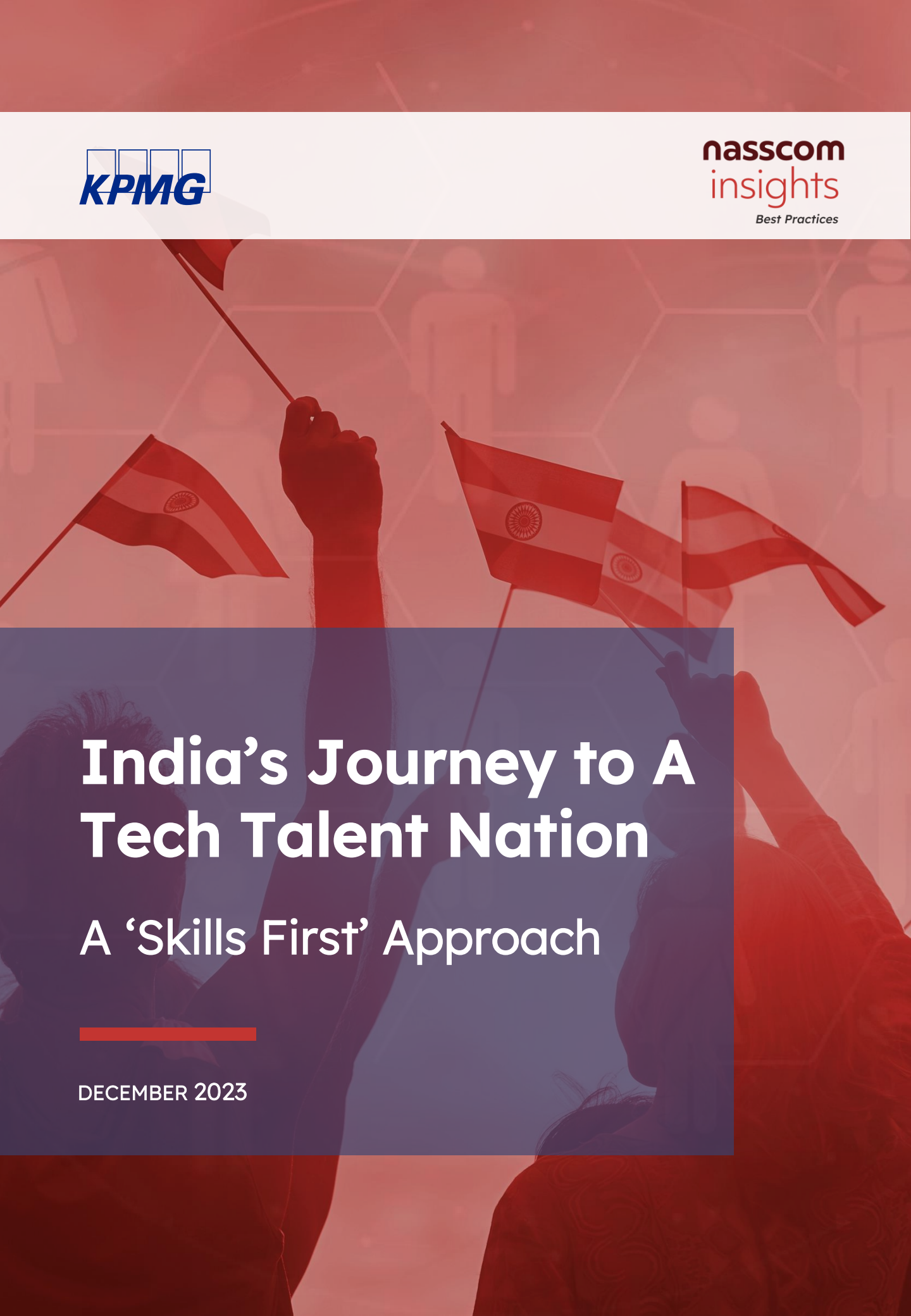
KPMG

nasscom insights
Best Practices



India's Journey to A Tech Talent Nation

A 'Skills First' Approach

DECEMBER 2023

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Foreword

India possesses a dynamic and vibrant business landscape powered by its incredible will to innovate and make progress through the effective application and use of technology for business growth. India's Technology industry with a robust talent pool is at the forefront leading digital transformation not only in the country but globally too. In today's fast-paced and rapidly evolving ecosystem, the importance of digital skills and competence within India's talent pool can't be overstated.

Organizations around the world and in India are now adopting a 'Skills-First' approach, especially aimed at enhancing digital competencies. Digital Skilling in India, serves as a catalyst to achieve business growth and gaining an edge in a market which is fiercely competitive. Digital skilling and creating a digitally competent talent pool is foundational to the building of a Digital Economy.

To assess 'India's Journey to a Tech Talent Nation', nasscom, in collaboration with KPMG, launched a Digital Skills Survey along with case study submissions from organizations on five categories highlighting digital skilling initiatives and best practices followed.

The insights presented in this study is based on the analysis of information shared by organizations depicting the practices, collaborations and initiatives driven by them to digitally skills their workforce and the society. The report adopts a multidimensional approach aimed at understanding digital skilling in Indian organizations through the lens of trending skills as well as the various mediums employed by companies to achieve the requisite level of digital competence and proficiency.

The Indian Technology Industry's journey in the upcoming years will be marked with an upsurge of digital skilling. Organizations will have to be aware of the technological advancements and employ the right resources and expertise to ensure that their talent pool remains digitally competent. In short, many organizations will focus on a 'Skills first' approach to remain competitive.

We hope the insights presented in this report will provide organizations embarking on their digital skilling journey relevant guidance.

Shalini Pillay

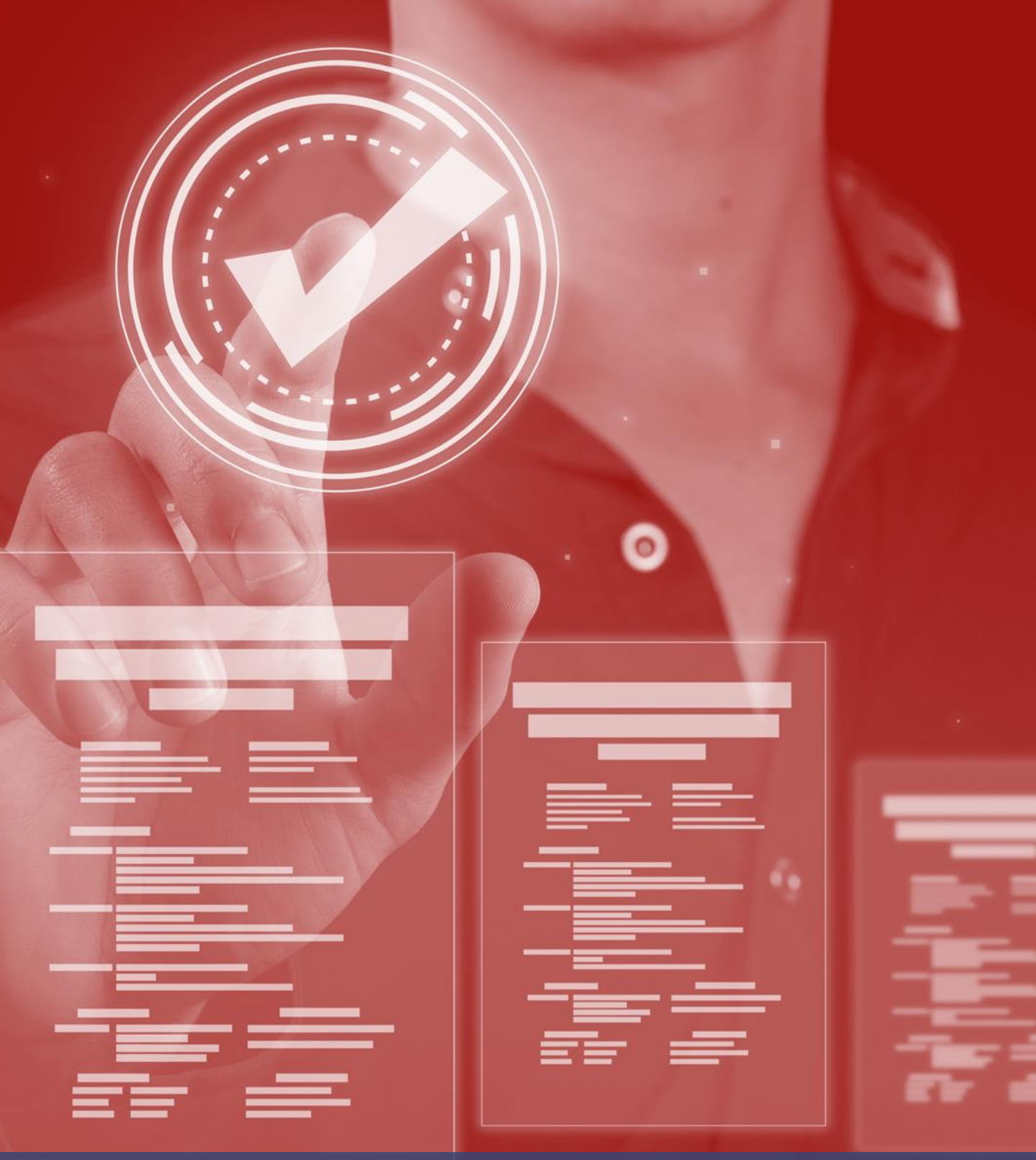
India Leader- Global Capability Centers

KPMG in India

Achyuta Ghosh

Head Research & Senior Director

Nasscom Insights



Research Methodology

Research Methodology

To assess 'India's Journey to a Tech Talent Nation', nasscom, in collaboration with KPMG, launched a Digital Skills Survey along with Case Study submissions from organizations on five categories highlighting digital skilling initiatives and best practices followed.

Key Focus Areas of the Survey & Case Study Submissions

Pervasiveness of Digital Skilling in Organizations

The extent to which organizations are undertaking Digital Skilling initiatives for their employees

Types of Skills Targeted by Organizations

The Digital Skills considered important by organizations for their business

Utilization of In-House and External Learning Platforms

Organizations' reliance and utilization of learning platforms for Digital Skilling of their employees

Academic Alliances for Digital Skills

Organizations' involvement with Academic Institutes for Digitally Skilling employees and students

Corporate Social Responsibility in Digital Skilling

Organizations' involvement in Digital Skilling as a contribution to the society and increasing its Digital Competence.

Post the collection of data, a deep dive analysis of group data was conducted to draw quantitative as well qualitative insights from the responses of participating organizations.

About the nasscom Digital Skills Survey & Case Study Submissions

Participant Demographics

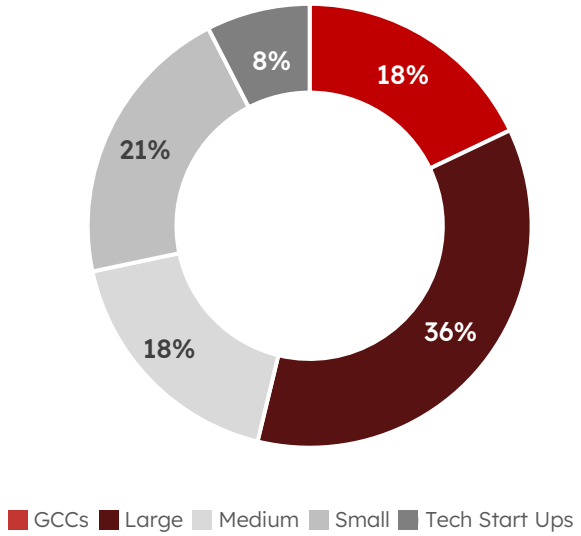
106
Participating Organizations

250+
Case Studies Submitted

39
Locations Reached

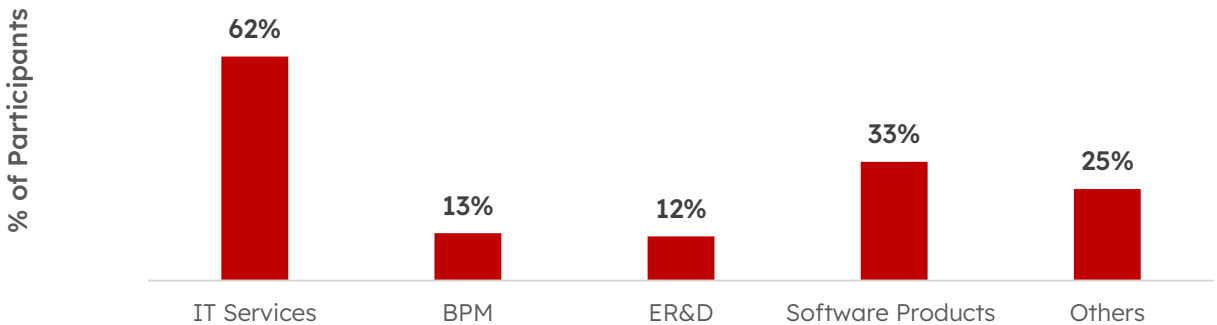
20
Industries Covered (Tech & Non-Tech)

Split by Organization Type



Large Organizations: Revenue >₹ 250 Cr.
Medium Organizations: Revenue >₹ 50 Cr. and < ₹ 250 Cr.
Small, Micro MSME: Revenue <=₹ 50 Cr.

Participant Demographics (% share)



Note: Others include Healthcare, BFSI, FMCG, Automotive, Education, etc.
Given the overlaps in organizational categorization, the total participation % is not 100%.



Executive Summary

Executive Summary

Background & Objective

- The insights presented in this study is primarily based on information collected through a Digital Skills Survey and Case Study submissions on five specific categories shared by nasscom member companies. The key objective was to assess the Digital Skilling journey of the technology industry in India, best practices, collaborations and frameworks followed by organizations in their pursuit to become a 'Skills-First' company

Digital Skilling Trends in India

- India's technology industry employs close to 2 million digitally skilled people, accounting for 36% of the industry workforce, growing at nearly 19% in FY2023
- Indian organizations are aggressively pursuing Digital Skilling of their talent pool, with 52% of the organizations spending nearly 60-100 hours a year on digital learning; over 50% of MSMEs are investing more than 100 hours in Digital Skilling every year
- 70% of firms are focusing on developing skills around three technology areas -Cloud Computing, AI/ ML, Mobile and Web Development
- Foundational Digital Skilling across all technologies is an integral element for core tech, and non-tech roles, majority of organizations have >50% of FTEs skilled in Foundational digital skills

Harnessing Learning Platforms for Digital Proficiency

- Organizations are increasingly relying on one or more learning platforms for driving digital skilling:
- 80% of respondents indicated that they rely on Internal Platforms for Foundational Digital Skilling, at the same time use External Platforms for Expert level Digital Skilling.
- Organizations widely use Data-driven platforms, and platforms that offer AI-Based personalization and Gamification features. These features help to increase learning engagement and enable a continuous Digital Skilling environment.

Executive Summary

Academic Partnerships for Digital Skilling

- 63% organizations indicated having an academic partnership for digital skilling, with most of them leveraging academic partnerships for about 10% of their focused FTEs
- Organizations skilling 1% to 5% FTEs through partnerships mainly focus on Expert and Advanced Skills, while for large scale skilling i.e. >50% FTEs the focus is on imparting basic or foundational skills
- 45% organizations have over 10 partnerships while the remaining have between 1 to 10
- 54% undertake employee skilling via Indian academic collaborations while 38% leveraged tie-ups with International institutes, constituting primarily of large companies
- Academic Collaboration models mainly center around four themes – Targeted Employee Upskilling, Higher Education for employees in Technology Domain, Creation of a Ready – to-hire Talent pool & Enhancing employability for society.

