ET HRWorld
From The Economic Times

Future-proofing India's IT Workforce
What L&D Professionals Are Prioritizing

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CONTENTS

Executive Summary

This report, a collaboration between **ETHRWorld** and **edForce**, delves into the learning and development (L&D) strategies, challenges, and emerging trends within India's IT sector, which faces unprecedented change due to technological advancements like AI, cloud computing, and automation. As companies aim to future-proof their workforces, L&D professionals play a crucial role in identifying skill needs, implementing innovative training approaches, and navigating challenges to deliver effective learning outcomes.

Key Insights from the Survey:

Top Skill Priorities: Skills in Data Science, AI, and behavioral competencies (e.g., leadership, communication) were identified as critical by 72% of respondents, reflecting a growing demand to prepare a workforce that can meet new industry standards.

Widespread Adoption of Digital Learning: The survey showed that 46% of organizations have adopted AI-driven personalized learning, particularly in larger, internationally headquartered companies. Digital tools are becoming essential, especially for upskilling at scale.

Budget Constraints as a Barrier: Nearly half (47%) of organizations allocate less than 10% of their total budget to L&D, a significant limitation affecting the scope of initiatives. Budget limitations, cited by 32% as a major challenge, underscore the need for increased investment.

Key Findings:

L&D Priorities and Trends: The majority of organizations prioritize fostering continuous learning cultures, with a 4.48 (4.5 approx) weighted average rating for its importance. Furthermore almost 70% of respondents believe in personalized learning paths, and 53% highlight the importance of digital tools like AI to support adaptability and retention.

Challenges: Rapid technological changes, skill identification, and limited updates to training curricula are the key barriers. Technological advancements often outpace adaptation, with many organizations updating L&D programs infrequently, leading to outdated content. Additionally, aligning training initiatives with evolving skill demands remains a persistent hurdle.

Opportunities for Improvement: Suggestions for improvement include increased collaboration with workforce upskilling companies (supported by 53% of respondents), establishing L&D as a standalone function, and enhanced investment in digital and AI-based tools. These strategies can help bridge skill gaps and increase L&D effectiveness across the sector.

Introduction

The Indian IT industry, recognized globally for its innovation and impact, is facing unprecedented shifts as advanced technologies such as artificial intelligence, cloud computing, blockchain, and automation reshape workforce needs. NASSCOM estimates that AI and automation could add up to $500 billion to India's GDP by 2025, a projection that further drives the urgency for upskilling across sectors. For India's IT sector to remain competitive on a global scale, continuous upskilling and reskilling, thus, are essential. L&D professionals are at the heart of this change, tasked with equipping employees to handle emerging technologies and evolving business demands. They identify skill gaps, design relevant training programs, and foster a culture of continuous learning that enhances adaptability in a volatile landscape.

The objective of this report is to investigate the key priorities and strategies L&D professionals are implementing to future-proof India's IT workforce over the next 3-5 years. Our research aims to understand the primary skills these professionals deem necessary, the types of training methods they prefer, and the obstacles they encounter in creating effective learning environments. From AI-driven personalized learning to virtual reality (VR) in training, the findings provide a window into the innovative practices emerging across the IT/ITeS sector.

By capturing insights from L&D and HR leaders across diverse organizations, this report also explores how technological advancements are reshaping learning practices. The survey targets senior managers and above, ensuring a strategic perspective on skill needs across small, medium, and large enterprises. Through the analysis presented here, L&D professionals and industry stakeholders will gain actionable insights that help align L&D programs with evolving business goals and position India's IT workforce for a future defined by constant innovation and digital transformation.

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"At edForce, we've always been driven by a singular mission: empowering the L&D community with the insights, tools, and resources needed to future-proof workforces and drive meaningful change. This report, crafted in collaboration with ETHRWorld, is a reflection of our steadfast commitment to the Learning and Development ecosystem, with a particular focus on addressing the unique needs of the Indian IT industry. By sharing invaluable data and actionable strategies, we aim to give back to the community, equipping organizations to confidently navigate the challenges of tomorrow and build a resilient future."

Ravi Kaklasaria
Co-founder & CEO
edForce

"Success tomorrow begins with a mindset shift today, so here the L&D takes pride to shape the Skillset, the Toolset & the Mindset of people to bridge the potential to achievement with a human-first approach."

Michael Joseph
Head-L&D Operations
Adecco India

"A Personalized learning approach has transformed our learning paradigm, making it more relevant and impactful. We have enabled our talent with platforms and tools that align career aspirations to organization's purpose. This transformational approach to learning has accelerated our journey to creating a future ready workforce."

Rahul Sahay
SVP-HR
Virtusa

"Continuous learning isn't just a strategy; it's a competitive edge. As technology evolves rapidly, the focus must remain on empowering teams with the skills they need to adapt, innovate, and excel."

