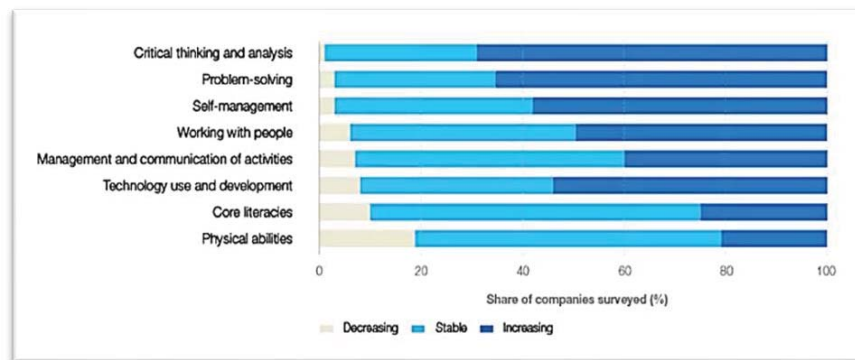
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In the modern era of automation and AI (Artificial Intelligence) technologies, the work is transforming with smarter machines and technology. They are fetching several advantages including efficiency, productivity, enhanced performance as well as quality of work. The work with future technologies will not only change the workplace but also change the skills of human workers. The future of work increasingly demands highly skilled personnel for human-machine interaction. There is a potential skill shift to acquire the benefits of advanced technologies.

Going forward to automation and AI, the demand for these skills is accelerated. Despite the demand for technological skills being important, the increase in the need for social and emotional skills will equally accelerate. On the other hand, physical and manual skills will be effectively declined in the modern workplace.



In the transformative period of work, the role of skills is more important for the workforce. The era of working in a confined role is altered to a skills-based approach comprising greater learning as well as development expanding growth opportunities. In this alteration, the required competencies in a new workplace are an important factor impacting individuals and the competitive job market. The evolving work demands constant adapting and acquiring innovative skills during the shift towards automation and AI. It requires the ability of individuals to direct digital tools, analyse data, as well as influence emerging technologies to drive revolution and efficacy in the workplace. The skill development is hereafter an imperious factor in future work.



**Figure 1: Growing demand for skills in future work (Source: Future Job Survey 2020, World Economic Forum)**

Yet, the future of work is not solely defined by technological competency and growth. With enhanced machine interaction, the essential skills in communication, and collaboration are equally important along with social and emotional skills. The increasing requisites for individuals efficiently collaborating with diverse teams using creativity and critical thinking are important in an efficient workplace. Uniquely human skills like problem-solving, adaptability and communication will remain unaltered.

In the rapidly evolving landscape of modern technologies, traditional concepts of education and training are important to keep pace with highly changing skill requirements. It turns to lifelong learning as the cornerstone of career development, offering opportunities to enhance skills of the individuals throughout their professional lives. So the prerequisite to achieve the



goal of future work skills is to collaborate with educational institutions, businesses, and policymakers to align the training programs and curricula with the needs of the future workforce.

Inherently, the future of work presents both challenges as well as opportunities for individuals to encounter the requirements. By investing in skill development and fostering a culture of continuous learning, individuals can position themselves for success in the evolving job market. Moreover, by recognizing the importance of social and emotional skills alongside technical competencies, organizations can build resilient, adaptive, and innovative teams capable of thriving in the digital age.

## 1. Future of work

According to a case study by the Education and Skills Enterprise Survey in India (ORF, 2018), most businesses use industrial technologies and equipment. It contributes to improving output quality, expanding into emerging markets while preserving the present competitiveness. However, the primary impediments to the adoption of modern machines and technology are an absence of expertise as well as access to financing. Specifically, 35% of businesses experience challenges to adopting technology because of a shortage of required skills, while 24% cite financial constraints. In the next five years, introducing digital tools and services aims to attract new customers, improve the quality of output and comply with government regulations. In future, 64 percent of businesses supposed to acquaint with features of IoT technology. According to a survey, despite increasing reliance on digital tools, recruitment strategies remain largely offline. Even though 81% of young people hunt for jobs online, only 14% of employers use websites or online platforms to fill job openings. Nevertheless, the utilisation of digital tools and offerings is constrained. Only one-third of businesses employ digital accounting, 12% use online customer support chats, 15% use digital systems for inventory and only 25% conduct online sales. On the other hand, the use of encryption is also limited to 5 percent of companies while 42 percent of companies will introduce it in upcoming years.