Digital Skilling for All: A CSR Perspective

- Digital Skilling in the realm of CSR is a steadily growing activity for the Indian Technology Industry
- 60% of organizations indicated that employees spend up to 40 hours in a year in Digital Skilling CSR, with MSME and start-ups accounting for 25% indicating the growing interest towards contributing to society irrespective of the size of the organization
- For 25% organizations the prime focus is to increase technology accessibility and imparting the right digital skillset to the financially deprived groups in the society

The Digital Way Ahead

- While organizations are proactively taking steps to 'Future- Proof' their workforce with respect to digital skills, they will also have to tackle certain challenges like rising training costs, retention of highly skilled employees, resistance to constant changes and upgrades in technology, etc.
- Tackling these changes will become paramount for organizations in the future for ensuring a digitally competent talent pool that can sufficiently contribute to the growth and development of business and country



Thriving in the Digital Age

Global Perspectives on Work and Skills Transformation

Global Work and Skills Transformation

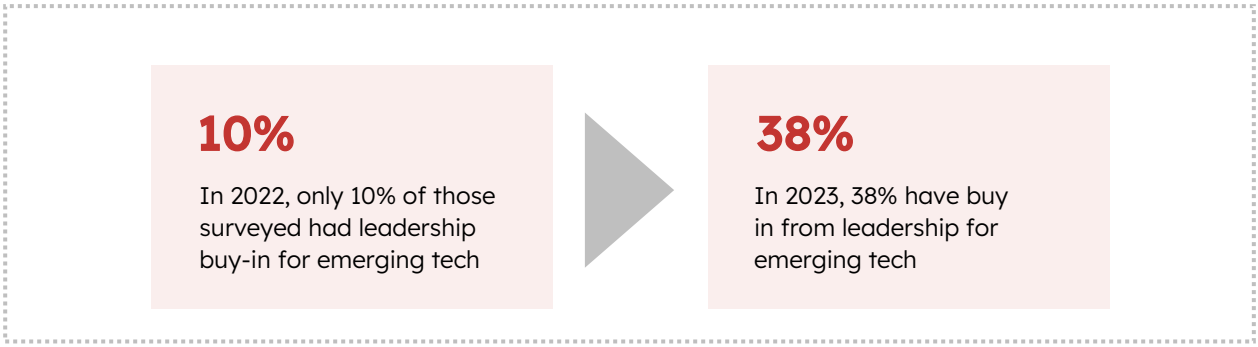
Faced with an unprecedented and sudden pandemic, growing macroeconomic uncertainties, climate change, and socio-political issues, organizations globally have been compelled to relook at the way they operate. Rapid technological advancements are further disrupting the way we work. Technology is getting tightly integrated into all aspects of professional and personal lives. These shifts have compelled organizations to reassess their approach to business, markets and people.

Technological breakthroughs, especially Generative AI, will impact various job roles and functions, replacing some job roles while augmenting others. World Economic Forum's Future of Jobs report[1] (May 2023) states that over 2023-2027, globally, 69 million jobs will be created, and 83 million jobs will no longer exist across 27 industry clusters - a contraction of global labor markets of 14 million jobs at the present rate of change.

Embracing technology and harnessing its potential has become an imperative for companies to build business resilience and for staying ahead of competition. Consequently, organizational priorities are shifting towards accelerated technology adoption.

As per the World Economic Forum's Future of Jobs report (May 2023), 82% of the surveyed firms identified *increased adoption of new and frontier technologies* and *broadening digital access* as the top two macrotrends driving business transformation

Globally 3.8X growth in Leadership Buy-In for Emerging Technologies since 2022



Source: KPMG Global Tech Report 2023

1: This scope of the Future of Jobs Report goes beyond technological change to also consider the impact of various concurrent trends, incl. green and energy transitions macroeconomic factors, and geo-economic & supply-chain shifts

Global Work and Skills Transformation

Organizations globally are heavily investing in Digital Transformation projects to enhance operational efficiencies, productivity to drive overall business results, thus strategically pivoting towards a 'Digital-First' approach.

Increase in Technology-Driven Business Performance

63%

respondents reported a notable increase in performance as a direct result of their digital transformation efforts over the past 24 months.

Organizations demonstrated increased employee productivity, improved efficiency and cost control, enhanced customer engagement, higher levels of employee satisfaction, support for new business development and the enablement of innovation.

APAC Region is observed to be moving faster in harnessing data and analytics

In the Americas, only **24%** of organizations reported a significant increase in profitability and performance from investments in data and analytics; for EMA, it was **28%, and APAC was the highest at 35%.**

Technology plays a transformative role in Driving Business Success Across diverse sectors and Key Functions

89%

Respondents say they have enterprise applications that are streamlined for each function **(51 percent)** or streamlined and integrated enterprise-wide **(38 percent).**

Customer value, customer centric experiences, and data-driven decision-making are the major drivers for digital transformation. Consequently, **Marketing, Customer Services and Sales functions** are benefiting the most from digital-transformation programs.

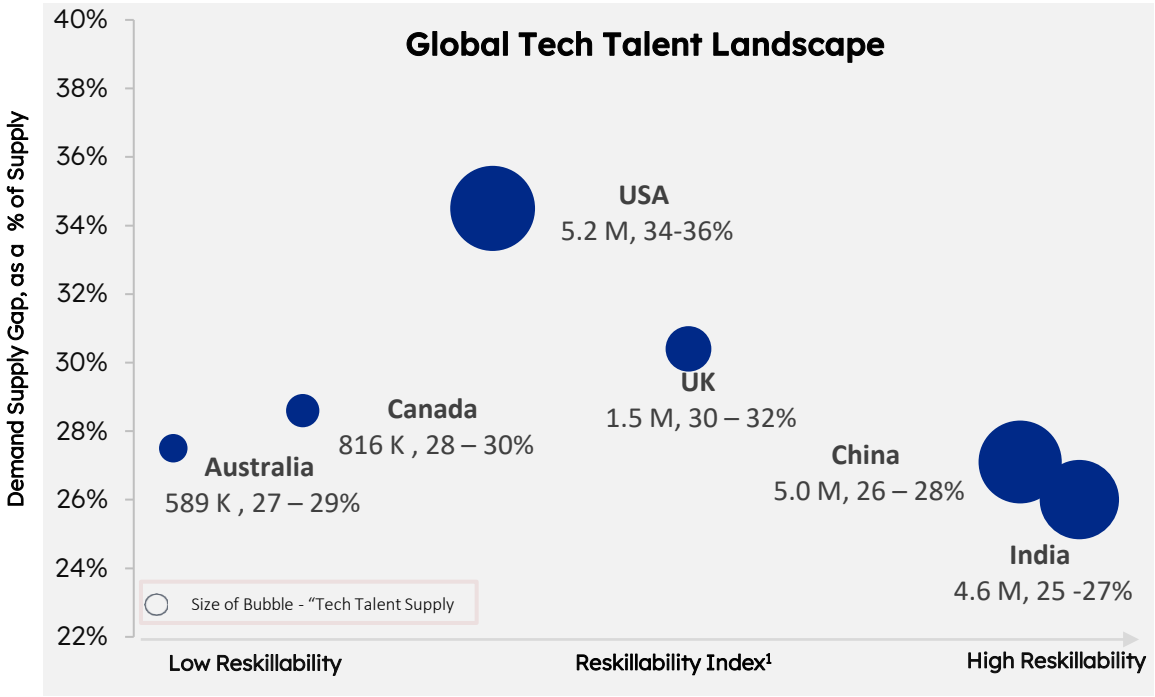
Source: KPMG Global Tech Report 2023

Global Work and Skills Transformation

Growing Global demand for Digital Skills and Global Skill Gap

Increased integration of technology with business has resulted in the growing demand for digital skills across the globe, which needs to be fulfilled.

As per a survey conducted by WEF (Future of work report 2023), the fastest-growing roles today are driven by technology, digitalization and sustainability. AI & Machine Learning Specialists, Sustainability Specialists, Business Intelligence Analysts and Information Security Analysts are few of the jobs where the net job creation (jobs created less jobs displaced) is expected to be the highest during 2023-2027.



There is immense opportunity to address and bridge the digital skills divide prevailing in most economies. This divide represents the gap between the growing demand for digital skills, in proportion to the level of industrial development, and the current capacity of policymakers, educational institutions, and corporate trainers to effectively respond to this talent deficit and deliver the necessary skills.

Tech talent shortage is a global phenomenon- India's tech talent demand supply gap (25-27%) is the lowest among top tech locations such as USA, China, UK.

Source: nasscom Report on India's Tech Industry Digital Talent Demand Supply Analysis, 2023

Global Work and Skills Transformation

Prominence of Digital Skilling

Moreover, the average half-life of skills is now less than five years—and around 2.5 years in some technology fields [(1)]. With technology changing so rapidly, the need of the hour is to build a continuous-learning culture and mindset. Organizations, therefore, need to be extremely agile and quick to adopt new approaches to skilling their workforce. They must also invest in setting up & continuously upgrading/updating learning infrastructure – online learning platforms, learning pods, nurture mentors/trainers, online/offline labs for hands-on experience and more.

Organizations and individuals must prioritize ongoing technology training & skilling initiatives to ensure their digital skills remain up to date and adaptable to emerging technologies.

Emergence of Complementary Skills

In addition to digital skills, there has been a notable rise in the significance of behavioral and functional skills in the global job market

Analytical thinking and creative thinking are the most important core skills for the workforce in 2023 [(2)]. Resilience, flexibility and agility; motivation and self-awareness; and curiosity and lifelong learning are some of the other skills in high demand.

These complementary skills contribute to a more comprehensive and well-rounded talent pool. By nurturing both technological and non-technological proficiencies, organizations will be better placed to adapt to emerging market trends and can build a more resilient workforce.

Source: (1) (2) WEF Future of Jobs 2023



India's Rise as a Global Digital Talent Hub

Introduction to the Digital Skilling Landscape

The Growing Demand for Digital Skills

Investing in employee skilling is now a board agenda and technology firms are continuously scanning the industry landscape to identify early, emerging trends both in terms of technology developments and market movements. In turn, organization-level skilling roadmaps are also constantly being upgraded to facilitate first-mover advantage (Generative AI is the most recent example of a disruptive technology around which firms are rapidly building relevant skills). By prioritizing skill development, organizations can foster a workforce that is adaptable, innovative, and capable of meeting the evolving demands of the business world.

With a focus on right skilling, technology companies are providing the relevant resources to their employees for learning and acquiring the new skillsets.

Indian technology firms too are mirroring this sentiment and are taking advantage of the high skillability index of the Indian workforce. Various initiatives in partnership with the academia and the government have been rolled out to meet the demand for relevant digital skills.

How does India fare vis-à-vis the world?



64%

India's overall Digital Competitiveness Score (on 100), Ahead of every BRICs nations besides China



25-27%

The Demand-Supply gap for Tech Talent in India - lowest among global tech leaders like USA, UK, Canada and Australia.

Source: nasscom Report on India's Tech Industry Digital Talent Demand Supply Analysis, 2023

Government as the Key Transformation Catalyst

"Digital India program" launched by the Government of India with the vision of transforming India into a digitally empowered society and a knowledge-based economy plays a key role in transforming India into a 'Global Digital Talent Hub'

As part of the program the central and state governments have partnered with leading technology firms to strengthen the digital talent pool in the country

- **The Ministry of Electronics and Information Technology (MeitY)** partnered with **Google** to launch the 'Build for Digital India' program, providing engineering students the chance to develop technology-based solutions for the market.
- **MeitY** collaborated with **Amazon Web Services (AWS)** to set up a quantum computing applications lab in India, aiming to accelerate research and development in quantum computing and foster new scientific discoveries.
- **Amdocs, Cognizant, Cyient, Google, Intel, Microsoft, and Zensar Technologies** established NDLM (National Digital Literacy Mission) centers, promoting digital literacy training across India[1].
- **FutureSkills Prime**, a platform under **MeitY** and **nasscom** has launched a digital upskilling incentives program. The program offers globally competitive curriculums, spanning across technologies from AI, the Internet of Things (IoT), big data analytics, cloud computing to cybersecurity, augmented/virtual reality.
- **Karnataka Government** collaborated with **Meta** in November 2023, an initiative involving development of a Chatbot for promotion and encouragement of Digital Awareness and Safety within students[2].

Additionally transformational programs like the "Skill India Digital" platform have been implemented to make skill development more innovative, accessible, and personalized with a focus on digital technology and Industry 4.0 skills.

1: ibef.org/government-schemes/digital-india
2: Karnataka govt brings Meta onboard for digital skilling, online safety (deccanherald.com)

India Inc the Engine Accelerating the Digital Journey

India Inc is looking to leverage digitalization

India's skilling landscape has undergone a remarkable transformation in response to the rapid advancements in the global talent scenario, advent of technological transformations and the increasing digitalization across industries. Recognizing the need to catch up and stay relevant, India has embraced a proactive approach to upskilling and reskilling its workforce..

Need to stay relevant & competitive in disruptive times

In disruptive times, the business landscape undergoes significant changes, characterized by rapid advancements, evolving market dynamics, and increasing competition. In such a scenario, Indian organizations need to navigate through uncertainty and adapt to the changing environment to remain successful and relevant. Technology plays a pivotal role in this process. It acts as a catalyst for transformation, enabling organizations to embrace new opportunities, overcome challenges, and achieve sustainable growth.

Indian organizations also face intense competition, both domestically and globally. Embracing digitization provides a competitive edge by enabling organizations to offer innovative products and services, optimize operations, and deliver superior customer experiences. Digital skilling initiatives empower employees to enhance their productivity, creativity, and problem-solving abilities in the digital realm, enabling organizations to outperform their competitors.



Unlocking India's Digital Potential

Skilling Trends

India's Technology Industry crosses the $245 Bn mark

Snapshot of India's Technology Industry in FY2023

$245 Bn.
India's Technology Industry Revenue

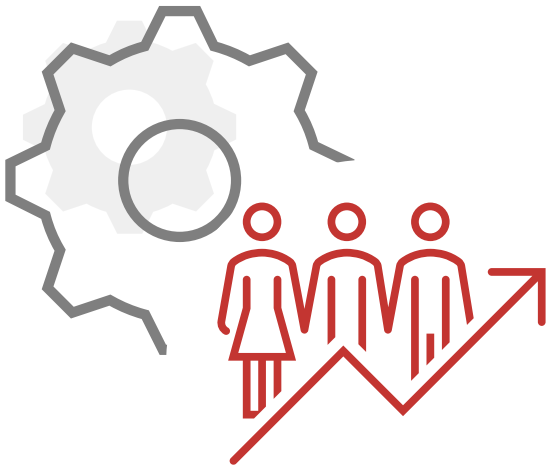
7.5%
Relative Share in India's GDP

53%
Share in India's Services Export

~5.4 Mn.
India Tech Industry Employee Base

~2 Mn.
Employees Digitally Skilled

2.5 Mn.
STEM Graduates



Source: nasscom Report Priming for a No Normal Future, 2023

Accelerated Skilling needed to bridge the talent Demand-Supply Gap

India is positioning itself as the locus for technology talent and solutions. At the heart of maintaining this position, there is a need for building a robust and resilient quality talent pool.

Currently, India's digital talent gap stands at 25-27% and even though it is globally the lowest, the gap is set to widen to 28-29% (~1.4 mn.) by 2028 as existing job roles change and new job roles emerge due to technology advancements.

Our research indicates that fresher talent can address only about 16-18% of this demand and the balance supply would need to be fulfilled through skilling, re-skilling and up-skilling of the existing technology workforce.

