FICCI

Future-ready campuses: Unlocking the power of AI in higher education

October 2025



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FICCI foreword

India's higher education system is entering a new era—one defined not just by digital transformation, but by the intelligent integration of artificial intelligence (AI) across every dimension of academic life. As the world reimagines learning, research, and institutional governance, AI is no longer a distant frontier; it is a foundational force shaping the future of higher education.

The National Education Policy (NEP) 2020 laid the groundwork for innovation, flexibility, and global relevance. Building on this vision, the FICCI-EY Parthenon Knowledge Report 2025, "Future-ready campuses: Unlocking the power of AI in higher education," explores how Indian Higher Education Institutions (HEIs) are embracing AI to transform pedagogy, personalize learning, enhance student services, and drive research and innovation.

This report draws on insights from senior academic leaders, policymakers, and industry experts, along with data though a nationwide survey of HEIs. It highlights the growing adoption of AI tools—from adaptive learning platforms and automated assessments to immersive technologies and intelligent campus operations. It also underscores the importance of ethical governance, faculty upskilling, and the alignment of AI initiatives with the Sustainable Development Goals (SDGs).

Some of the key findings include the need to embed AI literacy across disciplines, invest in digital infrastructure, and foster collaborative ecosystems that bring together academia, industry, and government. Institutions must move beyond experimentation to strategic integration—placing students at the center of transformation and ensuring that AI enhances equity, accessibility, and lifelong learning.

FICCI remains committed to enabling this transition through policy advocacy, thought leadership, and multi-stakeholder engagement. We believe that with a shared vision and coordinated action, India can build future-ready campuses that not only respond to global trends but lead them.

We extend our sincere appreciation to all contributors who shared their insights and experiences. This report is intended to serve as a catalyst for action—guiding institutions, educators, and policymakers as they navigate the opportunities and responsibilities of AI in higher education.



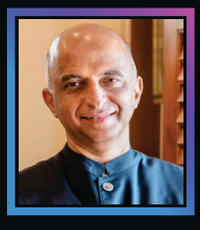
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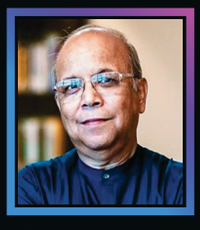
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EY-Parthenon foreword

Artificial Intelligence is redefining how societies function—powering personalized learning in classrooms, accelerating drug discovery in laboratories, transforming customer engagement in businesses, and enabling smarter decision-making in public policy. It is also beginning to influence how knowledge itself is produced and disseminated. Even in developing this report, AI tools played a supporting role—scanning global best practices, structuring large volumes of data and refining content flows—underscoring how integral AI has become to organizational operations today.

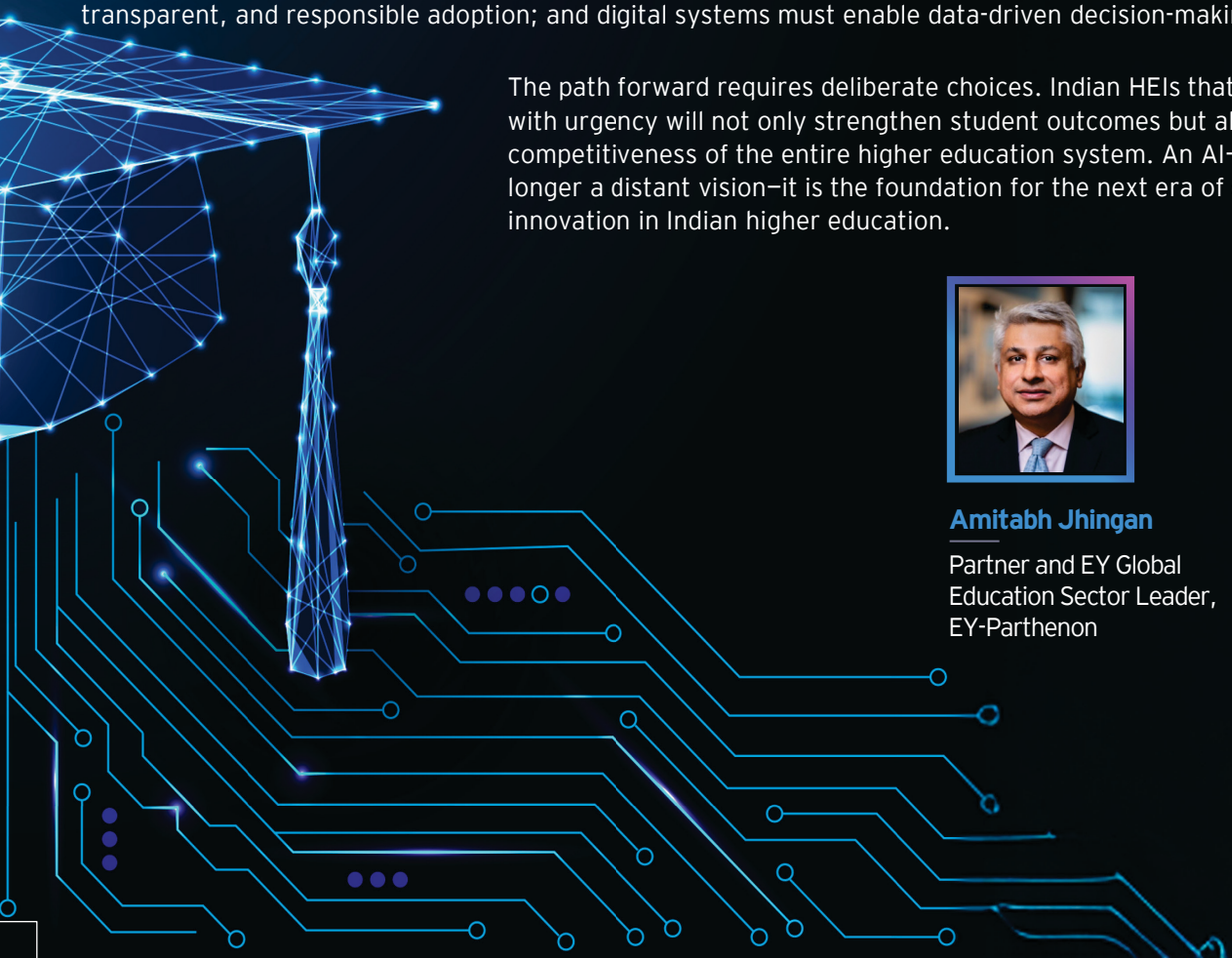
For higher education, the implications are particularly profound, with AI reshaping how institutions teach, research, govern and compete globally. For India's higher education system, which is already balancing scale with quality, AI presents both a disruptive challenge and an extraordinary opportunity to leapfrog into global leadership.

Findings from our nationwide survey of 30 higher education institutions, spanning both public and private universities, show that AI adoption is accelerating across classrooms, research and administration. However, progress remains uneven and fragmented. Current usage is largely limited to generative AI tools for developing teaching materials, AI-powered tutoring and chatbots, and small-scale pilots in areas such as admissions and campus operations. While these initiatives are encouraging, they remain isolated efforts rather than the system-wide transformation needed to fully realize AI's potential.

To harness AI's transformative power, Indian HEIs must re-conceptualize their institutional strategies along three key dimensions:

- Integrating AI into core academic design: Ensuring every graduate attains AI literacy, embedding domain-specific applications into disciplines, and investing in research that advances both applied and fundamental AI knowledge.
- Building institutional readiness: Reskilling faculty, redesigning curricula, and strengthening data infrastructure, governance, and policies that address fairness, transparency and accountability.
- Driving student-centric outcomes: Leveraging AI-enabled insights to improve access, employability and lifelong learning pathways.

For Indian higher education, this is a pivotal moment. Institutions must move beyond pilots and isolated initiatives by committing to sustained investment—in infrastructure, digital systems, and above all, institutional readiness. Faculty must be equipped to integrate AI meaningfully into pedagogy and research; governance frameworks must ensure ethical, transparent, and responsible adoption; and digital systems must enable data-driven decision-making at scale.



The path forward requires deliberate choices. Indian HEIs that invest with intent and act with urgency will not only strengthen student outcomes but also enhance the global competitiveness of the entire higher education system. An AI-enabled ecosystem is no longer a distant vision—it is the foundation for the next era of quality, equity and innovation in Indian higher education.

Amitabh Jhingan

Partner and EY Global Education Sector Leader, EY-Parthenon



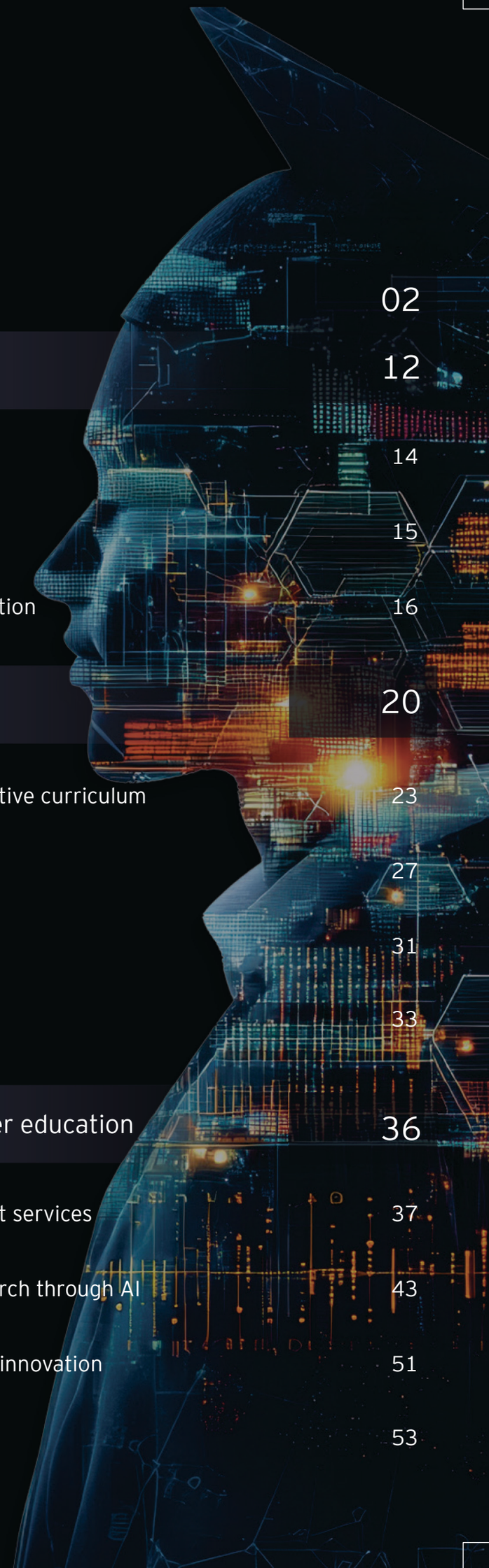
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Abbreviations and acronyms

AI	Artificial Intelligence
AICTE	All India Council for Technical Education
CoE	Centre of Excellence
DL	Deep learning
EU	European Union
HEI	Higher educational institution
IIM	Indian Institute of Management
IIT	Indian Institute of Technology
ML	Machine learning
MOOC	Massive Open Online Course
NEP	National Education Policy
SDG	Sustainable Development Goals
SOP	Standard operating procedures
STEM	Science, Technology, Engineering, and Mathematics
UK	United Kingdom
US	United States
UN	United Nations
UGC	University Grants Commission
UNESCO	United Nations Educational, Scientific and Cultural Organization

Contents



Executive summary 02

1 Decoding AI: From concept to campus 12

1.1 What is artificial intelligence? 14

1.2 A brief history of AI evolution 15

1.3 How AI is currently shaping Higher Education 16

2 Today's transformations: AI in action 20

2.1 Personalized learning pathways and adaptive curriculum 23

2.2 Enhancing educator effectiveness 27

2.3 AI for career services 31

2.4 AI-enabled assessment and testing tools 33

3 Emerging frontiers: The future of AI in higher education 36

3.1 Intelligent campus operations and student services 37

3.2 Advancing AI through research and research through AI 43

3.3 AI as a catalyst for entrepreneurship and innovation 51

3.4 AI-Enhanced Immersive Learning 53

4 Embedding AI in academia: Curriculum innovation in the AI era 56

4.1 Building foundational AI literacy across disciplines 57

4.2 Advancing STEM curricula through AI-focused specialization 59

4.3 Discipline-specific AI integration: Preparing graduates for AI-augmented industries 63

4.4 Micro-credentials and lifelong learning: Scaling AI upskilling 67

5 Bridging borders: AI as an enabler of transnational education 70

5.1 AI-driven access to global classrooms 71

5.2 Localizing international curricula using AI 73

5.3 Virtual exchange and XR-powered immersive global learning 74

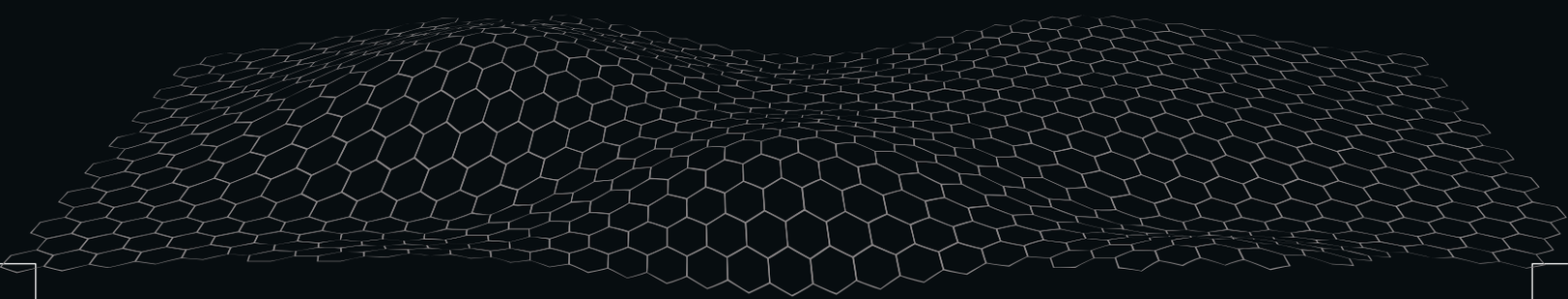
5.4 International student lifecycle: Admissions, retention and career support 76

6 Ethical adoption: The role of policy and governance 80

6.1 Setting guardrails for ethical AI in classrooms 82

6.2 Stakeholder-driven frameworks for responsible AI use 86

6.3 Data privacy, bias and transparency in AI tools 88



7 AI and the Sustainable Development Goals (SDGs) 92

7.1 AI's contribution to achieving the SDGs 93

7.2 Promoting equity, inclusion and accessibility through AI 96

7.3 Environmental impact of AI use 98

8 Faculty of the future: Capacity building and upskilling 100

8.1 Identifying AI training needs for faculty and staff 101

8.2 Building institutional support systems for continuous learning 103

8.3 Partnering with EdTech and industry for training 105

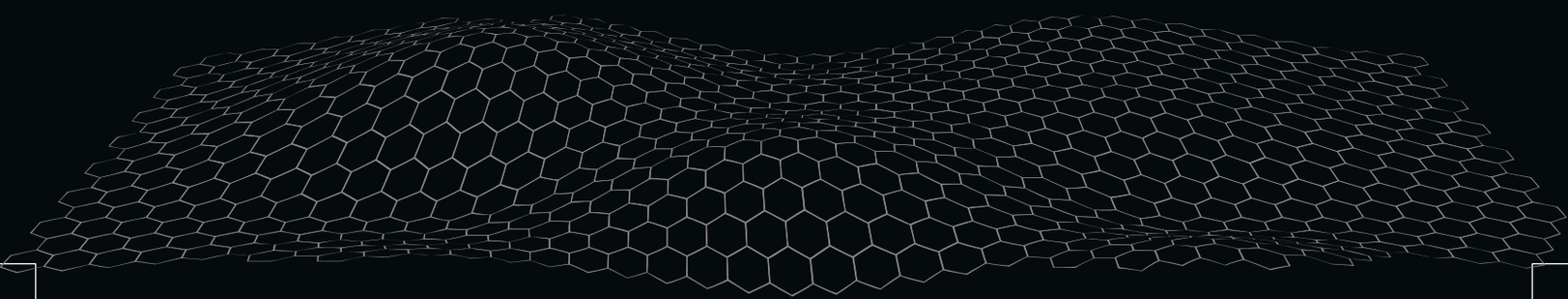
9 The road ahead: Strategizing for an AI-enabled future 108

9.1 Institutional visioning and readiness 109

9.2 Building collaborative ecosystems 121

9.3 Keeping students at the core of AI-driven transformation 123

9.4 Shaping a national vision for AI in higher education 125

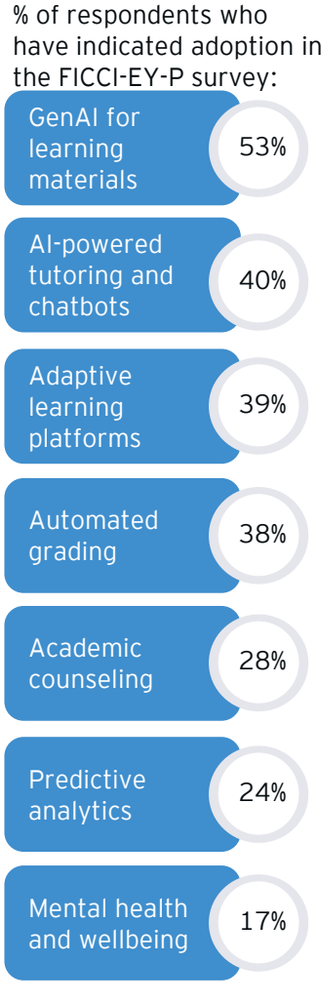


Executive summary

- India's higher education sector is among the largest in the world, comprising more than 65,000 institutions, nearly 43 million students and around 1.6 million teachers.
- The National Education Policy (NEP) 2020 aims to improve India's higher education GER to 50% by 2035 and propel Indian universities into the top 100 in global rankings.
- The accelerating diffusion of artificial intelligence (AI) is reshaping higher education worldwide, influencing teaching, research, administration and governance. For Indian higher education institutions (HEIs), AI represents both a strategic opportunity to leapfrog in global competitiveness and a domain where careful guardrails are needed to ensure safe and effective adoption.
- The report explores how AI is being integrated into higher education across key dimensions: academic and administrative use cases, curriculum redesign, policy and governance, faculty capacity building and roadmaps for institutional readiness.

Academic use cases: Teaching, learning, assessment and transnational education

Leading AI use cases



AI is already embedded in student learning practices globally. A survey conducted by the Digital Education Council, representing 3,800+ students from across 16 countries, revealed that 86% of students report using AI in their studies, with 54% using it weekly and 24% daily. Tools such as ChatGPT, Grammarly and Microsoft Copilot are already widely used by students.[1] Their growing presence shows that AI is no longer peripheral to education, but is becoming an integral part of both the teaching and learning experience. Findings from a survey conducted by FICCI and EY-P in 2025 on AI adoption in higher education, with 30 respondents representing leadership and faculty across HEIs in India, indicate that ~57% already have an AI policy in place, while another 40% are currently developing one. The implication for HEIs is that student engagement with AI must be reflected in classroom policies, curriculum and assessment design and broader institutional governance frameworks.

Across the teaching and learning landscape, AI is being deployed for diverse applications, including **adaptive tutoring, automated grading, plagiarism detection, curriculum design and career guidance. Generative AI tools for creating teaching materials, AI-powered tutoring or chatbots** and **personalized adaptive learning systems** are emerging as the top use cases according to the FICCI-EY-P survey. The case studies in the report illustrate how AI adoption across various use cases, such as automated grading, which reduces evaluation time, or AI chatbots trained on proprietary learning materials, can drive significant efficiencies and pedagogical gains.

AI also has implications for internationalization. In the context of **transnational education (TNE)**, AI-enabled translation and virtual collaboration tools can lower barriers to global exchange, while virtual campuses and online programs extend institutional reach. Together, these use cases illustrate the extent to which AI is reshaping both the academic experience and the modalities through which Indian institutions engage globally.

Source: 1 Digital Education Council Global AI Student Survey 2024

Research and innovation

India ranks fourth globally in research output but lags its peers in quality indicators such as citations and H-index. The report examines AI in research through two lenses: first, as an enabler of research across disciplines such as the life sciences, social sciences, environmental studies and digital humanities; and second, as a field of research in its own right. Examples cited in the report highlight how institutional ecosystems that combine AI research with entrepreneurship can drive start-up incubation and cross-disciplinary collaborations.

15 of the 30 HEIs that responded to the FICCI-EY-P survey engage in AI-related research via a dedicated research center. Top research areas include applied AI research (e.g.,AI applications in healthcare, education and agriculture) and fundamental AI research (computer science research to advance AI) .

Q. Which of the following best describes your institution's engagement in AI-related research?



The report also highlights how AI contributes directly to advancing the **Sustainable Development Goals (SDGs),** with applications in **healthcare diagnostics, renewable energy, agriculture and disaster response**. At the same time, the environmental costs of training large AI models underline the importance of sustainable computing practices and green AI infrastructure.

Together, these trends suggest that institutions aligning AI research with SDG priorities—such as climate action, healthcare access and inclusive education—are better positioned to deliver meaningful societal impact.

Non-academic use cases: Campus operations and administration

AI's potential extends beyond the classroom into the broader operational fabric of universities. The report identifies multiple opportunities in **IT services** (e.g. AI-enabled helpdesks, access management), **procurement and facilities management** (e.g. vendor risk scoring, invoice automation) and **finance and HR** (e.g. automated payroll, budget forecasting). Adoption in these domains is a means of enhancing efficiency, reducing costs, and freeing academic and administrative staff to focus on higher-value activities. Respondents to the FICCI-EY-P survey indicated highest adoption across IT, academic affairs and external affairs (alumni relations, admissions, marketing, etc.) departments. For HEIs, these operational applications offer an early and relatively low-risk entry point for institutional AI strategies.

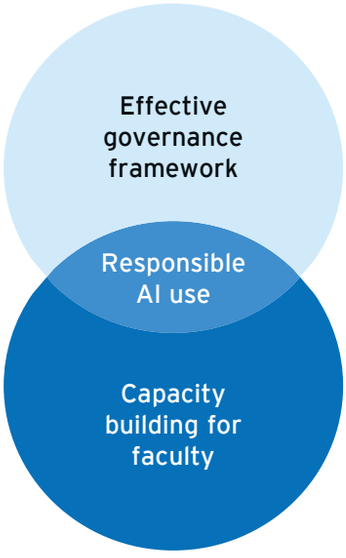
Curriculum redesign

The report also highlights the importance of embedding **foundational AI literacy across programs** to ensure all students, regardless of discipline, develop a baseline competence encompassing a grasp of core AI concepts, ethical awareness, digital skills, critical thinking and familiarity with practical applications. In STEM disciplines, this also involves integrating advanced AI content such as machine learning, natural language processing and robotics into core curricula, equipping graduates with specialized technical expertise.

AI adoption is taking multiple formats. Institutions, including respondents to the FICCI-EY-P survey, are experimenting with various academic delivery formats, **including full-time degrees, minors, interdisciplinary modules and stackable micro-credentials,** supported by credit-bearing frameworks that allow learners to combine short courses with degree pathways. Domain-relevant programs are emerging in fields such as **law, healthcare and business management,** illustrating how AI is being embedded into non-STEM disciplines to address sector-specific needs.