The adoption of technology, particularly IoT (Internet of Things), is becoming gradually prevalent across various industries. Currently, IoT is already employed in 40 percent of companies across different sectors like banking and financial services (BFS) where 51 percent of companies are utilizing features of IoT. Also, 48 percent of transportation and logistics companies, 33% of textiles companies and 28% retail businesses are leveraging IoT technologies into their operations. This trend underscores the increasing importance of technology adoption and innovation across industries to enhance operational efficiency, improve product quality, and stay competitive in the rapidly evolving market landscape.

## 2. Future of work and skill development

Several transformative trends have a great impact on the future of work and skill development. It includes technological advancements like automation, and AI integration, as well as evolving market dynamics and socio-economic changes. The future of work is influenced by several key factors, including the gig economy and remote work, lifelong learning and upskilling, and the development of soft skills. Additionally, the prioritization of equity, diversity, and inclusion, along with the growing significance of green skills and sustainability, has an impact on work. Work dynamics and skill development can be enhanced through collaboration between industry and academia.

- ✓ **Automation and AI Integration:** Automation, powered by artificial intelligence (AI) and robotics, is revolutionizing industries, leading to the automation of routine tasks and the emergence of new job roles. While some jobs may become obsolete, there will be a growing demand for skills related to AI development, machine learning, data analysis, and human-machine collaboration.
- ✓ **Gig Economy and Remote Work:** The rise of the gig economy and remote work arrangements is transforming traditional employment models. Freelancing, remote contracting, and gig-based platforms offer flexibility and opportunities for individuals to work on demand and across geographical boundaries. Skill development in areas such as remote collaboration, digital communication, and project management will be essential for thriving in this environment.



- ✓ **Lifelong Learning and Upskilling:** Continuous learning and upskilling will be critical for staying competitive in the future job market. As technology evolves rapidly, individuals will need to adapt and acquire new skills throughout their careers. Employers and educational institutions will need to provide accessible and flexible learning pathways, including online courses, boot camps, and micro-credentials, to support lifelong learning initiatives.
- ✓ **Focus on Soft Skills:** In addition to technical skills, there is a growing emphasis on soft skills such as communication, creativity, adaptability, and emotional intelligence. As automation takes over routine tasks, human-centric skills that cannot be easily automated will become increasingly valuable in the workplace. Skill development programs will need to incorporate a holistic approach that nurtures both technical and soft skills.
- ✓ **Diversity, Equity, and Inclusion:** The future of work will prioritize diversity, equity, and inclusion (DEI) initiatives to create inclusive workplaces that embrace diverse perspectives and backgrounds. Skill development efforts will need to focus on fostering cultural competence, empathy, and inclusive leadership to build cohesive and collaborative teams.
- ✓ **Green Skills and Sustainability:** With increasing concerns about climate change and environmental sustainability, there will be a growing demand for green skills related to renewable energy, sustainable agriculture, waste management, and eco-friendly technologies. Skill development programs will need to integrate sustainability principles and environmental awareness into curricula and training modules.
- ✓ **Collaboration between Industry and Academia:** To bridge the gap between education and industry requirements, there will be greater collaboration between academia, industry, and government stakeholders. Work-integrated learning programs, apprenticeships, and industry-academic partnerships will play a crucial role in providing hands-on experience and real-world skills to students and job seekers.



Hence, the future of work and skill development will be characterized by agility, adaptability, and a commitment to lifelong learning. Embracing these changes and investing in continuous skill development will be essential for individuals and organizations to thrive in the dynamic and rapidly evolving landscape of work.

- **Agility:**

In the constantly changing modern work environment, organizations need to be exceptionally agile. It is important to adopt skills-based strategies for fostering an agile, adaptable, and collaborative workforce. This new approach of organizational paradigm emphasizes valuing employees for their skills rather than their job titles, levels, or educational qualifications. Employees are matched with tasks and projects based on their skills, capabilities, and interests, promoting greater learning, development, and growth opportunities.

