Young Hans

YOU CAN'T BUILD VIKSIT BHARAT WITHOUT INNOVATION: IIT HYD DIRECTOR

ARTI ADKE

At a time when AI is rapidly reshaping careers and Indian students remain caught in a relentless cycle of grades, rankings, **Prof. B. S. Murty**, Director of IIT Hyderabad, is quietly steering one of the country's boldest experiments in higher education. From fractal academics and artists-in-residence to deep-tech startups and AI-powered engineering programmes, his vision challenges long-held assumptions about how engineers should be trained—and what success truly means.

"If somebody comes to me and tells me they have never failed in life," Prof. Murty says, "I tell them they have probably never learned anything—or never experimented enough."

That belief underpins the transformation unfolding at Indian Institute of Technology (IIT Hyderabad). In an education system often criticised for rigidity, exam obsession and placement-centric thinking, the institute has emerged as a striking outlier—prioritising freedom, creativity and skills over conformity and fear. Here, students are encouraged to explore across disciplines, build products, create enterprises and think beyond conventional career paths.

In a wide-ranging conversation, Prof. Murty tells *The Hans India* about the future of jobs in the age of AI, why India must evolve from a service economy into a product nation, and how nurturing skills, innovation and purpose is central to building a truly Viksit Bharat.

EXCERPTS:

Q: You have often described Indian education as rigid. What do you believe is fundamentally wrong with it?

Education in India has been quite straitjacketed for decades. Students are told what to study, how to study and often what they should become in life. But the current generation does not want to fit into such a structure. They want freedom. They want flexibility.

If you look at older IITs and engineering colleges, the curriculum is very straight. Even electives are often not real electives. Many times, only one elective runs. That means the student is forced to take it—it becomes a core course in disguise. There is no real choice.

When I studied B.Tech, we faced the same issue. That experience stayed with me. We felt it was time to break away from this model and create an environment where students can genuinely explore different interests.

Q: You repeatedly stress the need for deep-tech innovation. Why is this so critical for India?

India is currently known more as a service economy. We provide services to the world. But no country has ever become developed by being only a service economy.

Every developed nation—big or small—is known for its products. India must also be known for its products. Software and apps are important, I do not deny that, but deep-tech innovation is essential.

For me, Viksit Bharat is the day I go to a place like Tokyo or Melbourne and buy a product labelled "Made in India"—because it is high quality, globally competitive and reasonably priced.

Q: Will degrees lose relevance in the coming years?

I am sure that in the years to come, people will not care much about your degree. They will care about your skills. What matters is what you can do, what problems you can solve. Institutions must create environments where skills and ideas are nurtured. The success of our startups already shows that this shift has begun.

Q: You frequently speak about Viksit Bharat. What does that term mean to you personally?

For me, Viksit Bharat is not a slogan—it is a practical vision. A developed nation is one that is known for its products, technology and innovation. Today, India is largely known as a service economy. We provide services to the world, which is good—but it is not enough.

No country in the world has become developed by being only a service provider. Every developed nation—whether it is Germany, Japan, South Korea or the United States—is known for what it makes. For India to become Viksit Bharat, we must become a product nation.

Q: How do student startups fit into the Viksit Bharat narrative?

Startups are not just about valuation—they are about value creation. When a 19-year-old student tells me he has paid salaries to five employees, that is nation-building in action. That is economic activity, confidence and leadership. In six years, IIT Hyderabad students have created 330 startups with ₹1,500 crore in revenue. These are not just numbers—they represent ideas becoming reality. If every IIT produces job creators instead of only job seekers, India's transformation will accelerate.

We introduced something called Fractal Academics, which is a very unique system in India.Typically, a full semester course is a three-credit course—about 42 hours of teaching spread over 14 weeks. We divided the semester into six segments. This allows us to offer courses worth 0.5 credits, one credit, 1.5 credits, two credits and, of course, three credits.A 0.5-credit course is about seven hours of teaching. A one-credit course is around 14 hours. In the first year especially, we encourage students to explore many such short courses. I compare it to tasting food at a restaurant—you sample different dishes before deciding what you like.Once students discover a subject they enjoy, they can take full three-credit courses and go deeper. This kind of academic freedom—we are the first in the country to offer it at this scale.