Emerging practice shows that partnerships with industry are enabling **co-created curricula** and AI clinics, which provide students with applied, practice-oriented learning experiences while ensuring academic content remains aligned with market demands. Delivering these programs at scale will also require **investment in upgraded technology infrastructure,** including labs, compute resources and digital platforms. Finally, the report stresses the need for lifelong learning pathways, supported by flexible credentials that allow graduates and working professionals to continually reskill and adapt to changing labor markets.

Ethics, governance and capacity building



The integration of AI into higher education has prompted ongoing discussions around fairness, transparency, and accountability, with potential risks such as algorithmic bias in admissions, limited transparency in automated grading systems, and the protection of student data. The report references the Beijing Consensus on AI in Education (2019) and UNESCO's Recommendations on the Ethics of AI as international frameworks that can guide institutional policymaking on responsible adoption. In India, the Digital Personal Data Protection (DPDP) Act, 2023, and the anticipated Digital India Act are expected to provide a regulatory baseline for AI use in education.

Capacity building remains a parallel challenge. A survey conducted by the Digital Education Council in 2025, which gathered insights from over 1,600 faculty members across 28 countries, found that only 17% of faculty rate their proficiency in AI at "Advanced" or "Expert", and only 6% report feeling satisfied with AI literacy sources provided by their institutions[2]. **Time constraints** are also emerging as a barrier to faculty capacity building, cited by 43% of respondents in the FICCI–EY–P survey. This points to the urgency of **structured AI literacy programs** for faculty capacity building. The report highlights a tiered training approach — combining baseline AI literacy micro-credentials, scalable MOOCs, targeted workshops and extended seminars. For institutions, embedding such capacity-building programs within AI adoption roadmaps is key to sustained adoption.

Conclusion

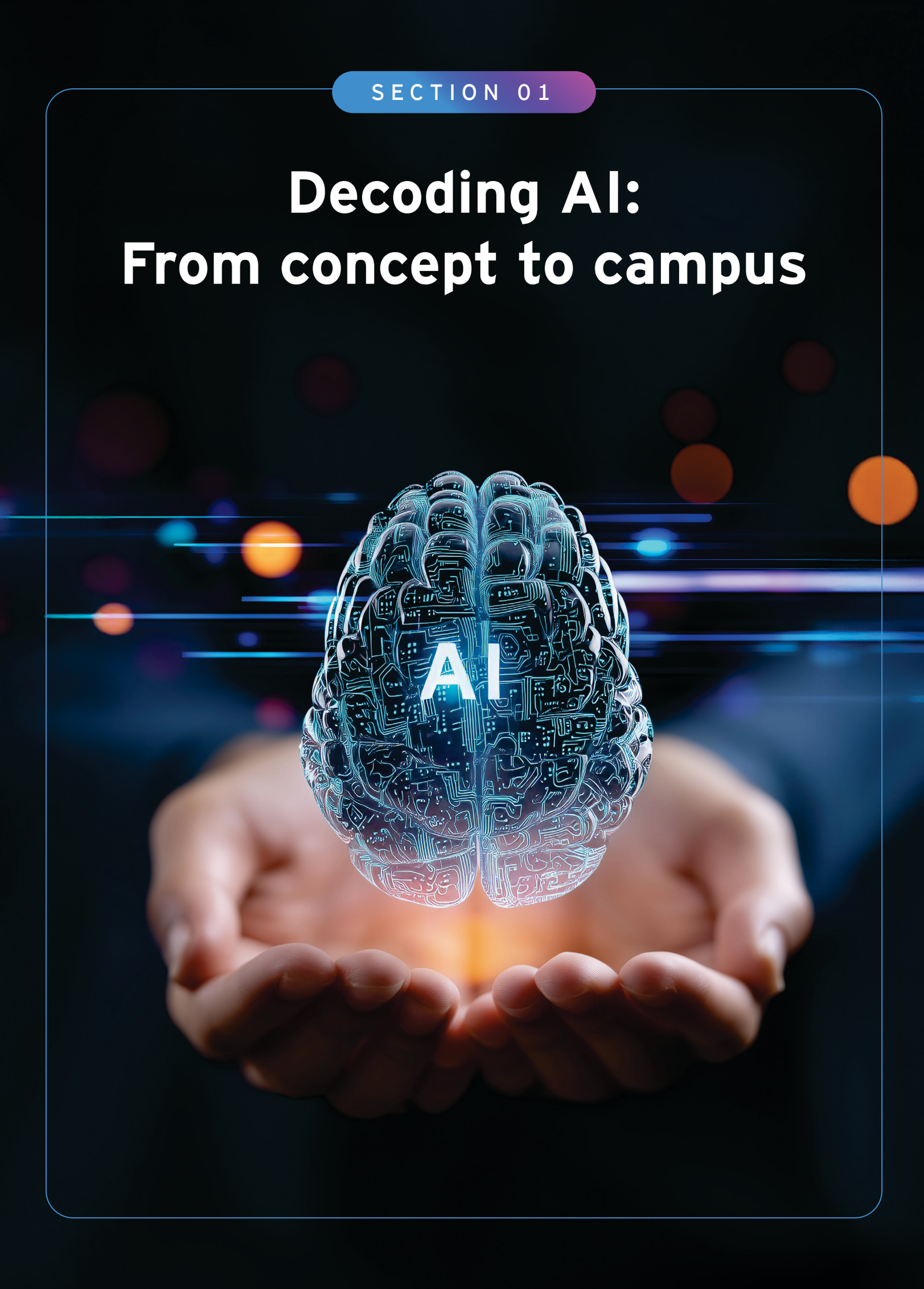
AI is transforming the global higher education landscape and India stands at a critical juncture. The report demonstrates that opportunities exist across academic functions, campus operations, research and administration, supported by strong policy momentum and growing national investment. At the same time, risks relating to fairness, transparency and privacy require strong governance. The overarching challenge is therefore not whether Indian HEIs should adopt AI, but how they can do so in a way that is responsible, inclusive and strategically aligned with both national priorities and institutional missions.

Source: 2 Digital Education Council Global AI Faculty Survey 2025



SECTION 01

Decoding AI: From concept to campus



Generative AI tools have accelerated AI adoption in academia, unlocking powerful capabilities for learning, research and administration

Artificial intelligence (AI) is rapidly transforming how we live, work and interact by powering smarter systems, automating complex tasks and extracting insights from vast amounts of data. AI is accelerating innovation, improving efficiency and opening new possibilities across sectors worldwide — from powering fraud detection in finance to enhancing diagnostics in healthcare. As this technology continues to evolve, it is also changing the landscape of education, making learning more personalized, improving access and engagement, and equipping learners and institutions to thrive in an AI-driven future.

AI has rapidly moved from a niche technology to a mainstream tool in higher education, with the widespread availability of free generative AI tools such as ChatGPT, DeepSeek and conversational AI engines like Perplexity. These technologies have democratized access to AI-powered assistance, and brought AI adoption to the forefront of academic discourse and practice, enabling students and educators alike to access powerful capabilities for learning, research and administration. However, the rapid rise of AI often outpaces the development of national and institutional policies, leaving many universities struggling to integrate it responsibly and effectively.

It is also important to note that artificial intelligence extends beyond the realm of generative AI tools that capture public attention. The technology encompasses machine learning algorithms, natural language processing, computer vision, predictive analytics and automated decision-making systems that increasingly permeate educational infrastructure. This broader AI ecosystem demands a nuanced understanding that goes beyond surface-level interaction with chatbots and content generators.

Hence, meaningful and responsible adoption depends not only on access but also on literacy. A foundational understanding of how AI systems work — including their design and the underlying foundational technologies enabling them and critically engaging with their limitations, including embedded biases, hallucinatory outputs and ethical implications – is critical for conscious and ethical adoption. As per a survey conducted by the Digital Education Council among 3,800+ students across 16 countries, 58% of students believe they lack adequate knowledge and skills in AI, while 48% feel unprepared to navigate an AI-driven workplace.[1]

AI is reshaping curricula and pedagogy

		Illustrative examples
AI in education	▪ The application of AI tools to enhance teaching and learning	A student uses Khanmigo to review lessons taught in class
AI literacy	▪ The foundational understanding of AI, how it works, how to use it, and the risks of usage	A student using ChatGPT for information discovery checks the source of the information because they are aware of LLMs' tendency to distort data
AI education	▪ AI Literacy + the technical skills required to build AI	Building AI applications for discipline-specific research (including medicine, digital humanities, etc), building core AI technologies such as foundation models

Source: The 2025 AI Index Report | Stanford HAI , EY-P analysis

Source: 1 Digital Education Council Global AI Student Survey 2024, IBM Technology and EY-P analysis

Artificial intelligence refers to a broad set of technologies that enable machines to mimic cognitive functions, including learning, reasoning and pattern recognition

1.1 What is artificial intelligence?

AI encompasses a wide range of techniques, from traditional rule-based systems to the more advanced algorithms inspired by the human brain. Modern AI applications are powered by three key technologies: machine learning (ML), deep learning (DL) and foundation models (FM).

Artificial intelligence (AI)

Techniques that enable machines to mimic cognitive functions associated with the human brain, including all aspects of learning, reasoning and problem solving.

Machine learning (ML)

ML-based systems are trained on data to uncover patterns and make predictions or decisions. ML models improve over time as they are exposed to more data.

Deep learning (DL)

Uses multiple layers of neural networks that process information in a way similar to biological neurons. DL is well-suited to interpreting unstructured data, like text, images and speech.

Foundation models

Large-scale deep learning models trained on vast amounts of generalized, often unlabeled data. They predict the next item in a sequence—such as the next word in a sentence or the next pixel in an image—based on context and probability.

Use cases for education

- **Predictive analytics:** Detecting at-risk students by analyzing engagement and performance data
- **Automated grading:** Evaluating multiple-choice and structured assignments on a large scale

- **Proctoring systems:** Examining video and audio content to ensure exam integrity
- **Research tools:** Deriving insights from academic papers or datasets

Examples of models based on data-type:

- **Text:** GPT-4, DeepSeek, Mistral, BERT
- **Code:** CodeGPT, Codex, CodeT5
- **Image:** CLIP, DALL·E, Midjourney
- **Audio:** Whisper, DeepSpeech
- **Video:** Flamingo, Sora, VideoLLaMA
- **Multi-modal:** GPT-5

Source: IBM, EY-P analysis

Explainer: How large language models (LLMs) work

Large Language Models (LLMs) are computer programs designed to read and generate human-like text. A breakthrough that made LLMs possible was the development of the transformer architecture. Transformer architecture was initially created by Google in 2017. Unlike earlier models that read text one word at a time, transformers use a mechanism called "attention" to look at all the words in a sentence at once. This allows them to understand the relationships between words more effectively, improving their grasp of context and meaning. Transformers can also process information in parallel, which makes them faster and more efficient to train. As researchers fed these models more data and used more powerful computer chips (like GPUs and TPUs), the models became more advanced—leading to the development of the GPT series, from GPT-1 in 2018 to the latest GPT-5, which can work across text, images and audio.

Source: An AI glossary - by Lenny Rachitsky - Lenny's Newsletter; EY-P analysis

A brief history of AI evolution: From frontier innovation to mainstream adoption

1.2 A brief history of AI evolution

Artificial intelligence may seem like a sudden breakthrough, but it is the result of decades of continuous innovation dating back to the 1940s. Early AI research focused on creating machines that could mimic human intelligence, with slow but steady progress in labs and specialized industries. Breakthroughs such as neural networks and landmark chess matches between humans and computers periodically captured public attention, while significant progress in AI research unfolded at top-tier academic institutions such as MIT, Stanford University and Carnegie Mellon University due to the ambitious nature of experimental research undertaken.

1950	Theseus, a robotic mouse developed by Claude Shannon, was able to navigate a maze through trial and error, demonstrating the foundational principles of adaptive behaviour and memory-based learning
1956	The Dartmouth Summer Research Project on AI in the US is widely regarded as the birthplace of AI as a field.
1958	Development of Perceptron, which is regarded as the first artificial neural network, that makes decisions in a manner similar to the human brain
1960	Development of Adaptive Linear Element, which was a single-layer artificial neural network. It was an adaptive system for pattern recognition, which laid the foundation for advancement in ML
1962	IBM's 7094 computer played against checkers master Robert Nealey and defeated him
1974	The periods 1974–1980 and 1987–1994 are known as AI winters, marked by significant declines in AI funding
1997	IBM's Deep Blue system becomes the first computer to defeat a reigning world chess champion in a standard tournament match
2012	Introduction of AlexNet, a deep-learning neural network with many layers, was a significant breakthrough in image recognition
2019	The release of GPT-2 by Open AI showcased the power of natural language processing. It could perform tasks such as summarising and translating text as it was able to predict the next item in a sequence
2022	ChatGPT was released in 2022. It was built on large language models and introduced the concept of generative AI to the world
2025	In 2025, Agentic AI advanced autonomous agents for workflow management and problem-solving
Future	Experts foresee the rise of Physical AI next, enabling systems to understand and interact with the physical world

Source: WEF, Hugging Face, Sal Khan's Brave New Words: How AI Will Revolution Education (and Why That's a Good Thing) and EY-P analysis

The global adoption of AI in higher education has accelerated dramatically over the past two years, with 86% of students regularly using AI in their studies

1.3 How AI is currently shaping Higher Education

AI is transforming education by improving learning experiences, optimizing administrative processes and expanding accessibility. In Higher Education Institutions (HEIs), AI benefits both students and educators. It enables personalized learning based on individual student needs, making education more effective, while automated grading and scheduling systems reduce educators' workload, allowing them to focus more on teaching.

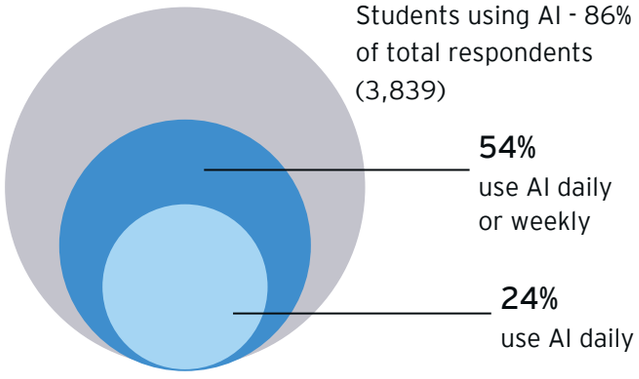
However, the global impact of AI on HEIs is more substantial than in India due to higher adoption rates, greater readiness, and a more advanced policy framework. An overview of the policy and investment landscape for the global and Indian contexts is provided in the following sections.

Global landscape

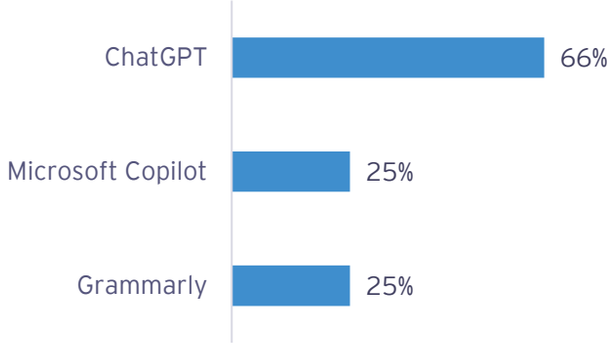
Adoption and use

The adoption of AI in higher education has accelerated over the past few years. 86% of students regularly use AI in their studies, while 54% of them use it on a weekly basis, according to the Digital Education Council survey. ChatGPT was the most widely used tool, with 66% students using it, and over 2 in 3 students reported using AI for information searching.[1]

Frequency of students using AI in their studies



AI tools usage among students (Top 3)



Source: Digital Education Council Global AI Student Survey 2024

This widespread adoption extends beyond students to initiatives for institutional-level implementation. According to surveys conducted by HolonIQ, 25% HEI representatives report successful investment and deployment of AI in 2022, compared to 14% in 2019, indicating a significant acceleration in institutional commitment to AI technologies. 44% of respondents have included AI in their short-to medium-term plans, suggesting continued growth in strategic AI integration.[3]

Policy landscape

Several countries, including the US, China, the UK and Australia, have developed AI policies to govern the use of AI in education. Notably, the EU has pioneered comprehensive AI regulation with the EU AI Act, which classifies certain education-related AI applications in areas such as admissions decisions, grading systems and proctoring systems as high-risk and mandates strict compliance requirements, including risk management, data governance, transparency and human oversight. The Act prohibits certain AI practices, such as inferring emotions from biometric data in educational contexts, to protect student rights. The EU AI Act was enacted in August 2024, with phased implementation through 2027.[4]

Source: 1 Digital Education Council Global AI Student Survey 2024, 3 Holon IQ, 4 FeedbackFruits, and EY-P analysis

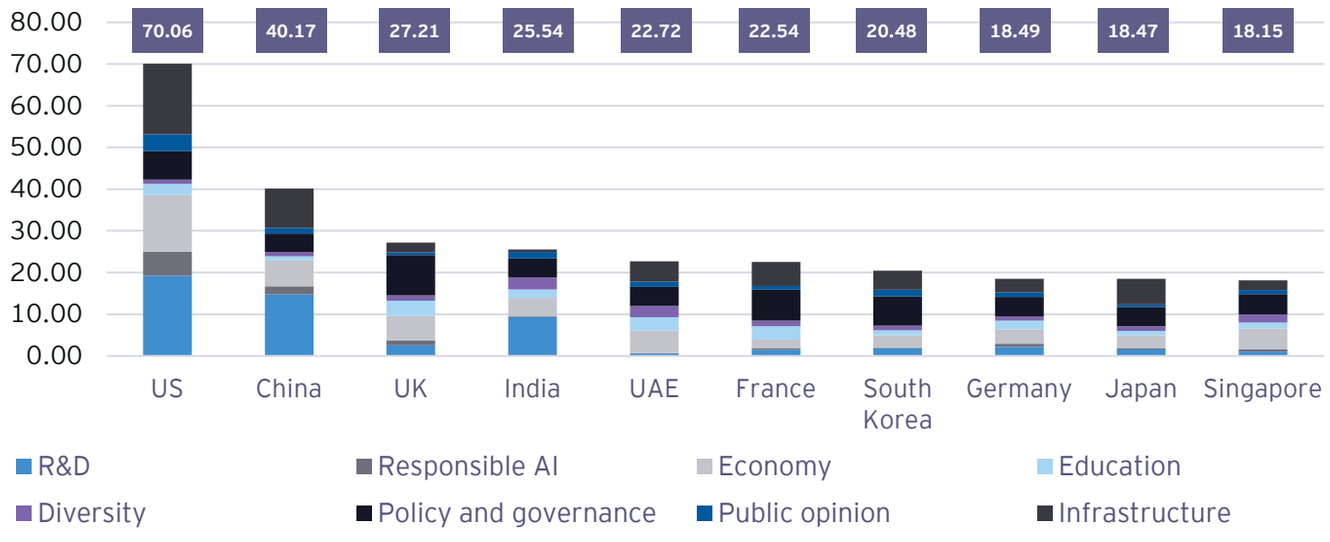
Stanford University's Global AI Vibrancy Tool, which ranks countries by AI ecosystem maturity, places India fourth owing to its strong R&D output

Countries such as the US, China and the UK have introduced AI policies that address ethics, privacy and AI literacy in higher education institutions. However, the EU stands out for having the most detailed and binding regulatory framework to date. A key milestone in global AI policy in education was the **Beijing Consensus on Artificial Intelligence and Education,** adopted during a multi-stakeholder gathering in 2019, which brought together government officials, UN agencies, member state representatives, academic institutions, civil society and the private sector. The consensus reaffirmed a collective commitment to the 2030 Agenda for Sustainable Development, particularly SDG 4 and highlighted the need for strong policy measures to effectively integrate AI into education. It emphasizes using AI to foster open, adaptable learning systems and to ensure equitable access to quality education for all.[5]

Investment and readiness

The Stanford Global AI Vibrancy Tool ranks countries based on the maturity of their AI ecosystems, with the US, China, the UK and India emerging as leaders—driven by strong performance across R&D, infrastructure and policy metrics.[6]

2023 Global AI Vibrancy Ranking
Weighted Index Score



Source: Global AI Vibrancy Ranking

- **The US** leads the ranking, dominating in research output, private AI investment and technological innovation.
- **China** follows closely, with high levels of R&D spending and infrastructure development.
- **The UK** excels in education, policy and governance pillars, reflecting strong academic readiness and regulatory support.
- **India** ranks fourth, bolstered by its strong score in R&D (~9.37), placing it ahead of most other countries but significantly behind the US and China, with R&D scores of 19.29 and 14.78, respectively. Journal publications and patent activity are key indicators for calculating the R&D score. India's R&D score is driven by its strong AI research community, ranking first in AI conference citations, third in total AI journal publications and second in the number of AI GitHub citations.
- Other notable countries include the **UAE, France, South Korea, Germany, Japan and Singapore**, highlighted for their advancements in infrastructure, responsible AI and economic competitiveness.

Source: 5 Beijing Consensus, 6 Global AI Vibrancy Ranking and EY-P analysis

The Government of India signals strategic focus on AI through investments in AI Centres of Excellence (CoEs), despite a nascent policy landscape

Indian context: Where India stands

Adoption and use

- Indian HEIs are increasingly adopting AI tools such as generative AI for content creation, plagiarism detection and AI chatbots for student support.
- Institutional investments in AI are uneven and largely consist of setting up research centers at premier public institutions like IITs and well-funded private universities. Use cases in pedagogy, such as adaptive learning and predictive analytics, are emerging but not yet widespread.

Policy landscape

- India's national AI policy framework is still in its early stages. At present, AI-related activity is governed through existing laws such as the Information Technology Act, 2000, the Digital Personal Data Protection Act, 2023, and various advisories issued by the Ministry of Electronics and Information Technology (MeitY).
- MeitY has also released specific guidelines addressing emerging concerns such as deepfakes, privacy risks and cybersecurity threats, including requirements for companies to seek approval before deploying certain AI models.
- In parallel, sectoral regulators like the Reserve Bank of India (RBI) and the Telecom Regulatory Authority of India (TRAI) are shaping their own approaches to managing AI-related risks within their domains.
- Meanwhile, the proposed Digital India Act—a comprehensive legislative overhaul that aims to consolidate previous laws—is under active discussion. Anchored by MeitY, this upcoming law is expected to include AI-specific provisions related to data protection, misinformation, algorithmic accountability, regulatory oversight of high-risk AI systems, and safeguards against misuse.
- Rising budgetary allocations to the IndiaAI Mission signal the government's strategic intent to position AI as a key driver of national development. The IndiaAI Mission, launched in 2024, aims to build a robust AI ecosystem by democratizing AI education, improving data quality, developing local AI skills, attracting talent, fostering industry collaboration, funding startups, supporting socially impactful projects and promoting ethical AI.
- IndiaAI FutureSkills is one of the seven pillars of the mission, which aims to reduce barriers to entry into AI programs by increasing AI courses at the undergraduate, master's, and Ph.D. levels. Data and AI Labs are planned to be established in Tier 2 and Tier 3 cities to offer foundational courses.
- In the Union Budget for 2025-26, INR2,000 crore was allocated to the IndiaAI Mission, a 1056% increase from the INR173 crore revised allocation in the 2024-25 Budget.[7]
- A key initiative of the government includes the establishment of Centres of Excellence (CoE) in AI, which act as centralized hubs for driving innovation and research by bringing together academia, industry and startups to collaborate on interdisciplinary research to develop scalable AI solutions. Three CoEs in agriculture, health and sustainable cities were announced in 2023. A fourth center, for AI in the education sector, was announced in 2025, with a total outlay of INR500 crore.[8]
- In addition to national efforts, individual states are also pursuing AI initiatives. Odisha, for example, is pioneering state-level AI governance with ethical and infrastructure provisions in its AI policy-2025.[9]
- Institutional AI policies within universities are still nascent, unlike in countries such as the US, Japan, or China.