Skills-based strategies support workforce agility by tapping into existing talent pools, facilitating the easy transfer of skills across the organization. The crises heightened the need for workforce agility, leading businesses to mobilize talent across different areas swiftly. Skills-based strategies offer opportunities for employees to reinforce their skills as well as encourage them to learn and apply new skills.

Agile work, such as projects and gigs, forms the cornerstone of a skills-based workforce. Organizations are increasingly using project-based work for employee development, leading to enhanced innovation, speed, and efficiency. Prioritizing project work in employee development programs fosters workforce agility, enabling organizations to meet rapidly changing business demands. As we face the uncertainties of the future, a skills-based approach will likely remain essential for organizational success in 2024 and beyond.

- **Change in Skills Landscape**

The skills landscape has been significantly transformed in the 21st century. Previously, individuals developed marketable skills either through on-the-job training facilitated by firms or through higher education. However, with the decline of unions and changes in employer demands, the traditional pathways to skill acquisition have shifted. Advanced technical and



behavioural skills, such as problem-solving, communication, teamwork, and leadership are now in demand. But, comparatively, the capacity of the education system to nurture mid-level skills has declined. Thus, some radical local initiatives have made efforts to address skills gaps by collaboration between multiple employers and educational institutions, integrating classroom education with practical work experiences, etc. They also offer career pathways to individuals rather than just skill development for immediate employment. It is efficiently working in bridging the skills gap and preparing individuals for the evolving workforce.

- **How to fill the Skill gap**

A skill gap raises the issue of the disparity between the skills required for certain jobs and the skills of the available workforce. In the United States, the skill gap is particularly evident in middle-skill jobs, which demand technical education, and training at higher education levels or degrees. This gap significantly impacts firms by hindering the ability to fill vacancies and undermining competitiveness. It leads some firms to relocate operations overseas. In India, the skill gap in the manufacturing sector has largely been affected resulting in a decline in their profitability. Indeed 76% of the firms reported a decline in their profitability due to a shortage of skilled employees in a survey conducted by workforce and HR management service.

Therefore, efforts must focus on training individuals to meet the demands of skilled jobs to address the skill gap. Estimated millions of future jobs within the middle-skills range need strategies for bridging this gap. However, executing these strategies is more challenging. Despite efforts to overhaul higher education, progress in addressing the issue of skills shortage has been slow. So the skill gap requires concerted efforts from both businesses and government agencies to provide relevant training programs and educational opportunities focusing on skill development. By aligning skill development initiatives with the needs of future skill jobs, investors can help improve the wage stagnation and socioeconomic disparities allied with the skill gap. It will ultimately foster a more competitive and resilient workforce for future work.



### 3. Skill Development

- **Process of Skill Development**

Skill development empowers individuals to attain goals and competitive advantage. This can be accomplished through the execution of skill-building activities designed to enhance particular competencies. The process of skill development begins with the identification and documentation of strategic competencies like knowledge, behaviours, abilities, and skills. By considering existing skills and identifying gaps, companies can determine areas for improvement and devise plans to develop these skills internally. Internal skill development is a strategic initiative for organizational growth, employee advancement, and talent retention. It provides opportunities for employees to enhance their skills and progress in their careers, and organizations foster a culture of continuous learning and development.



**Figure 2: Skill development in companies (AIHR, 2022)**

According to Gartner, (Gartner, 2022) a prominent research and advisory company, 59% of HR leaders prioritize building critical skills and competencies within their organizations. However, 40% of HR leaders express challenges in developing skill development solutions quickly enough to address evolving skill needs. So skill building in the workforce is a crucial part of organizational development through talent management. By identifying skill gaps, planning for development, and implementing effective strategies, companies can empower their employees and stay competitive in today's dynamic business landscape.





- **Strategies for skill development**

Companies can enhance the skill development program focusing on the following areas.