In 2023, India's Technology firms are resolute in Digitally Skilling their employees



60-100

Annual Average Learning Hours invested on Digital Skilling



81%

Organizations indicated Pervasive Digital Skilling of both, experienced and new employees



~25

Technologies targeted through Digital Skilling Interventions in India

Source: nasscom Digital Skills Survey | India's Tech Industry Talent: Demand Supply Analysis

N=106

A 'Skills First' Approach required to Accelerate Digital Skilling

Designing the right approach to conduct digital skilling in organization involves assessing the organization's position on key touchpoints that help in the development of a 'skills first' approach.

Leader organizations follow a comprehensive approach to initiate and conduct digital skilling initiatives

01

Which Technology to Skill on?

02

Which Digital Skills to include in the Basket?

03

Which employee cohort requires this skillset the most?

04

Which platform to use?

05

How to drive Digital Skilling in the Organization?

06

How to measure effectiveness of skilling interventions?

These touchpoints add value in the form of Higher Return on Investment (ROI), Learning Satisfaction, and Learner Engagement.

Case in Point

Fostering a comprehensive, life-long learning culture as a Global Leader of Building Information Modelling (BIM) Services

The organization has invested in Digital Skilling of its employees to enhance their Digital competence, improve performance, and contribute to the organization's growth and competitiveness.

Strategic Approach for Digital Skilling

The organization identifies the relevant digital technologies and the skillsets required through market research, skill gap analysis, existing project requirements, and past data gathered on engagements. In addition to their in-house learning platform, they have also onboarded external learning partners to offer employees the best-in-class Digital Skilling experience. Pre- and post-training assessments, completion rates, active participation in the programs, and feedback collected on surveys helps in active tracking of the learning activities of employees.

The Impact



69%

Learning Hours Target achieved in 2023 until now



92%

Internal Vacancies fulfilled



13,990

Projects Delivered

Source: nasscom Digital Skills Case Studies

Drivers of Digital Skilling

Digital skilling in organizations is driven by internal and external forces that determine the direction in which companies want to channelize their skilling efforts. Currently, efforts are directed towards the creation of a 'Future-Ready Workforce', driven by the following factors.

Top 5 Drivers of Digital Skilling in India

95%

Ensuring Perpetual Availability of Skilled Workforce

Organizations want to ensure that their workforce remains Digitally Competent to address the requirements of the present, as well as be 'Future-Ready' in terms of potential business requirements

91%

Driving Business Outcomes through Digital Skilling

Consider it a strategic imperative to link Digital Skilling trainings to business needs to achieve the outcomes related to business growth and development

87%

Bridging the Gap between Domain Knowledge and Know-how

Initiatives are aimed at the efficient application of technical knowledge on the job and help in yielding the best results expected out of employees

83%

Keeping up-to-date with Technology Advancements

Organizations also include re-skilling employees on advancements in various Digital Technologies in their Digital Skilling initiatives

81%

Innovation, Productivity, and Global Competitiveness

Organizations believe that Digital Skilling presents opportunities for innovation, increases employee productivity and offers a competitive edge

Source: nasscom Digital Skills Survey

Case in Point

Skilling Framework of a GCC of a Multinational Organization

Development of a robust approach and framework for skilling

The Global Capability Center (GCC), established in 2014, realized that it was facing certain business challenges that called for tightening of its Digital Skilling approach. Accordingly, the company scaled up its Digital Skilling initiatives to ensure:

1. Its workforce is competent enough to address the business requirements of a sizeable and growing company
2. Increasing innovation and productivity through collaboration within teams to achieve business outcomes that are at par with its standards.

The Digital Skilling Approach

The organization has successfully developed a Digital Skilling framework that can be leveraged for upskilling on any digital skillset, including Future Technologies. The key achievement of this breakthrough framework is its scalability, which creates a model for regions and BUs across the organization and its other peer Global Capability Centers (GCCs). This means that the framework can be easily adapted to different regions and technologies. Currently, the framework has been implemented to skill in Data Science, recording a large increase in projects completed, and reduction in lead time (time to hire + train is saved).

The Impact

~3X
Increase in part time analytics projects

~$4M
Cumulative savings for the organization

~$20M
Cumulative savings for customer

70+
Trained Participants

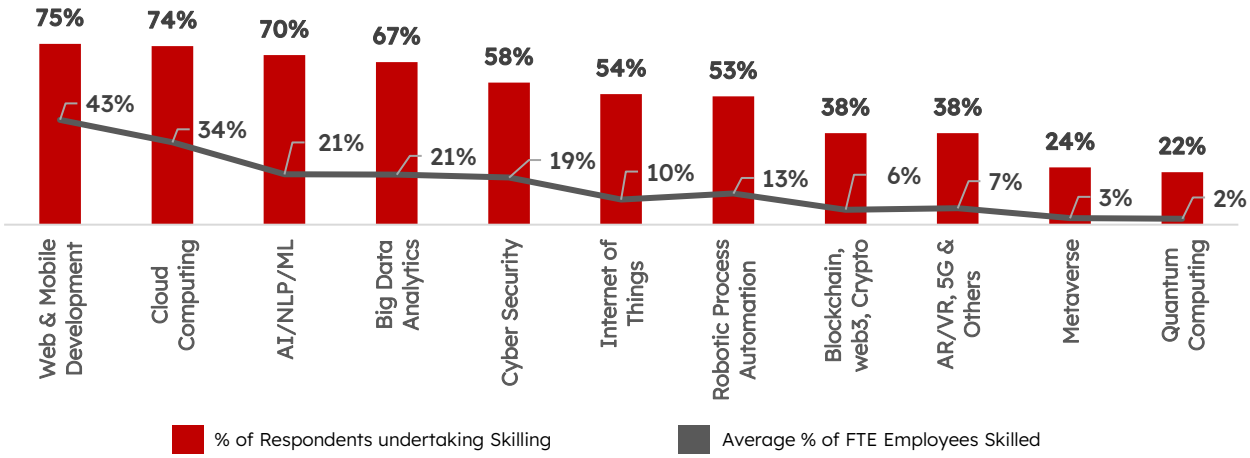
52
Projects Delivered

12
Skilling Coaches developed in 2022

Source: nasscom Digital Skills Case Studies

More than 70% Firms are Focusing on Skill Development in three Technology areas

Web & Mobile Development, Cloud Computing & AI ML NLP- The top 3 trending skills in India



Source: nasscom Digital Skill Survey
N=106

Our analysis indicates that 70% of firms are focusing on developing skills around three technology areas:

- Focus on user experience: **Web development** allow firms to establish a strong online presence, engage with customers, and expand their reach. In India, Broadband mobile devices users have reached more than 80 million (1). Mobile devices are now crucial customer touchpoints, be it banking & financial services, media & entertainment, gaming, e-commerce, etc. One-third respondents indicated focusing on Web & Mobile development skills and currently, **~43% of employees have been trained on these skills.**

- Digital Transformation: Digital transformation accelerated during the pandemic as companies raced to shift their business and operations online. This forced companies to modernize their IT infrastructure and leverage cloud platforms resulting in demand for cloud-native applications and services around cloud computing. This demand is set to multiply with increasing use of Gen AI. **Currently, ~34% of the employee base of participating companies are trained in cloud computing & related areas.**

Source: (1) TRAI, Press Release No.46/2023

- Data and Analytics: Hyper-personalization, identifying untapped markets / customer segments, new revenue streams, need for predictive insights, and building innovative solutions are some factors that have been driving the demand for data and analytics. Our survey indicates that about **one-fifth of the employees (of participating companies) are trained in AI/ML and also for Big Data Analytics**. With Gen AI, the demand is set to grow exponentially and there is an urgent need to scale training on these technologies.

- Cybersecurity: Growing numbers of endpoint devices (mobile, IoT, wearables, etc.), increasing Softwarization (XaaC-Everything as a Code), as-a-service models are broadening the attack surface both for business and consumers. Since the pandemic, cyber attacks have increased exponentially. Close to **60% firms indicated their focus is on building cybersecurity skills like threat monitoring and vulnerability assessment, digital forensics, cloud security, application security, etc.**

Case in Point: Emerging Technologies at a Global IT Firm

The IT Firm has implemented the "DIGITAL" framework to position its workforce at the forefront of digital transformation and driving success in the digital age

Organization's approach for Digital Skilling



Individual Development Programs



Global Training Portal



Cloud Learning Portal & Labs



Virtual Learning Academy

- The 'Reimagine' program facilitates a vibrant digital learning culture to upskill employees in niche digital technologies **like Cloud, Web Development AI/ML**
- The framework accelerates learning through tools like training simulators, AI-based personal learning coaches, and their internal Academy to train agents on client-specific requirements and sharpen their digital skills.

30%	>98%	38%	▲	
Higher team productivity	Skill match for Projects	Improvement for CSAT scores	Increase in Revenue per employee	Better Resource utilization

Source: nasscom Digital Skills Case Studies

Digital Fluency Levels in India

The choice of Digital Technologies and related skills that are relevant to the organization are further perceived from the lens of the complexity of skill and technology under consideration.

Every Digital Technology and the relevant skills under it are divided as per Foundational, Advanced, and Expert Level Skill.



Which Technology to Skill on?



Which Digital Skills to include in the Basket?



Which team requires this skillset the most?

Foundational Skills

Skills used to effectively perform tasks by utilization of digital technology, mediums, and devices.

These skills are crucial for further development of digital fluency and expertise.

Advanced Skills

Skills used to effectively perform routine as well as non-routine tasks using digital technology, medium, or device.

These skills require a deeper understanding and mastery over digital technology, medium, or device.

Expert Skills

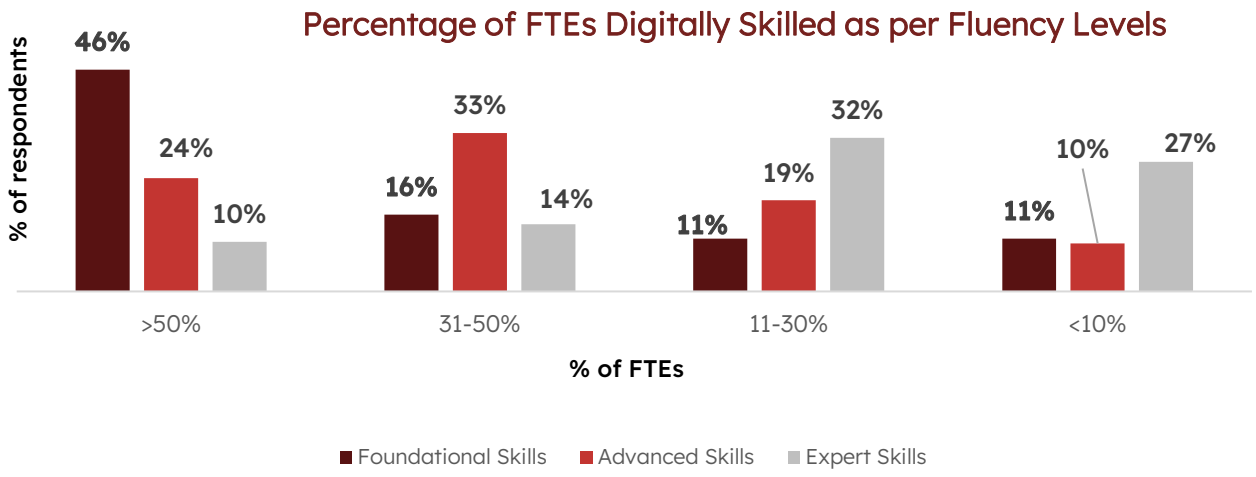
Skills used for the efficient application and utilization of more complex and sophisticated technology and solutions required in business.

These skills require specialized and advanced technical skills and knowledge.

Source: nasscom Digital Skills Case Studies

Maturing Digital Fluency Levels in India

Majority of organizations in India have achieved substantial level of foundational digital skilling



Source: nasscom Digital Skill Survey

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Case in Point: "One Thing to Learn" Framework at an Indian Technology Services Firm

The organization adopted to upskill and cross skill the entire workforce of the organization with the goal of making them on-par with global digital skills index. There are 3 components:

LEFT-SHIFT

A skill building program for fresh entrants that bridges the gap between industry and academia

NOTCH UP

A program that helps middle to senior level technical members to upskill, reskill, or cross-skill

ENRICH

A program that enables leaders to have confident conversations in the emerging and disruptive tech landscape.

The program has successfully resulted in an increase in the learning hours and participation of **3000** employees.

Source: nasscom Digital Skills Case Studies

Digital Skills is a Priority Across all Sectors

The Importance of Digital Skills is sector agnostic…

84%

Respondents have indicated that their **Tech FTEs** have at least one foundational level of digital fluency

81%

Respondents have indicated that their **Non-Tech FTEs** have at least one foundational level of digital fluency

Source: nasscom Digital Skill Survey

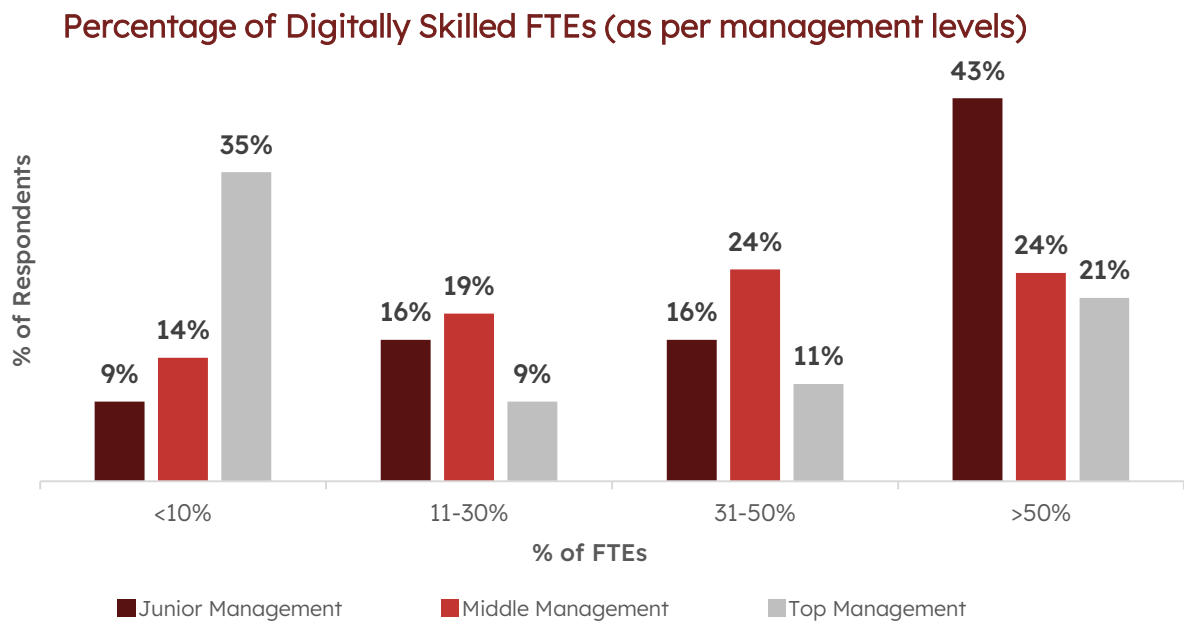
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The proliferation of key foundational skills among Non-Tech FTEs is a testament to the perception of digital literacy both in the minds of the employee and employer. Indian firms are also willing and able to leverage learning platforms and academic partnerships to upskill/ cross-skill these employees.