Source: 7 The Hindu, 8 Outlook Business, 9 TOI and EY-P analysis

Indian HEIs must adopt responsible, inclusive and scalable AI strategies that not only enhance learning outcomes but also drive equitable and sustainable transformation across the education system

Conclusion

The global higher education landscape is swiftly embracing AI's transformative potential, reshaping how institutions teach, assess and support students. Leading countries are investing in infrastructure and research while also developing enabling policies and AI literacy programs that allow institutions to adopt AI responsibly and effectively.

India, while still in the early phases of systemic adoption, is demonstrating strong intent through national and state-level investments. However, there is a critical need to shift from isolated experimentation to coordinated institutional strategies that include governance, capacity building, curriculum alignment and student-centered innovation.

As AI moves from being an emerging technology to an embedded capability, the question facing Indian HEIs is no longer whether to adopt AI, but how to build responsible, inclusive and scalable strategies that ensure long-term educational value. The chapters that follow explore how AI is already shaping institutional practice, where its future impact may lie, and what kinds of academic, infrastructural and governance shifts are needed to navigate this transformation.



SECTION 02

Today's transformations: AI in action

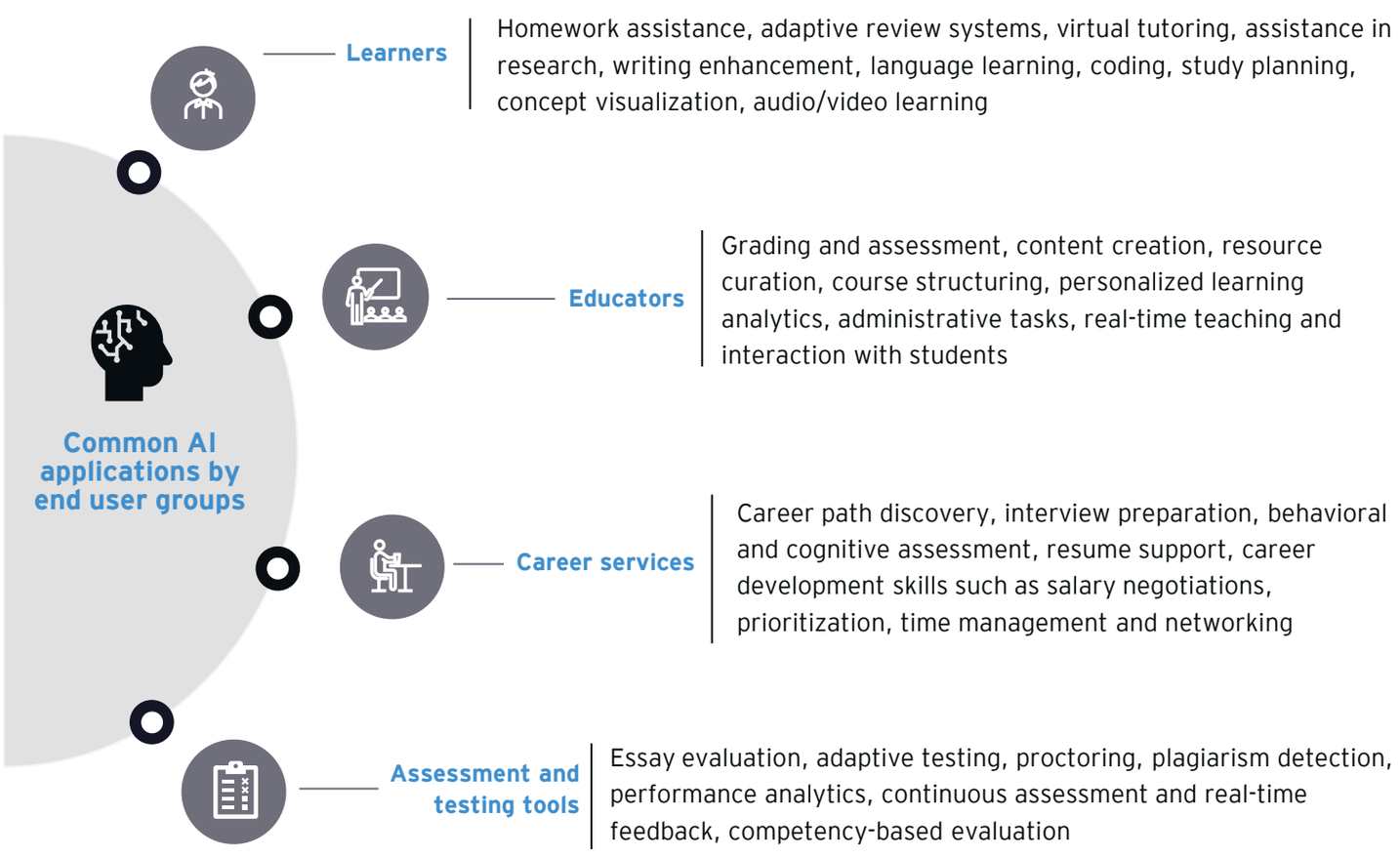


AI is reshaping the higher education landscape by serving diverse user groups with tailored applications that address their unique learning needs

The landscape of higher education in India and globally is undergoing a profound transformation driven by artificial intelligence. 2025 promises to be an inflection year for Indian education with paradigm shifts led by AI, as AI-powered tools are now embedded not only in classrooms but also in the administrative functions that keep universities running smoothly. This chapter examines the core use cases of AI across teaching, employability and academic services, exploring how universities are leveraging these technologies to build institutional capacity and enhance educational outcomes.

While AI is being applied across a wide range of areas in higher education, this chapter focuses on four key domains where adoption is currently most prevalent: personalized learning pathways that adapt to individual student needs, enhancement of educator effectiveness through intelligent tools and analytics, AI-powered career services that bridge the gap between education and employment and sophisticated assessment tools that provide more accurate and efficient evaluation methods. These applications are reshaping not only how knowledge is delivered and consumed but also how institutions operate and scale their educational services.

Common AI applications by end user groups



Source: EY-P analysis

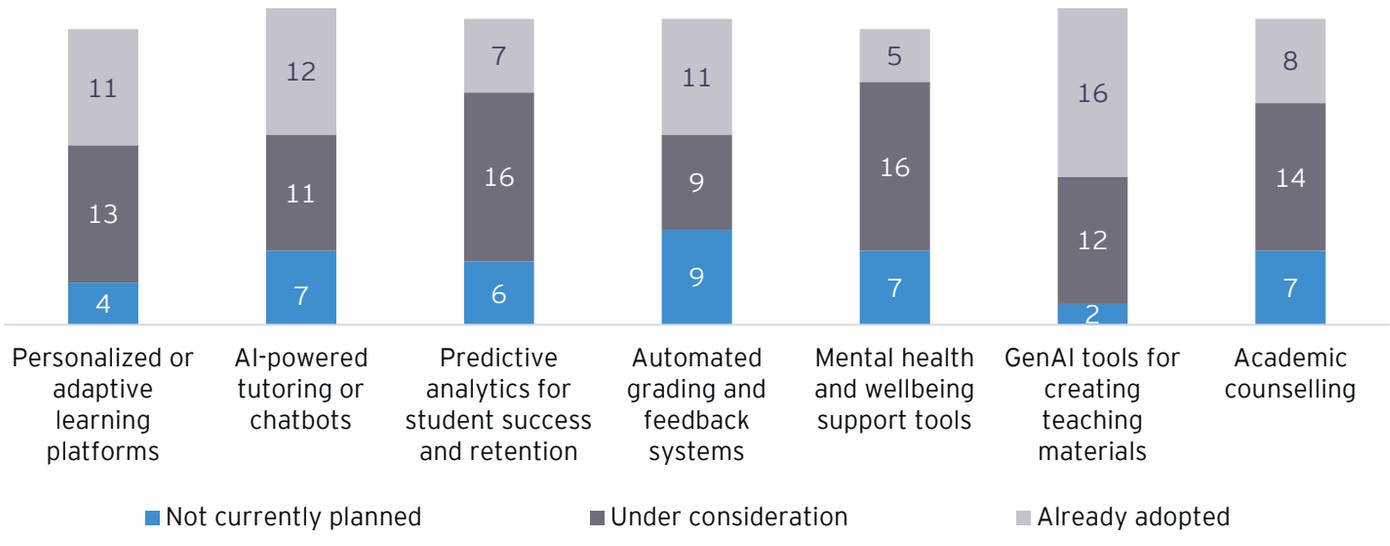
Generative AI tools, AI tutors and predictive analytics emerge as the most adopted AI applications for academic use cases

Some of the common AI tools used by HEIs are as follows:

- **Personalized or adaptive learning platforms** are tools that tailor educational content and experiences to each learner's individual needs, pace and preferences using AI.
- **AI-powered tutoring or chatbots** are virtual assistants that use AI to provide instant, personalized academic support, answer student queries and guide learning in real-time.
- **Predictive analytics for student success and retention** refers to the use of data and AI to identify students at risk of dropping out or underperforming, helping institutions take timely actions to support them.
- **Automated grading and feedback systems** are AI-driven tools that evaluate student assignments and provide instant, personalized feedback to help improve learning outcomes.
- **Mental health and wellbeing support tools** are AI-powered applications that help students manage stress, anxiety and emotional wellbeing through resources like self-help content, mood tracking and virtual counseling.
- **GenAI tools for creating teaching materials** are AI-powered tools that produce educational content such as quizzes, presentations and lesson plans based on input from educators.
- **Academic counseling** uses AI to help students make informed decisions about their educational goals, course selections and career paths through personalized guidance and planning.

Tools/applications currently used by HEIs to enhance student experience

Q. Which AI tools or applications is your institution currently using or exploring to enhance student experience?



Source: FICCI-EY-P AI Adoption in Higher Education Survey 2025

As illustrated in the chart above, HEIs in India have already embraced a wide range of AI tools and applications/ are actively considering their adoption. This clearly indicates that the integration of AI into the Indian education landscape is well underway.

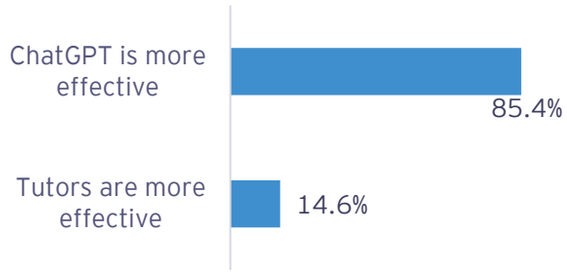
Increasing student adoption of generative AI tools for academic tasks highlights the necessity for HEIs to develop personalized learning systems

2.1 Personalized learning pathways and adaptive curriculum

The landscape of higher education is undergoing a paradigm shift from traditional "one-size-fits-all" approaches to AI-driven personalized learning experiences. This change is fueled by advanced AI technologies, comprehensive learning analytics, and the growing recognition that students learn at different paces and through diverse modalities. A 2023 survey by US-based market intelligence firm Intelligent.com indicates that students find AI tools like ChatGPT more helpful than traditional tutoring[10], signaling a fundamental shift in learner preferences and expectations.

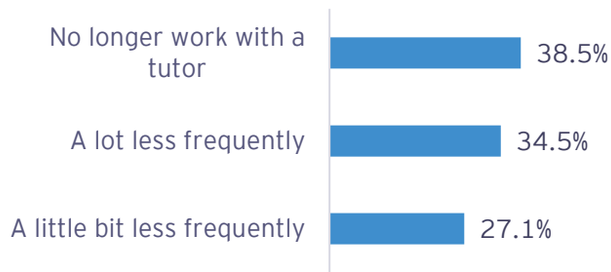
Effectiveness of studying with ChatGPT, High school and college students (ages 16-24), N=~3000

Q. In general, do you believe studying with a tutor or studying with ChatGPT is more effective?



Changes in frequency of working with a human tutor, High school and college students (ages 16-24), N=~3000

Q. As a result of studying with ChatGPT, how much less frequently do you work with a tutor?



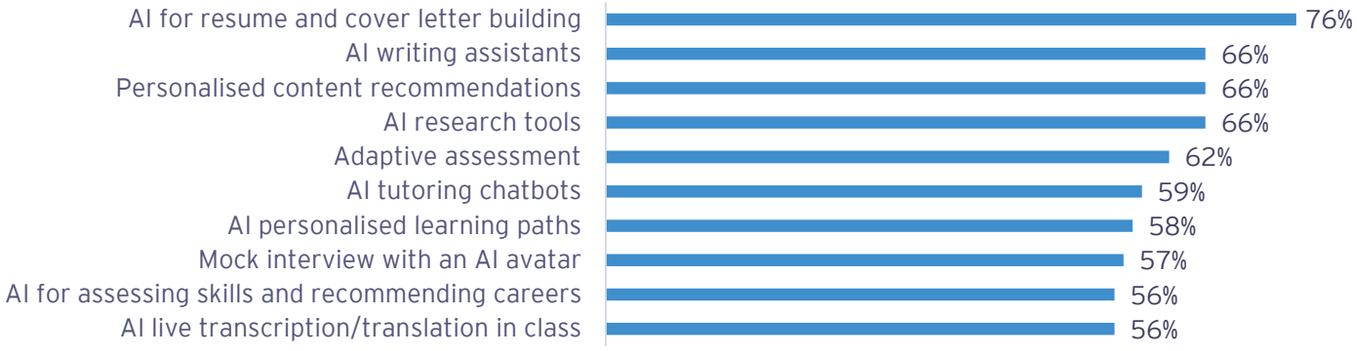
Source: Intelligent.com survey in the US of high school and college students conducted in 2023

The growing substitution of traditional tutoring with general AI chatbots underscores the urgency for HEIs to develop specialized AI tools—whether by fine-tuning existing models or building proprietary systems. Unlike non-specialized, publicly available models prone to errors and hallucinations, institution-developed applications can promote accuracy and pedagogical alignment. Ethical considerations and biases inherent in models are discussed in Chapter 6.

In addition to using chatbots such as ChatGPT as virtual tutors, students are using AI for several other educational use cases as well, with resume and drafting cover letters topping the list.[1]

Top 10 AI use cases in higher education perceived by students

Q. To what extent do you agree the following AI use case is useful/ will improve your learning journey/outcome?



Source: Digital Education Council Global AI Student Survey 2024

Source: 10 Intelligent.com survey, 1 Digital Education Council Global AI Student Survey 2024 and EY-P analysis

AI-powered educational tools offer support across multiple stages of the academic journey– from initial learning to exam preparation

AI-powered study tools and applications for higher education students

The integration of AI in higher education has spawned a diverse ecosystem of tools designed to enhance student learning experiences. These applications range from basic homework assistance to sophisticated review systems that adapt to individual learning patterns.

Student learning journey

Initial knowledge acquisition and review	Enhanced productivity and scheduling	Concept mastery and reinforcement	Assignment writing support
Building basics through review and learning, including subject-specific applications	Organizing time and learning material for effective study	Doubt solving, deepening and strengthening subject understanding	Structuring and expressing academic ideas clearly

Source: EY-P analysis

Area	Use case	Description	Representative tools
Knowledge acquisition, concept mastery and reinforcement	Virtual tutoring	AI-powered tutoring systems that solve problems step-by-step, explain concepts and offer immediate feedback, adapt to learning styles and track progress over time	Tutor.com's Essay Feedback, Khanmigo (Khan Academy's AI tutor), Wolfram Alpha, Photomath
	Adaptive review systems	Platforms that analyse student performance and create personalized review schedules using spaced repetition and active recall techniques	Anki, Quizlet's Learn mode, RemNote, Obsidian with spaced repetition plugins
Enhanced productivity and scheduling	Study planning and organization	Intelligent scheduling tools that optimize study time, track habits and provide productivity insights	Motion, Reclaim.ai, Todoist with AI features, MyStudyLife, Forest
	Concept visualization	Tools that create mind maps, diagrams and visual representations of complex concepts automatically	Mindmeister AI, Lucidchart, Whimsical, Miro AI features
	Audio/video learning	AI-powered transcription, summarization and note-taking from lectures and educational videos	Otter.ai, Notion AI, Riverside.fm, Descript, SpeechText.AI
Assignment writing support	Research support	Tools that help students discover relevant sources, synthesize information, generate citations and organize research materials	Elicit, Semantic Scholar, Research Rabbit, Zotero with AI plugins, Notion AI
	Writing support	AI writing assistants that provide grammar correction, style suggestions, plagiarism detection and structural feedback	Grammarly, ProWritingAid, Hemingway Editor, Notion AI, Jasper AI
Subject-specific applications	Language learning	Personalized language learning platforms that adapt difficulty levels based on performance, provide conversation practice and cultural context	Duolingo, Babbel, Rosetta Stone, HelloTalk, Speak
	Code learning and programming	AI-powered coding assistants that provide code completion, debugging help and programming concept explanations	GitHub Copilot, Replit AI, CodeWhisperer, Tabnine, Cursor

Source: EY-P analysis

SP Jain School of Global Management has developed a proprietary AI chatbot to offer students personalized academic assistance throughout their learning journey

AI integration in higher education

S.P. Jain School of Global Management

In April 2025, the SP Jain Group announced the launch of AI-ELT (Artificial Intelligence-Enabled Learning Tutor), a proprietary AI chatbot to provide students with personalized academic support throughout their learning journey. While most learning chatbots and virtual tutors are built on existing foundational models, such as GPT-4 and Claude, through fine-tuning and retraining, SP Jain's AI-ELT has been developed entirely in-house and is patent-pending.

Key features and capabilities

- **Curriculum-specific training:** AI-ELT distinguishes itself from generic AI chatbots by being specifically trained on SP Jain's business curriculum. The system is mapped to course outlines, learning outcomes and assessment rubrics, ensuring high relevance and accuracy in academic support.
- **Socratic teaching methodology:** The AI tutor employs a Socratic-style dialogue approach, prompting students to think critically, apply concepts and progressively build topic readiness through interactive conversations rather than providing direct answers.
- **24/7 availability:** AI-ELT functions as an always-available academic companion, complementing faculty guidance and making high-quality learning support accessible regardless of student starting levels.
- **Adaptive learning:** The system adapts to individual student pace and needs, helping them progress from uncertainty to clarity through personalized question-based interactions.
- **Scalable personalization:** The platform levels the playing field by supporting both students requiring additional concept reinforcement and those seeking advanced learning challenges.

Comprehensive academic support at various touchpoints of the learning journey

- **Pre-class preparation:** Helps students understand key concepts before classroom discussions through case-based scenarios and thought-provoking questions.
- **Project mentoring:** Provides guidance on research question framing, model identification, metrics selection and data interpretation.
- **Exam readiness:** It generates exam-style questions, identifies knowledge gaps and provides strategic preparation support to students.
- **Professional development:** Includes features to support interview preparation, communication skills enhancement and real-time performance feedback.

Source: SP Jain School of Global Management and EY-P analysis

Arizona State University's adaptive learning system demonstrated tangible results, showcasing its potential for expansion across large university environments

Adaptive learning initiative

Arizona State University

Arizona State University's (ASU) efforts in AI-driven adaptive learning systems date back to as early as 2013, when it first partnered with Pearson and Knewton to personalize student learning. By 2019, the results were evident, with an increase in pass rates for AI-enabled mathematics courses.

System overview

- **Adaptive mathematics program:** ASU implemented ALEKS (Assessment and Learning in Knowledge Spaces) by McGraw-Hill, an AI-powered adaptive learning system, for their college algebra course in 2015. The system replaced traditional lectures with a blended model, combining lab work and group sessions. The percentage of students who achieved a C or higher in college algebra increased from 57% in 2015 to 79% following the implementation.
- **Personalized learning pathways:** Students are assessed by the adaptive software in an initial "knowledge check", with each student then starting at a different curriculum point based on their performance. Course completion is also tied to performance in the knowledge checks. Students who do well on the initial checks can finish the course in five to six weeks, allowing them to take another class during the semester if they wish. This individualized approach ensures that learning paths are truly personalized.

Measurable outcomes

- 22% point improvement in college algebra pass rates (C or higher)
- Reduced time-to-completion for prerequisite mathematics courses

Scalability potential

- ASU's success with adaptive learning in mathematics has led to expansion across multiple disciplines such as biology, economics and psychology, demonstrating the scalability of AI-driven personalized learning approaches in large university settings.

Source: Inside Higher Ed, McGraw-Hill and EY-P analysis

AI is enhancing educator effectiveness by automating administrative tasks, freeing up more time for instructors to concentrate on teaching and student engagement

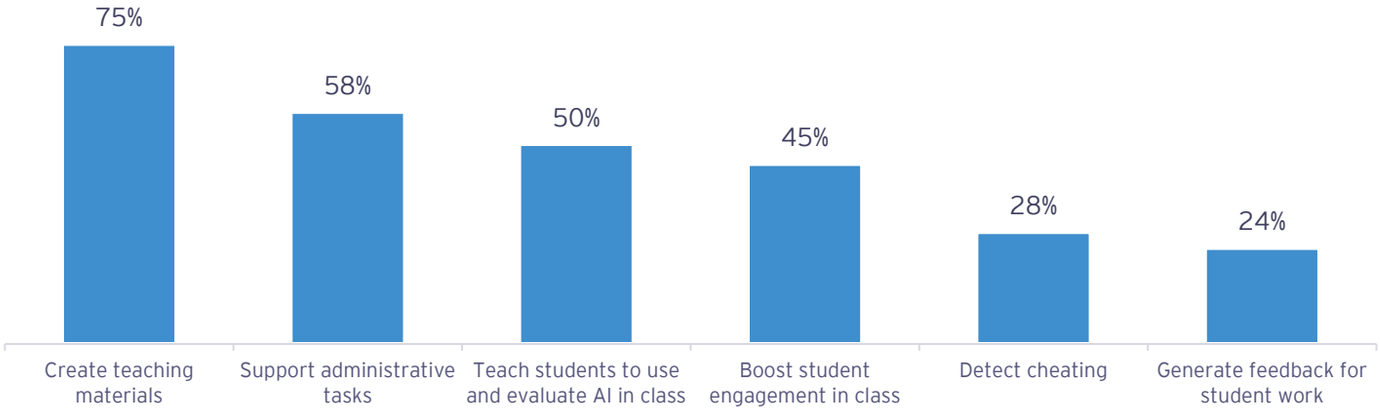
2.2 Enhancing educator effectiveness

AI in higher education is fundamentally transforming the role of educators, not by replacing human teachers but by augmenting their capabilities and freeing them from time-consuming administrative tasks. This shift allows faculty to focus on what they do best: meaningful human interaction, creative problem-solving, mentoring and personalized instruction. A survey conducted by the Digital Education Council in 2025, which gathered insights from over 1,600 faculty members across 28 countries, revealed that 75% of respondents actively use AI to develop teaching materials. Other notable applications include streamlining administrative tasks and supporting students in learning how to effectively use and critically evaluate AI technologies.[2]

Top AI use cases in teaching

Q. What do you use AI for in your teaching?

Note: Respondents only include those who have used or are using AI in teaching



Source: Digital Education Council Global AI Faculty Survey 2025

AI offers a significant opportunity for faculty to enhance their teaching practices in the years ahead. According to the survey, 65% of faculty members view AI's impact on education as a positive opportunity. Moreover, 64% agree that AI is poised to bring transformative changes to the role of instructors. Among those who anticipate at least a moderate shift in teaching roles due to AI, 84% report having a clear understanding of many of the changes AI is likely to introduce.[2] In the following pages, we highlight several use cases relevant for faculty in higher education. Further training and upskilling of faculty is taken up in Chapter 8.