Q: IIT Hyderabad has made liberal arts and creative courses mandatory for engineers. Why was that mandatory?

If India has to become Viksit Bharat, innovation is essential. And for innovation, intuition is just as important as intelligence.Engineers are trained to calculate everything. Out-of-the-box thinking does not come easily. Artists, on the other hand, think intuitively. That is why we decided that about 10% of a B.Tech student's total credits—out of roughly 130—must come from liberal arts and creative arts.These include anthropology, psychology, philosophy, music, dance, painting and even martial arts.We are now introducing sports as credit-based courses—cricket, tennis, hockey—where students study, practise and are evaluated. When students balance left-brain logic with right-brain creativity, you get far better innovation.

Q: You strongly advocate student choice. Why does this matter?

At 17 years of age, we allow citizens to decide who becomes the Prime Minister of India. Then why can't they decide what they want to become?

Why should someone be told, "You must become a mechanical engineer"? Many students later realise this is not what they wanted in life. Education should expand freedom, not curtail it.

When parents ask me, "What kind of job will my child get?", I ask them—why should every B.Tech graduate get a job? Let them create jobs. India needs job creators, not just job seekers. We need leaders.

Parents often measure success only through salary packages. How do you respond to that mindset?

I understand parental anxiety. It comes from concern for their children's future. But salary should not be the sole measure of success.

A student who builds a startup, creates employment, files patents or works on deep-tech innovation may not earn the highest salary in the first year—but they contribute far more to the nation in the long run. At IIT Hyderabad, we have students who chose not to sit for placements because they are building companies, pursuing research or working on socially relevant technologies. That is also success.

We must broaden our definition of achievement beyond the first job or first salary slip.

Recent and upcoming academic and institutional launches

New academic programmes with AI integration

This year, the institute is set to launch a new M.Tech programme in Artificial Intelligence and Machine Learning in Chemical Engineering. IIT Hyderabad already offers an M.Tech in Integrated Computational Materials Engineering (ICME), where AI and ML are applied to the design of advanced materials such as new-generation steels, alloys, and functional materials with enhanced properties. These programmes reflect the institute's academic approach of integrating AI across core engineering disciplines, rather than limiting it to computer science alone.

Digital transformation initiatives

As part of its move towards deeper digital integration, IIT Hyderabad has created the position of Dean of Digital Transformation. In the coming months, the institute plans to roll out a ChatGPT-based digital system designed to provide quick access to information related to research activities, faculty expertise, patents, startups, and technology transfers. The system is expected to help students, faculty, and industry stakeholders gain a clearer understanding of the institute's work in areas such as quantum technologies, materials science, artificial intelligence, and clean energy within a short time.

Integration of arts and humanities

The institute is also preparing to announce the association of Padma Vibhushan and Padma Bhushan award-winning performing artists as distinguished professors. In addition, an Artists-in-Residence programme is being introduced, under which eminent artists will spend one to two weeks on campus interacting with students. The initiative aims to expose students to creative disciplines alongside technical education, encouraging broader perspectives and sensitivity beyond conventional engineering training.

Student-led innovation through BUILD projects

IIT Hyderabad has implemented BUILD projects—Bold and Unique Ideas Leading to Development—to encourage student innovation. Under this initiative, students submit brief proposals, sometimes as short as half a page, which are evaluated by a committee for support. Over the past six years, students have launched around 330 startups, collectively generating approximately Rs 1,500 crore in revenue. A significant number of these ventures were founded while the students were still enrolled at the institute.

BHARATI programme for engineering excellence

The institute has also introduced the BHARATI programme—Bold-Hearted Aspirants Raising to Transform India. The programme seeks to reinforce the importance of engineering excellence and product development, encouraging students to focus on building and creating solutions rather than viewing education solely through the lens of placement outcomes.

