Start-ups Transforming the Landscape of Education & Skill Development

India has emerged as the world's third-largest startup ecosystem, boasting 118 unicorns by 2025. Driven by the Start-up India initiative and National Education Policy (NEP) 2020, these ventures are revolutionizing education and skilling through AI-driven personalised learning and digital infrastructure. By bridging the gap between academia and industry, startups are transforming India into a hub of job creators, fostering an inclusive, future-ready workforce to achieve the *Viksit Bharat* 2047 vision.

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A startup is an ecosystem designed to develop and scale innovative products or services. Startups identify various opportunities in all walks of life and envision innovative solutions. They use technology & artificial intelligence, collaborate with stakeholders to provide comprehensive outcome. Prime Minister Shri Narendra Modi has rightly quoted startups as job creators rather than job seekers.

Start-up Culture in India

In the late 1990s and early 2000s, India witnessed the rise of information technology giants like Infosys, Wipro, and TCS which laid the groundwork for a new wave of innovation and entrepreneurship. Rise of tech-savvy young entrepreneurs and advent of internet ignited the sparks in India's startup culture. Success of startups such as MakeMyTrip, Flipkart, and Zomato have paved the way of Indian startups culture to new height.

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Start-up India Initiative

To foster a more inclusive entrepreneurial ecosystem, the Government of India has undertaken multiple initiatives focused on entrepreneurship education, training, advocacy, and access to support networks. Start-up India has transformed the country's innovation landscape by forming a strong "innovation stack". Initiatives such as Digital India, Aadhaar, UPI and BharatNet have created a robust digital public infrastructure that lowers entry barriers for entrepreneurs, expands access, reduces costs, and supports an inclusive innovation ecosystem.

Launched in 2016, Start-up India initiative, supports entrepreneurs by fostering a strong innovation ecosystem through tax benefits, simplified compliance and funding access to drive economic growth and employment. These interventions have collectively developed a multi-layered innovation ecosystem that enables startups to scale quickly. India witnessed a sharp rise in unicorns—from just 4 in 2014 to 118 by mid-2025. This startup boom has yielded substantial economic dividends creating over 12 lakh direct jobs and millions of indirect opportunities, reducing import dependence, enhancing exports, and strengthening India's economic influence globally. Today, India is home to the world's third-largest startup ecosystem with more than 1.4 lakh registered startups and a new unicorn emerging every 20 days.

Start-up in Education

India's National Education Policy (NEP) 2020 strongly advocates for a shift from rote learning to a system that cultivates an innovation and entrepreneurship culture and resonate with *Viksit Bharat*. The policy aims to produce job creators, not just job seekers, by integrating skill-based, hands-on, and multidisciplinary learning from an early age and offers a clear direction for understanding past shortcomings and taking corrective measures. It seeks to address the long-standing disconnect between education and livelihood opportunities. NEP 2020 introduces flexible entry and exit options, allowing students to choose and modify subject combinations based on their interests. This flexibility removes the stigma associated with 'dropouts' and empowers learners to explore skills, innovations, or ideas they wish to pursue at any stage of their academic journey thereby enabling to explore new horizon of startups.

While Startup growth has been fuelled by strong academic linkage, it also played significant role in changing the educational landscape right from school education to higher-education and research institutions. Covid pandemic led to a huge opportunity in innovations across education delivery models in India and shifting priorities in education to make India. Startups played a transformative role in reshaping education by introducing innovative tools and approaches that make learning more engaging, accessible, and relevant to future needs. They are developing creative digital platforms enriched with multimedia content, gamification, and interactive quizzes that enhance both learning effectiveness and enjoyment.

Start-ups also provide hands-on learning opportunities through robotics programmes, coding camps, and workshops, enabling students to apply theoretical knowledge in real-world contexts while nurturing creativity and critical thinking. With the support of data analytics and artificial intelligence, personalised learning solutions are helping cater to diverse learning styles and paces, thereby improving student engagement and retention. By offering affordable online courses and resources, startups are democratising access to high-quality education resources, especially to socially and economically disadvantageous group. Collaborations with educational institutions are further integrating these innovations into mainstream curricula, giving teachers access to cutting-edge teaching tools. Mentoring initiatives connect students with industry professionals, helping them gain insights into future careers and develop essential skills.

National Education Policy 2020 recommends integration of technology in learning and education system. Startups such as BYJU'S, Physics Wallah, Karkhana, Cuemath, Vedantu are playing a transformative role in reshaping India's educational landscape by expanding digital access through their learning platforms, making quality education available to learners across demographics. In the STEM domain, platforms like Cuemath etc encourage inquiry-based learning, robotics, and coding, fostering scientific temperament and problem-solving skills. Start-ups like KYT, SpeakX (formerly Yellow Class), and Flintobox are revolutionising early childhood education through play-based and experiential content that builds foundational

THE RISE OF EDUCATION STARTUPS

1. PERSONALIZED LEARNING
2. ACCESSIBILITY
3. INTERACTIVE TECHNOLOGY
4. GAMIFICATION
5. PEER-TO-PEER LEARNING
6. TEACHER SUPPORT TOOLS

literacy, numeracy, and socio-emotional skills. Kalam Labs, represents a bold leap in K-12 education by blending gaming with immersive learning, creating a unique game-streaming environment where students learn academic concepts through play and has pivoted from kids' edtech to advanced defense-tech, building stratospheric UAVs (drones) for high-altitude surveillance and defence.