Source: 2 Digital Education Council Global AI Faculty Survey 2025 and EY-P analysis

AI is powering automated grading, generating instructional content and delivering personalized learning analytics, with LMS at the forefront of supporting educators in these tasks

AI-powered study tools and applications for higher education faculty

The integration of AI in higher education has given rise to a broad array of tools that support faculty across the teaching lifecycle. From automating grading and streamlining administrative tasks to designing course structures, curating content and analyzing student learning data, these tools enhance instructional efficiency and effectiveness.

Use case	Description	Representative tools
Automated grading and assessment	AI systems can handle routine grading tasks, providing immediate feedback while freeing educators to focus on complex evaluation and personalized feedback	Gradescope, Turnitin Feedback Studio, CodeGrade, Blackboard's SafeAssign, Canvas SpeedGrader with AI features
Content creation and resource curation	AI assists in developing specific educational materials (lessons, quizzes, videos) and finding/organizing existing resources from various sources for day-to-day teaching needs	Moodle 4.5 AI text/image generation, Blackboard AI Design Assistant for images, ChatGPT for Education, Quizlet AI, Canvas Smart Search, Synthesia for video creation
Course structure and instructional design	AI provides systematic support for overall course architecture, learning sequences, pedagogical strategies and educational methodology– focusing on how content should be structured and delivered	Blackboard AI Design Assistant for learning modules, Blackboard AI test question generation, Articulate Rise 360, Adobe Captivate, H5P with AI features, Course Hero's AI Tutor, Edcafe AI
Personalized learning analytics	AI analyzes student performance data to identify learning patterns, predict at-risk students and recommend interventions	Brightspace Insights, Canvas Analytics, Blackboard Analytics, Moodle predictive analytics roadmap, IBM Watson Education, Civitas Learning
Administrative task automation	Streamlining routine administrative functions such as scheduling to reduce educator workload	AdmitHub chatbots, Moodle OpenAI Chat Block, Calendly for scheduling, Otter.ai for meeting transcription, Microsoft Viva Insights, Zoom AI Companion
Interactive learning experiences	Tools that provide interactive learning experiences through conversation and engagement	Blackboard AI Conversations with role-playing (e.g. an AI avatar customized by an educator to respond as Jane Austen)
Student engagement in online/ blended settings	AI-powered tools for creating and sharing learning materials and monitoring performance to enhance student engagement in online or hybrid classes	Microsoft Teams plugins and Zoom plugins for Kahoot!, Moodle, Miro

Source: EY-P analysis

Harvard has successfully implemented an AI-powered chatbot in its introductory computer science course, enhancing student comprehension of core concepts

Implementation of AI teaching assistant

Harvard University

Embracing the growing role of AI across disciplines, Harvard University introduced an AI-driven tool powered by ChatGPT, called the CS50 Duck in 2023, to support instruction in its introductory computer science courses. Serving as a virtual teaching assistant, the bot helps students work through coding challenges and better understand foundational concepts. The initiative aimed to give every student personalized, expert-level guidance by leveraging generative LLMs like OpenAI's GPT-4.

Implementation

- The introduction of the CS50 Duck was intended to provide students with 24/7 support, thereby reducing the burden on teaching assistants and enabling them to dedicate more time to meaningful work.
- Launched during the summer session for around 70 students in Harvard's introductory computer science course, this AI tool delivers detailed explanations of coding problems and instant feedback, helping students stay on track and avoid frustration.
- Beyond supporting learners, the CS50 Duck also aids teaching assistants and professors by automating tasks such as offering code style suggestions, reviewing code design, resolving common errors and responding to frequently asked questions (FAQs).

Outcomes

- After an initial pilot with 70 students in Summer 2023, the tool was expanded to several hundred on-campus students in the Fall 2023 semester as well as thousands online. The tool was well received, with 75% of students using the tool frequently and 94% finding it helpful.
- By mid-November 2024, 211,000 students had used the CS50 Duck, generating 10 million queries at an average cost of US$1.50 per student per year.
- When tested in Fall 2023, the CS50 Duck achieved an 88% accuracy rate on curriculum questions, outperforming the underlying GPT model's baseline, which correctly answered software engineering questions only 48% of the time.

Expansion potential

- Building on the success of CS50's integration into the summer course, Harvard extended its use to 10 additional CS50-related MOOCs, spanning topics like Game Design, SQL and Cybersecurity. These online courses, accessible year-round to tens of thousands of learners globally, now benefit from around-the-clock support thanks to CS50.
- Looking ahead, the university aims to broaden the system's reach even further by incorporating it into a wider array of courses across both STEM and humanities disciplines.

Source: PCMag, Prompt Engineering Institute, Harvard University and EY-P analysis

HEIs can accelerate AI adoption by investing in institutional licenses and utilizing AI-enabled features within learning management platforms

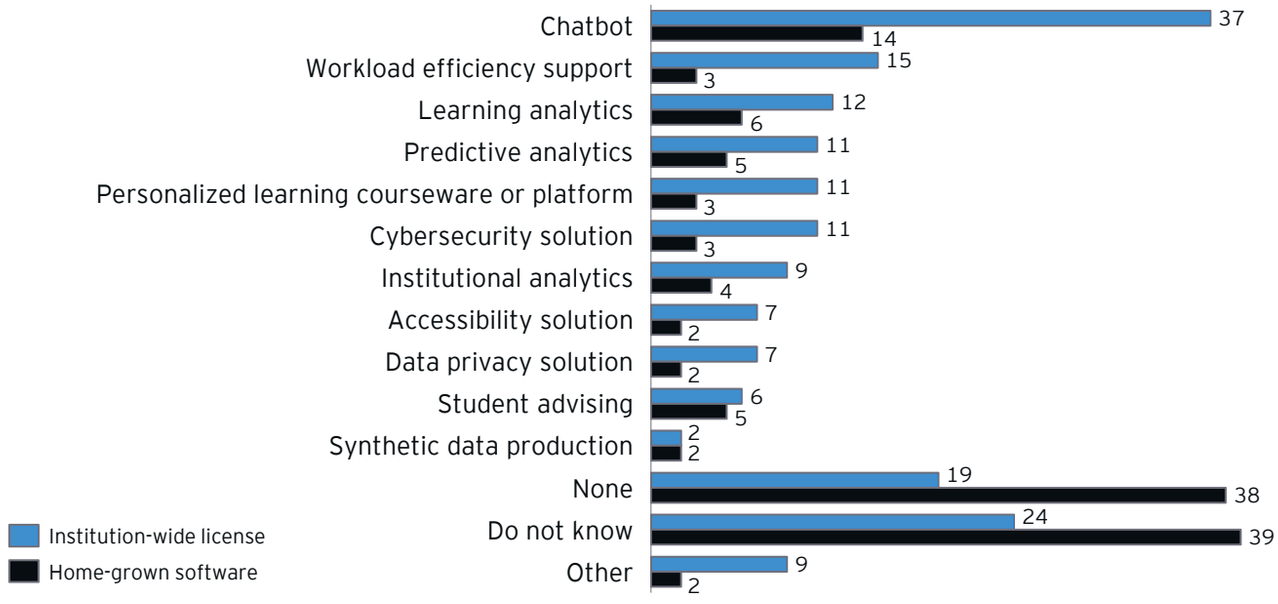
Access models for LLMs: Individual student vs. institutional subscription options

Although the initial surge in AI use within higher education was largely driven by students using high-performing large language models (LLMs) freely available online, a growing number of universities are now purchasing institutional subscriptions as they develop policies around responsible AI use. Enterprise-grade offerings such as ChatGPT Edu and Claude for Education offer significant benefits over free versions, including customizability of datasets (e.g., training on institutional research to improve reliability), strict data privacy (disabling data use for model training—key for safeguarding intellectual property and preventing misinformation), reduced hallucinations (via domain-specific fine-tuning) and bias mitigation (controlled data sources).

The California State University (CSU) system, comprising 23 campuses and nearly 460,000 students, has adopted ChatGPT Edu across its network, providing no-cost access to students and staff. Other institutions following suit include Northeastern University and the London School of Economics, which have rolled out Claude for Education. These strategic moves signal a broader trend where universities are not only accommodating but actively shaping the integration of AI into academic life through secure, pedagogically aligned and institutionally governed platforms.

Source: Axios, Northeastern University, London School of Economics and EY-P analysis

AI capabilities for which institutions have institution-wide site licenses or homegrown software



Source: 2025 EDUCAUSE AI Landscape Study: Into the Digital AI Divide

Significantly, many AI-powered tools for creating and grading assessments, doubt resolution and adaptive learning are now embedded within established Learning Management Systems (LMS) such as Moodle, Canvas and Blackboard, platforms that experienced rapid adoption during the COVID-19 pandemic. By integrating AI capabilities directly into existing LMS infrastructure, HEIs can streamline adoption, minimizing the logistical and financial burdens associated with managing multiple standalone AI solutions.

AI is enhancing student learning while also empowering educators by streamlining administrative tasks, allowing them to focus more on teaching and mentoring.

AI is enhancing student employability by assisting with job searches, analyzing skill gaps and offering personalized career guidance to align students with industry demands

2.3 AI for career services

Digital career services platforms are being actively used for placement processes, with 24 out of 30 HEIs surveyed BY FICCI and EY-P reporting limited to extensive adoption. Digital career services platforms are well-positioned to leverage AI to transform student employability by delivering personalized job matching, skill-gap analysis and continuous career guidance, as well as AI-powered mock interviews. AI platforms analyze student profiles, academic performance and labor market trends to recommend tailored career paths and upskilling opportunities. Tools like HireVue leverage AI-driven assessments and behavioral analysis to enhance recruitment processes, while platforms like Coursera Coach and LinkedIn Learning use AI to suggest personalized learning pathways aligned with career goals. Nxtwave and Newton School, Indian Edtech providers in the IT job prep and upskilling segment, provide AI-powered mock interviews to help students prepare for placements.

As employability becomes a key outcome metric for higher education institutions, AI is playing an increasingly strategic role in transforming campus-based career services. From personalized career discovery to mock interviews and skills alignment, AI-enabled platforms offer scalable, data-driven solutions to support students as they transition from education to the workforce.

Below, we look at the key use cases in AI for career services:

Use case	Description	Representative tools
Career path discovery and skill-course alignment	AI platforms assess student interests, academic records, job market trends and aptitude to recommend career tracks	Mindler, Coursera Coach, Coach by CareerVillage
Behavioral and cognitive assessment	AI evaluates candidate competencies using game-based or scenario-based challenges	Coach by CareerVillage, HireVue Virtual Job Tryout
Resume and application support	AI helps students tailor resumes and cover letters based on industry expectations	Coach by CareerVillage, Mindler, Coursera Coach
Interview preparation	Students receive real-time feedback through simulated interviews and AI-based performance scoring	Coach by CareerVillage, TryOuts, NxtMock
Career development skills	AI tutors train students in skills essential in job hunting, including networking, time management, salary negotiations, understanding job descriptions	Coach by CareerVillage

Source: EY-P analysis

Carnegie Mellon acknowledges the critical role of AI in career and professional growth and offers a variety of AI-driven tools to support its students' development and employability

In today's competitive job landscape—where employers are increasingly using AI to screen and evaluate candidates—higher education institutions (HEIs) face mounting pressure to equip students with tools that enhance their career readiness. Career coaching is a critical yet resource-intensive process that often exceeds the capacity of lean placement and career services teams. Off-the-shelf AI-powered platforms offer scalable, cost-effective solutions to bridge this gap, providing personalized support that would be difficult to deliver manually at scale. Carnegie Mellon University's adoption of such tools demonstrates how HEIs can ease the burden on placement cells while empowering students to navigate job and internship searches with greater confidence, precision and independence.

AI-powered guidance tools for career and professional development

Carnegie Mellon University

Carnegie Mellon University (CMU) recognizes AI tools' potential to significantly enhance the job and internship search process. The university promotes various AI-driven career resources to support students throughout their journey, offering the following platforms and resources:

Use case	Tool	Functionality
Career path discovery and skill-course alignment	Handshake	▪ Handshake delivers personalized job recommendations based on each student's profile, interests and search history, with suggestions becoming increasingly accurate as students interact more with the platform. ▪ To receive the most relevant opportunities, it's essential for students to maintain a complete and up-to-date Handshake profile.
Resume and application support	Vmock	▪ The online platform delivers instant, personalized resume feedback by leveraging advanced algorithms, data science and AI technologies to help students enhance their resumes. ▪ It generates an overall resume score to gauge effectiveness and provides detailed insights on both content and presentation, thereby empowering students to fine-tune their applications with precision.
Interview preparation	Big Interview	▪ Big Interview offers AI-powered feedback on recorded video interview responses, giving students instant coaching as soon as they save their practice sessions. ▪ The platform analyses verbal and non-verbal cues such as eye contact, vocabulary usage, tone, speaking pace and more, helping students refine their communication skills and present themselves more effectively.

Source: CMU and EY-P analysis

The assessment and testing landscape is experiencing a major shift as AI-powered platforms look to replace conventional assessment methods

2.4 AI-enabled assessment and testing tools

AI is redefining higher education assessment through automated essay scoring, adaptive tests and AI proctoring. Plagiarism detection tools cross-analyze sources, while performance analytics unlock competency-based evaluation. Real-time feedback and continuous assessment models now integrate testing directly into the learning cycle—making evaluation more dynamic, personalized and pedagogically actionable. The expansive ecosystem of assessment automation tools offers significant potential to streamline evaluation processes for academic staff and administrators. These solutions are particularly valuable for managing high-volume grading tasks, including competitive admissions assessments and online course assignments, as institutions increasingly expand their digital learning offerings.

Use case	Description	Representative tools
Automated essay scoring and evaluation	AI-driven essay evaluation tools now go beyond basic grammar checks to assess argument strength, coherence and critical thinking. Using advanced language processing, they offer feedback on structure, evidence and logic	e-rater, Turnitin
Adaptive testing platforms	Computer-adaptive testing (CAT) dynamically adjusts question difficulty to student responses, enabling faster, more precise assessments—ideal for placements and certifications	Knewton Alta, Eklavvya
Proctoring and academic integrity	As remote learning grows, AI proctoring tools have become vital for ensuring academic integrity by monitoring online exams and detecting suspicious behavior	MettI, MeritTrac, ProView, Eklavvya, ProctorEdu
Plagiarism detection and prevention	Advanced AI tools now detect not just copying, but also paraphrasing, idea theft, AI-generated text and improper collaboration by comparing submissions against extensive academic and online databases to generate detailed similarity reports and uphold academic integrity	Turnitin, Copyleaks, Originality.AI, Grammarly Premium
Performance analytics and learning insights	AI assessment platforms analyze student performance to uncover learning trends, misconceptions and support needs, enabling faculty to adapt instruction and offer personalized study guidance	Gradescope, Cognii
Continuous assessment and real-time feedback	AI-enabled systems enable continuous assessment through regular tasks and micro-assessments, offering real-time feedback that supports timely intervention for both students and instructors	Formative, Socrative
Competency-based evaluation	AI systems enable competency-based assessment by tracking skill mastery across contexts and offering evidence-backed certification, shifting focus from time-based learning to demonstrated abilities	Coursera for Campus, EduSourced

Source: EY-P analysis

Garden City University enhanced grading accuracy by 98% and cut evaluation time by 70% by adopting an AI-driven grading tool

Grading and assessment use cases often demand tailored solutions because academic disciplines, evaluation rubrics and institutional policies vary widely. Off-the-shelf AI tools may not accommodate discipline-specific marking schemes, diverse response formats, or the need for secure, auditable workflows. Garden City University's collaboration with InovarTech to develop a customized Agentic AI system exemplifies how tailored approaches can deliver measurable operational efficiencies.

Automating exam grading using AI-powered tool

Garden City University

Garden City University, a Bengaluru-based private university offering undergraduate and postgraduate programs across a range of disciplines collaborated with InovarTech, a software solutions provider, to implement an AI-driven exam evaluator powered by a custom Agentic AI engine and LLM stack, enabling secure, rubric-based evaluation of answer scripts.

Problem

- Academic departments struggled with operational inefficiencies stemming from manual assessments, non-standardized evaluations, paper-based records and administrative overload.

Solution implementation

- InovarTech deployed a secure, rubric-driven evaluation system using Agentic AI, designed to address key academic challenges, offering features such as:
  - Custom AI models aligned with academic rubrics to evaluate both short- and long-form responses
  - Instant report generation with scores, personalized feedback and performance breakdowns
  - Data security through customizable on-premise or cloud deployment in compliance with the university's IT governance policies
  - Built-in oversight tools empowering professors to review flagged answers and modify grades where necessary

Outcomes

- The university achieved a 98% boost in grading accuracy, cut evaluation time by 70%, and unlocked actionable insights into student performance through data analytics.

Source: InovarTech and EY-P analysis

Conclusion

As higher education institutions navigate the integration of AI, the most immediate gains lie in reimagining core academic functions—teaching, assessment and career counseling—that directly shape learner outcomes and institutional performance. Prioritizing AI adoption in these foundational areas can deliver tangible impact and build internal readiness for more ambitious transformations. While the next wave of AI innovation offers exciting possibilities—from intelligent campus systems to immersive learning environments—these advances will be most effective when built on a strong, student-centered AI infrastructure.


AI

SECTION 03

Emerging frontiers: The future of AI in higher education



While AI has already begun transforming classrooms, its next wave promises to revolutionize how universities operate, conduct research and drive innovation

The future of higher education is being dramatically reshaped by the transformative potential of AI. What was once limited to academic theory is now driving a new era of intelligent campus operations, where institutions use AI to streamline administrative tasks, personalize student services and optimize resources through smart scheduling. These intelligent ecosystems are enabling faculty and support staff to focus more on mentorship and instruction, while students benefit from more seamless and responsive services.

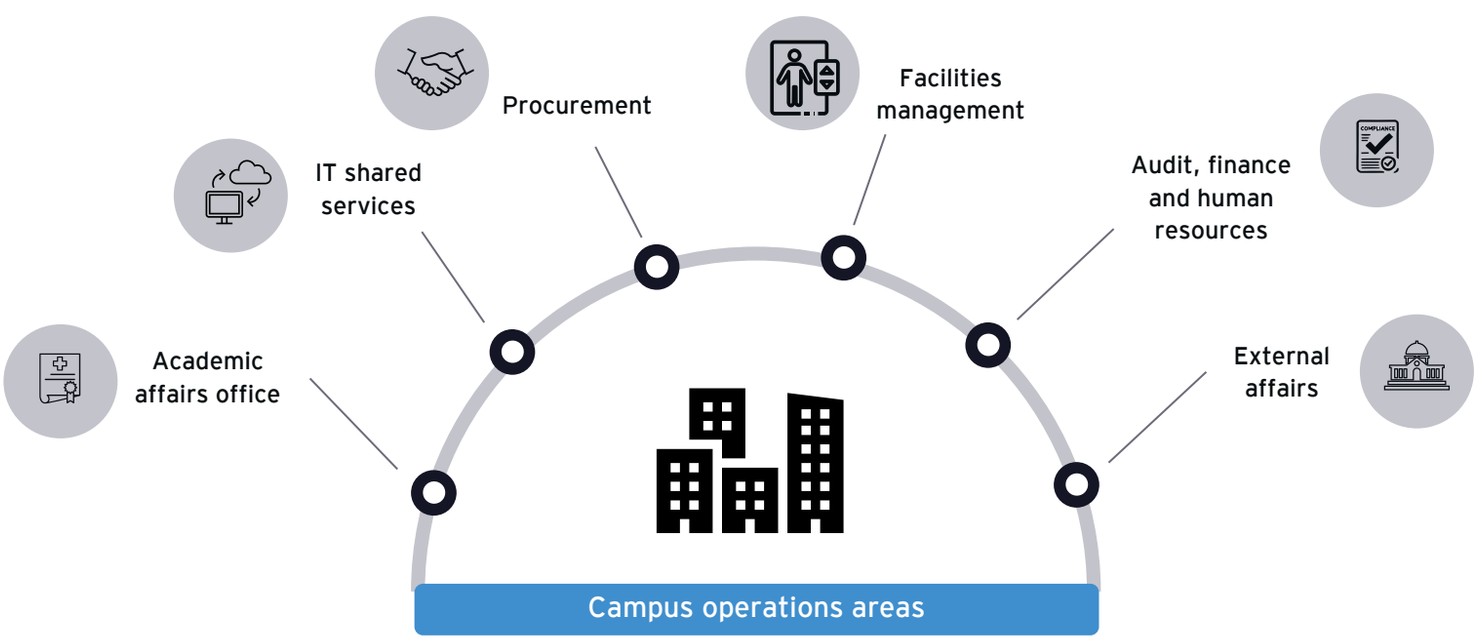
Simultaneously, universities are not only advancing AI through groundbreaking research but also using AI itself to accelerate discovery across disciplines. From automating data analysis in science labs to enabling adaptive literature review in humanities, AI is becoming both the subject and engine of academic progress. It's also emerging as a powerful catalyst for innovation and entrepreneurship-fueling student-led startups, deep tech ventures and real-world problem-solving.

Complementing these developments is the rise of AI-enhanced immersive learning, where XR technologies, simulations, and virtual labs provide hands-on experiences that transcend traditional classroom boundaries. This convergence of AI with teaching, research, and institutional operations signals a bold, adaptive and human-centric future for higher education.

3.1 Intelligent campus operations and student services

AI is rapidly transforming campus operations across HEIs, offering unprecedented opportunities to streamline administrative processes and enhance operational efficiency. Beyond learning, AI is reshaping campus operations by automating tasks across functions like facilities management, procurement, security, etc. This frees up educators and administrators' time to focus on more strategic initiatives. Below are the areas in campus operations that can be made more efficient with AI adoption.

Campus operations areas which can be made more efficient by adoption of AI



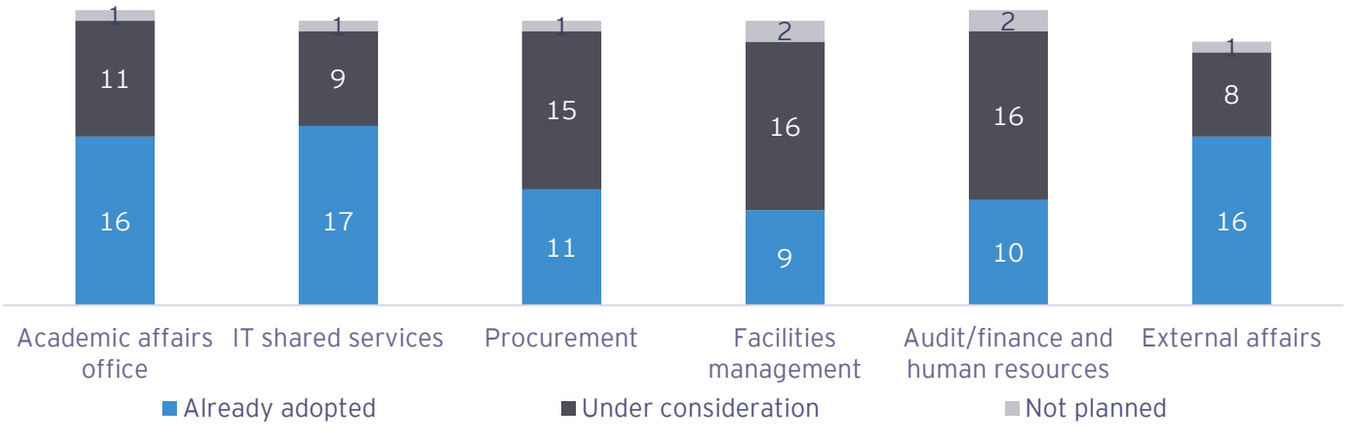
Source: EY-P analysis

HEIs are increasingly leveraging AI tools in campus operations to streamline administrative workflows, with usage expected to grow in the coming years

Findings from the FICCI-EYP AI Adoption in Higher Education Survey indicate that HEIs are increasingly leveraging AI tools to improve administrative efficiency in campus operations. As shown in the chart below, Indian HEIs have already adopted or are actively exploring AI tools across various campus operations, highlighting another aspect of AI integration in higher education.