Source: nasscom Digital Skills Survey

Digital Skills are ubiquitous across levels

Respondents indicated that Digital Skilling initiatives are carried out across all levels of management in the organization



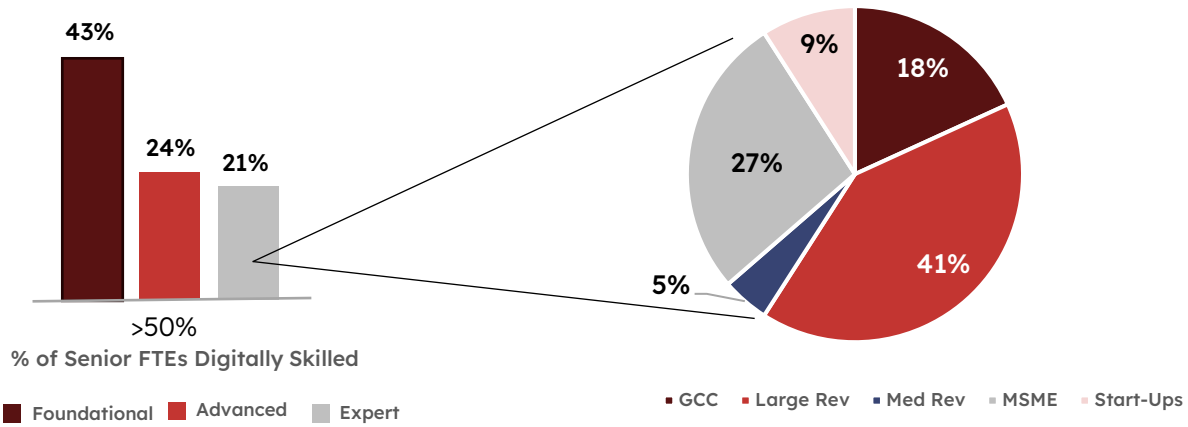
Source: nasscom Digital Skill Survey

N=106

- Organizations are focusing extensively on digitally skilling junior management to enhance the foundation of skills and build a digital focused culture. These can be attributed to initiatives such as partnerships with platforms and academia to upskill their FTEs with extensive training initiatives.
- Moreover, about 25% of firms across different sizes have indicated that most of their top management displayed an expert fluency in key digital skills ensuring that the required proficiency of skills are embedded at the senior levels as well

A dive into who drives top level demand

21% Firms reported that most of their top management possessed expert fluency in key digital skills



Source: nasscom Digital Skills Survey

N=106

Though, large companies continue to lead in terms of top management expert fluency in key digital skills, MSMEs are the close second reporting a higher share in the digitally skilled top management compared to GCCs and Medium Revenue firms. These skills are critical to success as these firms realize the importance of leveraging digital solutions to drive competitiveness, growth and productivity

Case in Point: Digital Upskilling at a Patenting Services Organization

The organization has the following training programs for upskilling:

- 80 Hours of Knowledge transfer upon joining the organization
- 40 hours on LLM, Gen AI and NLP as they are niche subject area
- Exclusive upskilling with AWS cloud as scheduled with AWS team.
- Domain upskilling with WIPO course work.
- Human centric design thinking with Coursera for UX design and Figma from Google.

Impact: All employees and interns hit the semi-annual target of 100 training hours.

Source: nasscom Digital Skills Case Studies

Creation of a Continuous Digital Skilling Ecosystem

Leading practices followed by organizations to offer best-in-class Digital Skilling Experience

01

Timely introduction of interventions for observed skilling gaps

02

Creation of scalable and replicable Digital Skilling Frameworks for regions and units of the organization

03

Unhindered accessibility and availability of Digital Skilling resources

04

Appointing key Champions and Coaches to drive Digital Skilling in the organization

05

Recognition of top or active learners

06

Continuous gathering and incorporation of feedback for improvement

07

Sponsorship of higher-level Digital Skilling courses

08

Providing opportunities for on-the-job application of the acquired digital skills

09

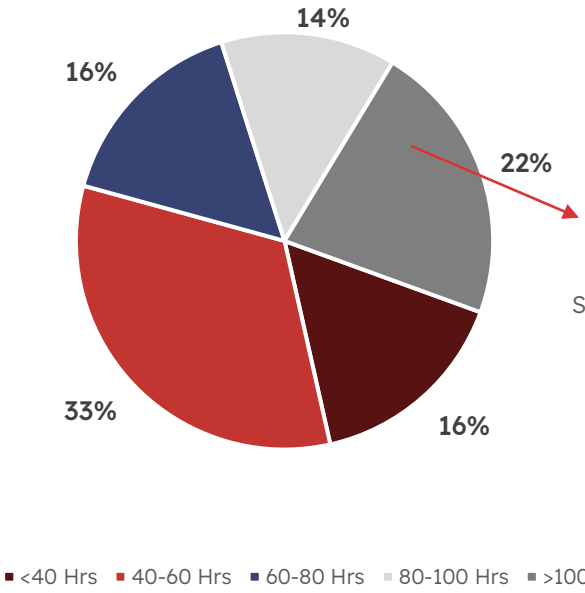
Active tracking of learning effectiveness metrics

Source: nasscom Digital Skills Case Studies

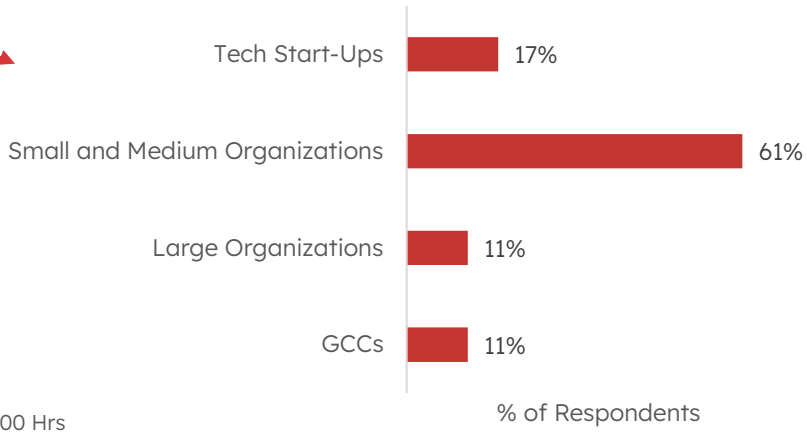
52% of Organizations spend 60-100 hours annually on Digital Learning

Learning hours is a vital metric to gauge employees' engagement in the organization's learning endeavors. Additionally, active tracking of learning hours also helps to ensure the quality of the Digital Skilling programs, customization of skilling experiences, and linking skilling initiatives to business outcomes.

Organizations' time investment in Digital Skilling



Organizations (by type) spending more than 100 hours on Digital Skilling



Interestingly, over 50% of Micro, Small and Medium sized organizations are investing more than 100 hours in Digital Skilling every year as they perceive building cutting-edge skills as a key differentiator in a competitive market.

Source: nasscom Digital Skills Survey
N=106

Case in Point:

Driving a Continuous Learning Ecosystem at a Digital Transformation Company

Approach for creating a continuous learning ecosystem

- **A Skills Inventory** to identify skill gaps and learning needs.
- **Custom learning journeys** tailored to roles, focusing on both "what“ & "how"
- **T-shaped skills** fostering a well-rounded expertise
- **Experts help with content curation**
- **Learning occurs through self-paced experiences** and collaborative elements, like bootcamps designed to replace traditional classrooms.
- **Self-paced environment,** supported by pre-work and prerequisites. Experience sharing, shadowing, and knowledge
- Creation of an atmosphere for **Peer-Learning**

Human-centered approaches to sustain engagement

- **Silent Learning hours:** focused time collectively spent to learn prioritized skills
- **Felicitation of Top Learners** during townhalls & public forums

Key impact metrics



10M

Learning hours each year since 2020



47%

Demand for digital skills met internally

Source: nasscom Digital Skills Case Studies

Harnessing Learning Platforms

For Digital Proficiency



Harnessing Learning Platforms for Digital Proficiency

Adoption of Learning Platforms for Digital Skilling

Learning platforms in the context of digital skilling ecosystem are dynamic and customizable systems that surpass traditional learning models. Through learning platforms, there is a substantial reliance on curated content, interactive modules, and personalized learning pathways. These platforms act as catalysts for skill acquisition and enhancement for thriving in the contemporary Digital milieu.

2 types of Learning Platforms are used



Digital Learning Platforms have witnessed a significant surge in adoption within Indian Technology Industry, to the point where they've become a crucial medium to drive Continuous Learning and Skilling.

98% of the surveyed organizations reported utilization of learning platforms for Digital Skilling

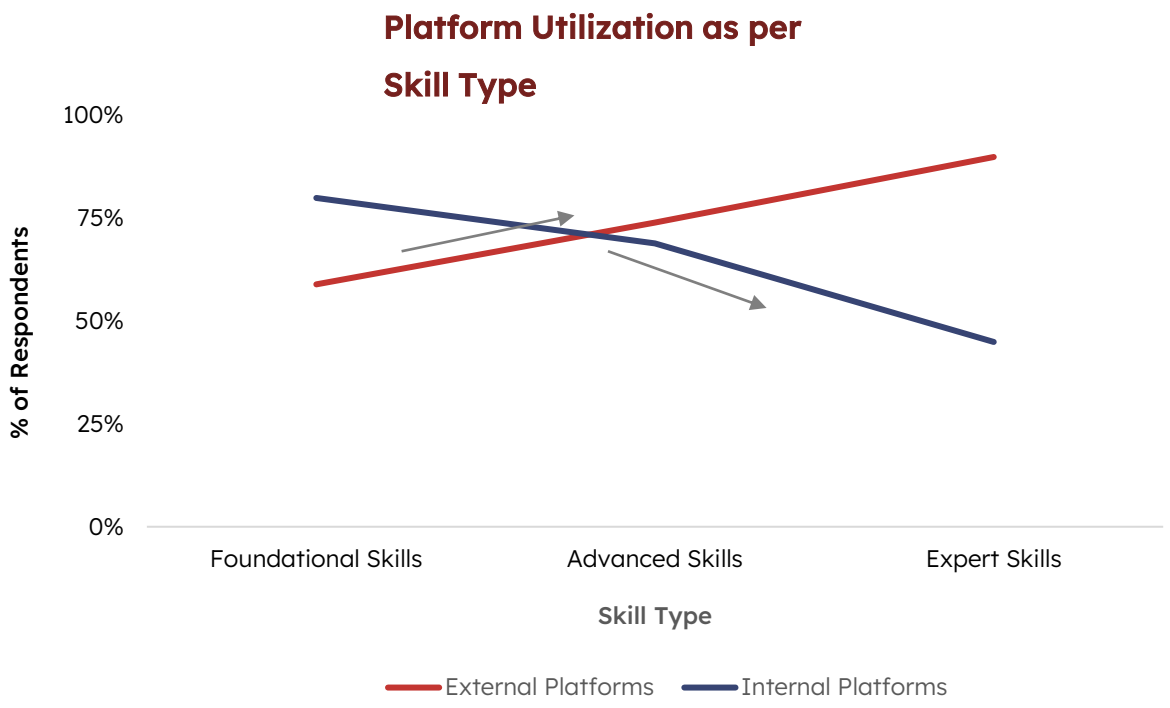
Source: nasscom Digital Skill Survey
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The Hybrid Skilling Experience

The Indian learning ecosystem offers a variety of platforms based on specific skilling needs. A notable trend is the 'Hybrid Skilling Experience', which combines Internal and External learning platforms for offering flexibility and customization in their learning experience. Alongside a holistic learning experience, organizations prefer to target Foundational, Advanced, and Expert level Digital Skills through different internal and external platforms.

Impact of Learning Platforms on Digital Proficiency

80% Respondents opt for Internal learning platforms for Foundational Skilling and External platforms for Expert level training



An increasing reliance on Internal and External Platforms for imparting Foundational, Expert, and Advanced Digital Skills is observed across organizations, given the diverse capabilities that these systems offer. 35% of the respondent organizations indicated that they rely solely on Internal Learning Platforms and capabilities which they use for Foundational Digital Skilling of their employees. However, 90% organizations indicated that they rely only on External Learning Platforms for expert and niche trainings.

Source: nasscom Digital Skills Survey
N=106

Case in Point:

Driving digital re-skilling through learning platforms at a Digital Transformation Major

The Business Need and Challenge

The organization recognized the need to reskill at a scale that enabled adaptation to fast changing technology and client transformation needs.

The Platform

The organization's Learning system has Internal as well as External Learning Platforms. The system:

- Utilizes a skills inventory to ascertain gaps and learning needs
- Customizes learning journey by role
- Allows accessibility to internal as well as external Skilling content.
- Utilizes a knowledge network of SMEs – and agile squads led by coaches
- Offers Self-Social-Experiential learning bootcamps instead of classroom learning. Social learning, Practice solving 'real digital' related business problems, are also enabled by the system

The Impact

Percentage of employees skilled using the above platforms

- Internal Platform: **95% of employees skilled**
- External Platform: **~7.7k of employees skilled**

Source: nasscom Digital Skills Case Studies

Case in Point:

Anytime, Anywhere Skilling at a leading Technology Services Firm

Organizations have adopted a more proactive approach in providing digital learning and skilling resources for 'Anytime, Anywhere Skilling. With the heavy reliance on devices like smartphones and tables, the accessibility of Internal and External Learning platforms is no more restricted to laptops. The 'Anytime, Anywhere Skilling Experience' offers flexibility to choose the location and time of employees' preference for skilling, ensuring a consistent learning experience.

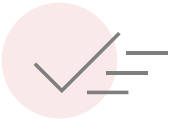
The need for a flexible learning environment

The current employee workforce at the organization is dominated by freshers, resulting into a huge generational diversity. Hence, catering to the needs of individual learners' learning preferences was identified to be an integral part of employees' learning journey.

Organization's Approach

The organization leverages both in-house and external digital content platforms to provide learners with diverse, engaging and personalized learning experiences. The Digital Skilling model of the organization rests on the principles of 'Self-Paced' learning, which involves letting learners decide the best time and place that they want to learn in.

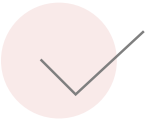
Some Features of the Platforms at the organization



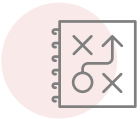
Completion Tracking



Gamified Learning



Automated Skill Evaluations



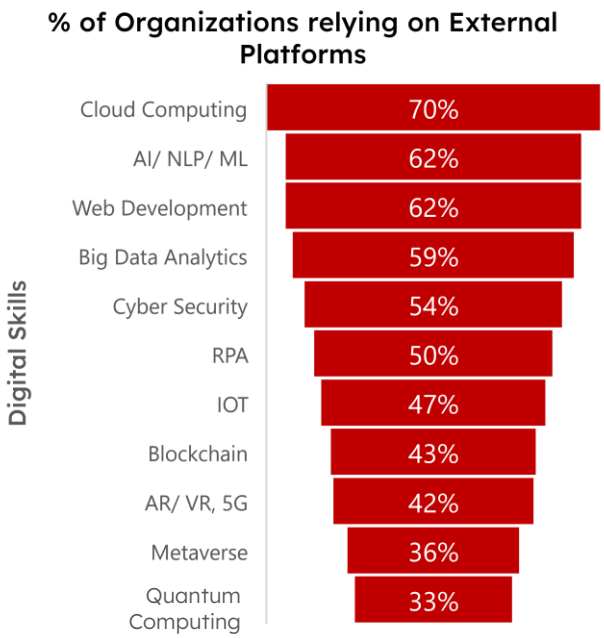
Personalized Learning Journeys

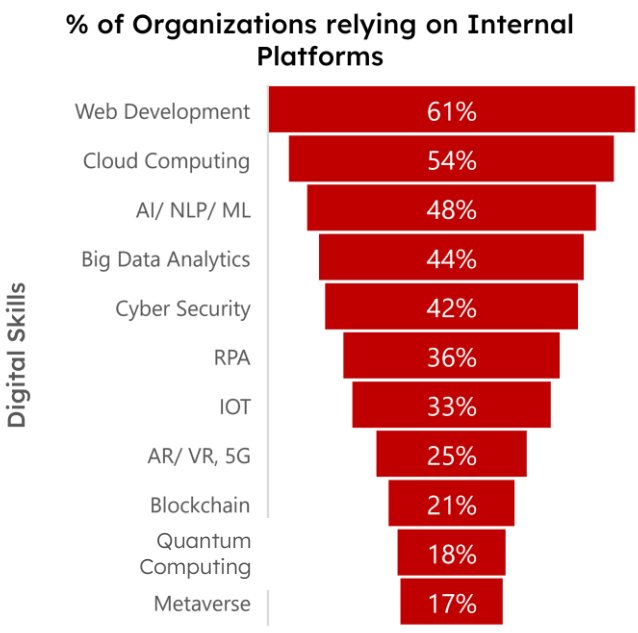
Impact Created

The organization has skilled more than 10,000 employees using the platforms till date.