Alongside such innovations, the rise of online learning has also reshaped academic support services, with professional paper-writing and AI-enabled platforms like Essay Service catering to the needs of learners and are further transforming student learning and research, enabling more efficient academic preparation and support in an increasingly digital educational landscape. Meanwhile, assistive-technology startups such as Tinkerbell Labs are empowering Children with Special Needs (CwSN) by offering accessible devices, assistive technologies, AI-based learning support and inclusive educational tools. Many Start-ups provides Learning Labs across education, industry and community domains and empower learners, educators and organisations to transform ideas into reality through hands-on exploration, digital fabrication, and emerging technologies. Collectively, these startups are driving a more inclusive, digital, and future-ready education ecosystem in India.

NEP 2020 recognises that every child is unique, thereby learning pace and trajectory of each child us different and specific. Start-ups have greatly focusing on personalised learning and reimagining traditional classroom settings by tailoring learning experiences to individual students. Through adaptive algorithms and AI-powered platforms, students can access customised content, progress at their own pace, and receive real-time feedback. This approach enhances student engagement, boosts motivation, and ultimately improves learning outcomes.

Educational Start-ups have placed strong emphasis on inclusivity by designing programmes for under-represented groups, including girls and marginalised communities to build a diverse talent pool. By fostering entrepreneurial mindsets, encouraging innovation, and empowering students to devise creative solutions to societal challenges, startups are significantly contributing to strengthening education in India and preparing learners to thrive in a rapidly evolving world.

Start-up in Skill Development

Under the Skill India Mission led by the Ministry of Skill Development and Entrepreneurship (MSDE) the Government of India provides skill, re-skill, and up-skill training through a wide network of centres operating under schemes such as the *Pradhan Mantri Kaushal Vikas Yojana* (PMKVY), Jan Shikshan Sansthan

(JSS), National Apprenticeship Promotion Scheme (NAPS), and the Craftsman Training Scheme (CTS) implemented through Industrial Training Institutes (ITIs). Skill India Mission is designed to prepare India's youth for the future by equipping them with industry-relevant skills.

India's skilling startups are playing a key role in transformation and preparation for the need of the hour and future of work by bridging the gap between academic learning and industry/organisation skills. Platforms such as UpGrad, Coursera India, Unacademy, SudoLearn Technologies, WhiteHat etc., offer specialised courses such as in coding, AI–ML, data science, digital marketing, communication skills, and emerging technologies. These startups provide flexible, experiential, and project-based learning pathways through live classes, micro-credentials, and industry mentorship.

These startups also provide platform to collaborate with corporates to offer internships, apprenticeships, and job-linked programmes, helping students build employability early. Skillshare provides solutions for creative skills i.e.-design, writing, photography by providing Short project-based lessons and entrepreneurial skill development. Internshala offers online skill training programmes, internship and job opportunities and employability-focused courses. By focusing on digital literacy, STEM education, soft skills, and domain-specific expertise, these startups empower learners from diverse backgrounds, including rural youth and CwSN to access quality training, enhance confidence, and stay competitive in a rapidly evolving job market.

Startups in education and skill development can play a vital role in promoting lifelong learning and professional development. Individuals can continuously enhance their knowledge and acquire new skills through online courses, micro learning modules and skill-building platforms.

Way Forward

There are startups in all spheres of the education and skill development. They are making foundational literacy and numeracy interesting, effectively implementing *PM Poshan Shakti Nirman* scheme, easing STEM education, ensuring support to researcher and vocation skill learner. To effectively implement these solutions, adequate teacher training and support are crucial. Educators need to be equipped with the skills and knowledge to leverage technology in the classroom effectively. Professional development programmes, workshops, and ongoing support can empower teachers to adopt new teaching methods, incorporate edtech tools, and leverage data-driven insights to enhance student learning outcomes. Collaboration between edtech startups and educational institutions can facilitate comprehensive teacher training programmes.

Startups in the education sector often face challenges related to scalability and sustainability. Developing and maintaining robust technological infrastructure, providing ongoing updates and support, and sustaining financial viability are key considerations. Collaborating with investors, education-focused organisations, and government bodies can provide the necessary resources and support to scale operations, expand reach, and ensure long-term sustainability.

Edtech startups have to collaborate with educators, institutions, and other stakeholders to co-create innovative educational solutions. By working closely with teachers and educational experts, edtech companies can gain valuable insights, align their offerings with pedagogical principles, and develop solutions that meet the evolving needs of learners. Collaborative partnerships enable the development of more effective and relevant edtech tools, ensuring their applicability in real-world educational settings.

Startups in education and skill development need to integrate their innovative solutions into traditional education systems. Time tested Indian knowledge

system should find its place while envisioning startups in education and skill development.

Collaborative efforts are needed to bridge the gap between edtech startups and educational institutions, fostering partnerships, providing training, and creating supportive environments for successful integration.

Conclusion

Startups in education and skill development have the potential to accelerate India's economic and social transformation by building a lifelong learner, future-ready workforce aligned with emerging technologies and industry demands. Digital learning platforms, skilling edtech and AI-driven personalised learning systems will bridge the skill gap, enhance employability, and improve productivity across sectors. Start-up ecosystem need to be promoted in big way to realise its full potential and unleash the potential of Indian's youth dividend. It is essential to address regulatory hurdles, foster deeper collaboration between academia and industry, and ensure equitable access to funding and infrastructure. By integrating education, entrepreneurship, and employment, India can unlock its entrepreneurial potential and move closer to becoming a developed nation by 2047.

Apart from this, Educational startups have the opportunity to make a global impact by reaching students in remote areas, underserved communities, and developing countries. With the power of online platforms, mobile apps and accessible technology Educational and Skill development startups can transcend geographical boundaries to provide quality education and bridge the education gap and empower learners worldwide. ❑