Areas of campus operations being automated through AI/digital tools

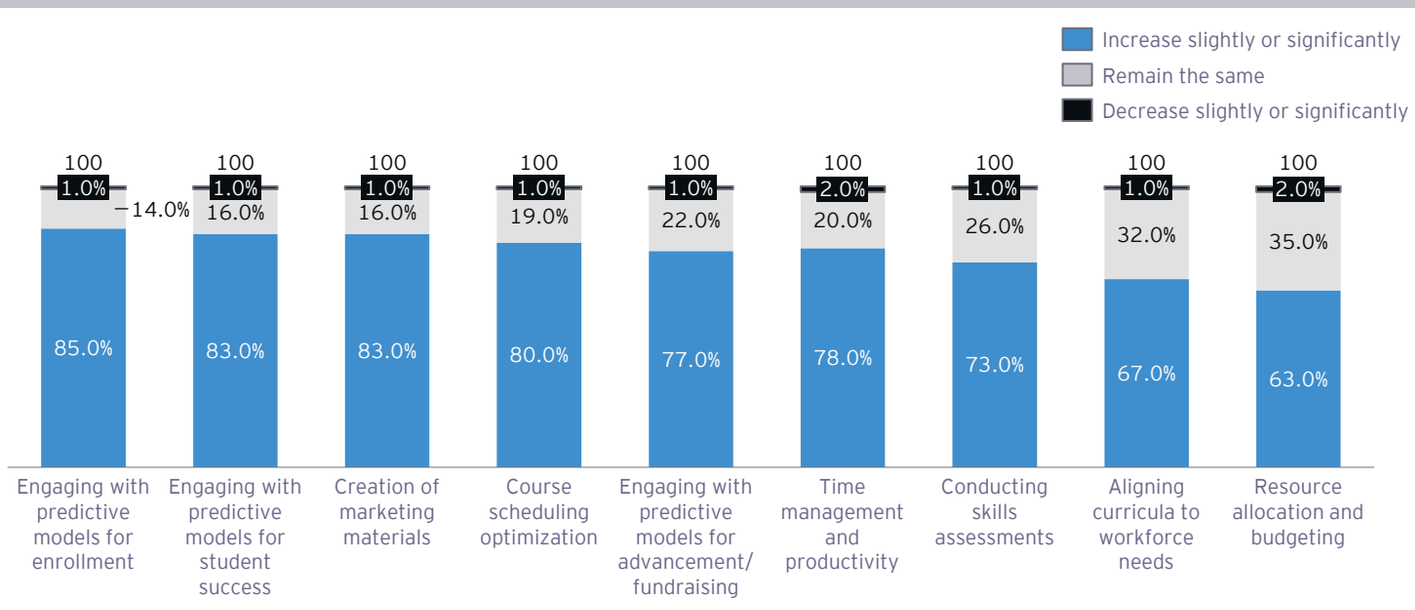
Q. What areas of campus operations are AI/digital tools deployed or being considered for?



Source: FICCI-EY-P AI Adoption in Higher Education Survey 2025

In Ellucian's survey of 445 administrators across HEIs in the US and Canada, survey results indicated that adoption across use cases is expected to increase within the next two years.

Over the next two years, how do you think the frequency of AI use will change for the following use cases?



Source: AI in Higher Education Report | Ellucian and EY-P analysis

AI is reshaping academic operations by enhancing efficiency across various tasks, including assignment grading, student advising and the scheduling of classes and examinations

Academic affairs office

Key functions of the academic affairs office include grading, transcript generation, course registration, academic advising and scheduling. Automated grading enhances efficiency and saves educators valuable time by streamlining assessment processes. AI-powered academic advising recommends personalized course paths based on student performance and interests. Smart scheduling systems optimize class and exam timetables by considering faculty availability and institutional constraints. Transcript and record automation ensures fast and secure exchange of academic records and transcripts.

AI use case	Details	Example	Representative tools
Automated grading	AI-assisted grading of quizzes, assignments and MCQs using natural language and image recognition	IIT-Bombay has successfully piloted an Automatic Short Answer Grading (ASAG) model using LLMs during an end-semester exam for its Learning Analytics course[11]	Gradescope, Eval.ai
AI academic advisors	Recommends courses based on student performance, engages with students to surface insights for advisors	Amity University leverages AI-driven chatbots to support students academically by providing tutoring resources and streamlining administrative tasks, enhancing the overall learning experience1[2]	Squirrel AI, EdSights
AI-powered scheduling	Optimizes class, exam and room schedules with faculty preferences and constraints	Northern Arizona University reduced the number of scheduling conflicts by 60% with Coursedog implementation[13]	Coursedog, Asimut
Transcript and record automation	Extracts, verifies and delivers academic transcripts digitally	Docufide enables secure and rapid exchange of transcripts among 9,000 schools and universities[14]	Docufide by Parchment, Digitary

Generative AI also presents a significant opportunity to enhance student support systems by delivering timely, actionable guidance in a unified platform. Currently, institutions rely on dozens of disparate advising tools—often requiring students to manually compile information from multiple sources just to answer critical questions like, "Given my revised financial aid package, should I adjust my course load to accommodate my new part-time job?"

AI-powered conversational assistants could streamline these processes by serving as a single point of contact for instant, personalized responses. Over time, these tools could even anticipate student needs—such as sending reminders about registration deadlines or offering step-by-step enrolment guidance.

As generative AI advances, its ability to handle complex "should I" questions will expand, enabling dynamic recommendations tailored to individual circumstances. For instance, it could suggest optimal course selections based on degree progress, past academic performance and instructor reviews—or advise on extracurricular involvement considering career goals and current workload. This real-time support not only boosts student engagement but also allows advisors to prioritize high-need cases.

While human oversight remains essential—particularly for high-stakes decisions like financial aid or academic planning—these tools hold immense promise for scaling proactive, comprehensive support and strengthening student success initiatives.

Source: 11 arxiv, 12 Intellectyx, 13 Coursedog, 14 Docufide and EY-P analysis

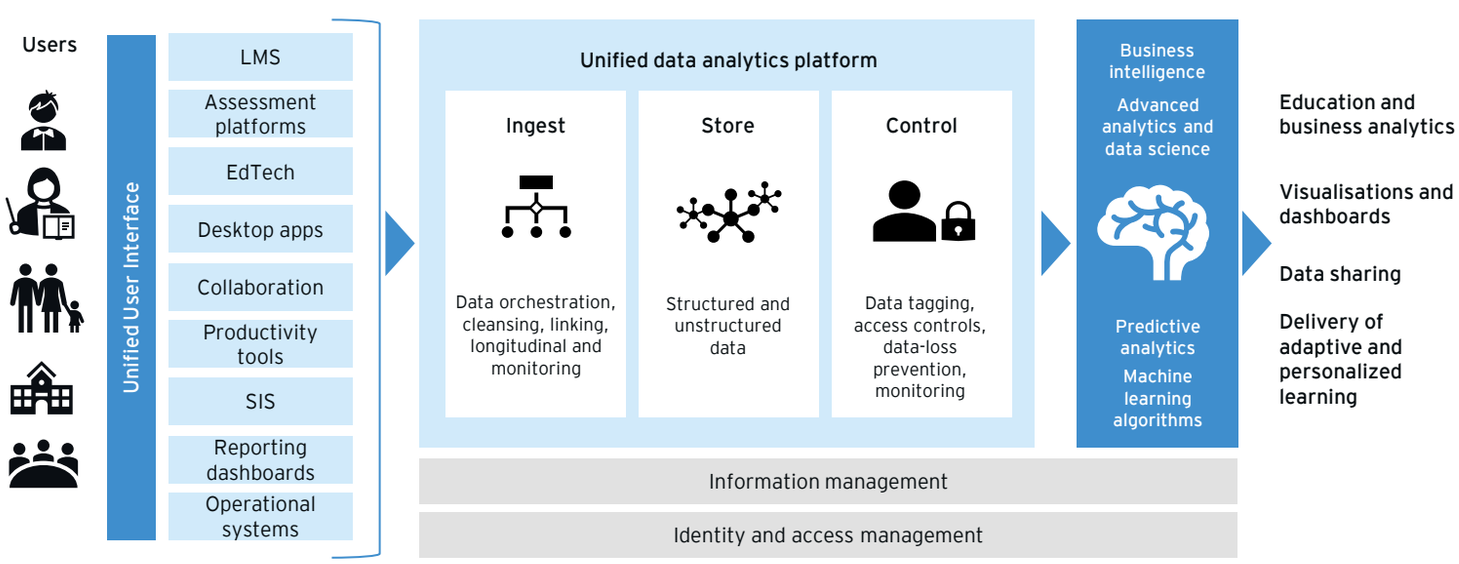
AI is revolutionizing IT service operations by automating help desk support, streamlining access management and optimizing database performance

IT shared services

IT shared services undertake functions such as IT help desk, system access, migrations, software testing and database management. AI-powered help desks efficiently resolve support tickets and software-related queries, enhancing user experience and reducing response time. Access management systems ensure secure and controlled access to digital resources, strengthening information security. Database optimization tools analyze query patterns and usage trends to recommend schema improvements, boosting performance and scalability.

AI use case	Details	Example	Representative tools
AI helpdesks	Resolves tier-1 IT support tickets, automates password resets and software queries	Warner University in Florida uses Moveworks to reduce helpdesk load[15]	Moveworks, Freshservice
Access management automation	AI tracks usage and flags anomalies; automates user provisioning	University of Leeds is using SailPoint technology to create a scalable and secure cloud-based identity and access management platform for stronger information security[16]	SailPoint, Okta
Database optimization	AI analyzes queries, usage patterns and recommends schema changes	Ithaca College and DePaul University are transitioning to cloud-based solutions to enhance operational efficiency and elevate student success[17]	Oracle Cloud, IBM Db2 AI

IT departments of HEIs could undertake the development of an AI-driven operational dashboard or a unified data platform that would synthesize institutional data from academic, financial and resource management systems. This intelligent platform would utilize machine learning to generate real-time analytics and predictive insights, enabling administrators to make evidence-based decisions. By identifying usage patterns, forecasting trends and flagging potential issues, the unified data platform can optimize resource allocation and enhance operational efficiency across campus functions. The system would transform raw data into actionable visualizations, serving as a strategic decision-support tool for institutional administration and leadership.



Note: User groups represented: Students, teachers, parents, learning leaders, business leaders; SIS refers to Student Information System

Source: 15 HG Insights, 16 Diginomica, 17 Oracle and EY-P analysis

AI is transforming procurement by automating vendor management and invoice processing, while facilities management can be optimized using predictive maintenance and smarter space utilization

Procurement

Key functions the procurement department of an institution typically undertakes include vendor selection, invoicing, supply chain monitoring and contract workflows. AI-powered vendor risk and compliance scoring enables faster, data-driven vendor selection. Invoice processing automation streamlines workflows, reducing cycle time and improving accuracy.

AI use case	Details	Example	Representative tools
Vendor risk and compliance scoring	Uses AI to assess vendor reputation, pricing and contract risk	Virginia Tech University is using TealBook to diversify its suppliers and enhance its vendor master[18]	TealBook, SAP Ariba
Invoice processing automation	AI extracts, verifies and codes invoice data from multiple formats	The University of Oxford provides its staff with Kofax to manage documents, streamline cycle times and reduce errors[19]	Kofax, Tipalti

Facilities management

The facilities management function covers a range of critical activities, including repairs, access control, space utilization and safety. Increasingly, these functions are being enhanced through AI and smart technologies. AI-enabled predictive maintenance detects potential system failures early, reducing downtime and optimizing asset performance. Smart access and key management systems strengthen campus security by enabling controlled and trackable entry. Space utilization analytics help identify usage patterns, enabling more efficient planning and allocation. In addition, issue-reporting bots automate maintenance requests, improving response times and overall operational efficiency.

AI use case	Details	Example	Representative tools
Predictive maintenance	AI analyzes IoT sensor data to predict breakdowns or failures	Kielce University of Technology has implemented the IBM Maximo application suite to optimize asset management, which resulted in a reduced system outage from 2 weeks to 4 days[20]	IBM Maximo, EcoEnergy Insights
Smart access and key management	Uses biometrics or facial recognition to control building access	Les Roches Marbella implemented HID Mobile Access to replace physical student ID cards with digital credentials on smartphones to enable them better access to university facilities[21]	HID Global, Trueface
Space utilization analytics	AI tracks usage patterns of rooms, labs, common areas	University of North Texas relies on FM:Systems for daily space planning and churn management enabling them better optimisation[22]	SpaceIQ, FM:Systems
Facilities issue reporting bots	AI-enabled platforms triage maintenance requests via chat or mobile apps	University of Arizona is using Dude Solutions for better enterprise asset management[23]	Dude Solutions

Source: 18 Procurement Magazine, 19 Oxford University, 20 Cohesive, 21 HID, 22 FM:Systems, 23 Enlyft and EY-P analysis

AI is streamlining payroll and accounts payable processes while also supporting admissions through query handling and enhancing marketing with personalized automation

Audit, finance and human resources

Key functions of the audit, finance and human resources departments include invoicing, payroll, performance reviews and budgeting. In payroll and taxation, AI enables automation that reduces manual effort, ensures compliance and minimizes errors. Automated budgeting and accounts payable systems powered by AI facilitate real-time budget analysis, leading to more accurate financial planning and reduced discrepancies.

AI use case	Details	Example	Representative tools
Payroll and tax automation	Automates calculations, deductions and filings using rules and ML	Daemen University, New York, implemented ADP Workforce Now, which helped in streamlining payroll processing, allowing the HR team to spend time on value-addition tasks[24]	ADP Workforce Now, Rippling
Automated budget forecasting	AI analyzes historical budgets and models future scenarios	Wake Forest University implemented the Workday Adaptive Planning tool, leading to better planning and ownership of the budget[25]	Workday Adaptive Planning, Oracle Cloud EPM
Improving accounts payable processes	Identifies anomalies and duplicate entries in expense reports	Georgetown University implemented AppZen AI solution leading to an upskilled accounts payable team saving 1,600 hours of manual work and a 76% reduction in cycle time[26]	AppZen, Oversight Systems

External affairs

External affairs department's functions include admissions, marketing, alumni relations and community outreach. AI-powered chatbots streamline the admissions process by efficiently handling student queries and providing instant support. Marketing automation leverages demographic data to curate and distribute personalized content, improving outreach and conversion. Alumni engagement is strengthened through AI-driven analytics that help institutions identify and connect with potential donors. Additionally, AI-based sentiment analysis enables real-time monitoring of public sentiment across social media platforms.

AI use case	Details	Example	Representative tools
AI chatbots for admissions	Handles queries, nudges applicants, tracks progress	Illinois State University uses Mainstay, AI-powered chatbot, for communication with new students to assist them with every day questions[27]	Mainstay (formerly AdmitHub), Drift for Education
Marketing automation	AI curates and distributes personalized content based on behavior and demographics	Newcastle University adopted HubSpot, resulting in a 250% increase in traffic and a 25-fold increase in landing page conversion rates[28]	HubSpot, Salesforce Marketing Cloud
Alumni engagement analytics	Predicts likelihood of Alumni giving donations and participating in events	Williams College uses EverTrue to reach out to donors in an efficient manner[29]	Gravyty, EverTrue
Community sentiment analysis	AI monitors social media and news to gauge public sentiment about the university	During its rebranding process, Bayes Business School utilized Talkwalker and Hootsuite to monitor sentiment across various social channels, enabling them to gain insights into stakeholder sentiment throughout the transition[30]	Brandwatch, Talkwalker

Source: 24 ADP, 25 Workday, 26 AppZen, 27 Illinois State University, 28 HubSpot, 29 Emma, 30 Hootsuite and EY-P analysis

HEIs are increasingly becoming hubs of transformative AI innovation, driving research that is reshaping the frontiers of technological advancement

3.2 Advancing AI through research and research through AI

Advancing AI through research is a multidimensional endeavor that merges technical breakthroughs with critical inquiry. While innovations in ML, NLP and robotics are pushing the boundaries of what AI can do, parallel research in ethics, the humanities and public policy ensures that these technologies develop responsibly and equitably.

AI is driving innovation through research in technological areas

HEIs have emerged as pivotal centers for pioneering advancements in AI, catalysing innovation across a wide spectrum of disciplines. From the development of cutting-edge ML algorithms to breakthroughs in neuromorphic computing, HEI-led research continues to shape the future of AI in technology. 26 out of 30 HEIs surveyed in the FICCI-EY-P AI Adoption Survey are engaged in AI-specific research, primarily focusing on applied and fundamental AI research. Below, we highlight some universities that have made significant contributions to research in AI and related technologies.

Use case	Description	Example
Explainable AI (XAI)	▪ Developing interpretable machine learning models whose logic and predictions are easily understood by humans is crucial in fields like healthcare and law ▪ Professionals such as doctors and lawyers are held accountable for their decisions and stakeholders like regulators and judges are more likely to adopt tools that offer transparency	Researchers from University of Toronto Engineering and LG AI Research have created an innovative XAI algorithm designed to detect and resolve defects in display screens, which could have potential applications in other fields[31]
Low-resource NLP	▪ Addressing language inequality by building models for underrepresented languages. ▪ These efforts aim to bridge digital divides and ensure linguistic communities are not excluded from the benefits of language technologies	International Institute of Information Technology Hyderabad's Language Technologies Research Centre (LTRC) is conducting research work for speech processing and NLP for Indian languages[32]
Edge AI and neuromorphic computing	▪ A rapidly advancing frontier where universities are laying the groundwork for AI to operate. ▪ Edge AI focuses on enabling AI algorithms to run directly on local devices, while neuromorphic computing draws inspiration from the human brain to design computing systems that are faster and capable of adaptive learning	Researchers at IIT-Bombay are developing spiking neural networks tailored for compact, low-power environments, paving the way for efficient neural processing directly on edge devices[33]
Embodied AI	▪ Embodied AI integrates digital intelligence with physical capabilities, allowing agents to sense, interpret and act within the real world using sensors and actuators ▪ Unlike conventional generative AI, which produces text-based outputs, embodied AI translates instructions into real-world actions, effectively turning language into movement and interaction	Fudan University in Shanghai has launched the Institute of Trustworthy Embodied AI, dedicated to advancing state-of-the-art research and fostering real-world applications of embodied AI across fields like computer vision, natural language processing, robotics and control systems[34]

Source: 31 University of Toronto, 32 IIIT-H, 33 Arm Limited, 34 Yicai Global and EY-P analysis

IISc stands out as a premier institution at the forefront of AI innovation in India, contributing to cutting-edge research; apart from technical disciplines, AI is accelerating research advancement across several non-technical disciplines as well

AI Robotics Technology Park (ARTPARK) @Indian Institute of Science (IISc)

The ARTPARK at IISc, Bengaluru, is a national innovation hub launched to accelerate AI and robotics research that can have a real-world impact. It is seed-funded by the Department of Science and Technology and the Karnataka government, with a mission to bridge academia, industry and government for societal transformation.

Below are some of the ARTPARK's key initiatives and outputs:

ARTgarage

- A 75,000 square feet facility for prototyping and testing autonomous systems, supporting startups and MSMEs in industrial, social and defense applications.[1]

Startup incubation

- Through programs like the ARTPARK Innovation Challenge, the park funds and mentors startups tackling high-impact problems in AI and robotics, among others, offering up to INR2 crore per team annually.

Assistive robotics

- Development of Asha, a robotic nurse developed with TCS and Hanson Robotics, aims to deliver remote healthcare using visual reality and multilingual interfaces.
- Ongoing research is focused on developing technologies that enable robots to express human-like emotions and communicate fluently in multiple Indian languages.

Source: ARTPARK, KERNEL and EY-P analysis

AI is fostering research across non-tech disciplines

AI is being adopted as a research tool across disciplines, enabling faster insights, automation of complex tasks and new modes of knowledge discovery. AI is increasingly becoming a catalyst for innovation in non-technical disciplines, enabling deeper inquiry and broader impact across fields like ethics and governance, humanities, climate change, life sciences and social sciences, among others.

In ethics and governance, it supports the development of policies and frameworks that promote responsible and transparent AI deployment. In climate science, AI enables advanced satellite data analysis and predictive modeling, offering deeper insights into how climate initiatives affect diverse stakeholders. In the social sciences, it facilitates sentiment analysis and behavioral modeling, enriching our understanding of societal dynamics. In the life sciences, AI accelerates drug discovery and genomic analysis, opening new frontiers in personalized medicine and biotechnology.

On the next page, we highlight key non-technology disciplines advancing through AI research alongside their AI applications and notable examples, illustrating the impactful ways AI is being integrated across fields.

AI is driving innovation across non-technical disciplines, opening new frontiers in ethics, environmental studies, life sciences and social sciences through data-driven insights

Discipline	AI applications	Example	Impact
Life sciences	AI-driven drug discovery, genomics analysis, protein folding	Harvard University used the AlphaFold-Multimer to predict how proteins involved in genome maintenance interact[35]	Paves the way for AI-driven large scale interpretable biological insights
Social sciences	Sentiment analysis, policy simulation, behavioral modeling	MIT Media Lab's Moral Machine project investigated public perspectives on the ethical dilemmas faced by machine intelligence such as self-driving cars[36]	Allows simulation of social behaviour at scale
Climate and environment	Satellite data analysis, predictive modeling	Under its Business and Climate Change Initiative, Columbia Business School has undertaken research and field experiments related to climate change[37]	Laid the foundation for understanding how climate change initiatives influence stakeholders
Digital humanities	Text mining, automated transcription, historic language modeling	Stanford created a project called ORBIS that uses AI and digital tools to map how people, goods and information moved around the Roman Empire[38]	Became a model for how AI and data visualization can transform historical research
Materials science	AI to model materials, optimize lab experiments	MIT plays a key role in advancing the goals of the Materials Genome Initiative, a US federal effort launched to accelerate the discovery, design and deployment of advanced materials at a fraction of the traditional time and cost[39]	MGI helped cut the time to develop new materials by reducing trial and error in labs
Education research	Intelligent tutors, learner modeling	Carnegie Mellon University developed the LearnSphere to accelerate research in learning science[40]	Easier to share, analyze, and collaborate on educational data
Healthcare	Agent-based AI frameworks are streamlining diagnostics, treatment planning and research workflows	Manipal Academy of Higher Education is leveraging AI to advance early disease diagnosis and enhance the analysis of patient records[41]	Early diagnosis empowers faster clinical decision-making, enabling timely access to appropriate treatment and improving patient outcomes
Ethics and governance	Shaping policies and frameworks for responsible AI deployment	University of Oxford's Institute for Ethics in AI is undertaking research on themes including AI and democracy, AI and human rights and AI and governance among others to investigate its ethical impacts from all perspectives[42]	As AI evolves, anchoring it in human values and democratic principles will be vital to ensure it drives responsible progress

Source: 35 Predictomes, 36 MIT Media Lab, 37 Columbia Business School, 38 Stanford, 39 MIT News, 40 CMU, 41 Pharmabiz, 42 University of Oxford, and EY-P analysis

Stanford University is a leading institution driving AI innovation for societal benefit and impact

Stanford University's Human-Centered Artificial Intelligence (HAI)

Launched in 2019, Stanford HAI is a prominent interdisciplinary hub dedicated to advancing AI that serves and uplifts human experience. It unites experts from academia, industry, government and civil society to steer the development and ethical deployment of AI technologies. Stanford HAI hosts several prominent centers and labs, each with a distinct focus:

Center for Research on Foundation Models (CRFM)

- This center pioneers the study and development of large-scale foundation models.
- It is best known for the Foundation Model Transparency Index, a benchmark that assesses the openness of major AI developers regarding their models.