Source: nasscom Digital Skills Case Studies

95% Organizations utilize an External Learning Platform alongside an in-house Learning Platform

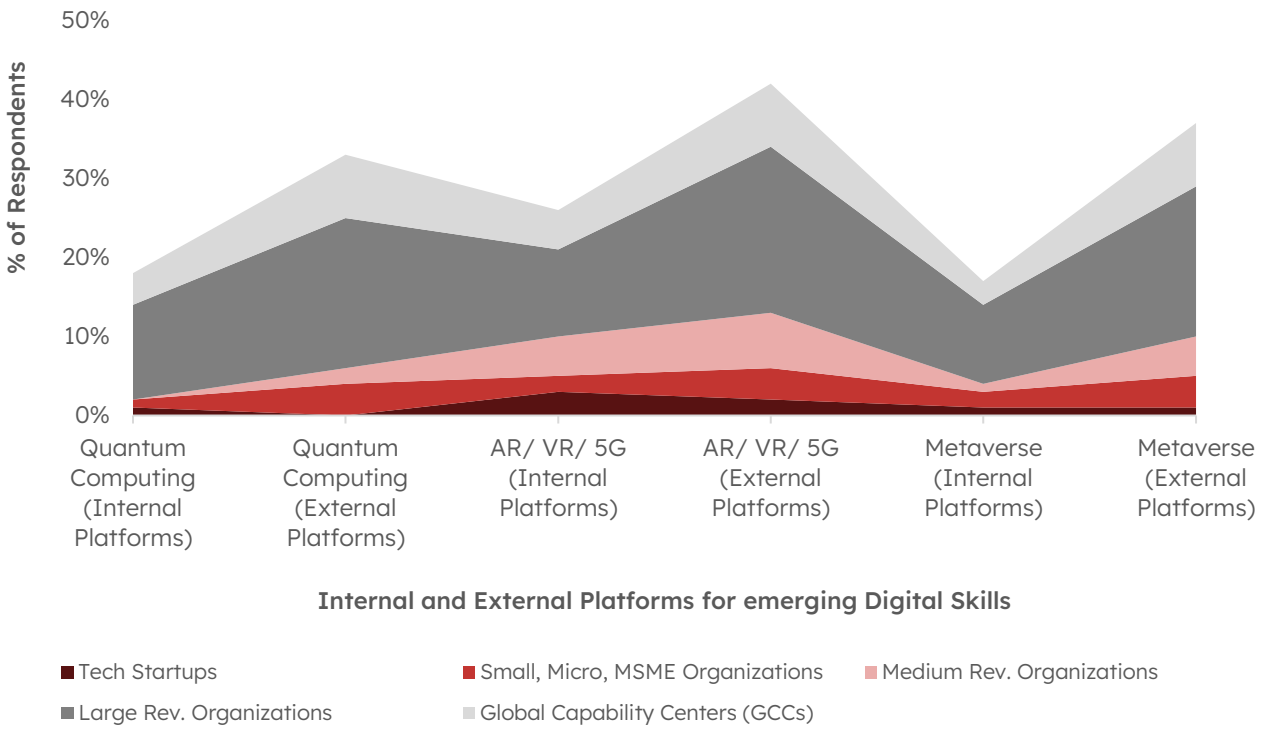




Source: nasscom Digital Skills Survey

N=106

Quantum Computing, AR, VR, and 5G, and Metaverse are some of the niche, but emergent Digital Skills that would gain popularity in the coming years. However, Large Revenue Organizations have already started skilling employees on these Digital Skills through internal as well as external platforms.

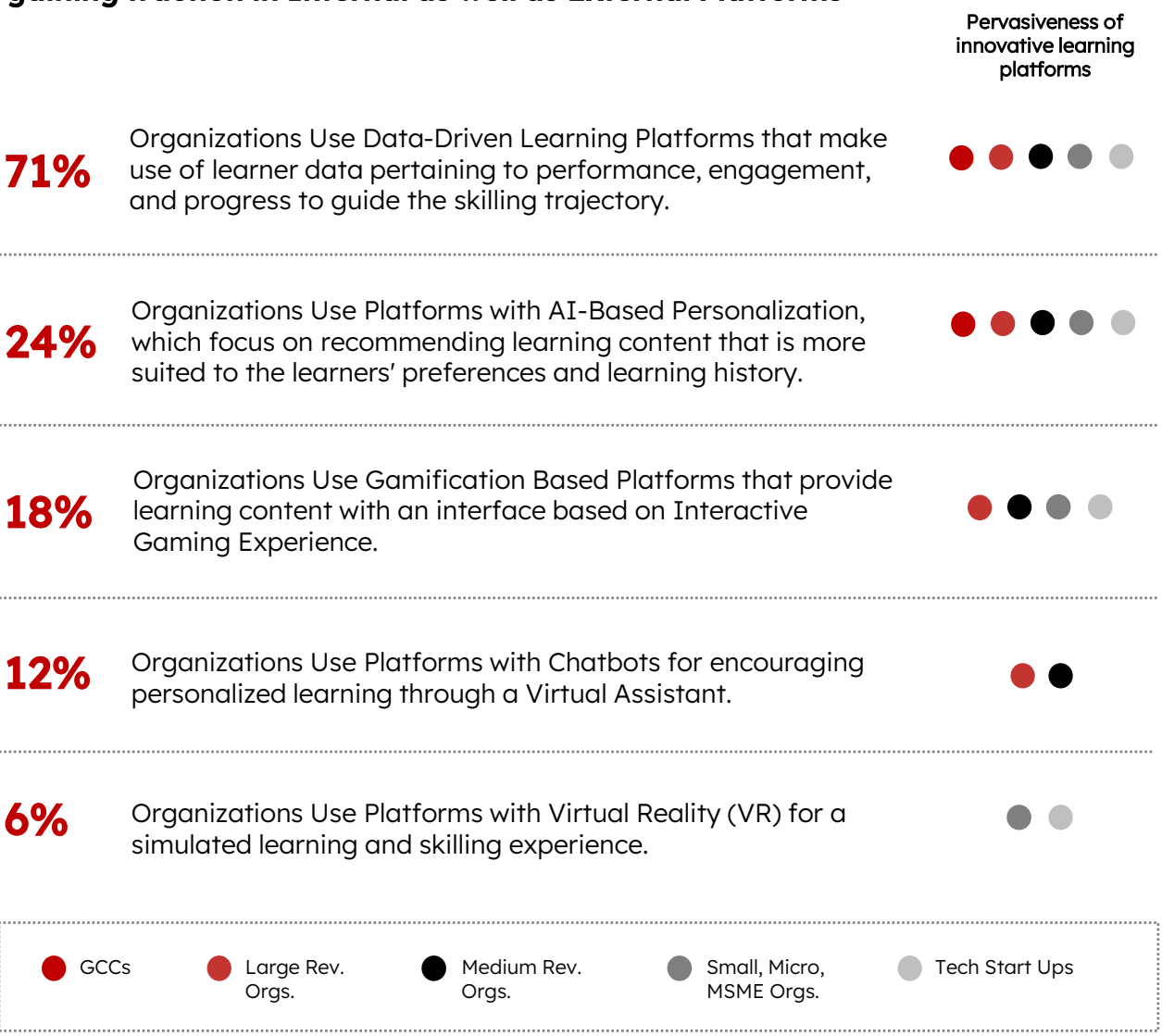


Source: nasscom Digital Skills Survey
N=106

More than 70% Organizations rely on Data-Driven Learning Platforms

Given the long legacy of Data-Driven platforms and the benefits they offer in terms of important metrics like platform adoption, skill penetration, and learning effectiveness, the utilization of such platforms is there to stay for at least some years. However, other platform features like AI-based personalization and Gamification in learning content is also gaining popularity.

AI-Based Personalization in Learning Platforms, followed by Gamification is gaining traction in Internal as well as External Platforms



Source: nasscom Digital Skills Case Studies

Leading Practices in the use of Innovative Learning Platforms

Illustrative Examples

#1 Data Driven Learning System at a Global BPM Company

The organization's Learning Platform has a targeting engine that gathers user data, learns about user preferences, and then makes continuous content and learning recommendations, which can be accessed on the go. Additionally, user data is also gathered and tracked to determine metrics like learning effectiveness and engagement through the data gathered from users.

#2 AI-Powered Learning Platform at a leading Indian IT Company

The organization's in-house platform is based on AI and powered by the 'New Age Delivery engine'. This engine provides interactive, on-demand, contextual, and hyper-personalized upskilling to employees in self-service mode. The platform deploys skill knowledge unit (i.e., set of related skills cutting across various roles) based learning to develop holistic full stack/ full cycle (end to end) software professionals.

#3 Gamification in Learning at an Indian Tech Consultancy Firm

The firm has built a one-click, gamified, machine-first learning ecosystem that presents coding tasks in the form of an interactive gaming environment that not only engages the learners, but also, enables experimenting with real-time coding challenges.

Additionally, the organization hosts a monthly hack for seasoned hackers, a trial round for first-time hackers, and A business-specific hack environment that allows business teams to evaluate and rapidly identify the right talent for their teams.

Source: nasscom Digital Skills Case Studies

Enabling Digital Skilling through FutureSkills Prime

FutureSkills Prime, a joint initiative by nasscom and Ministry of Electronics, and Information Technology (MeitY), is an innovative learning platform designed to equip learners with cutting-edge skills required in the rapidly evolving digital landscape. The platform provides free-of-cost knowledge resources to learners for Digital Skilling. The curriculum on the platform is aligned to National Occupational Standards (NOS) and National Skill Qualifications Framework (NSQF). Apart from accessible-to-all Digital Skilling and Knowledge resources, the platform also offers nasscom Certified Courses for strengthening individuals' Digital Competence.

The courses cater to both, tech and Non-tech employees.

Case in Point: Leveraging FutureSkills Prime to impart Digital Skills at Cognizant

Cognizant devised a program to train engineering students on the technical skills required in the industry from the 6th semester onwards. They partnered with FutureSkills Prime to skill their participant on the relevant professional and technical skills, which contributed to the reduction of orientation period from 6-9 months to 4-6 weeks.

Post sixth semester training evaluation, the program identifies the top talent for the next level of training in 7th semester (6 weeks) and the top talent from 7th semester is offered internship at Cognizant during the 8th semester.

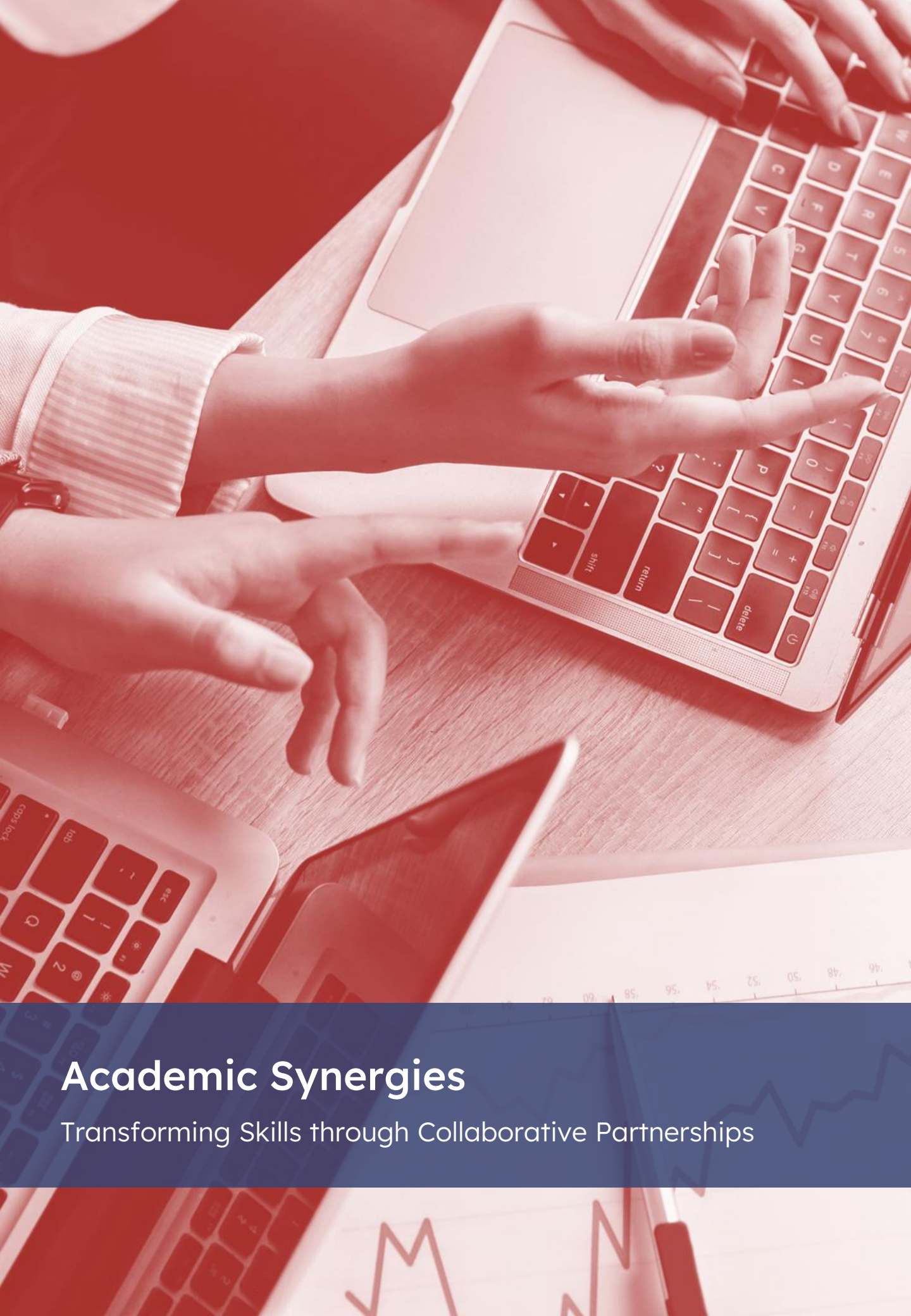
The Impact

70
Participation from 70 colleges across 15 states

~16K
Student Participants

170K
Digital Fluency Badges won by students

Source: FutureSkills Prime - India's Technology Skilling Hub, https://futureskillsprime.in/case-study



Academic Synergies

Transforming Skills through Collaborative Partnerships

Prominence of Industry-Academia Synergies

Academic collaborations have emerged as a crucial component for organizations aiming to navigate the swiftly evolving talent landscape and effectively address the changing skill requirements of today's dynamic environment. Organizations acknowledge the immense value of collaborating with stakeholders in academia to maximize the impact of their large-scale upskilling and reskilling initiatives, even as they diligently implement in-house skilling programs and cutting-edge learning platforms.