Lalit Suresh
Global Head - Learning and Development
Torry Harris Integration Solutions

"This report highlights the pivotal role of L&D professionals in preparing India's IT workforce for rapid technological shifts. By focusing on upskilling strategies and innovative practices, it offers a roadmap for building a future-ready workforce. The insights serve as a guide for aligning learning initiatives with evolving demands of the IT industry."

Yasmin Taj
Editor
ETHRWorld

"Learning is taking a new shape with technology. This report highlights some key data-driven insights and actionable strategies that are helping L&D professionals like us to be able to navigate the challenges of budget constraints, rapid technological changes, and partner with business in building capabilities. AI-driven learning will be the pivotal in meeting the growing demand for personalized learning paths"

Chandrashekar Shetty
Head Learning
Development,
Aditya Birla Capital

"From identifying skill gaps to leveraging AI-driven learning tools, this report equips L&D professionals like us to revolutionize how we develop future-ready teams. It serves as an essential resource for aligning workforce capabilities with emerging industry demands while fostering a culture of continuous growth and innovation."

Dr. Neha Bhopatkar
Director - People,
InfoBeans

"Future-proofing India's IT Workforce" analyzes the Learning and Development (L&D) landscape within India's Information Technology sector. It highlights current practices, emerging trends, challenges, skill gaps, future projections, and offers recommendations for developing effective L&D strategies. This read was insightful and interesting, and it adds significant value to the context.

Dharmin Ravi Thakkar
Associate Senior
Manager - L & D,
Persistent

"With 47% of companies dedicating less than 1% of their budgets to L&D, it's clear there's significant room for growth. This report underscores the importance of prioritizing L&D as a strategic focus within every organization."
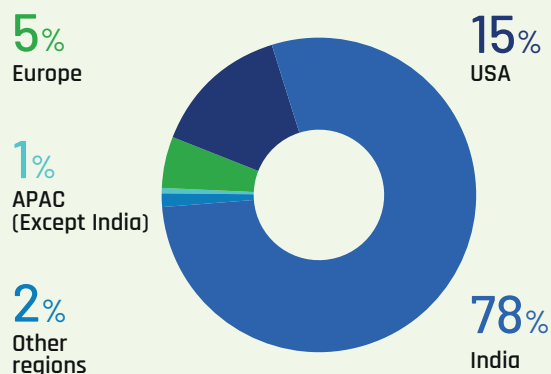
Zahida Jabeen
Learning Consultant,
Ericsson

Demographic Analysis

India-Based vs. Internationally Headquartered Companies

- The majority of companies in the survey are headquartered in India, with only a small percentage based in the USA, Europe, or other APAC regions.

- India-based companies are more likely to face budget constraints in their L&D investments, with nearly half of the surveyed organizations allocating less than 10% of their budget to L&D. This limited funding impacts their ability to adopt advanced technologies like AI-driven learning, which is more prevalent in internationally headquartered companies that often have larger budgets and prioritize innovation in L&D.

- India-based companies mostly house L&D within HR function, potentially restricting the agility and specialization of training programs. In contrast, internationally headquartered companies more frequently report L&D as an independent function, allowing for more strategic alignment with broader organizational goals and rapid technological advancements.

Company Headquarters Distribution

5% Europe

1% APAC (Except India)