Stanford Digital Economy Lab (DEL)

- DEL investigates how AI and digital technologies are transforming work, productivity and economic structures.
- It produces insights on digital economy, digital platforms and society, and the future of employment in an AI-driven economy.

Stanford Artificial Intelligence Lab (SAIL)

- Since its founding in 1963, SAIL has been a pioneering hub for AI research, education and innovation, shaping both the theoretical and practical foundations of the field.
- There are diverse research groups at SAIL that conduct research in all areas of AI, including natural language. processing and speech, robotics and computational cognitive and neuro-science, among others.

Source: Stanford HAI and EY-P analysis

Strategic industry–academia partnerships are emerging as a key driver of applied AI innovation in India

Industry-academia partnerships

India's leading HEIs are rapidly emerging as hubs for applied AI research, catalysed by a wave of strategic collaborations with industry and public sector partners. Recent initiatives reflect a strong emphasis on solving real-world problems through AI—from sustainability and green mobility to public health and generative AI.

Institutions like IIT Delhi, IIT Bombay, IIT Kanpur and IISER Bhopal have partnered with companies such as Wipro, R Systems, Horiba India, and a host of med-tech startups, as well as public bodies including Rotary India, the WHO and the Ministry of Environment. These collaborations are not just funding AI research but are also helping create commercialization pathways through product development, spin-off startups and deployment in critical sectors. The accompanying table showcases key examples launched since 2023, underscoring how AI innovation in India is increasingly being shaped through cross-sectoral partnerships rooted in academic excellence.

Initiative	Academic partner(s)	Industry / public partner(s)	Description
Applied AI in sustainable systems CoE	IIT Delhi	R Systems	MoU to establish a CoE on applied AI for sustainable systems—includes research lab, endowed chair and student scholarships. The initiative is part of R Systems' priority to promote AI and innovation.[43]
GenAI CoE	IIT Delhi (Yardi School of AI)	Wipro	GenAI CoE will serve as a hub for R&D, focussing on tackling real-world problems at large scale.[44]
Green mobility, smart fabrics and clean hydrogen projects	IIT Delhi	Horiba India	MoU to support three R&D projects under the company's CSR initiative:[45] ▪ Low-cost EV motors ▪ 3D-printed smart fabrics ▪ Green hydrogen production (H-SOEC)
BETIC–Biomedical AI devices	IIT Bombay	Maharashtra Govt, Med tech companies	BETIC is R&D network with 14 partner institutes spread across Maharashtra. It has developed and commercialized AI/ML enabled medical devices and has founded 15 startups to offer its products.[46]
AI for public good	IIT Kanpur	Rotary India, WHO Regional Office SE Asia, National Clean Air Programme (MoEFCC)	The IIT Kanpur Consulting Group has emerged as a leading research collective in India, dedicated to promoting social good since its inception in 2018. Some of their ML-based public health interventions include[47]: ▪ Polio-risk modeling ▪ COVID hospital-burden monitoring ▪ Delhi-NCR air-quality forecasting

While premier institutions such as IITs have successfully established strong industry partnerships, many mid-tier and low-tier institutions in India continue to lag behind. However, these institutions stand to gain significantly by actively pursuing collaborations with industry. Such partnerships can unlock vital support in the form of research grants, funding opportunities, internships and placement avenues for students and backing for incubators and accelerators. Moreover, they can contribute to enhancing the institution's reputation and academic relevance. In the following section, we explore in detail the various forms of support that industry partnerships can offer to educational institutions.

Source: 43 R Systems Press Release, 44 Business Standard, 45 ET Government, 46 BETiC Impact, 47 arXiv – IITK Consulting and EY-P analysis

With a strategic outreach approach, HEIs can unlock valuable benefits such as research funding, improved student outcomes, commercialization opportunities and enhanced institutional reputation

Funding opportunities	▪ Industry collaborations can channel resources into research projects, laboratories and innovation hubs, enabling cutting-edge academic advancements. ▪ Companies may provide financial support for campus facilities and specialized equipment to enhance institutional capabilities.
Student outcomes	▪ Corporate linkages create pathways for students to secure high-quality internships and competitive job placements. ▪ Collaborative research projects expose students to real-world challenges, enhancing practical skills and experience.
Innovation	▪ Partnerships with industry accelerate the translation of research into patents, products and entrepreneurial ventures. ▪ Companies may offer financial backing and networking opportunities to strengthen institutional incubators and accelerators.
Reputation	▪ Association with prominent corporate partners strengthens an institution's brand equity and public profile. ▪ A stronger brand image attracts further industry support in the form of funding, mentorship and collaboration.

The outreach process is a critical enabler of successful industry–academia research collaborations. It may be initiated by either the academic institution or the industry partner, depending on the specific context, objectives and the strength of existing networks. In some cases, outreach is facilitated through joint platforms or intermediary initiatives that connect both parties. Below, we outline the common approaches used to initiate and advance such engagements.

Funding opportunities	▪ Institutes reach out to companies with proposals for joint research, seeking funding or technical collaboration. ▪ Universities have dedicated offices that facilitate partnerships by identifying industry needs and matching them with academic expertise. ▪ Professors leverage professional networks to initiate collaboration talks.
Funding opportunities	▪ Companies approach institutes to access skilled graduates and interns to work on collaboration projects. ▪ Firms may seek academic partners to solve specific challenges or conduct exploratory research. ▪ Companies may collaborate with institutes as part of their CSR initiative or open innovation strategies.
Funding opportunities	▪ Hubs such as iHUB DivyaSampark at IIT Roorkee facilitate collaborative research between academia and industry. ▪ Industry bodies such as FICCI and NASSCOM also facilitate collaboration between institutes and companies.

Source: EY-P analysis

AI tools are delivering productivity gains across research workflows by accelerating information discovery, automating documentation and other manual processes

AI tools accelerating research administration and operations

Beyond discovery, AI is streamlining research support functions:

Function	AI application	Example tools
Literature review	AI-assisted paper discovery and summarization	Semantic Scholar, Elicit
Grant writing assistance	Drafts summaries, matches researchers to calls	Scite Assistant, GPT-based custom tools
Lab workflow automation	Robotic lab assistants, experiment design	Emerald Cloud Lab, Labforward
Research integrity	AI checks for plagiarism, fake data, image manipulation	iThenticate, ImageTwin
Data management	Automates metadata tagging, FAIR compliance	OpenAI Codex integrated in research workflows

Source: EY-P analysis

HEIs leveraging AI tools to accelerate research administration and operations

SciSummary

- SciSummary offers a suite of AI-powered tools that benefit HEIs engaged in research. Below are some ways it supports researchers, faculty and students in accelerating research operations.

Key areas of support

- Literature review: SciSummary helps students and researchers quickly summarize research papers by extracting key points, thereby expediting the literature review process.
- Identify areas for future research opportunities: SciSummary spots gaps and unresolved questions in a research paper and helps researchers identify areas where potential further research can be conducted.
- Chat feature: Enables users to engage in a conversational chat with the research paper through an AI-powered feature, simulating a dialogue with the author.
- Breaking down figures, charts and tables: SciSummary can simplify charts, graphs and tables by providing clear explanations in plain language. Additionally, it enables users to ask questions about any figure presented in the paper.

Adoption

- The tool is being used by researchers, students and faculty from some of the leading universities including Harvard University, Stanford University and Massachusetts Institute of Technology.
- SciSummary has summarized more than 1,500,000 papers from over 700,000 users since March 2023.

Source: SciSummary, SciSummary Blog and EY-P analysis

Ashoka University offers a model for research by combining liberal arts interdisciplinarity and applied research partnerships in a multi-center ecosystem

Ashoka University — building a holistic and ethical AI research ecosystem

Ashoka University, a liberal arts and sciences institution in Haryana, has emerged as a distinctive player in India's AI research landscape. Unlike traditional STEM-focused institutions, Ashoka integrates AI research with public policy, ethics and social impact. Its multi-center ecosystem reflects a deliberate effort to build AI capabilities that are interdisciplinary, responsible and application-oriented.

Initiative	Focus area	Highlights and contributions
AI@Ashoka	Core and interdisciplinary AI research	This initiative fosters AI research across disciplines including biology, psychology, environmental science and economics. It promotes fundamental AI research while encouraging critical reflection on its societal implications.
Mphasis AI & Applied Tech Lab	Applied research, public systems, health analytics, cybersecurity	Industry-backed lab established in 2020 (renewed in 2023). The lab brings together various academic disciplines to provide a comprehensive perspective on computational challenges, featuring students and researchers from diverse backgrounds. Key initiatives include: ▪ **BharatSim**: Large-scale agent-based simulation platform for modeling policy interventions. ▪ **CHART**: Health analytics platform addressing India's healthcare data gaps. ▪ **Cybersecurity**: Focus on post-quantum cryptography and federated privacy-preserving systems. ▪ **Digital Makerspace**: Rapid prototyping lab enabling AI-focused hardware and software innovation.
Centre for Digitalisation, AI and Society	AI ethics, governance and policy	Established in 2023, the centre studies societal implications of large-scale digital systems, focusing on themes like digital rights, privacy, bias and inclusion in the Indian context.
School of Advanced Computing (ASAC)	Institution-wide AI integration and capacity-building	Launched in 2025, ASAC supports interdisciplinary computational thinking. It houses multiple centres including: ▪ **Centre for Data Science and Analytics (CDSA)**: Consolidates institutional data assets for research. ▪ **SafeExpress Centre**: Applies AI in areas like climate risk, disease modeling and fraud detection. ▪ **Centre for Digitalisation, AI and Society**: Integrated within ASAC to align AI research with societal needs.

Source: AI@Ashoka, Mphasis Lab for AI & Applied Tech, Centre for Digitalisation, AI and Society, Centre for Data Science and Analytics (CDSA), Digital Makerspace and EY-P analysis

AI is emerging as a catalyst for entrepreneurship and innovation in higher education, helping universities transform bold ideas into real-world, high-impact ventures

3,3 AI as a catalyst for entrepreneurship and innovation

AI is rapidly emerging as a driving force for entrepreneurship and innovation within higher education, empowering students, researchers and faculty to transform bold ideas into impactful ventures. Universities are increasingly integrating AI into interdisciplinary curriculum, fostering creativity at the intersection of technology, business and social impact.

Beyond classrooms, many institutions are establishing AI-focused startup incubators and accelerator programs that nurture student-led companies and cutting-edge prototypes. Simultaneously, academic researchers are pushing the boundaries of what is possible, publishing breakthrough studies and developing AI tools with real-world applications. Together, these efforts position universities not only as knowledge centers but as launchpads for the next generation of AI-driven changemakers. Below we list some prominent examples of global and Indian universities/institutions that have made some valuable contributions in the AI-driven entrepreneurship landscape.

University/ Institution	Country	Incubator/ Initiative	Focus Areas	Notable output/ Startups
IIT-Madras	India	Incubation Cell, AI4Bharat	NLP for Indian languages, AI, ML, IoT	Uniphore Software Systems, Stellapps Technologies, Hyperverge
IIIT-Hyderabad	India	CIE-IIITH, IHub-Data	AI, data science, cybersecurity, NLP, speech, computer vision	DreamVu, NeuralSync AI, BlueSemi
IISc	India	ARTPARK	Robotics, AI, medtech, mobility	AlgoBotix, Ai Health Highway
Stanford University	US	StartX, HAI	AI, ML, robotics, computer vision, NLP	Kumo AI, Snorkel AI
MIT	US	The Engine	AI, ML, robotics	Biobot Analytics, ISEE AI
University of Toronto	Canada	Vector Institute Startups	AI, neural networks, ML, human-computer interaction	Cohere, Deep Genomics
UC Berkeley	US	SkyDeck	Data science, AI, robotics	LeadGenius, KiwiBot, Ambi Robotics
Tsinghua University	China	Institute for AI Industry Research	AI IoT, AI transportation, AI healthcare	Zhipu.AI, ChatGLM
University College London (UCL)	UK	BaseKX, UCLB	AI, data science, robotics, human-computer interaction	Synthesia
École Polytechnique	France	X-UP Incubator	Healthtech, AI, cybersecurity, Robotics and IoT	Archismart Solar, Tinental
Carnegie Mellon University	US	Project Olympus	AI, ML, robotics	Petuum, Duolingo

Source: EY-P analysis

Incubators provide startups with crucial support such as funding, mentorship, access to research facilities and networking opportunities

Incubators mobilize funds from diverse sources, including government grants, partnerships with innovation funds, internal capital and other institutional or philanthropic grants. Startups incubated at institutes' incubators receive comprehensive support, including funding, mentorship, access to research facilities and networking opportunities. We explore in detail how these startups are nurtured.

Funding

- Incubators provide early-stage startups with seed capital to help them develop their initial product or prototype, enabling them to move from idea to execution. The seed funding per startup in India can typically be in the range of INR2 lakh to INR 25 lakh.[48]
- To support growth, incubators offer non-dilutive grants and soft loans, helping startups expand their operations without immediate financial pressure.
- Beyond initial funding, incubators often assist startups in securing follow-on investments by connecting them with relevant funding providers.

Mentorship

- Mentors provide valuable insights and advice across various aspects of business operations, helping startups navigate challenges and make informed decisions.
- Through their professional connections, mentors open doors to potential investors and industry experts, accelerating the startup's growth and visibility.
- Mentors help founders sharpen critical entrepreneurial skills such as pitching ideas, effective communication and networking, essential for building a successful venture.

Research facilities

- Incubators offer startups access to essential facilities such as working spaces, meeting rooms and administrative support, creating a conducive environment for day-to-day business operations.
- Startups benefit from the incubator's research labs, technical equipment and other research resources, enabling them to prototype and test their products.

Holistic ecosystem and networking

- Incubators foster a collaborative environment where startups benefit from peer learning, shared experiences and access to knowledge, thereby encouraging innovation and growth.
- Through curated events like workshops, seminars and competitions, incubators connect startups with potential investors and strategic partners, helping them build meaningful relationships and expand their reach.

Source: 48 StartupFlora and EY-P analysis

AI is blurring the lines between traditional and virtual classrooms by integrating immersive learning technologies, creating richer and more engaging experiences for students

3.4 AI-Enhanced Immersive Learning

AI is redefining the landscape of higher education by enabling immersive learning experiences that are more adaptive, engaging and personalized than ever before. As institutions embrace these advancements, they are increasingly integrating Extended Reality (XR) technologies, interactive simulations and AI-powered virtual labs into their curriculum, thereby blurring the boundaries between physical and digital classrooms. XR is an overarching term that includes all technologies merging real and virtual environments, while Virtual Reality (VR) specifically refers to a technology that fully immerses users in a simulated environment. Below we list some of the disciplines where immersive learning technologies are being used.

Discipline	Technology used	Example
Science and engineering	▪ Virtual labs allow students to conduct experiments safely in the fields of physics, chemistry and biology ▪ VR allows students to get more engaging and interactive learning in engineering through simulations	▪ The University of Michigan has collaborated with a VR company to develop a VR platform for mechanical design students ▪ This initiative allows students to wear VR headsets and use specialized software to design components and engage with interactive simulation, resulting in significantly greater student engagement[49]
Medical and healthcare	▪ VR provides medical students a safe and controlled environment to practice performing procedures and gain valuable experience	▪ The University of Oxford Medical School has partnered with John Radcliffe Hospital to implement a VR training program that allows students to safely practice surgical procedures in a simulated, controlled environment, minimizing risk while maximizing hands-on learning[50]
Psychology and cognitive science	▪ XR is used to study human behavior in a controlled environment and immersive settings ▪ Virtual patients are used in psychiatric and geriatric care, helping students practice sensitive counseling scenarios	▪ The Human Extended Reality Interaction (HXRI) Laboratory at the University of Illinois Urbana-Champaign investigates how people perceive and engage with XR environments ▪ Its research focuses on spatial cognition, the sense of presence and how XR influences various cognitive functions[51]
Computer science and IT	▪ Simulated environment for ethical hacking and cybersecurity ▪ XR is used to prototype and test interactive applications to gain hands on learning experience	▪ Deakin University's cybersecurity programs provide access to specialized labs equipped with cutting-edge technology for simulated real-world scenarios for conducting exercises in isolated and secure networks[52]
Environmental science	▪ Simulations are used to model environmental systems and disaster scenarios ▪ Virtual field trips (VFT) and terrain modeling to enhance spatial understanding	▪ Stanford University's Doerr School of Sustainability has developed a suite of VFTs to support geology and environmental science education ▪ These trips augment in-person field experiences and provide better accessibility to students[53]
Architecture and design	▪ XR and VR technologies help students visualize and iteratively refine 3D models of buildings and structures	▪ Drexel University's Westphal College of Media Arts & Design has a dedicated 550 square feet lab where it has virtual and augmented reality tools for immersive learning and prototyping[54]

The implementation of immersive technologies like XR and VR remains financially demanding, making them more accessible to universities with robust funding mechanisms. On average, building a digital campus can cost upwards of US$50,000, while individual VR headsets range between US$299 and US$499[55]. As a result, institutions aiming to adopt these technologies must rely on a diverse mix of funding sources, including grants, corporate sponsorships and strategic investments, to support the necessary technological upgrades.

Source: 49 IXRLABS, 50 IXRLABS, 51 HXRI, 52 Deakin, 53 Stanford Doerr, 54 Drexel, 55 Axon Park and EY-P analysis

AI is optimizing campus operations, accelerating research, driving entrepreneurial ventures and enhancing learning through immersive experiences

Conclusion

AI is fundamentally transforming higher education, moving beyond theoretical promise into real-world impact. From smart scheduling and predictive maintenance to personalized student services, institutions are embracing intelligent campus operations that enhance efficiency, free up staff for mentorship, and deliver more responsive student experiences.

At the heart of this transformation is a wave of AI research that combines technical advances with ethical and humanistic inquiry. Breakthroughs in ML, robotics and NLP are accelerating discovery and innovation, while scholars in policy and the humanities guide its responsible evolution. AI is becoming a powerful research partner across disciplines, reshaping how knowledge is produced and applied.

Beyond academics, AI is fueling a culture of innovation, empowering student entrepreneurship and reshaping learning experiences. Universities are weaving AI into interdisciplinary curricula and creating startup incubators to turn ideas into impact. Immersive technologies like XR and AI-driven simulations are also revolutionizing pedagogy, making learning more engaging, hands-on, and seamlessly connected across physical and digital spaces.

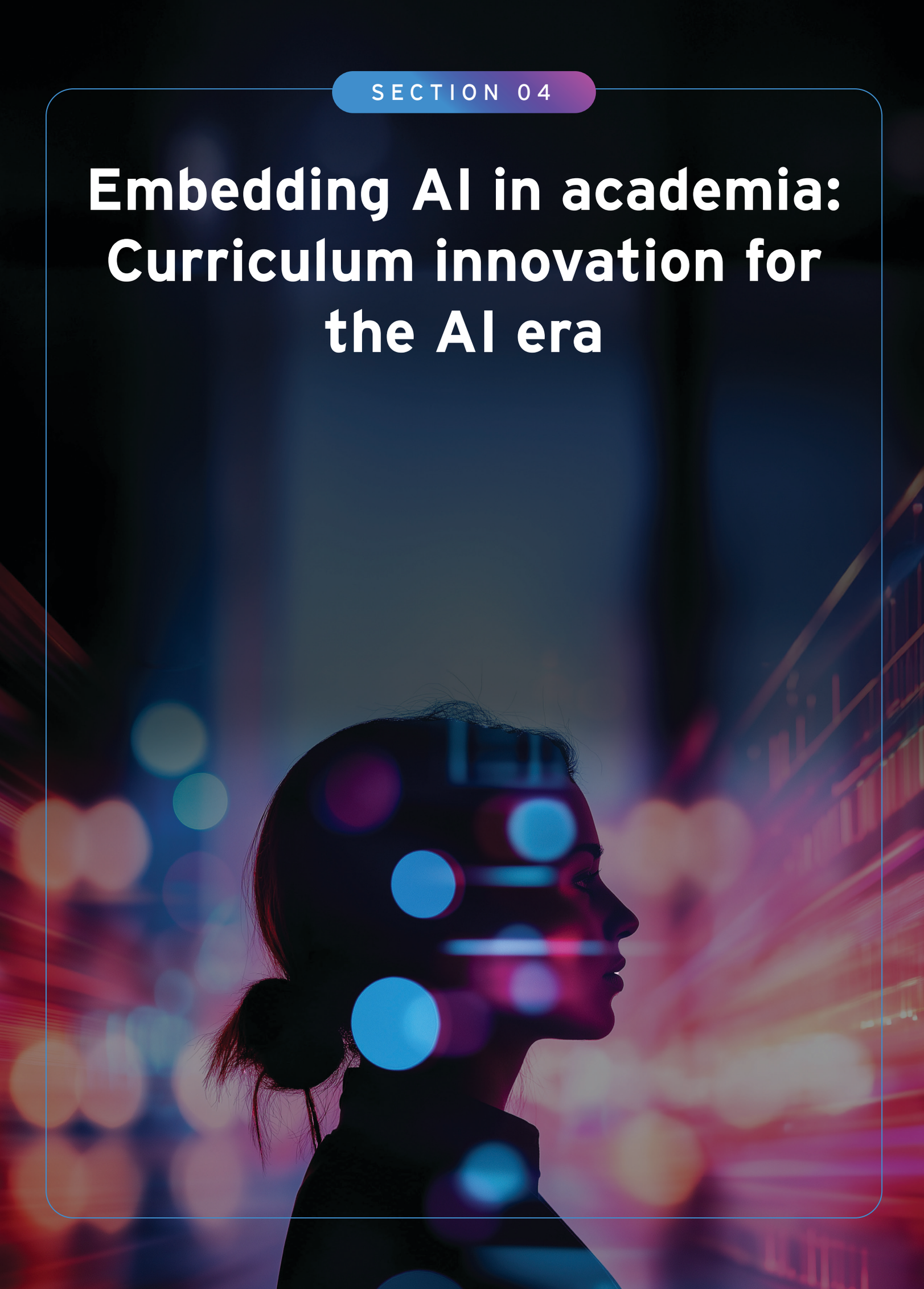
As AI transforms campus operations, fuels innovation, and reshapes learning through immersive technologies, integrating it into the academic curriculum becomes essential to prepare students for this evolving landscape. From specialized AI tracks in STEM fields to thoughtful integration in traditional disciplines like law and agriculture, higher education must ensure that AI becomes a foundational component across programs. The next chapter delves deeper into how institutions can strategically implement AI education to meet the demands of a rapidly changing world.

As HEIs move to integrate AI-driven tools, they must first realign their systems and upgrade existing infrastructure. Investing in intelligent systems can significantly enhance campus operations. To deepen AI adoption, HEIs should pursue research in areas such as XAI, low-resource NLP and edge computing, supported by dedicated research labs, funded internally or through external grants. To foster innovation and entrepreneurship, HEIs need to establish incubation centers and launch strategic research initiatives. Enhancing student learning will also require the integration of immersive technologies and corresponding infrastructure upgrades. These institutional imperatives are explored in detail in Chapter 9.



