Edtech's next chapter must shift focus from access to outcomes

The proper adoption of educational technology can help plug learning gaps and lay the foundation for Viksit Bharat by 2047

AMITABH KANT & GOURI GUPTA are, respectively, former CEO of NITI Aayog and G20 Sherpa; and senior director, edtech and AI, Central Square Foundation.

India stands at a defining demographic moment. By 2047, nearly 137 million of today's youth will enter the workforce. This represents a rare demographic window that must be leveraged if India is to realize its aspiration of becoming a $30 trillion economy by 2047. This ambition rests on human capital. Sustained economic growth will depend not only on infrastructure and innovation, but on workforce productivity. At its foundation, this means ensuring that every child builds strong literacy, numeracy, and problem-solving skills, and leaves school prepared to participate meaningfully in a dynamic economy.

Yet, the data presents a sobering reality. Every second child in India lacks basic reading proficiency by age 10. This is not just a learning deficit. It is an economic vulnerability and a national risk.

Realizing India's demographic opportunity, therefore, requires building strong learning foundations at a national scale. That would turn India's youth advantage into a powerful growth engine.

In this context, technology presents a powerful opportunity. When integrated into the teaching-learning process, edtech has shown potential in improving learning outcomes. India's expanding digital public infrastructure, affordable connectivity, and innovation ecosystem create strong tailwinds for responsible edtech adoption.

The **Bharat Survey for Ed Tech (BaSE)** by Central Square Foundation provides comprehensive national snapshots of this landscape. Conducted among 15,000 parents, children, and teachers across 10 states, the survey signals a pivotal shift: access to devices is no longer the primary constraint—90% of households now own at least one smartphone. Importantly, 57% report owning two phones. This grants mothers independent access to devices, increasing the likelihood that children can access smartphones for learning.

Also, 72% of children report access to a device at home. They also spend an average of 1.3 hours per day on smartphones. Among those with access, 70% report consistent internet connectivity and 29% report intermittent connectivity. Emerging evidence suggests that teacher-directed home learning can generate gains when aligned with

classroom instruction. Given the widespread household-level digital access revealed by BaSE 2025, structured home learning pathways represent an underleveraged opportunity. These findings shift the policy conversation. As governments expand digital investments, the focus can no longer be device distribution. With ubiquitous access, public investment generates greater returns when directed at mechanisms that drive adoption of high-quality learning solutions. This includes structured programmes, teacher capacity building, and governance layers. The next chapter must move from access to effectiveness.

BaSE 2025 confirms that children and teachers are active edtech users: 63% of children and 87% of teachers use digital tools for education. However, engagement occurs on general-purpose platforms such as YouTube, WhatsApp, and Google. While teachers are more likely to use dedicated edtech platforms, only 6% of children report using specialized applications. This indicates that digital adoption is organic but not structured.

The policy challenge, thus, is to optimize these environments to support structured learning. This requires collaboration with platform providers to align curriculums, build quality standards, and place safeguards within platforms. It also calls for stronger integration of home and school learning models.

Artificial intelligence (AI) adds both promise and complexity to this landscape. BaSE 2025 makes it clear that AI in education is not a distant possibility: 35% of edtech-using children and 51% of edtech-using teachers report using AI tools for education. Yet, AI understanding lags.

Among children who have heard of GenAI, 85% claim to understand how it works, but three in four equate it with a search engine. Among teachers, 46% of those aware of GenAI believe they understand it. However, half describe it as a retriever of information from the internet, and over a third believe it merely copies and regurgitates existing online content.

Without foundational AI literacy, we risk over-reliance, misinformation, and widening gaps between those who can critically engage with AI tools and those who cannot. The imperative, therefore, is not merely AI adoption, but AI capability. Policy must prioritize AI literacy for teachers and students. Clear guardrails around data privacy, ethics, transparency, and accountability must accompany scale.

AI-powered edtech offers prospects of personalized learning, identification of learning gaps, targeted remediation, multilingual content, and greater efficiency. Most importantly, technology can extend meaningful support to students in low-resource schools and underserved communities where traditional systems have struggled to

deliver consistent quality. BaSE 2025 shows that household-level digital access is now widespread across the country. Combined with emerging evidence on structured, teacher-directed home learning models, this creates an opportunity—not to increase screen time, but to make the time already spent online learning-rich.

This will lay the foundation of human capital needed for a Viksit Bharat. The stakes are not technological: they are generational. The time to move from access to outcomes is now.