2% Other regions

15% USA

78% India

L&D Reporting Structure

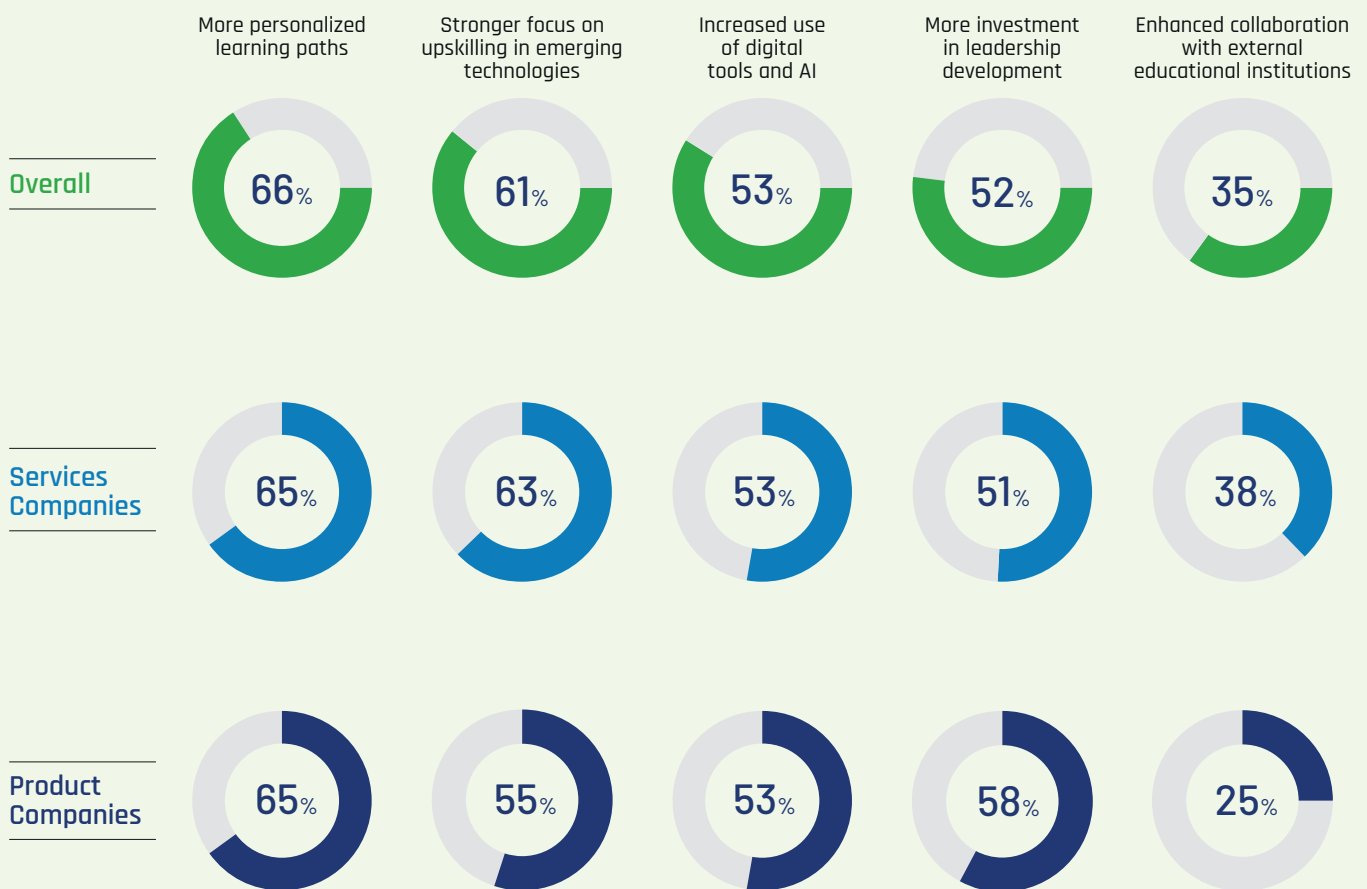30% Independent Function

70% Within HR
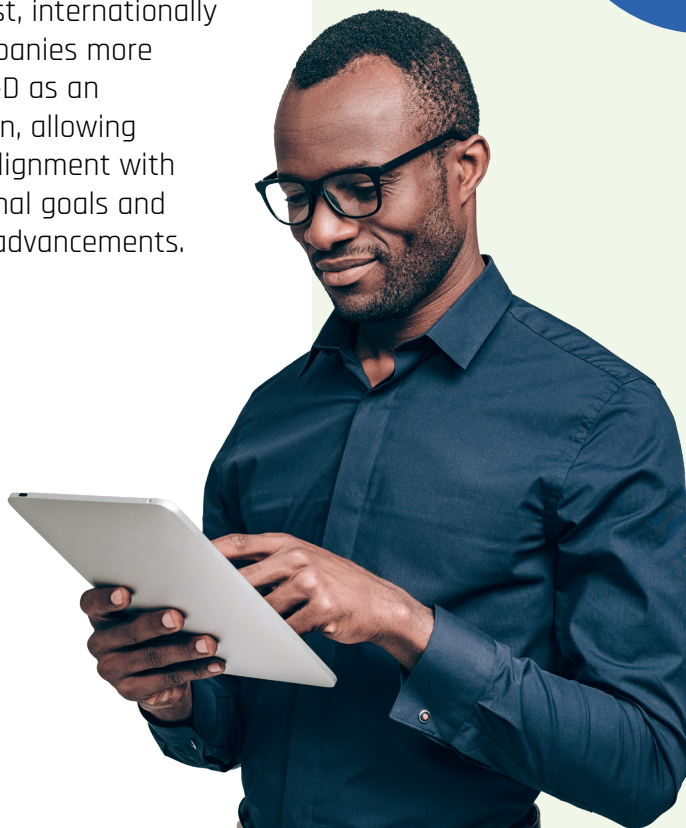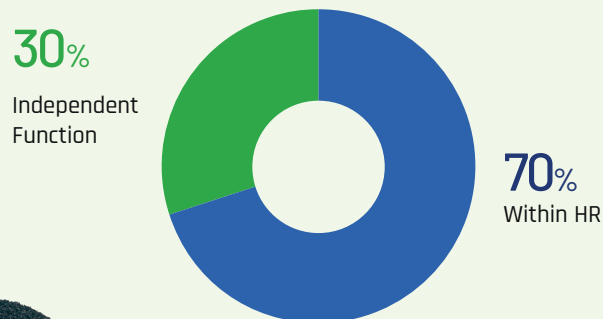
Product vs. Service Companies

Service companies majorly focus on customer-oriented skills, adaptability, and emerging technology proficiency, likely due to the diverse client demands they face. These companies often invest in continuous learning and behavioral skills training to equip employees with both technical and client-facing competencies.