The initiative aligns with broader national goals of strengthening India's technological and manufacturing capabilities.

Together, these initiatives highlight IIT Hyderabad's focus on interdisciplinary learning, innovation, digital access, and the development of well-rounded professionals.

> I want IIT Hyderabad to be remembered as a place where innovation flourished
>
> **Prof B S Murty, Director**, IIT Hyderabad

Encouraging creativity with screen-free childhood experiences

The idea behind learning through play is to give children the freedom to explore, imagine, and discover at their own pace. When children are placed in unstructured and spontaneous environments, they naturally develop creativity, problem-solving abilities, and social skills. Free play allows learning to happen organically, without pressure, rules, or predetermined outcomes.

Unstructured play encourages children to think independently and make their own choices. As they build, pretend, explore, or invent games, they learn to experiment, take risks, and solve problems in real time. These experiences strengthen cognitive development while fostering curiosity, confidence, and resilience. Without constant adult direction or digital distractions, children gain a deeper sense of ownership over their learning.

Social interaction is another key benefit of free play. When children play together, they learn essential life skills such as sharing, cooperation, communication, and conflict resolution. These interactions help build emotional intelligence, empathy, and teamwork—skills that are just as important as academic knowledge in later life.

Promoting screen-free play is especially important in early childhood. Excessive screen exposure can limit physical activity, imagination, and attention span. In contrast, play-based learning supports movement, sensory exploration, and hands-on experiences that contribute to healthy physical and emotional development.

Ensuring access to pre-school education through play for every child is vital for inclusive growth. Play-based learning environments create equal opportunities for children from all backgrounds to explore, express themselves, and build foundational skills. They also help children develop a positive relationship with learning, making the transition to formal schooling smoother and more meaningful.

By encouraging unstructured, screen-free play, we nurture confident, creative, and socially aware individuals—laying the foundation for lifelong learning and well-rounded development.

How startups are adapting to GenZ workforce trends

A conclave Neev 2026 Chapter 2 examined how startups are responding to changing expectations of Gen Z and Gen Alpha, focusing on talent, workplace culture, and the future of work

The Indian Institute of Management Kashipur hosted Neev 2026 | Chapter 2 – The Startup Conclave, a discussion-driven event that examined how startups and emerging organisations are adapting to changes in workforce expectations, particularly among Gen Z and Gen Alpha. The conclave focused on themes of startup talent, workplace evolution, and the future of work in fast-growing environments.

Industry leaders, startup founders, and human resource professionals discussed how younger professionals are reshaping organisational cultures. Speakers noted that today's youth place greater emphasis on purpose-driven work, flexibility, continuous learning, and meaningful engagement, rather than viewing compensation as the sole measure of career success.

Harsh Kumar Sarohi, Senior Vice President – Technology at TradeIndia, highlighted the growing demand among young professionals for clarity of purpose and structured mentorship. He spoke about the role of organisational values and leadership in career development, while underlining the importance of soft skills such as communication, negotiation, and conflict management in professional growth. Startup founder Mukil Vannan, Founder of Kplor, observed that while Gen Z professionals are comfortable with artificial intelligence and emerging technologies, foundational skills remain essential. He stressed the importance of communication, creativity, and problem-solving, advising students to focus on building core capabilities rather than being driven by job titles. Shilpa Arora, Co-founder and COO of Insurance Samadhan, spoke about changing attitudes toward work-life balance and flexibility. She noted that younger professionals tend to be more intentional in career planning and place value on meaningful work, customer engagement, and long-term relevance.

From an HR perspective, Sumedh Singh, AVP and Head of Human Resources at EPack Durable Limited, highlighted the analytical strengths of the new generation while pointing to the need for flexible work models, transparent communication, recognition, and continuous skill development.

The session was moderated by Gokul Ramanan Radhakrishnan, Manager – Business Strategy at Medinous. Faculty members and students attended the conclave, which reflected ongoing discussions around preparing youth for evolving workplace realities.