The survey findings also indicate that many organizations seek to collaborate with academic institutes to help develop industry-relevant skills in potential job candidates and address issues like talent shortages and skills mismatch between academia and industry by equipping students with the essential digital competencies needed to be job-ready. Students are exposed to real-world requirements through partnerships that impart practical training and mentorship from industry professionals

As per the survey, the industry academia synergies are leveraged for 2 main aspects.

2 Facets of Industry - Academia Collaborations



Leveraging Academic expertise for large-scale upskilling of employees

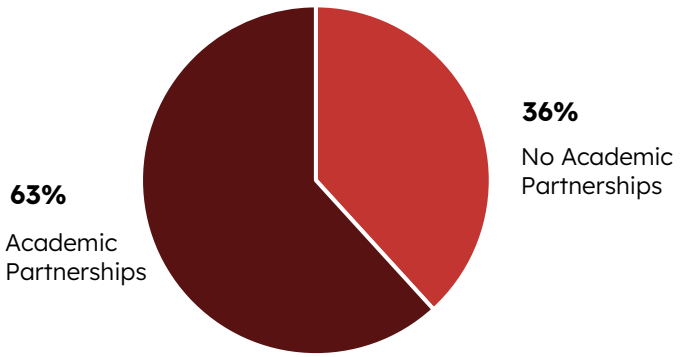


Development of an Industry- Ready workforce by imparting real-world technical skills & practical knowledge to students

63% of firms have established academic partnerships

These partnerships are a win-win for both parties. While the industry brings in learnings of newest technologies both for the students & faculty and opportunities to work on practical, real-world problems, academia brings in hard core research on various topics.

Increased focus on Academic Partnerships, with majority of the respondents building skilling collaborations



Indian Vs International Partnership Landscape

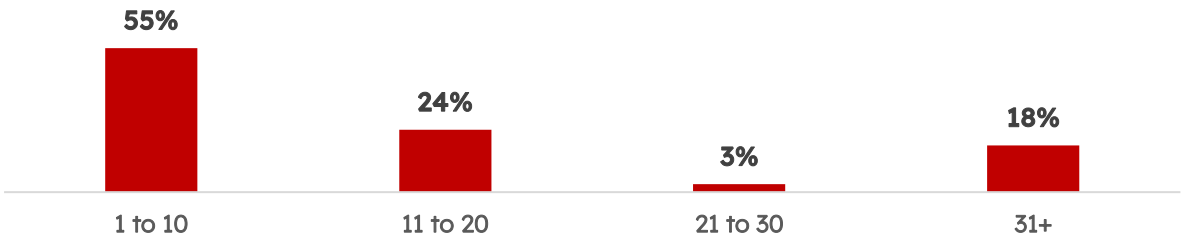
61% Respondents indicated that they have one or more **Academic Partnerships with Indian Institutions**

40% Respondents indicated that they have one or more Academic Partnerships with International Institutions

Source: nasscom Digital Skills Survey
N=106

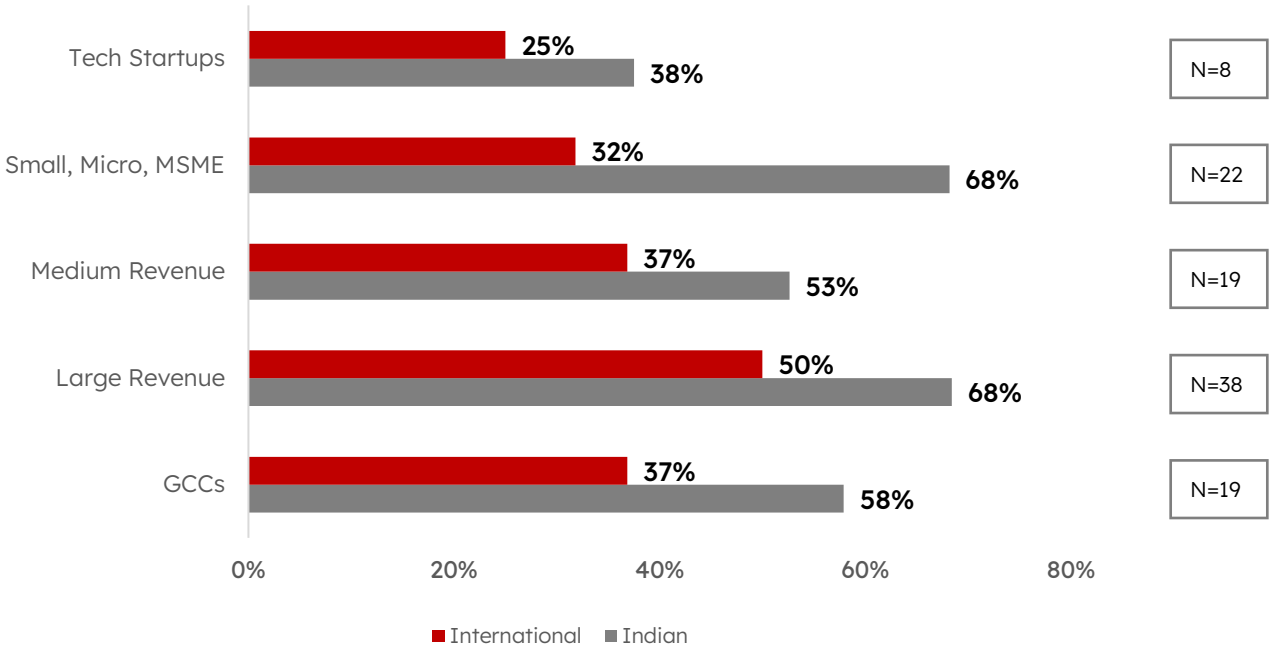
Partnerships Landscape with Academic Institutes

Different Partnership Strategies adopted by organizations thus impacting the Variation in Collaborations



***45%** organizations **have more than 10** partnerships and **55%** organizations have between **1 to 10 partnerships** overall (including both Indian and International)*

Small, micro, and MSME organizations heavily rely on the strength of partnerships within India. As organizations grow in size, there is an observed upward trend in international partnerships, primarily due to the availability of surplus capital. These collaborations enable businesses to leverage resources, expand their reach, and tap into new markets, fostering growth and innovation in the global business landscape



Source: nasscom Digital Skills Survey
N=67

Partnerships Landscape with Academic Institutes

Many Organizations Focus on the Depth & Quality of Partnerships

The findings indicate that while leveraging synergies through academic collaborations is a priority on the organizational agenda for most respondents, the data shows that the majority focus more on the depth rather than breadth of such partnerships for digital skilling.

58% of the organizations indulging in Partnerships with Indian academic institutions have **between 1 to 5 collaborations**
(N=65)

69% of the organizations indulging in Partnerships with International academic institutions have **between 1 to 5 collaborations**
(N=42)

This highlights that organizations seem to prefer cultivating a select number of strategic alliances for undertaking digital skilling. The emphasis appears to be on meaningful collaborations, with the goal of maximizing impact and outcomes through fewer but higher-impact academic collaborations.

What are these organizations doing?

The primary objective of these partnerships is to drive targeted internal or niche skilling initiatives for employees. The aim is to ensure that the existing talent pool remains up to speed with market trends and experiences continuous growth in specialized areas of focus. By prioritizing skill development in specific domains, organizations are enhancing employee expertise and competitiveness, ultimately contributing to their overall success in the dynamic business landscape.

Source: nasscom Digital Skills Survey
N=67

Partnerships Landscape with Academic Institutes

Organizations partnering with large number of Academic Institutes focus majorly on expanding the potential skilled Talent Pool

While depth of partnerships is more important for majority of the survey respondents, few respondents, also focused on maximizing the number of partnerships with educational institutions and impart the necessary relevant digital skills to students to make them industry ready and to expand the available talent pool to hire from.

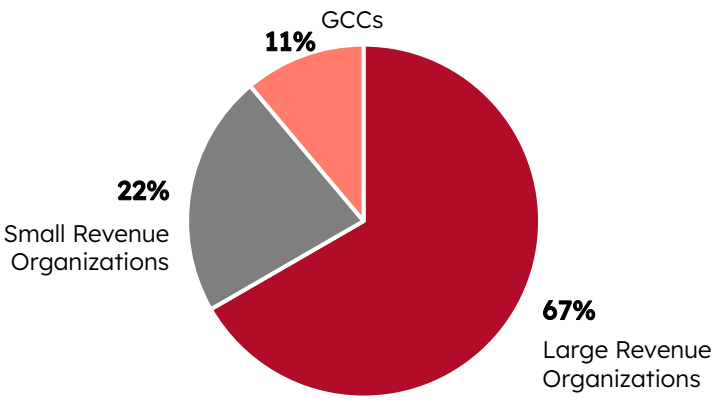
14% of the organizations indulging in Partnerships with Indian academic institutions have **more than 30 collaborations**
(N=65)

9% of the organizations indulging in Partnerships with International academic institutions have **more than 30 collaborations**
(N=42)

Key insights have been drawn to understand these Organizations further who have large number of collaborations with Indian institutes:

Large Revenue Organizations focus on Breadth of Academic Partnerships with more than half focusing on over 30 collaborations with Indian Institutes

Break-up of organizations having large number of Academic Partnerships (> 30) in India



- **Large-Revenue Organizations** in the IT Services Sector focus on breadth of academic partnerships
- Focused on making **engineering students** Industry ready by imparting specific skills required for the organization

Source: nasscom Digital Skills Survey

Academic Partnerships for Skilling

Overview of Top 4 Trends in Academic Collaboration Models

The following section elucidates the **top 4 academic collaboration models** embraced by organizations, underscoring the fact that a substantial majority of the surveyed entities align their collaborative endeavors with one of these models.

#1 **Targeted Employee Upskilling**

Focused Training programs for Niche Skills targeted towards specific employee groups like High Potential talent, Technology Associates, Managers

#2 **Higher Education opportunities for employees in the Technology Domain**

Relevant Management & Technical Courses and other Certifications open to all employees for skill upgradation

#3 **Creation of a Ready–to-Hire Talent pool**

Integration of Industry Knowledge and technologies into Curricula of Academic institutes to impart industry-relevant skills to students

#4 **Enhancing Employability by skilling**

Leveraging synergies to enhance technical knowledge and drive upliftment of underprivileged and unemployed youths through skilling

External Skilling Employee-focused Skilling

Source: nasscom Digital Skills Survey
N=57

Case in Point

1 Targeted Employee Upskilling at a Global Technology Services Firm

The organization wants to drive Innovation and Incubation, and consequently bridge the gap via skill & capability building for employees. The Human Capital Plan focuses on Workforce Agility & Associate Development as one of the Key Priorities.

- **CE Program with IIT Bombay:** Skilling in Data Science, AI/ML, Cloud computing, Digital Platforms & Cyber Security for Senior Tech Associates , mentoring circles with IIT faculty
- **CYBER ENRICH with IIT INDORE & UPES DEHRADUN:** providing learning opportunity and cross functional knowledge in Cybersecurity to Hi- potential Analysts, Associates, Senior Associates and Associate Directors who have completed 15 months
- **Data & AI with IISC Bangalore:** Courses on Data Analytics Vs Analysis, Descriptive Analytics, Predictive Analytics, Unsupervised Learning, Natural Language Processing for specific employee cohorts

2 Academic Partnerships for Higher Education at one of the Big 4 Firms

The Hult International Business School offers an online executive program accessible to all active professionals of the organization, regardless of rank or tenure. It is part of the organization's annual investment of over $500 million in employee well-being, education, and development, available at no cost to personnel irrespective of their tenure, rank, or location.

Source: nasscom Digital Skills Survey
N=57

Case in Point

3 Creation of a Ready –to-hire Talent pool by a German SaaS Company

To bridge the talent gap, the organization believes in equipping youth with digital skills needed to become the next generation thought leaders in Data Science.

- Close collaboration with universities/ institutes to integrate the organization into their curricula, offering academic licenses and resources to educators, organizing train-the-trainer sessions, and providing technical support
- Integration of process mining and software tools in the courses, designing case studies, projects and competitions, Student collaborations
- Rising Stars Learning Program that provides unique learning experience for university students and educators by designing a learning journey that is tailored towards specific job roles.
- The organization was able to train and impart digital skills supporting 300+ freshly graduated students with internship training or job opportunities

Source: nasscom Digital Skills Survey
N=57

Case in Point

4 Enhancing Employability by skilling at a Global IT Solutions Company

*The **organization collaborated** with Microsoft and LinkedIn to upskill 300,000 students in Andhra Pradesh. The Andhra Pradesh Government in conjunction with APSCHE wanted to take up skill development projects for college students and unemployed youth in the state.*

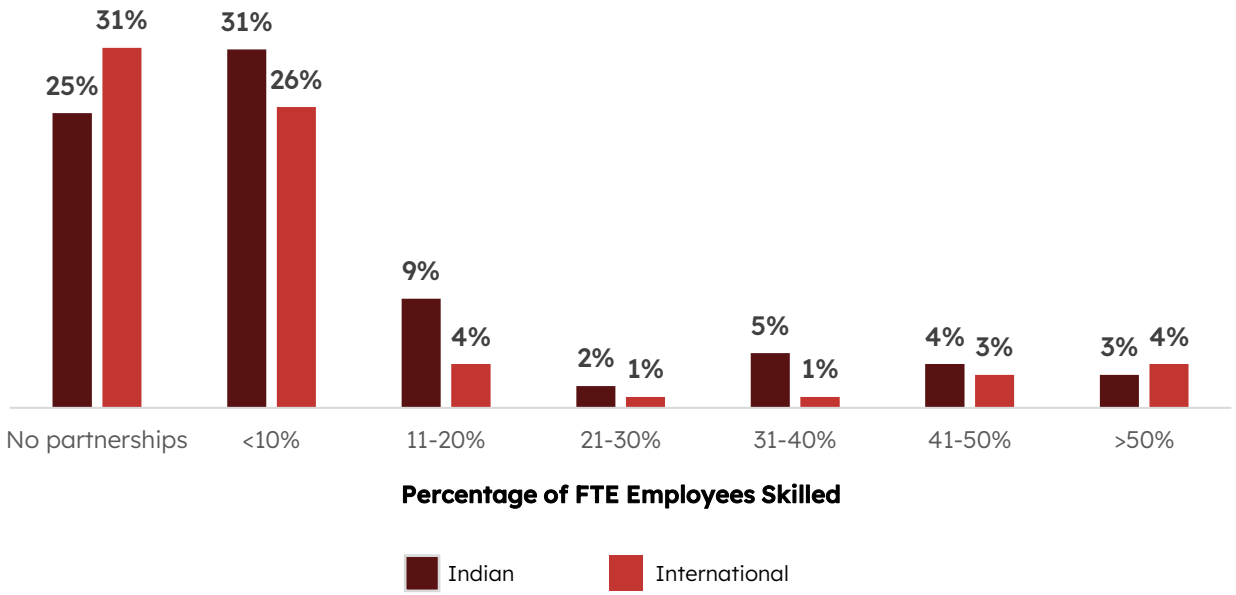
- The organization partnered with the Andhra Pradesh State Council of Higher Education (APSCHE), a Government Body to accelerate the digital skilling of the youth, including the entire cohort of young graduates.
- The courses included a broad range of emerging technologies, including AI, Big Data, and Data Sciences, and were based on personalized learning paths.
- 400 University proctors were addressed to manage the drive at the ground level involving 300,000 students across the state with Microsoft technologies and LinkedIn soft skill training during the year.