Product companies, in contrast, place a heavier emphasis on specialized skills and technologies directly tied to their product development cycles. They are more likely to prioritize training in areas such as data science, AI, and DevOps—skills that are integral to driving product innovation and quality.

Key Areas for Organizational Focus Identified by L&D Professionals

	More personalized learning paths	Stronger focus on upskilling in emerging technologies	Increased use of digital tools and AI	More investment in leadership development	Enhanced collaboration with external educational institutions
Overall	66%	61%	53%	52%	35%
Services Companies	65%	63%	53%	51%	38%
Product Companies	65%	55%	53%	58%	25%

Enhanced collaboration with external educational institutions

35%

Collaboration with external educational institutions is not just an optional enhancement—it's a strategic enabler for staying competitive in a dynamic business environment. Organizations should invest in these partnerships to harness innovation, meet workforce demands, and ensure sustainable growth.

Current L&D Practices in India's IT sector

Current L&D practices in India's IT/ITeS sector are designed to meet immediate skill needs through varied delivery methods. Common approaches include digital learning tools and in-house training, supplemented by external programs for specialized skills. Technology integration is central to training, with a majority using digital platforms to support learning delivery.

Over-reliance on lean L&D teams: Smaller organizations make up 64% of the responses, suggesting a reliance on leaner L&D teams (1-5 employees in L&D). However, companies with larger employee counts tend to have a greater number of in-house trainers and more robust L&D resources.

Digital learning adoption varies: India-based firms primarily use digital learning, while organizations headquartered in the USA and Europe show a higher inclination toward using AI-driven personalized learning.
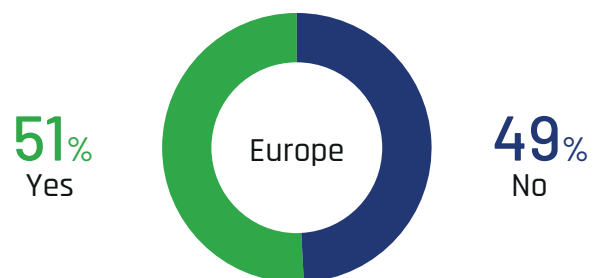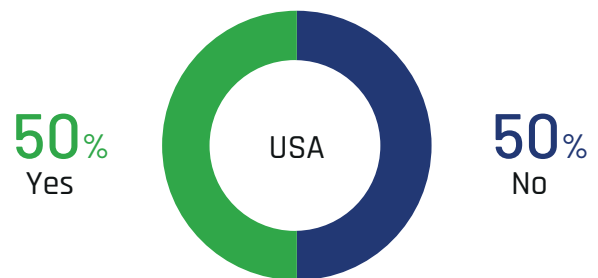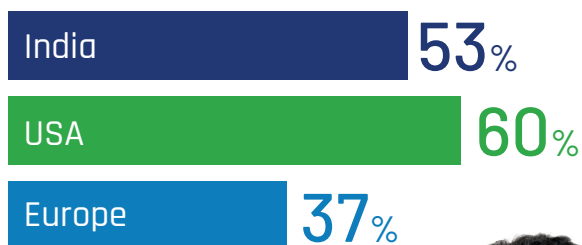
Organizations using AI-driven personalized learning to deliver training programs (overall)

46% Yes **54%** No

Organizations using AI-driven personalized learning to deliver training programs (by region)

India — **44%** Yes **56%** No

USA — **50%** Yes **50%** No

Europe — **51%** Yes **49%** No
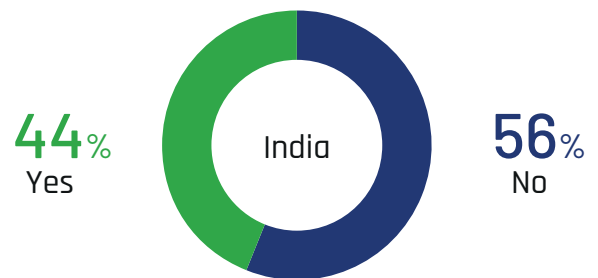
Digital learning adoption by region

India **53%**

USA **60%**

Europe **37%**

Emerging Trends and Innovations - Moving back to classroom training from VILT

The use of advanced learning technologies is transforming L&D approaches. Trends such as personalized learning, microlearning, and gamification are on the rise, and there's increasing interest in AI-driven and virtual reality (VR) learning solutions to enhance engagement and skill retention.
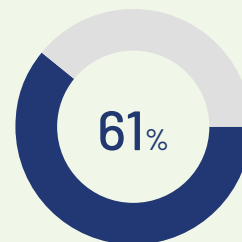
- **High adoption of AI and VR:** Larger organizations, particularly headquartered in the USA and Europe, are leading in AI-driven and VR-based learning, with 46% adoption. These technologies support personalized, engaging training that aligns closely with real-time industry needs, though budget limitations hinder broader adoption, especially in India.