- ✓ Skill Retraining for Workforce Empowerment
- ✓ Strategic Workforce Redeployment Strategies
- ✓ Talent Acquisition and Recruitment Tactics
- ✓ Agile Workforce Contracting Approaches
- ✓ Thoughtful Workforce Optimization Strategies

By investing in retraining, companies empower their current employees with new skills, preserving in-house knowledge and culture. This approach ensures a skilled workforce aligned with strategic company needs, such as advanced IT skills and critical thinking. Impact: Preserves institutional knowledge, enhances employee loyalty, and aligns skill sets with company objectives. Redeployment strategies include workers in different roles to optimize existing skill capacities. Restructuring tasks, shifting employees to higher-value tasks, or redesigning work processes increases workforce agility, maximizes skill utilization, and fosters adaptability in changing market landscapes. For acquiring talent with required skill sets companies offer attractive benefits and a culture that accesses specialized expertise, injects fresh perspectives, and fills skill gaps quickly. The companies also prefer external contractors and freelancers for flexibility in acquiring specific skills on demand. It offers agility in scaling the workforce, reduces overhead costs, and facilitates access to niche expertise. Thoughtful workforce optimization is important in releasing employees when necessary in stagnant industries or where automation replaces labour. While it may lead to cost savings, there are risks of losing institutional knowledge and impacting morale. Although it allows the transformation of the workforce, it can lead to loss of productivity besides cultural disruption.

The approach of companies to enhance the skills of individuals and to utilize external talents addresses different skill development needs and challenges. It enables companies to adapt to evolving market demands while optimizing workforce capabilities.



## 4. Skill development Initiatives

An initiative taken by the National Skill Development Mission in India (MSDE, 2015) aims to address the critical need for skill development to meet future work requirements. Additionally, it creates convergence across sectors and states in skill training activities. It combines and organises efforts to scale up skill development rapidly with great standards. The mission operates with policy guidance for supporting institutions to facilitate smooth functioning. Seven sub-missions introduced for achieving the mission's goals are:

- ✓ Institutional Training
- ✓ Infrastructure development
- ✓ Convergence of skill training efforts
- ✓ Enhancing the capacity and quality of trainers
- ✓ Facilitating overseas employment opportunities
- ✓ Promoting sustainable livelihoods
- ✓ Leveraging public infrastructure for skill development.

These initiatives aim to address skill gaps, enhance employability, and promote economic growth by ensuring a skilled workforce capable of meeting the demands of a rapidly evolving global economy.

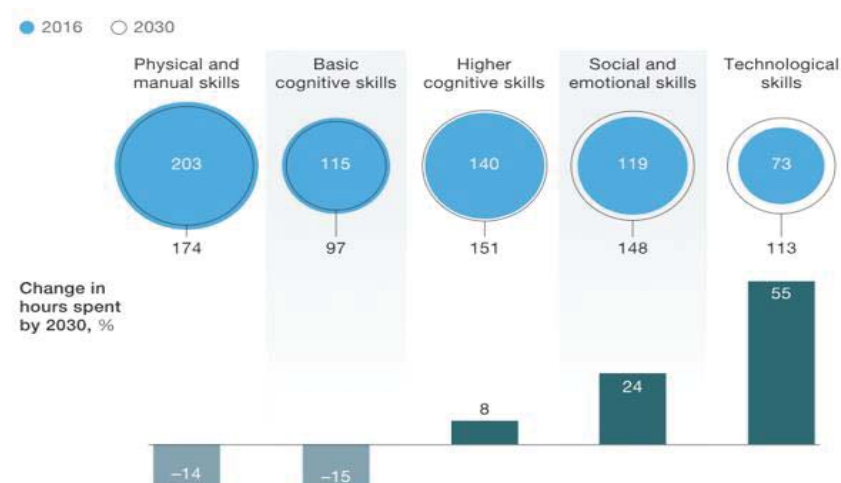


Figure 3: Analysis of skills evolution by 2030 (McKinsey, 2018)



## 5. Efforts for the Future of work and skill development

In India, the landscape of work and skill development is transforming into a dynamic transition of diverse sectors. From government-led to corporate endeavours, intensive efforts are in progress to prepare the workforce for the challenges and opportunities of the future. The initiatives are not limited to the government or corporate sector but span across fields of education, technology, as well as nonprofit organizations. They play a vital role in the skill development of individuals including competencies needed to flourish in the evolving job market. The digital age with socioeconomic changes, led to collaborative efforts for laying the foundation for a more agile, skilled, and future-ready workforce.