Source: nasscom Digital Skills Survey
N=57

Internal Skilling Pervasiveness via Academic Partnerships

54% of the Respondents indicated that they undertake employee skilling via **Indian academic collaborations** while **38%** respondents leverage **International Collaborations**

- Significant proportion of respondent organizations are involved in FTE skilling through collaborations
- Most of the organizations leverage academic partnerships for about 10% of focused set of employees



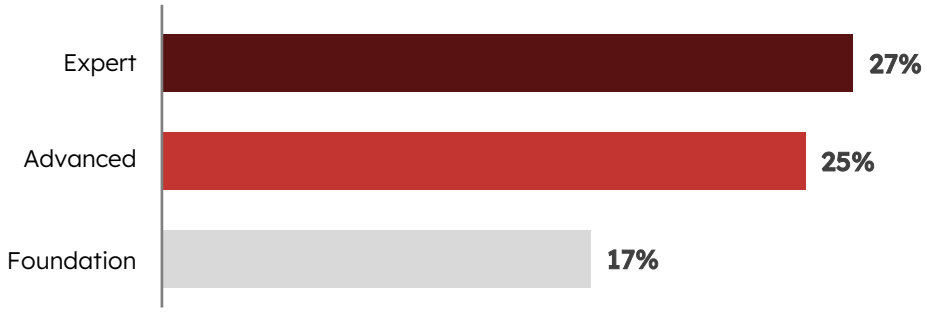
*Organizations are keen on harnessing the potential of academic partnerships to cater to **specific employee cohorts or to facilitate targeted skill development initiatives.***

Source: nasscom Digital Skills Survey
N=100

Skilling Fluency Levels via Academic Partnerships

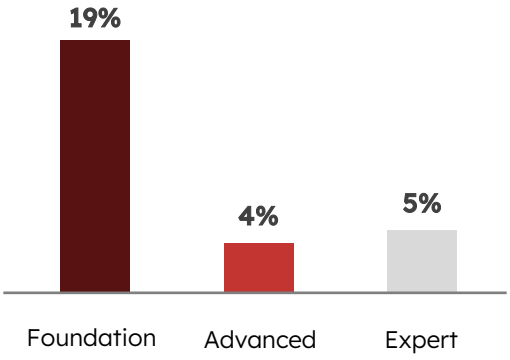
In addition to identifying the trends regarding the pervasiveness of skilling initiatives throughout organizations, the survey findings also shed light on the skilling trends across different levels of skill fluency, **namely Foundation, Advanced, and Expert.**

Organizations skilling a limited proportion of FTE Employees (1 to 5%), mainly focus on Expert Skills



- Higher Emphasis on **Expert Level Skills** when it comes to focused /targeted skilling of limited proportion of Employees.
- Top Trending skills for Expert level focused skilling for these organizations are **Data Analytics & Visualization, Cloud Computing, IOT, Bid data, Blockchain and Cybersecurity**

Skilling fluency trend for organizations skilling a large proportion of FTE Employees (>50%)



Organizations partnering with academic institutes for large-scale skilling of employees, mainly leverage synergies to impart basic or foundational skills.

Source: nasscom Digital Skills Survey
N=106



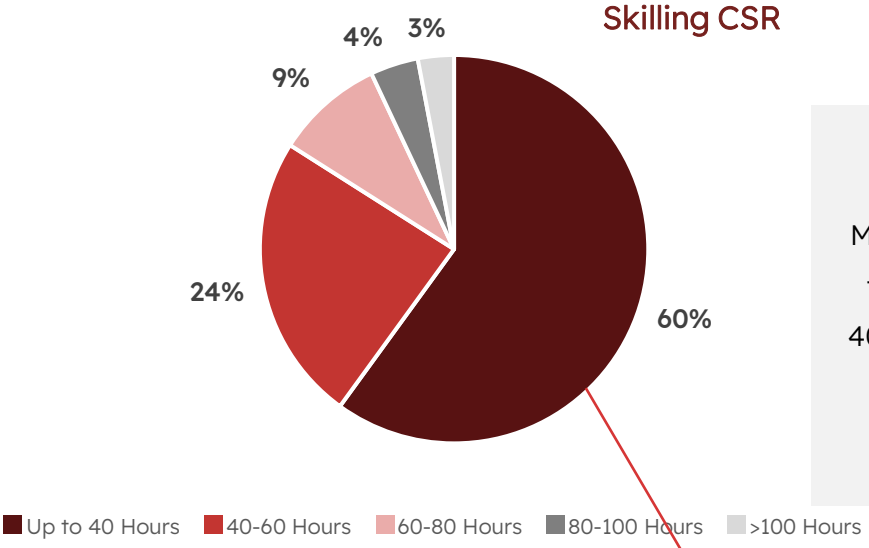
Digital Skilling for All

A CSR Perspective

Digital Skilling- The CSR Angle

The Digital Skilling efforts of Indian Organizations are not just aimed at ensuring Digital Competence internally, but also, contributing to society through Social and Inclusive Digital Skilling. As India strides towards a digital-first economy, organizations are taking steps to engender a Digital Mindset and make the society 'Digital-Savvy'. Respondents of the survey reported some key metrics indicative of the prevalence of Digital Skilling CSR in organizations:

Time Investment of Organizations in Digital Skilling CSR

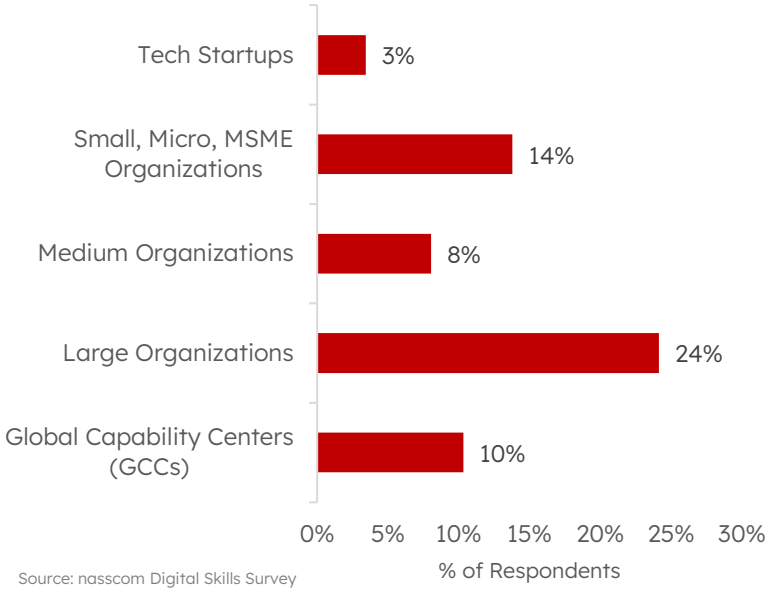


Source: nasscom Digital Skills Survey

N=87

Majority of Organizations said their employees spent up to 40 hours in Digital Skilling CSR in a year

Interestingly, even a substantial proportion of Small, Micro, and MSME organizations indicated time investment of up to 40 hours in Digital Skilling CSR, pointing towards organizations' growing interest towards contributing to the society through Digital Skilling CSR, irrespective of their revenue.

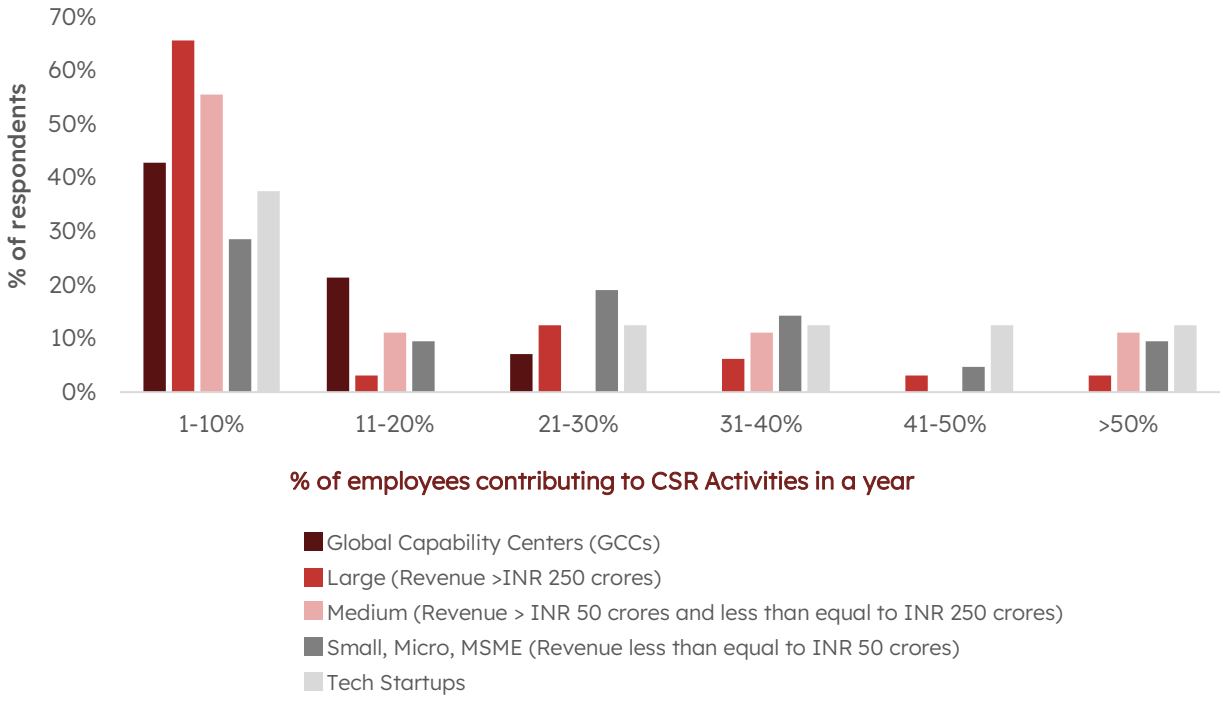


Source: nasscom Digital Skills Survey

N=52

The Emergence and Growth of Digital Skilling CSR

When asked about the proportion of employee participation in Digital CSR Activities, majority of organizations (irrespective of their type) responded that ~10% of their employees are involved in Digital Skilling CSR Activities



Source: nasscom Digital Skills Survey

N=106

Even though the employee participation is limited in Digital Skilling CSR currently, it is noteworthy that there are some organizations who indicate that more than 50% of their employees participate in the Digital Skilling CSR Activities. These organizations are mainly Small and Medium Sized Organizations, and Tech Start-Ups.

The current time investment and proportion of employees contributing to Digital Skilling CSR Activities indicates that Digital Skilling is a relatively nascent domain in the realm of CSR activities. However, given the advancements in technology and the need for a Digitally Skilled talent pool, it shows tremendous potential for growth in the coming years.

Case in Point:

Think 'Out-of-the-box'- Blending Automotive with Digital

The organization, a manufacturer of auto components, decided to take up the digital skilling CSR initiative to improve the quality of education, entrepreneurship training and access to Digital Skilling resources. The aim was to enhance the livelihood of non-urban communities by reaching them and empowering youth with digitally employability skills.

The Approach

Verging out of the conservative approaches, the organization built a mobile solution to reach individuals who can't access resources by themselves. The organization built a 20-seater bus equipped with monitors, mouse, keyboard, headphones, which is enabled with specific content as per the courses. The following courses are available for school students and community in general:

- Certificate Program in Digital Literacy (CPDL)
- Certificate Program in IT for Beginners (NBIB1)
- Use of Internet in Day-to-Day life

8 batches are run per day, with two dedicated IT Trainers.

The Impact



6

Outreach to 6 villages and 12 schools



55M 45F

55% Male and 45% Female beneficiaries



2,451

Certifications completed



~25%

Teacher trainings completed

Source: nasscom Digital Skills Case Studies

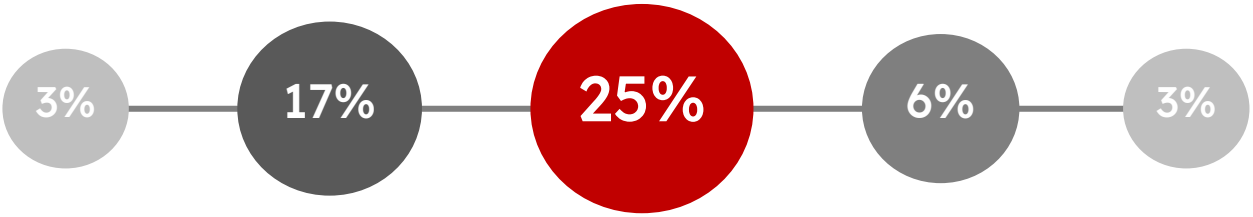
Digital Skilling for All: A CSR Perspective

Blending Social Inclusivity in Digital Skilling CSR

The convergence of CSR activities with Inclusivity, particularly in the context of integrating individuals from diverse groups and socio-economic backgrounds into Digital Skilling Initiatives is gaining momentum. With an aim to ensure that Digital Skilling opportunities reach beyond urban centers and extend to rural and underserved communities, CSR-driven digital skilling endeavors are not only addressing the digital divide but also fostering a more equitable digital ecosystem.

Key Drivers of Digital Skilling CSR Activities

Majority of organizations are working on Digital Skilling CSR Initiatives focused on increasing technology accessibility, followed by providing equitable skilling opportunities



Strengthening Non-Tech Background

Equipping the non-tech areas with the right tools and adequate Digital skillset

Equitable Skilling Opportunities

Catering to the Skilling needs of the underprivileged and underrepresented audience

Increasing Technology Accessibility

Improving the accessibility of Technology and resources for Digital Skilling in remote areas

Employment Generation

Creation of new job opportunities and a digitally skilled talent pool to meet the market demands

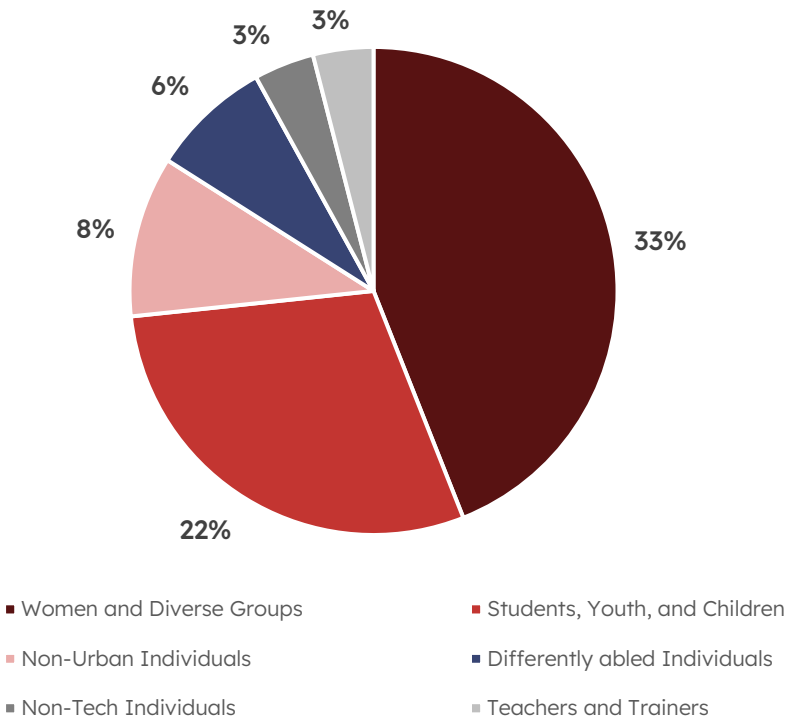
Increasing Trainer Competence

Skilling trainers for transferring the acquired Digital Skills and Knowledge

Source: nasscom Digital Skills Case Studies
N=36

Most Skilling activities are primarily for Women & Diverse Groups, and Students, Youth, & Children

Proportion of Organizations working with different audience groups



Source: nasscom Digital Skills Survey

N=87

Case in Point:

AI for All at an AI Focused Start-Up

Need of the Initiative

The organization - an all-woman start-up team running AI-related initiatives, decided to focus on eliminating initial entry barriers of access to AI, lack of awareness about AI-Based Technologies, insufficiently skilled non-tech workforce in AI, and Gender Divide.