- **Personalized and continuous learning gains traction:** Continuous learning cultures are highly prioritized, with 66% of organizations favoring personalized learning paths to address skill gaps effectively. This approach aligns training more closely with employee roles and career development, enhancing motivation and skill retention.

- **Microlearning and gamification:** Microlearning and gamification are gaining popularity for their ability to engage learners through brief, focused modules. These methods fit well in hybrid work models, improve training completion rates, and help foster an adaptable workforce.

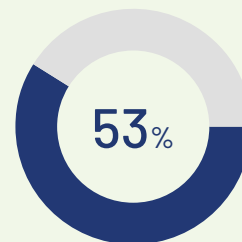## Personalized and continuous learning gains traction
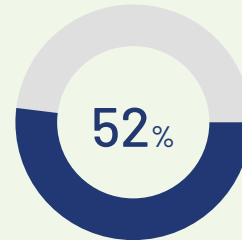
More personalized learning paths
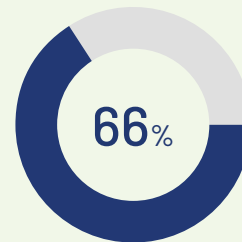
66%

Stronger focus on upskilling in emerging technologies

61%

Increased use of digital tools and AI

53%

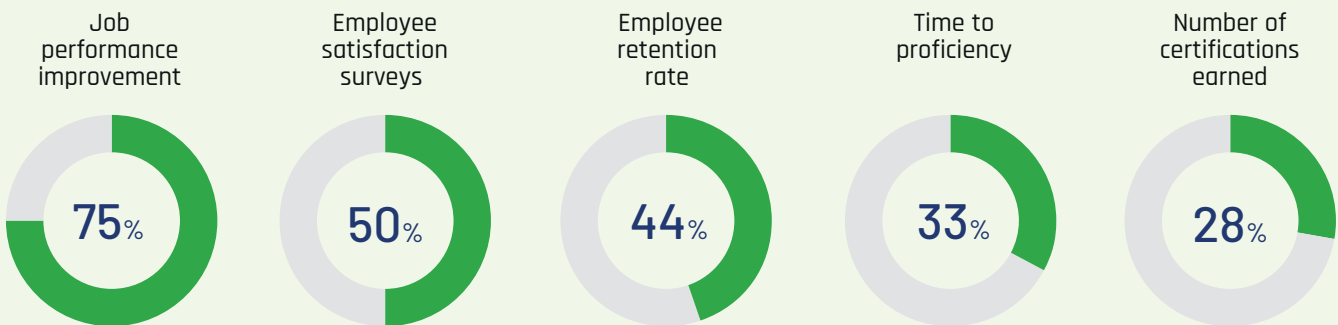More investment in leadership development

**52%**

Evolution of L&D Practices

L&D practices are evolving with a strong emphasis on technology-driven skills like Data Science, AI, and Cloud Computing, which are currently in high demand. Organizations are also adopting more agile approaches, with quarterly or ad-hoc updates, to keep their training programs responsive to rapid technological changes.

- With 66% of respondents aiming for stronger upskilling in emerging technologies, and 89% of leadership supporting a culture of continuous learning, future trends point to a greater investment in AI-driven and tech-focused training.

- Organizations are moving towards quarterly or ad-hoc curriculum updates (25% and 33% respectively), indicating a trend toward agility and responsiveness in training programs to keep pace with rapid tech evolution.

- With nearly three-quarters of respondents identifying job performance improvement as a primary measure of L&D success, it's evident that organizations prioritize tangible outcomes that directly impact business productivity and efficiency.

- Over two-thirds of respondents (approximately 67%) rated AR/VR-based learning at 3 or higher (on a scale of 5), demonstrating a general acceptance of its potential. Only 17% rated it as highly effective (5), suggesting that while AR/VR shows promise, it may not yet deliver the impact or scalability organizations expect for widespread adoption.