SECTION 04

Embedding AI in academia: Curriculum innovation for the AI era



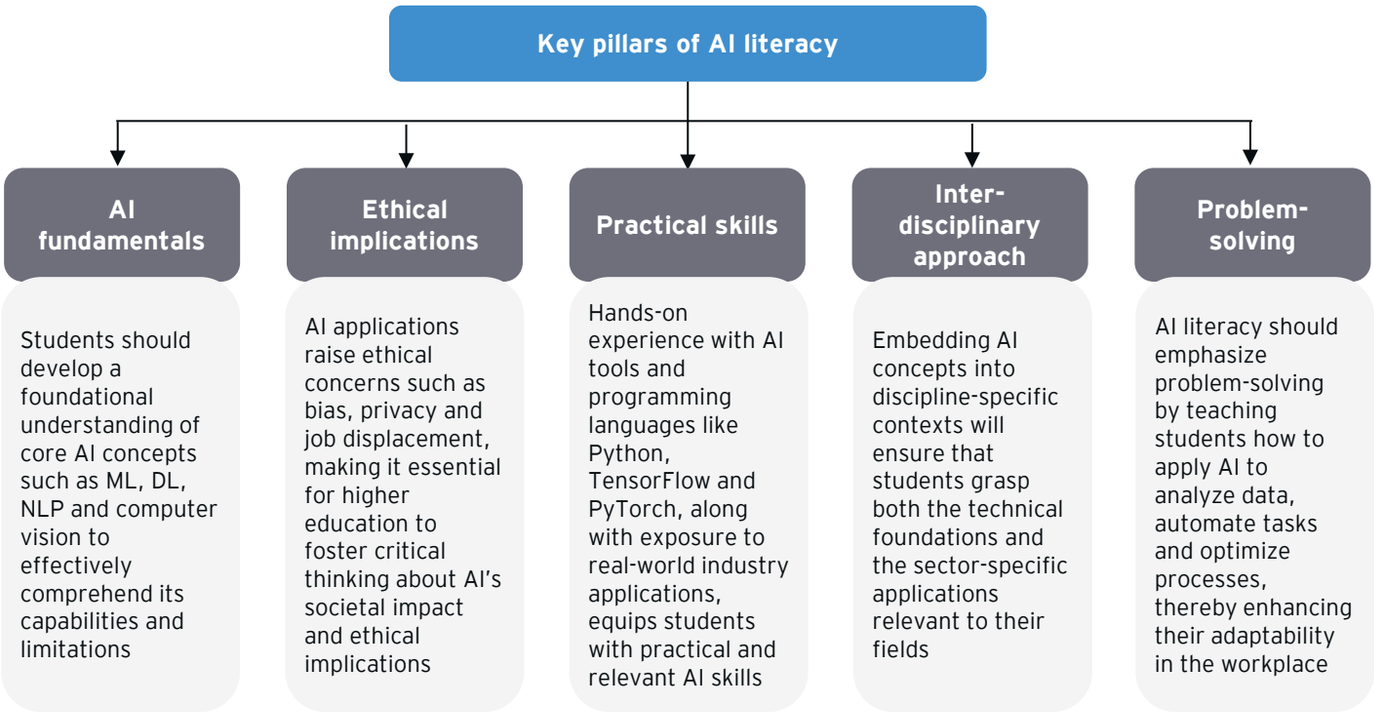
Embedding AI education into academic curricula is becoming essential, with foundational AI literacy serving as the ideal starting point for this integration

Embedding AI into academic curricula enables institutions to foster smarter decision-making, enhance student engagement and create adaptive educational experiences. AI is transforming the classroom into a dynamic environment through the use of intelligent tutoring systems and predictive analytics. More than a technological upgrade, AI integration represents a pedagogical shift, one that reimagines how knowledge is being delivered, measured and scaled.

Equally important is cultivating AI literacy through the curriculum, preparing students not just to use AI tools, but to understand their ethical implications, limitations and societal impact. As industries increasingly depend on AI-driven solutions, higher education must evolve to equip learners with foundational knowledge in AI, ML and data science. Embedding AI literacy empowers students to become informed citizens in a world shaped by intelligent systems. This is not about staying current, it is about future-proofing education in a landscape where understanding AI is fast becoming essential.

4.1 Building foundational AI literacy across disciplines

AI literacy is the ability to comprehend, apply and critically evaluate AI in a thoughtful and ethical manner. It blends foundational knowledge, practical skills and a responsible mindset, empowering individuals to engage with AI confidently and conscientiously.



Source: India Today and EY-P analysis

HEIs are recognizing the importance of AI literacy, with 23 out of 30 institutions in the FICCI-EY-P survey having integrated it into their curriculum in at least some disciplines and another six actively working toward its inclusion.

Queen Mary University has adapted the AI literacy framework developed by Hong Kong University to shape its own model, paving the way for adoption by other institutions

Implementing AI literacy model to build foundational AI literacy

Overview of the Hong Kong University's AI literacy framework

- The AI literacy framework was introduced by Davy Ng, Samuel Chu and Maggie Qiao from the University of Hong Kong, along with Jac Leung from the Hong Kong University of Science and Technology, through their exploratory review aimed at conceptualizing the emerging field of AI literacy. Their pedagogical model is structured around four core dimensions:
  - Know and understand AI: Students begin by building a strong foundation in GenAI, gaining a clear understanding of its core concepts, capabilities and limitations
  - Use and apply AI: Students develop hands-on skills by applying GenAI tools across diverse learning scenarios
  - Evaluate and create with AI: Students are encouraged to think critically and creatively, evaluate AI outputs, assess application quality and innovate using AI technologies
  - AI ethics: Students are guided to reflect on the ethical and responsible use of AI across all dimensions of their learning

Overview of Queen Mary University's AI literacy model implementation

The Queen Mary University of London has developed its AI in teaching and learning framework based on the above AI literacy framework, ensuring that students progressively build AI competencies throughout their academic journey. Their model includes three levels of progression, with levels of progression reflecting activities and goals depicted in the Bloom's taxonomy (a hierarchical model that classifies educational learning objectives into different levels of cognitive complexity)

- Foundational level: Understand fundamental concepts of AI
- Intermediate level: Apply AI concepts practically
- Advanced level: Develop advanced AI skills

The framework has been implemented in the University's BSc Business Management program, where AI is integrated into extracurricular and core-curricular activities:

- At the extracurricular level, students can enroll in a self-directed AI literacy program that explores areas of AI literacy such as literature search and academic writing. Upon successful completion, participants receive certificates recognizing their AI skills and knowledge.
- At the core-curricular level, the University integrates AI into at least one compulsory module in each of the program's three levels of education.
  - In the first year, AI is incorporated into the 'Challenges in Business and Management' module, where students build foundational AI skills by using GenAI tools for tasks such as taking notes, presentations and summarizing lectures.
  - In the second year, AI is incorporated into the 'Working with Business Data' module, where students advance their AI skills using tools such as Copilot, Power BI, Bricks and Julius for data analysis and interpretation.
  - In the third year, AI is embedded into Strategic Analysis and Practice module, where students co-create content with AI as part of class activities, additionally considering responsible use of AI for learning support.

Source: AACSB, Bloom's Taxonomy, ScienceDirect and EY-P analysis

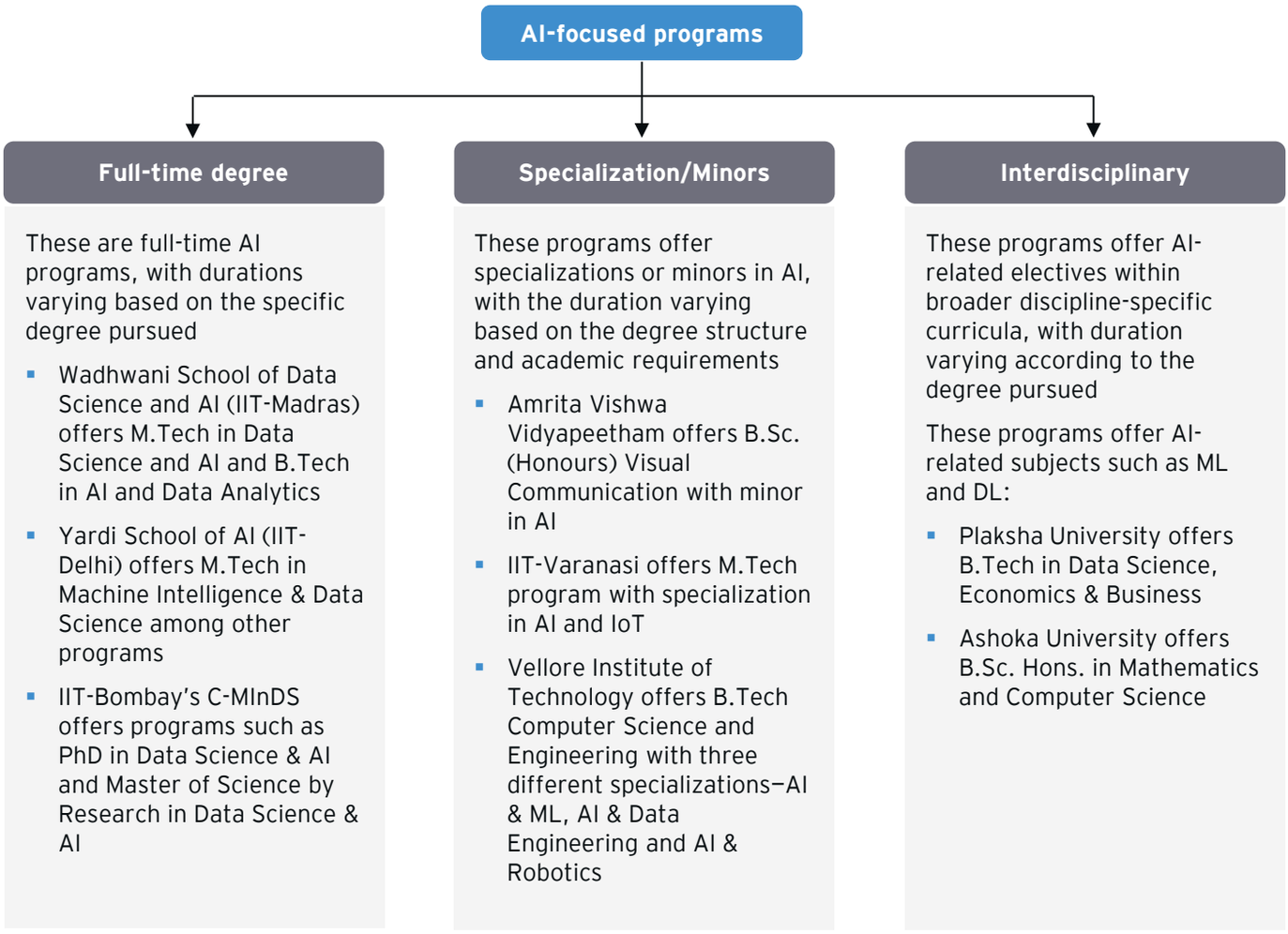
In response to the rising demand for STEM education, HEIs are increasingly introducing academic programs that specialize in AI and related disciplines

4.2 Advancing STEM curricula through AI-focused specialization

India is seeing increasing integration of AI across STEM disciplines, particularly in engineering education. Here, we examine how leading institutions are embedding AI into their STEM curricula to prepare students for the future of technology.

Several leading technology institutes in India have established dedicated departments to offer specialized AI courses within their engineering programs. Some prominent examples in this case are IIT-Madras (Wadhwani School of Data Science and AI) , IIT-Delhi (Yardi School of AI) and IIT-Bombay (Centre for Machine Intelligence and Data Science). While some institutes are offering AI-related courses through existing departments such as Department of Computer Science. A case in point being IIT-Varanasi, which offers AI-related program through its Department of Computer Science and Engineering.

HEIs in India are integrating AI in curricula through different types of programs such as full-time degree programs focused on AI, programs with specialization/minor in AI-related areas and interdisciplinary programs integrating AI. Each institution offers one or more of these programs based on their academic focus and teaching capacity.



In addition to offering formal programs, HEIs are incorporating AI content through diverse formats such as workshops, seminars, micro-credentials and industry-academic bootcamps.

Source: Institute websites and EY-P analysis

To facilitate the adoption of AI-driven STEM programs, HEIs must undertake a transformative overhaul of their existing tech infrastructure

The growing integration of AI into STEM disciplines is driving an urgent need for upgraded tech infrastructure in HEIs. Delivering AI-enabled programs requires powerful computing resources, high-speed connectivity, secure data systems, and interactive platforms that enable hands-on experimentation and real-time collaboration. Without these capabilities, institutions risk lagging in preparing students for a tech-driven future. The section below outlines the key infrastructure elements essential for embedding AI in STEM programs.

Computing resources

- High-performance computing infrastructure, specifically GPUs (graphics processing units) and TPUs (tensor processing units), are essential for deep learning and training of large-scale AI models.
- To effectively manage demanding AI workloads, educational institutions must prioritize access to these advanced computational resources.

Data management system

- AI models require access to large and complex datasets, making efficient storage infrastructure a cornerstone of any AI-driven academic environment.
- To manage this effectively, institutions should deploy a blend of local storage, network-attached storage (NAS) and cloud-based object storage.
- Moreover, integrating advanced data management systems is essential to ensure fast data retrieval, redundancy and strong security protocols.

Networks and connectivity

- Handling intensive AI workloads demands high-bandwidth, low-latency networking infrastructure that can support distributed computing environments.
- To accelerate model training, institutions must invest in high-performance interconnects that facilitate rapid and seamless communication between GPUs and storage systems.
- Embracing cloud-based AI platforms offers additional advantages by delivering scalable, resilient networking that ensures efficient data exchange between on-premises resources and cloud providers.

Virtual labs and smart classrooms

- To effectively support hands-on experimentation and deeper comprehension of scientific principles, institutions should invest in virtual labs and immersive learning platforms.
- These technologies offer safe, scalable environments for conducting experiments and visualizing complex STEM concepts, fostering exploration without physical constraints.
- Adopting smart classroom solutions significantly enhances the learning experience by integrating interactive technologies and personalized instruction.

Building faculty capability to deliver AI education

In addition to infrastructure upgrades, HEIs will need to recruit specialized faculty with expertise in AI, either from other academic institutions or leading industry organizations, to ensure that both curriculum design and classroom delivery reflect the latest developments in the field. Institutions can also consider appointing ***Professors of Practice***—experienced professionals from industry or research bodies—to deliver specialized modules where current faculty may lack the requisite skills. Such appointments can bridge critical knowledge gaps, bring real-world perspectives into the classroom, and ensure that students gain practical, application-oriented exposure alongside theoretical foundations.

Source: Guru Technologies and EY-P analysis

Industry and academia are collaborating to create co-developed courses that bridge the gap between traditional curricula and the demands of the real world

A growing trend in Indian higher education—especially among private universities—is the co-development of curricula with industry partners. This model is gaining traction as institutions seek to align academic offerings with evolving technological and market demands, ensuring graduates possess skills directly applicable in the workplace. By integrating industry-grade tools, sector-specific case studies, and applied project work into credit-bearing courses, these collaborations close critical skill gaps and accelerate job readiness. The approach not only enhances employability outcomes but also embeds real-time industry insights into academic delivery, positioning institutions at the forefront of producing a workforce equipped for rapid digital and sectoral transformation.

Woxsen University has partnered with IBM to co-develop academic programs

Woxsen University, located in Hyderabad, Telangana, is one of the state's pioneering private universities. Spread across a 200-acre, state-of-the-art campus, it offers future-focused, industry-aligned programs across business, technology, arts and design, architecture, law and liberal arts and humanities. Known for its innovation-led, research-oriented culture, Woxsen blends academic rigor with experiential learning through advanced facilities such as AI and robotics labs, analytics and behavioral labs, Bloomberg Finance terminals and Digital Design labs. Its Centres of Excellence and dedicated AI Research Centre foster interdisciplinary exploration in emerging fields like ML, computer vision and the Metaverse.

Background

In 2025, Woxsen University entered into a five-year Memorandum of Understanding (MoU) with IBM India, spanning its School of Business and School of Technology. The collaboration is designed to strengthen flagship programs such as the MBA (Business analytics) and BBA (Data science and AI), while also benefiting students across the broader technology portfolio.

Key features of the collaboration

- Enterprise-grade curriculum integration: Students gain hands-on experience with IBM's enterprise tools and platforms—covering AI, advanced analytics and blockchain—widely used by global corporations.
- Global certifications: The curriculum incorporates IBM-issued certifications, adding professional credibility and enhancing graduates' competitiveness in the job market.
- Co-delivery by industry experts: Selected modules are jointly delivered by IBM subject matter experts and Woxsen faculty, ensuring both academic depth and industry relevance.
- Career acceleration: Students have access to internships, mentorship and placement opportunities through IBM's global industry network.

Strategic impact

The partnership with IBM represents a fundamental shift in how Woxsen approaches higher education. By embedding enterprise-grade tools and globally recognized certifications into the core curriculum, the university ensures its students graduate on the same technological footing as professionals in Fortune 500 companies. The collaboration dissolves traditional boundaries between business and technology education - enabling a business analyst to work fluently with AI and a data scientist to navigate market strategy. This integrated approach produces graduates who are ready from day one, equipped with technological fluency, strategic acumen and the agility to lead in global, digitally driven markets.

Source: PRN NewsWire and EY-P analysis

Interview

IIT Mandi blends academic programs with industry problem statements, ensuring AI education is grounded in real-world applications

Context

Indian Institute of Technology (IIT) Mandi, established in 2009 in Himachal Pradesh, is one of India's newer IITs, which has rapidly built a reputation for innovation-driven teaching and research. The institute has taken a multi-layered approach to AI, embedding it across undergraduate, postgraduate and doctoral programs, while also expanding industry-linked electives, workshops and skilling initiatives. With dedicated centers focusing on AI applications in robotics, healthcare and climate resilience, IIT Mandi is positioning itself as a hub for AI research. We interviewed Professor Varun Dutt and colleagues to better understand the institute's AI programs, collaborations with industry and approaches to funding. Here are selected excerpts from the discussion:

Q. Could you tell us about the different types of AI-related programs currently offered at IIT Mandi?

- We have a range of programs that integrate AI at different levels. At the degree level, students can pursue a B.Tech in Data Science and Engineering, a B.Tech in Computer Science with a specialization in intelligent systems and Masters and Ph.D. programs with AI-focused tracks. In addition, we offer electives such as artificial intelligence, data mining for decision making, generative AI and natural language processing, etc. Many of these courses are designed with strong industry involvement.
- Beyond formal degrees, we offer certificate programs, online micro-credentials and workshops. For example, we partner with Masai School on a certificate program offering a minor in artificial intelligence and data science, while our Continuing Education Center organizes short-term skilling programs, summer schools and hackathons.

Q: How does IIT Mandi collaborate with industry, particularly in bringing real-world problem statements into classrooms?

- We follow both departmental and course-level models. At the departmental level, for example, our design practicum course involves the entire first-year B.Tech batch — about 550 students — working in teams over the semester on projects sourced from industry and other sources. The passing grade for this course is for students to showcase workable prototypes at the open house at the end of the semester, where industry experts also serve as judges.
- At the course level, faculty often invite industry speakers, assign live projects or problem statements. The model for industry outreach for integration in courses is decentralized: individual departments drive outreach to relevant industry players for their own courses, while dedicated units like International Relations or the Resource Generation and Alumni Engagement team handle larger partnerships and CSR projects.

Q: The survey noted that IIT Mandi has mobilized about INR45 crore for AI initiatives. How is this funding being utilized?

- The INR 45 crore represents funds competitively obtained from external sources and industry partners. This funding is used in four main ways:
  - Supporting research projects
  - Running certificate and skilling programs, training Masters and PhD students
  - Enabling collaborations, such as travel support for students and faculty to visit partner institutions
  - Building the entrepreneurial ecosystem through incubation and startup support
- What we may not receive are earmarked government funds for faculty training or for setting up new centers. We rely on external grants for these activities, and while that creates some constraints, we also find innovative ways to stretch resources. For example, adapting large AI models into smaller, campus-run versions for teaching.

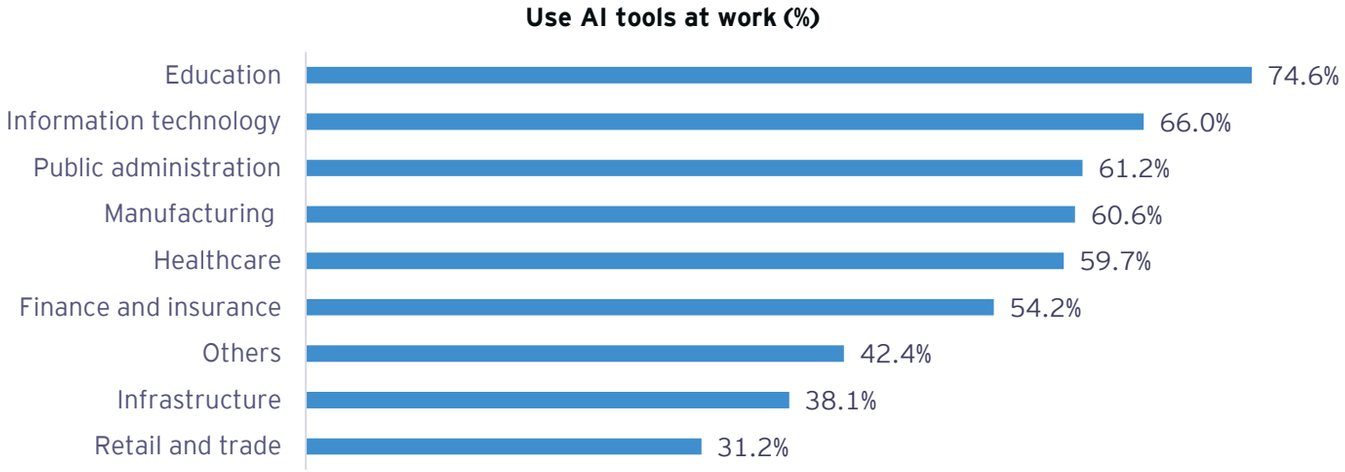
Integrating AI into non-STEM disciplines is essential to equip graduates with the skills needed to navigate and thrive in AI-driven workplaces

4.3 Discipline-specific AI integration: Preparing graduates for AI-augmented industries

As AI reshapes the learning landscape, integrating it across academic disciplines is becoming essential to prepare graduates for AI-augmented industries, especially as adoption accelerates across major sectors.

A recent survey by IIM-Ahmedabad of 550 white-collar professionals in India found that the Education sector leads in AI adoption, followed closely by Information Technology, while sectors such as Infrastructure and Retail show comparatively lower levels of integration.

Adoption of AI by industry



Source: Labour-force Perception about AI: A Study on Indian White-collar Workers

Integrating AI into non-STEM disciplines such as law, journalism, mass communication, healthcare, and business management is becoming increasingly vital. As industries evolve with AI-driven tools and processes, graduates from these fields must be equipped with relevant AI competencies.

Recognizing this need, many Indian HEIs have begun integrating AI into non-STEM curricula. On the next page, we explore a few notable examples of such courses that demonstrate how AI is being thoughtfully integrated into diverse academic disciplines.