The Approach

To build confidence among young learners, especially girls, the organization offers training to women in AI, post which, all trainees are given employment opportunities to work remotely, on a flexi-time basis. Other activities involve:

- Hosting pro-bono live interactions with SMEs in technical and non-technical fields
- Curation of a free monthly newsletter with the latest AI updates
- Creation of a freely available series of audio-based stories as an introduction to AI for primary-level children
- Hosting pro-bono international hackathons to encourage young children to develop an interest in AI
- Co-created an AI literacy story booklet with 'INDIAai' (the National AI Portal of India)

The Impact



500+

Girls educated and skilled in AI



1000+

Students through live pro-bono work



34

Female teachers provided with jobs

Source: nasscom Digital Skills Case Studies

Prevalent Digital Skilling CSR Initiatives in India

Digital Skilling CSR Initiatives represent a dynamic intersection of technology, education, and social responsibility, aimed at equipping individuals with the requisite Digital Skills. The focus of the initiatives is to empower various target audience groups by cultivating Digital Competence and enabling them to navigate the digital landscape effectively.

Top 5 Digital Skilling CSR Initiative themes

Initiative	Target Audience	Contribution to India's Skilling Ecosystem
IT Industry Readiness Programs	All audience types	Programs aimed at cultivating digital skills required for an advanced and evolving IT Industry
Science, Technology, Engineering and Math (STEM) Program	Primarily (but not limited to) Women and Girls	Strengthening knowledge and core skills pertaining to STEM subjects
Digital Tools Mastery programs	Primarily (but not limited to) Differently-abled Individuals	Programs meant for skills to use digital tools and technologies in spite of physical limitations
Apprenticeships/ Internships	Students and Fresh Graduates	Digital Skilling for the creation of a Digitally competent talent pool
Train the Trainer Programs	Trainers and Teachers	Programs for the cultivation of Digital Skills for effective transfer of knowledge

Source: nasscom Digital Skills Case Studies

These initiatives serve as a testament to the synergistic relationships between corporate responsibility and societal progress.

Case in Point:

Contributing towards a Digitally Skilled Society

A global technology giant conducts the following activities as a part of their Digital Skilling CSR Initiatives:

- Setting up Atal Tinkering Labs to provide 25 hours of skilling in Digital Skills like 3D Printing and Robotics.
- STEM Education and ICT Training for 3,500 children (in remote locations): Exposure to courses like Coding, AI, Robotics
- Training and certifying students on Microsoft approved digital literacy content.
- Introduction of ICT programs aligned to NCERT syllabus, based on self learning modules
- Collaborating with government partners like Education Department (Karnataka State), Digital India CSCS Program, etc.

What's ahead for Digital Skilling CSR?

The future of CSR Activities in the domain of Digital Skilling holds promising opportunities and challenges. A thematic analysis of the qualitative data provided by respondent organizations suggests the possibility of the following growth of Digital Skilling CSR:

Some emergent themes for future growth of Digital Skilling CSR



Industry and Government Collaborations targeted at a wider reach to diverse groups



Focusing on Specialized Skills that are relevant to the complexities of new technologies



Remote and Blended Learning to increase the accessibility of Digital Skilling resources



Offering diverse certifications to foster credibility of digital skills acquired through initiatives/ program



Global Collaborations for ensuring a globally competent talent pool and cross-border skilling initiatives

Currently, some organizations have already begun their Digital Skilling CSR Journey through activities like Collaborations with Government for reaching remote and underserved communities to offer them the best of knowledge and skills, certifying individuals on Digital Skills, and focusing on specialized skills. However, given the anticipated surge in the adoption and exponential advancement in technology, organizations' initiatives in the Digital Skilling CSR domain is bound to witness massive growth and opportunities for initiative diversification.



Organization Success Catalysts

To Drive Digital Transformation

Organization Success Catalysts to drive Digital Transformation

There has been a dramatic impact on the pace of digital transformation, increasing the demand for digital skills more than ever. As more industries adopt tech-driven approaches to grow and succeed, newer and cutting-edge jobs and skills are continuing to proliferate. So, while future digital skill identification, development platforms to build the skills and leveraging partnership with academia to build expertise is critical, organizations are looking at essential success enablers which would indirectly equip organizations on building digital skills for future. Following are the three building blocks for building a digital organization of the future.

1. Acquiring Digital Talent
2. Differentiated Career Paths for Digital Talent
3. Talent Strategy for Digital

1 Acquiring Digital Talent

According to KPMG's Global Tech Report 2022, "Talent Shortage is the #1 challenge, complicating the adoption of digital technologies."

To attract the digital workforce, most organizations are taking several necessary steps

a) **Niche skill premium –** Digital talent with niche skills are always in high demand and therefore organizations tend to offers salaries that are 60-120% more compared to other skills to attract and retain such talent. Specialist roles are paid higher than external market median to attract top talent. Most companies offer different internal bands for specialist & generalist roles to focus on niche skillsets.

Organization Success Catalysts to drive Digital Transformation

b) **Employee Value Propositions (EVPs) that inspire Digital Talent –** Most organizations build a compelling EVP to attract the digital talent by effectively articulating and communicating organization's vision towards digital employees

Case in Point:

A Global Technology organization has crafted its talent value proposition around **"intrapreneurs who get to build really cool tech with smart people using the latest innovations like AI, IoT, and edge computing"** and who are **"always hungry for a challenge."**

A leading OTT Platform proclaims that its **"engineers ship thousands of lines of code every day,"** their work translating into **"new product features, delivery of content, and algorithms for our service."**

Source: KPMG credential

c) **Incentivizing referrals for niche skills –** Organizations are customizing internal referral program for niche digital skills thereby offering increased referral value and additional incentives for events such as - each month of early joining and retention beyond certain years etc.

d) **Coveted designations for technical talent –** Most of the leading organizations have differentiated coveted designations for the specialist talent for attracting niche skills.

Organization Success Catalysts to drive Digital Transformation

Case in Point: Campus to Corporate Skill-building Program at a leading Indian Technology Organization

- The organization's skill-building programs are designed to hire candidates from Campuses & Technology Institutes by imparting relevant digital skills.
- Their structured Campus to Corporate program ensures smooth transition of campus hires into the organization.
- Strong collaboration with State Government to transform Polytechnic & ITIs into futuristic Centers of Excellence.
- Development of long-term & short-term courses based on industry requirements that help in acquiring digitally skilled talent into the organization.

Source: KPMG case study

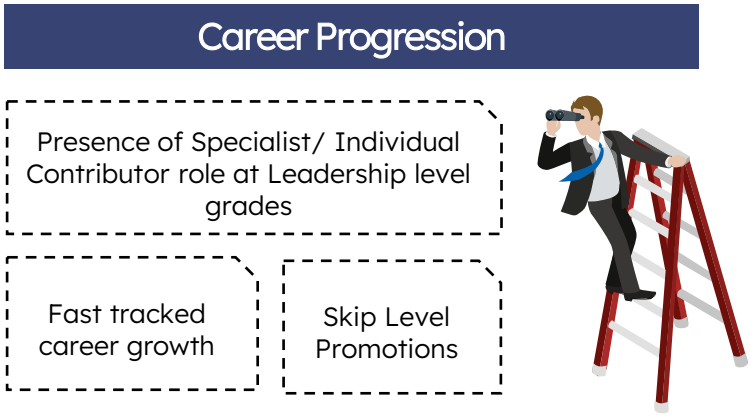
2 Differentiated career paths for Digital Talent

Leading organizations are breaking the traditional link between career progression and management responsibilities for digital talent, recognizing that not all digital talent aspire to manage people or have the skills to excel at doing so. In addition to maintaining traditional "people leadership" career paths, the organizations have developed parallel "specialist paths" for digital talent. This dual approach attracts and retains high-caliber digital talent by being able to move seamlessly from one track to another.

Differentiated designations such as Eminent Scientist, Technical Fellow, Principal Scientist, etc. exists for digital talent based on the nature of work.

Source: KPMG case study

Organization Success Catalysts to drive Digital Transformation



Case in Point: Career Path at the GCC of the world's largest Brewing Company

- The company transitioned to two separate tracks for Individual Contributor (IC) & Management Track (with IC tracks having less levels).
- The career path was differentiated for both technical & management track at all the levels.
- Role mobility was encouraged every 2 years, the plan for lateral, vertical or diagonal movement lateral was chalked out in individual's PDP (Professional Development Plan)

Source: KPMG credential

3 Talent Strategy

To establish a successful talent strategy, organizations should identify their specific digital skills needs, assess the current skill gaps within their workforce, and design comprehensive training programs for upskilling and reskilling. By fostering a culture of continuous learning, promoting collaboration, engaging employees and recognizing them, organizations can empower their employees to embrace digital transformation and drive success in the digital era.

Organization Success Catalysts to drive Digital Transformation

a) **Identifying and Developing a skills framework:** Identification of the specific digital skills required by the organizations both now and in the future. This can be done by assessing the current workforce, analyzing industry trends, and considering the organization's strategic goals, creating a comprehensive framework that outlines the specific digital skills required for various roles within the organization

b) **Foster a Learning Culture:** Creating a culture of continuous learning and development within the organization is very critical. Encouraging employees to take ownership of their learning journey and providing them with resources and opportunities for growth is crucial. This can include providing access to online learning platforms, organizing knowledge-sharing sessions, and promoting cross-functional collaborations.

c) **Robust Recognition Strategies:** Recognition practices are essential for promoting digital skilling within organizations as they provide a powerful tool to acknowledge and appreciate employees' efforts and achievements in acquiring and applying digital skills. When employees receive recognition for their digital skills development, it not only boosts their motivation and engagement but also reinforces a culture of continuous learning and growth.

Few critical recognition practices observed by leading organizations are as follows.

- **Monetary Recognition –** Organizations offer ESOPs to critical technology roles and it is observed that their salaries could be 20-30% more for niche skills.
- **Non-monetary Recognition –** Companies are now focusing on segmenting talent to offer differentiating talent strategy for digital roles.

Source: KPMG internal ESOP study

Organization Success Catalysts to drive Digital Transformation

Case in Point

A leading Commercial Bank has developed a talent strategy for digital skills that focuses on “Run the Bank” and “Grow the Bank”. A comprehensive 3-step approach for talent building was devised – Borrow (Contract), Buy (Hire), Build (Train) which is defined basis the digital skill to become a competitive differentiator in a highly digital oriented world.

Bank has the strategy to grow **65%** of the overall "Grow the bank" capability requirement by building the existing talent

Source: KPMG credential

Case in Point

An India based global Technology Service Provider’s strategic vision is to provide Business Friendly Technology Solutions to customers. Given that Digital is core to Business Transformation, they are leveraging a mix of tools, processes and partnerships to strengthen digital talent capabilities across levels.

The Digital Talent Strategy includes:

- Digital talent Acquisition and Hybrid Workforce Management
- Digital Talent-Development, Deployment and retention
- Partnership with Hyperscalers

Outcomes:

- ~80% resources certified for specific digital skills/domains/roles
- Partnered with various Learning Platforms to help build talent through certifications & trainings

Source: KPMG credential



Nasscom Digital Skills Awards 2023

About the nasscom Digital Skills Awards 2023

As India aspires to be the 'Digital Talent Hub for the World', nasscom celebrated and highlighted the top Digital Skilling organizations via **nasscom Digital Skills Awards 2023.** As a part of nasscom's commitment to fostering a digital-focused mindset, the awards honored organizations that have demonstrated a focus on exceptional digital learning and driving digital skilling.

Organizations were recognized on the following categories:

Digital Fluency Catalyst

The award focused on firm-wide large-scale digital skilling and building a learning culture in the organization.

Deep Skills Disruptor

The award focused on initiatives undertaken for digital skilling across emerging, niche technologies.

The Innovation Ignitor

The award focused on Digital skilling using robust learning infrastructure like Digital Learning Platforms. The category tapped into in-house and partnered learning platforms employed by organizations for their Digital Skilling initiatives.

The Academic Partnership Pioneer

The award focused on organizations' efforts towards creation of partnerships and collaborations with academic institutions for skilling students and employees for the strategic creation of a wider talent pool.

Social Changemakers

The award focused on organizations' efforts and initiatives aimed at Digital skilling of various demographic groups in the society and creating maximum social impact through these initiatives.

Winners of the nasscom Digital Skills Awards 2023

Category: Digital Fluency Catalyst | Organization-wide Digital Skilling

1. **Cummins Global Services and Analytics (CGSA)** for deploying a scalable framework across the organization for upskilling in data science, access to low-code and no-code platforms for creation of better AI/ML based solutions.
2. **Infosys BPM Ltd.** for its talent development program and enablement of growth of new service lines like RPA, Analytics, and Digital Services using the 'learning by doing' model, promoting hands-on digital skilling in the organization

Category: Deep Skills Disruptor | Depth of Niche Technology Skilling

1. **Dell Technologies** for its outstanding Digital skill development program Performance Analytics Group (PAG) supporting critical digital transformation initiatives and upskilling in AI/ML and Analytics.
2. **Mastek** for its initiatives designed for reimagining Digital Commerce, and skilling program aimed at transforming fresh hires into project ready professionals.

Category : The Innovation Ignitor | Learning Platforms for Digital Skilling

1. **Genpact** who have built a learning infrastructure in their organization that builds on collective intelligence to amplify digital, human-led transformation.
2. **Tata Consultancy Services** for PlaySTAK- the organization's in-house gamified, innovative technical solution aimed at development of coding skills.

Winners of the nasscom Digital Skills Awards 2023

Category : The Academic Partnership Pioneer | Digital Partner for Skills

1. **Celonis SE** for partnership programs aimed at training students with digital skills needed to become the next generation of thought leaders in Data Science and Process Mining.
2. **Cognizant** for the 'Digital Nurture' initiative launched to equip engineering students with industry-aligned knowledge of the latest Digital Technologies & strengthening their fundamentals.
3. **Tata Technologies** for collaboration and support in the transformation of Polytechnic and Industrial Training Institutes (ITIs) into futuristic Centers of Excellence (COEs).
4. **Wipro Ltd. (Special Recognition)** for being a trusted partner to Nasscom's FutureSkills Prime in their TalentNext initiative to train professors and students on industry demanding digital skills.

Category : Social Changemakers

1. **Coding and More** for social initiatives aimed at reducing entry barriers and inequality of access to AI and making AI more accessible to students and individuals across all strata of the society.
2. **Pegasystems Worldwide India Pvt. Ltd.** for fostering education and youth development, empowering women and girls in technology through digital skill training, vocation training, entrepreneur development program and access to technology.



Appendix

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About nasscom

nasscom is the industry association for the technology sector in India. A not-for-profit organization funded by the industry, its objective is to build a growth led and sustainable technology and business services sector in the country with over 3100 members. nasscom Insights is the in-house research and analytics arm of nasscom generating insights and driving thought leadership for today's business leaders and entrepreneurs to strengthen India's position as a hub for digital technologies and innovation.

About KPMG

Established in August 1993, the KPMG entities have rapidly built a significant competitive presence in the country. Today we operate from offices across 14 cities including in Ahmedabad, Bengaluru, Chandigarh, Chennai, Gurugram, Hyderabad, Jaipur, Kochi, Kolkata, Mumbai, Noida, Pune, Vadodara and Vijayawada.

The People and Change Advisory (P&C) Practice is a part of KPMG's Business Consulting services. It is focused on providing consulting services falling under the purview of Human Resources. Currently, the P&C Advisory is headed by Dr. Vishalli Dongrie (Partner and Head).

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