Metrics used to measure the success of L&D initiatives

Job performance improvement	Employee satisfaction surveys	Employee retention rate	Time to proficiency	Number of certifications earned
75%	50%	44%	33%	28%

Effectiveness of AR/VR-based learning solutions in enhancing employee skill development

- 6%
- 9%
- 33%
- 35%
- 17%

■ least effective ■ moderately effective ■ average ■ effective ■ most effective
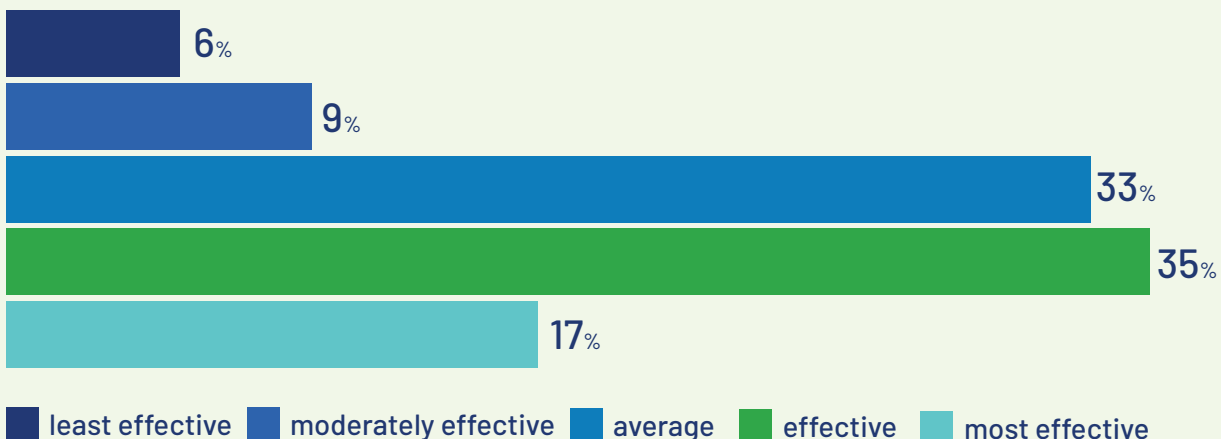
Challenges and Gaps in L&D

Budget limitations, rapid technological changes, and skill identification are primary challenges in implementing effective L&D programs. Product-based companies, in particular, face budget constraints that hinder scaling L&D efforts.

- **Budget constraints impact resources: A significant proportion (47%) of organizations allocate less than 10% of their budget to L&D**, which directly impacts their ability to scale upskilling initiatives. A large portion of respondents (32%) identified financial limitations as a primary obstacle, indicating that many organizations may struggle to allocate enough resources to implement comprehensive and effective training programs.

- **Technological change outpaces adaptation:** A prominent challenge, cited by 21% of survey respondents, is the rapid pace of technological changes, which complicates curriculum updates and adoption of cutting-edge learning tools. **33% of the companies also update their L&D programs on an ad-hoc basis rather than quarterly, resulting in outdated or less relevant training content that doesn't fully address evolving industry requirements.**

- **Gaps between skill demands and industry needs:** While 46% of organizations have adopted AI-driven personalized learning, many companies have yet to implement it, potentially leading to generalized training approaches. While 53% recognize the value of increased digital tool usage, the gap between awareness and implementation limits L&D programs' ability to adapt to evolving skill demands and individual learning needs.
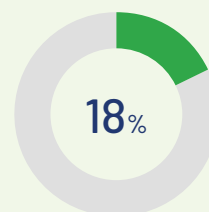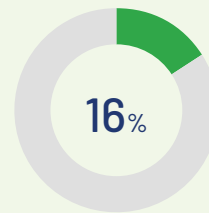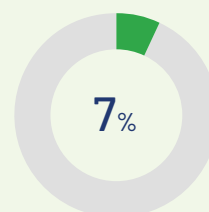
Budget constraints
32%
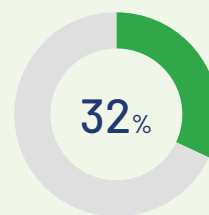
Rapidly changing technology
21%
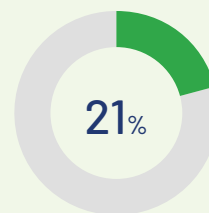
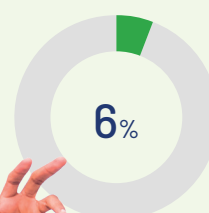Lack of employee engagement in training programs
18%

Difficulty in identifying the right skills to focus on
16%

Other
7%

Leadership resistance
6%

Training Needs and Skill Gaps

The most sought-after skills include Data Science, AI, and Behavioral competencies such as leadership. However, gaps remain between industry needs and available skills, with organizations struggling to balance technical and soft skills training in a fast-paced environment.

- **High demand for Data Science & AI:** Data Science and AI top the list of in-demand skills, reflecting the sector's shift toward advanced technologies. Companies are prioritizing these areas, with a notable focus on developing in-house expertise to stay competitive and reduce reliance on external talent.

- **Behavioral skills in focus:** Over 70% of respondents emphasize the importance of leadership and communication skills, especially given the hybrid work model. These skills are seen as critical for managing remote teams and fostering collaboration across functions, making them a high priority alongside technical upskilling.

- **Selective investment in emerging tech:** While skills like Blockchain and IoT are considered less immediately relevant, organizations are selectively investing in these areas based on their specific needs. This approach enables companies to allocate resources to the most impactful skills, aligning training with strategic priorities rather than adopting a broad approach.