### 1. Government Initiatives:

The Indian government has launched several skill development programs, including the Skill India Mission, National Skill Development Mission etc., to provide training to millions of youth across the country to enhance their employability and fulfil the industrial need for skillset.

### 2. Policy Makers

In India, policymakers are reshaping the roles of individuals, companies, and state agencies to foster a more agile workforce and address skill development needs. They focus on restoring labor agencies from passive to active, emphasizing job centers that facilitate retraining for the unemployed including efforts for workforce mobility, flexibility and security beyond specific job roles. These initiatives demonstrate a proactive approach by policymakers to navigate the changing dynamics of work in India.

### 3. Corporate Sector:

Many companies have established their own training and skill development programs to upskill their workforce for future obligations. Additionally, in industrial corporate social responsibility (CSR) initiatives, skill development projects are aimed at benefiting local communities.



#### **4. Education Sector:**

Today, several educational institutions are revising their curricula to align with industry requirements and focus on skill-based learning. They have added contributions to vocational training and polytechnics for providing practical skills training.

#### **5. Technology Sector:**

With the rise of digitalization, the technology sector is investing to promote digital literacy. They also provide training in emerging technologies such as artificial intelligence, machine learning, and data analytics.

#### **6. Non-Governmental Organizations (NGOs):**

NGOs are actively involved in skill development programs, especially in rural and underserved areas. These programs mainly focus on imparting vocational skills and entrepreneurship training to empower individuals economically.

#### **7. Industry Associations:**

Various industry associations collaborate with government bodies and educational institutions to bridge the skill gap by organizing workshops, seminars, and certification programs tailored to industry needs.

#### **8. Startups and Entrepreneurship Ecosystem:**

The startup ecosystem in India is fostering innovation and entrepreneurship. Incubators, accelerators, and startup hubs provide mentorship, training, and funding support to aspiring entrepreneurs, contributing to job creation and skill development.

#### **9. International Collaborations:**

India partners with other countries and international organizations to exchange best practices, expertise, and resources in skill development. Bilateral agreements and partnerships facilitate knowledge transfer and capacity building in diverse sectors.



These initiatives collectively contribute to shaping the future of work and skill development in India by equipping individuals with the necessary competencies to thrive in a rapidly evolving job market.

## 6. Action by companies for skill development

Skill development plays a crucial role in shaping the future of work for both organizations and individuals. It gives several benefits like Improving Performance, Preparing for the Future along with Engaging and Retaining Employees

1. **Improving Performance:** Acquiring new skills improves individual productivity and performance, thereby contributing to overall organizational success. Skill development results in more efficient, effective employees and it positively impacts the company's bottom line.
2. **Preparing for the Future:** Skill development is also essential for aligning individual capabilities with the evolving needs and objectives of the organization. By investing in relevant skills for the short and long term, companies confirm their willingness to adapt to changing market dynamics and technological advancements.
3. **Engaging and Retaining Employees:** Organizations that prioritize employee development demonstrate a commitment to their workforce's growth and success. Such investments foster a sense of loyalty and engagement among employees, leading to higher retention rates. Studies show that a vast majority of employees are more likely to stay with a company that invests in their learning and development, thus contributing to a stable and motivated workforce.

So skill development not only enhances individual and organizational performance but also fosters employee engagement and retention, ultimately shaping a more resilient and future-ready workforce.



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## Conclusion

The future of work and skill development hinges on the readiness of the workforce to embrace automation and AI technologies. A well-trained workforce is essential for boosting productivity with unbiased economic growth. Overlooking to address shifting skill demands could intensify social disparities while obstructing overall progress of organizations. Therefore, organizations must prioritize skill building as a fundamental component of their long-term success strategy. By focusing on social, emotional, and cognitive skills development, companies can cultivate an agile and engaged workforce capable of thriving in an ever-evolving landscape, thereby driving business growth and innovation.





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