Top skills based on demand in corporates for upskilling and reskilling (Ranked in order)
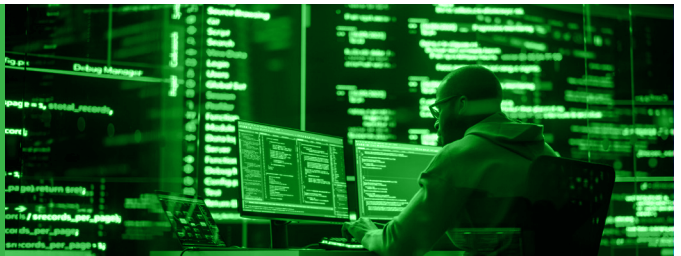

Data Science & AI

Cloud Computing

Behavioral Skills (Leadership, Communication)

Cybersecurity

Blockchain

DevOps

Internet of Things (IoT)

Skill Readiness Index

The Skill Readiness Index measures how prepared individuals or teams are to meet current and future skill demands. It is calculated by assessing current skills, identifying gaps, evaluating the effectiveness of training programs, and measuring adaptability to new technologies or challenges. This index provides a clear view of skill levels and helps prioritize development efforts.

Based on current practices (e.g., budget allocations, tech adoption, and leadership commitment), a Skill Readiness Index could be created using factors such as:

- Budget Allocation: Higher budgets correlate with more extensive training capabilities.

- Tech Adoption: Organizations using AI-driven training (46%) are likely more prepared for future skill needs.

- Leadership Commitment: Strongly correlates with overall program effectiveness and sustainability.

Organizations that meet these criteria would rank higher on the Skill Readiness Index, indicating they are well-prepared to tackle future workforce challenges.

Leadership Commitment

Strong leadership support in L&D correlates with better training effectiveness and program satisfaction, suggesting leadership involvement is crucial for impactful L&D outcomes.

- 89% agree that leadership understands the importance of continuous learning, and organizations with leadership backing report higher satisfaction with L&D programs.

- There is a clear relationship between leadership commitment and positive L&D outcomes; 60% of organizations believe their budget is sufficient, and 46% of L&D programs are rated as successful.

Future Outlook

The future of L&D in India's IT sector is oriented towards digital transformation, with expectations for increased adoption of AI and digital learning tools. Personalized learning and strategic partnerships with educational institutions are anticipated as key growth areas, especially as continuous learning becomes integral to retaining talent.

- **Focus on digital and AI tools:** With 53% of organizations planning to prioritize digital and AI tools, the future of L&D will focus heavily on technology-driven training solutions. These tools are expected to enable real-time skill adaptation and tailored learning experiences, helping companies keep pace with fast-evolving industry demands.

- **Leadership support for continuous learning:** Leadership commitment is seen as vital, with 89% of respondents acknowledging its role in fostering a continuous learning culture. This support is expected to help organizations retain top talent and build a resilient workforce that can adapt to future challenges.

- **Strategic partnerships for specialized skills:** Collaboration with educational institutions and external training providers is anticipated to play a key role in bridging skill gaps. By leveraging these partnerships, companies can access cutting-edge expertise and offer training in specialized areas like cybersecurity and data analytics, enhancing the breadth and depth of their L&D programs.
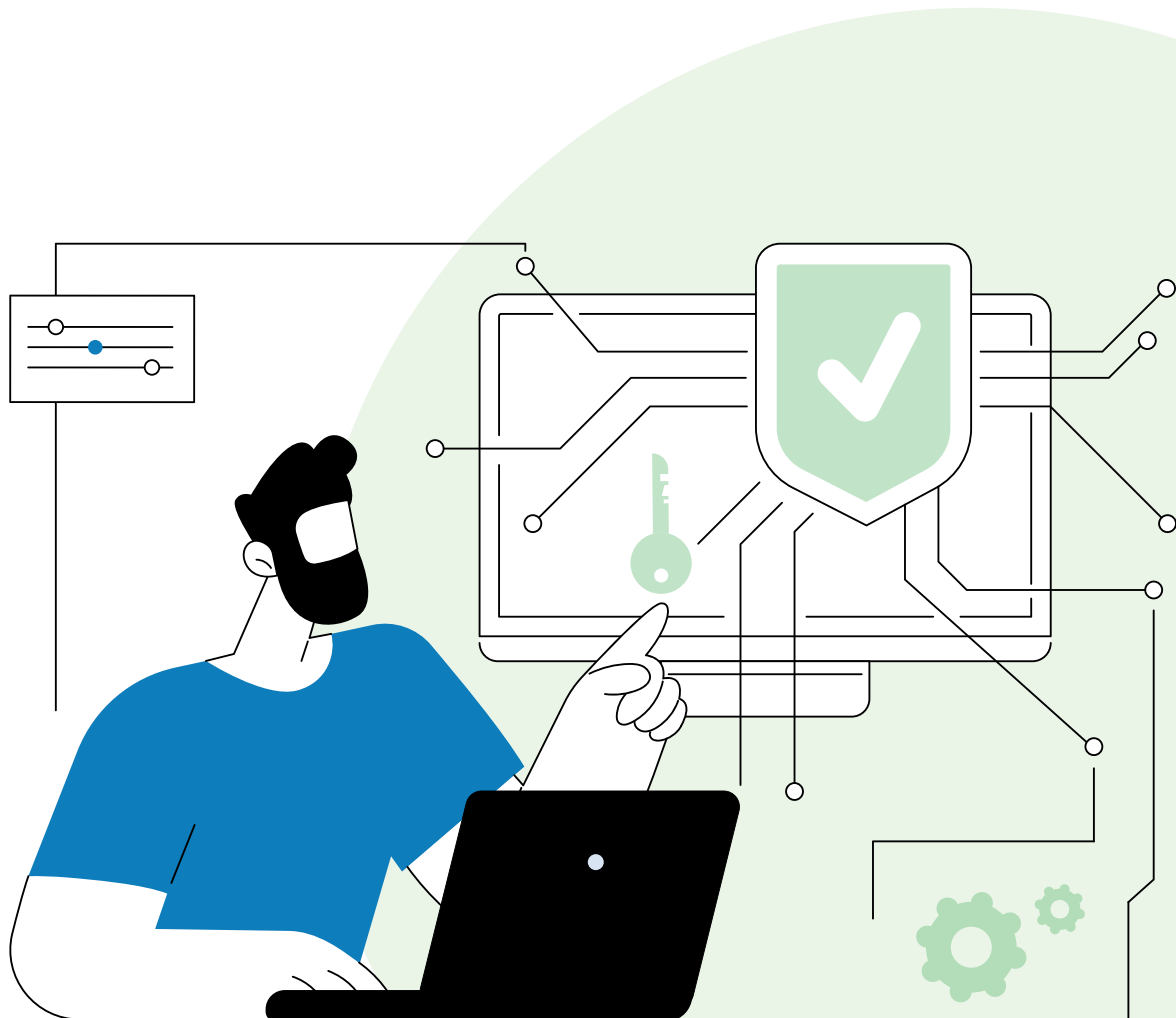
Conclusion & Recommendations

To build a resilient and future-ready IT workforce, organizations must implement robust learning and development (L&D) strategies. These strategies should address the rapid pace of technological advancements and the growing demand for specialized skills. Organizations are increasingly focusing on technical competencies like AI, cloud computing, and leadership. However, several challenges limit the effectiveness of L&D initiatives. Common obstacles include budget constraints, fast-evolving technologies, and difficulties in identifying skill gaps. Overcoming these barriers require strategic enhancements in both resource allocation and structural organization to better support workforce development.

1. **Enhanced Investment in L&D Resources:** Budget constraints are a major barrier, making the case for stronger funding for L&D programs, especially within IT/ ITeS sectors. Emphasizing ROI analysis on L&D investments can strengthen the business case for these investments, helping stakeholders recognize the long-term value of skill-ready employees in driving organizational success.

2. **Focus on Emerging Technologies and Continuous Learning:** Integrating AI, VR, and digital learning tools can boost engagement, enabling employees to stay aligned with industry shifts. These tools are crucial as emerging fields like AI are expected to create significant job opportunities and transform required skill sets by 2027.

3. **Collaborate with External Training Providers and Educational Institutions:** Partnerships with external bodies can bridge specific skill gaps, particularly in areas like data analytics and cybersecurity. Such collaborations ensure access to up-to-date knowledge and enable more agile training responses to industry trends.

4. **Developing L&D as an Independent Function:** Moving L&D out of the HR domain can empower it to operate as a strategic entity, more closely aligned with organizational growth and technological change. An independent L&D function is better positioned to deliver agile, innovation-focused training programs that meet evolving business needs.

   Implementing these recommendations can create a business case for L&D as a driver of competitive advantage, equipping India's IT workforce to thrive in an increasingly digital and competitive global market.

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edForce

edForce: Workforce Upskilling Accelerated

At edForce, we are committed to empowering organizations and professionals to thrive in an ever-evolving technology landscape. Our innovative learning solutions, powered by cutting-edge technology and driven by a passion for excellence, are designed to accelerate workforce upskilling and bridge skill gaps in the industry.

This landmark Report embodies our commitment to leading the charge in the future of learning, empowering organizations to stay resilient, agile, and future-ready.

From GenAI and AI/ML to Cloud, Cybersecurity, DevOps, Leadership, and beyond, we deliver impactful training and certifications in today's most sought-after domains. With every initiative, we strive to redefine workforce transformation and drive growth for the industries of tomorrow.

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