Indian HEIs are integrating AI into non-STEM curricula across a wide range of disciplines, reflecting a growing recognition of AI's relevance beyond technical fields

Institute	Program name	Program details
Jindal Global Law School	B.A. in AI & Law	▪ The aim of the program is to help students distinguish between operating within an AI-driven environment, utilizing available AI tools and services and making claims on AI-generated outputs. ▪ Students gain the necessary knowledge and skills to analyse the societal implications of AI, assess its ethical and regulatory frameworks, develop policy interventions, and contribute to the certification of AI technologies.[56]
IIT Mandi	MBA in Data Science and Artificial Intelligence	▪ The four-semester program blends contemporary management concepts, soft skills, and in-depth exposure to data science tools and artificial intelligence concepts with a strong emphasis on developing problem-solving skills.[57]
Bennett University	Post Graduate Diploma AI in Healthcare	▪ Launching in September 2025, Bennett University and Max Healthcare will jointly offer a distinctive, industry-aligned Post Graduate Diploma designed to fuse academic rigor with clinical exposure. ▪ This one-year hybrid program is structured to provide an immersive blend of theoretical learning and hands-on practice, empowering students with the skills needed to effectively apply AI technologies in real-world healthcare environments.[58]
UPES School of Law	BA/BBA Disruptive Technologies Law	▪ The Disruptive Technologies Law (Hons.) program at UPES School of Law is a legal specialization program that explores the regulatory dimensions of emerging technologies. ▪ The curriculum equips students with a deep theoretical foundation in the legal framework governing disruptive innovations in cyberspace. ▪ It spans critical themes such as cyber criminology, jurisprudence of cyber law, offenses involving disruptive technologies, and the evolving legal landscape that regulates them.[59]
Chitkara University	BA in Journalism and Mass Communication with AI	▪ The three-year program is designed to cultivate media professionals at the intersection of content creation and technology. ▪ By integrating core journalism principles with tools such as AI, ML and immersive media, students develop expertise in both editorial excellence and digital innovation. ▪ The curriculum prepares graduates for dynamic roles in digital media, advertising and public relations to meet the demand for professionals who can blend editorial judgment with innovative techniques.[60]

Source: 56 Jindal Global Law School, 57 IIT Mandi, 58 Bennett University, 59 UPES School of Law, 60 Chitkara University and EY-P analysis

The concept of AI Clinics can serve as a powerful enabler for preparing students to meet the evolving demands of today's AI-driven workplaces

As the corporate world rapidly embraces AI, a noticeable skill gap has emerged between traditional campus learning and the AI-centric demands of modern workplaces. In response, universities are adopting innovative models such as AI Clinics—specialized training hubs that equip students with practical AI implementation skills. These clinics bridge the divide between academic knowledge and real-world application, preparing graduates to integrate seamlessly into AI-enabled workplaces. We explore an example of an AI Clinic below:

Implementation of the AI Clinics concept at Aivancity

Aivancity is a pioneering HEI based in Cachan, France, that blends technology, business and ethics into its academic model. The AI Clinic at Aivancity is modeled after law clinics, where students provide pro bono legal services. Here, students engage in pro bono AI projects for small businesses, nonprofits and civic organizations that lack the resources to invest in AI solutions.

How it works?

- Projects are submitted by small and medium enterprises, associations and non-profit organizations, post which each project undergoes an initial assessment to determine its maturity level.
- Based on this assessment, dedicated teams are formed to work on the selected projects. These teams operate under the guidance of faculty members and in collaboration with company representatives.
- The projects and its evaluation are linked with the academic curriculum and serve as a key component of experiential learning.
- Typically, each project spans a duration of three to six months.

Benefits to students

- Students typically dedicate six to nine hours per week to solving real-world data science and AI problems.
- Students get hands-on experience with real datasets and business challenges, thereby bridging the gap between campus learning and AI-driven modern workplaces.

Broader impact

Democratizes access to AI by supporting organizations that lack the resources to afford commercial solutions.

Source: aivancity, Higher Education Review and EY-P analysis

Interview

University of Birmingham is integrating AI in its course portfolio through various novel program structures

The University of Birmingham (UoB), established in 1900, is a prestigious public research university in the UK and a founding member of the Russell Group, known for excellence across diverse disciplines including engineering, social sciences, humanities and health sciences. It offers AI-integrated programs in computer science and public policy at both undergraduate and postgraduate levels. We interviewed Professor Mark Lee, a leading AI expert at the university, to understand the university's stance on AI usage and the redesign of programs and curricula for the AI age. Here are relevant excerpts from the conversation:

Q. When did UoB first think about AI and how did you approach integrating AI into academic and research activities over time? Was there a broader strategy that was developed, or was this something that happened organically as the technology gained prominence?



Professor Mark Lee, School of Computer Science, University of Birmingham

- Like many universities, we started off around 2022, with a concern about plagiarism and authentic assessment and maintaining academic standards. But very quickly I think we realized that actually AI is both a risk to education but also an opportunity. People are using AI in the workplace. We have to equip our students to use AI, and in particular since students are going to be using AI whether we say so or not. We need to equip them with skills to conduct proper academic research, evaluate sources, question content generated by technologies like ChatGPT, and use it effectively—not to replace learning, but to enhance it.
- In terms of adoption, we are looking at it from three different levels – there is a distinction between the kind of cutting-edge research in AI we do, in say computer science, versus developing our teaching, which we do through our CoE called Higher Education Futures Institute, versus actually just making AI tools available for staff through IT services.

Q. Apart from your AI-integrated undergraduate and postgraduate programs in computer science and public policy, are there any other AI-related programs for students?

- We are about to launch "A Year in AI", where a student from any discipline, say, a humanities student or a math student or a geographer, can come to the computer science department and do a one-year focus study on AI. The credits from this degree will be counted toward the student's core discipline and the eventual degree, so they will get a degree title called "BSc Geography with a Year in AI."
- Additionally, we are introducing the "Ad Alta" program for all first-year students on campus. This is essentially a foundational program for enhanced, extra-curricular, broad-based education about various topics. Part of it is personal development, life skills, but there is also coverage of AI.
- In terms of standalone programs, we are offering a PhD in AI at our Dubai campus.

University of Birmingham's Campuses



Birmingham



Dubai

AI-integrated programs:

- BSc in AI and Computer Science
- MSc in AI and ML
- BSc in AI and Public Policy
- MSc in AI and Sustainable Development

Micro-credentials are becoming increasingly valuable, with GenAI certifications gaining popularity among both students and employers

4.4 Micro-credentials and lifelong learning: Scaling AI upskilling

Micro-credentials are focused certifications that validate specific skills, knowledge or competence. Unlike traditional degrees, they focus on a particular area of expertise, are typically delivered online and can be completed in a relatively short time. Designed primarily for professional development and upskilling, micro-credentials are often stackable, allowing individuals to combine them toward broader qualifications. These programs are frequently developed in collaboration with industry partners to align with the current job market demands.

Micro-credentials are rapidly gaining popularity among both students and employers globally. According to a Coursera report, 85% of students who have earned a micro-credential believe it enhances their job prospects, while 91% feel it equips them for success in the workplace. Moreover, student engagement and interest significantly increase when campuses offer credit-bearing micro-credentials through recognized academic partners. In fact, 88% of students report they would be more likely to enroll in a degree program that includes such micro-credentials. From the employer's perspective, 96% agree that micro-credentials strengthen a candidate's application, and 87% have hired at least one micro-credential holder in the past year.[61]

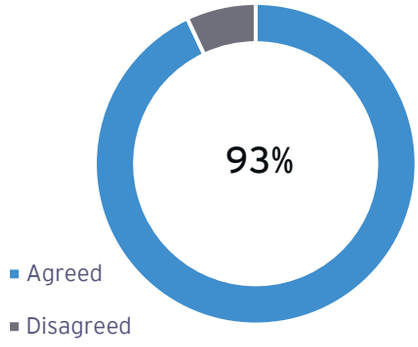
GenAI is rapidly emerging as the most sought-after skill for career readiness globally, with 86% of students prioritizing it over other in-demand competencies such as data strategy and software development. Notably, 17% of students have already earned a micro-credential in GenAI, and 87% of them report enhanced academic capabilities as a result. There is also strong student consensus that GenAI training should be integrated into formal degree programs.[61]

India, one of the world's fastest-growing economies with over 40 million university students, is showing strong momentum in adopting micro-credentials. Students increasingly view micro-credentials as a strategic tool to enhance employability, signaling a shift toward flexible and skill-based learning pathways. [61] Recognizing the growing demand, Indian HEIs have begun offering online courses through EdTech platforms or their own portals - 19 out of 30 HEIs surveyed by FICCI and EY-P have already done so, while seven more are actively working towards it.

Employers increasingly recognize micro-credentials as a valuable asset in hiring decisions, with a notably high preference for candidates holding GenAI certifications. An overwhelming 98% of Indian employers believe that micro-credentials strengthen a candidate's application, and 97% are willing to offer higher starting salaries to those who possess them.[61] This signals a growing alignment between industry expectations and skill-based learning pathways.

Student perception on integrating GenAI skills training into degree programs

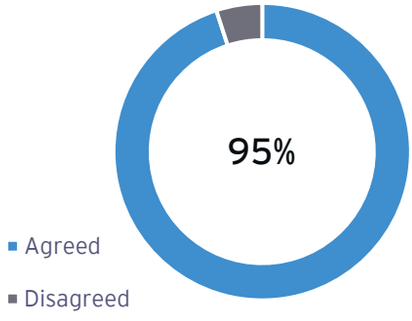
Should GenAI skills training be part of degree curricula?



Source: Coursera Micro-Credentials Impact Report 2025

Employer sentiment on hiring candidates with GenAI micro-credentials in India

Are employers likely to hire candidates with GenAI micro-credentials?



Source: Coursera Micro-Credentials Impact Report 2025

Source: 61 Coursera Micro-Credentials Impact Report 2025 and EY-P analysis

India is increasingly integrating micro-credentials into mainstream education, driven by the NEP's vision to embed skill-based learning within degree programs

In recent years, Indian education policymakers have recognized the transformative potential of short-term programs in preparing students for the workforce. The NEP 2020 advocates integrating vocational and skill-based courses into mainstream degree programs. In alignment with this vision, the UGC now permits up to 50% of a traditional degree and up to 70% in skill-focused universities to comprise credit-bearing micro-credentials.[62]

The recently introduced National Credit Framework (NCrF) strengthens this shift by unifying the National Skills Qualifications Framework (NSQF) and National Higher Education Qualifications Framework (NHEQF), enabling academic, vocational and skill-based learning to be credited in a standardized manner. With SOPs from regulators, universities can now collaborate with EdTech platforms, NCVET-recognized bodies and industry leaders to embed certified micro-credentials into formal degree programs.[62]

This shift has unlocked new collaboration opportunities. Global platforms like Coursera, Udemy and Udacity now partner with Indian universities to offer thousands of short courses co-developed with technology companies such as Microsoft and IBM. Simultaneously, government-backed initiatives like SWAYAM and NPTEL enable students to earn UGC and AICTE recognized credits for online learning. With the launch of SWAYAM Plus, HEIs can seamlessly embed these modules into their curriculum, fostering flexible and outcome-driven education pathways.[62]

Examples: Indian HEIs offering micro-credentials

Vishwakarma University, Maharashtra

At Vishwakarma University, students from all disciplines can earn four academic credits by completing select professional certificates such as IBM Full Stack Software Developer.

Chandigarh University, Punjab

Chandigarh University's Advanced Credit Program offers free certification courses across various fields. By earning credits, students demonstrate subject proficiency, allowing them to skip equivalent coursework or advance directly to higher-level classes. This accelerates their academic journey and can reduce the overall time required to complete a degree.

Online Manipal, Karnataka

Online Manipal, in partnership with Coursera, offers industry-recognized micro-credentials tailored for today's learners. These programs focus on high-demand skills like data analytics, project management and cybersecurity, among others, providing practical and job-ready knowledge. With globally recognized credentials, students can confidently showcase their expertise and enhance their career prospects.

As Indian HEIs integrate micro-credentials into core programs, partnerships with EdTech platforms are set to grow. This collaborative model benefits both students and industry - learners acquire in-demand skills faster, while employers access a talent pool certified in specific competencies. Over time, this can boost India's global competitiveness by cultivating a workforce that's practically equipped for a tech-driven environment.

Note: NCVET (National Council for Vocational Education and Training), SWAYAM (Study Webs of Active-learning for Young Aspiring Minds, NPTEL (National Programme on Technology Enhanced Learning)

Source: 62 Economic Times and EY-P analysis

HEIs must first build foundational AI literacy, then integrate AI into curricula and eventually advance to upskilling students for real-world AI applications

Conclusion

As AI continues to reshape industries, cultivating AI literacy across curricula has become a strategic imperative for HEIs. AI literacy goes beyond tool usage; it encompasses the ability to comprehend, apply, and evaluate AI technologies in an ethical and responsible manner. The key pillars of AI literacy include understanding AI fundamentals, exploring ethical considerations, developing practical skills, embracing an interdisciplinary perspective and honing problem-solving abilities.

HEIs are also increasingly embedding AI into STEM disciplines to prepare students for a future-ready workforce by offering a diverse range of programs including full-time degrees, minors and interdisciplinary degrees. However, this integration demands a transformative overhaul of existing infrastructure, which often lacks the capacity to support advanced AI-driven programs. To bridge the gap between academic instruction and industry needs, HEIs must foster strong industry-academia partnerships. These collaborations enable the infusion of current tools and market-aligned skills into the curriculum, ensuring relevance and employability.

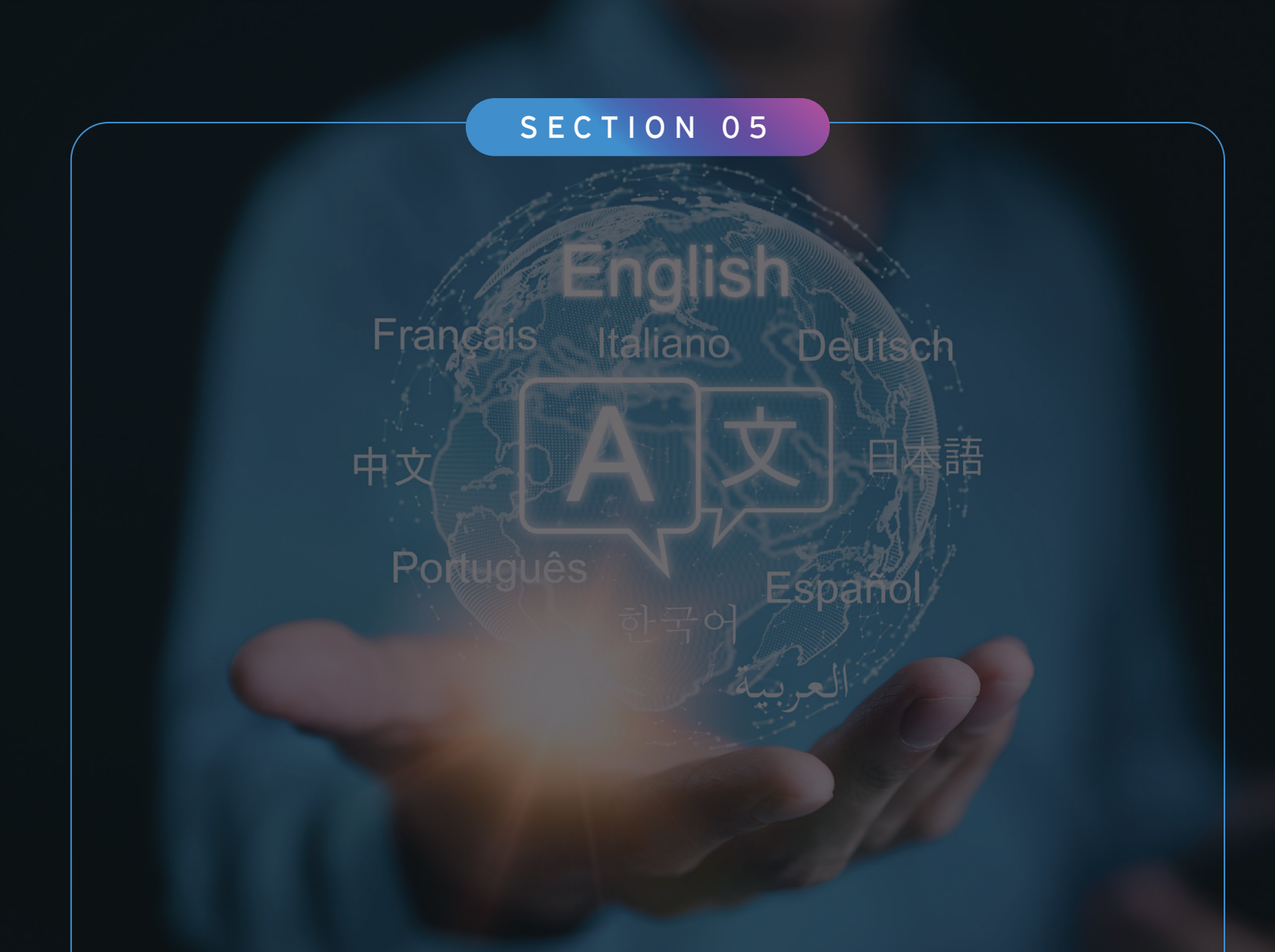
As AI becomes integral across industries, incorporating it into non-STEM disciplines is essential to equip graduates with the skills needed to thrive in AI-driven workplaces. Recognizing this, many HEIs are embedding AI into a broad spectrum of non-STEM curricula, underscoring the growing acknowledgment of AI's relevance beyond traditional technical domains. HEIs are proactively introducing AI specializations in non-STEM fields such as law, healthcare and journalism, among others. Initiatives like AI Clinics serve as experiential learning hubs, preparing students to meet the demands of AI-driven workplaces through hands-on exposure and interdisciplinary collaboration.

Micro-credentials are gaining traction as valuable assets for both students and employers. GenAI certifications, in particular, are becoming popular, enhancing employability and practical readiness. In India, the NEP is driving the integration of skill-based micro-credentials into mainstream degree programs. As HEIs partner with EdTech platforms, these credentials will play a pivotal role in boosting India's global competitiveness.

To foster foundational AI literacy, Indian HEIs can design their own AI literacy frameworks based on the key pillars outlined. Integrating AI into STEM curricula requires significant infrastructure upgrades to support advanced learning. Simultaneously, embedding AI in non-STEM disciplines will prepare students for a tech-driven future. Incorporating credit-bearing micro-credentials into core programs can further enhance employability.

AI's transformative potential extends beyond borders. It enables transnational education by breaking physical and geographic barriers. AI can support HEIs in localizing their curricula, making educational content more relevant to the cultural, economic and societal context of the host country. AI-powered immersive environments replicate international experiences for students unable to travel, while multilingual admissions bots and global career-matching tools further enhance accessibility and reach. We explore these themes in detail in the next chapter.

SECTION 05



Bridging borders: AI as an enabler of transnational education

AI is reshaping transnational education by removing geographical and language barriers, giving students seamless access to global classrooms

Transnational education (TNE) is defined as "the delivery of an educational award in a country other than that in which the awarding body is based". TNE may be broadly categorized into three models, distinguished by the depth of collaboration, level of integration between institutions and scale of operations:

1. Light-Touch TNE:
   These are low-intensity partnerships that do not require extensive credit mapping or deep curricular integration. They typically involve short-term mobility or exchange opportunities, visiting faculty arrangements, joint workshops, summer schools or non-credit-bearing study abroad components. Examples include semester-abroad programs, faculty-led study tours or cultural immersion initiatives. The focus is on exposure and relationship-building rather than awarding joint qualifications.
2. Mid-Scale TNE:
   These partnerships involve a higher degree of academic and operational alignment, often requiring some level of credit recognition and joint governance. Typical activities include joint research and innovation centers, dual-degree or joint-degree programs and structured twinning arrangements (e.g., 2+2 or 3+1 models). Students may earn qualifications from both institutions, and faculty collaborate on curriculum design, quality assurance and assessment. For example, an Indian university might partner with a UK institution to offer a dual MSc program in Data Science.
3. Large-Scale TNE:
   The most integrated form of TNE, these involve the establishment of a fully operational overseas branch campus or a joint university in the host country. Such campuses replicate (or closely align with) the home institution's academic portfolio, governance structure and quality standards, while adapting to local regulations. They typically offer a wide range of undergraduate and postgraduate programs, supported by on-site faculty and infrastructure. Examples include branch campuses set up by Australian universities in India's GIFT City or US universities in the Middle East.

AI is redefining TNE by breaking physical and geographical barriers in higher education delivery. Institutions can harness AI to identify global demand hotspots, assess feasibility and forge sustainable international collaborations. AI-powered immersive environments offer students unable to travel a near-authentic international experience, while multilingual admissions bots and global career-matching platforms are transforming student support systems. Together, these innovations position AI as a strategic enabler of inclusive, borderless learning.

5.1 AI-driven access to global classrooms

AI-driven access to global classrooms enables students worldwide to engage with international education through intelligent platforms that personalize learning, translate languages in real time and facilitate seamless collaboration. It breaks down geographical and linguistic barriers, making global learning inclusive, flexible and accessible.

Leading EdTech platforms have significantly expanded their offerings in collaboration with international universities, providing a wide array of programs across disciplines and formats. A case in point being Eruditus, which exemplifies global academic collaboration, partnering with over 80 global universities to offer a diverse array of programs in areas such as AI, ML, data science and leadership. These programs are delivered through flexible formats, including fully online, live-online and blended learning experiences.

Source: EY-P analysis

AI tools can enhance real-time collaboration, overcome language barriers and improve student learning outcomes, enabling large-scale access to global classrooms

These collaboration programs are cheaper than an on-campus program. A case in point being upGrad, where the fee for online MBA courses which it runs in collaboration with the US universities is between US$4,500 to US$8,000. The same master's degree when pursued on campus in the US would cost around US$40,000.[63]

Delivery of these programs can be significantly enhanced through the integration of AI tools. Real-time language translation can enable students from diverse backgrounds to engage seamlessly with course materials and peers. With 24/7 academic support via AI-powered chatbots, institutions can assist learners anytime, across time zones. Additionally, intelligent tutoring systems can offer targeted guidance, while predictive analytics can help identify at-risk students early, enabling timely interventions to improve learning outcomes. Together, these capabilities make global education more scalable, accessible and effective, bridging gaps in geography, language and learning styles.

Access to quality content

- AI empowers HEIs to design and disseminate high-quality instructional materials that are culturally inclusive and cost-effective.
- Through AI-driven technologies, students in underserved or remote areas gain access to rich learning resources, fostering greater engagement and educational equity.

Language translation

- Language barriers can significantly hinder students' ability to fully engage in their academic environment, particularly for international students, whose first language may differ from the medium of instruction.
- AI-powered translation tools can help bridge this gap by offering real-time multilingual support, making education more accessible and inclusive for learners across the globe.

Real-time collaboration and 24/7 learning support

- By leveraging tools that enhance communication and knowledge sharing, AI fosters real-time collaboration across borders between faculty and students.
- AI-powered systems can empower HEIs to offer students real-time academic support - from answering queries and resolving doubts to facilitating problem-solving practice.
- By providing 24/7 learning assistance, these systems enable HEIs to better address the diverse needs of individual learners.

Predictive analytics and outcome evaluation

- AI empowers HEIs to identify areas with the greatest educational needs and strategically allocate resources.
- By using predictive analytics, AI systems can detect learning gaps and recommend targeted interventions to enhance academic outcomes.
- AI can be leveraged to assess the effectiveness of initiatives aimed at improving student performance, offering valuable insights into their impact on learner success.

Source: 63 YourStory and EY-P analysis

To enhance relevance and accessibility, HEIs must prioritize localizing their curricula through AI integration by contextualizing learning materials and aligning them with regional academic and cultural requirements

5.2 Localizing international curricula using AI

When establishing an overseas campus, institutions must localize their global curricula to align with the educational regulations, socio-economic environment and cultural realities of the host country. This includes integrating locally relevant case studies and examples that resonate more with students than international ones. Additionally, curricula should be tailored to meet the expectations of the local labor market, ensuring graduates are well-prepared for regional employment opportunities. Below, we explore how AI can help HEIs in this context.

AI-powered contextualization of curricula and learning materials	▪ NLP tools can help analyze curriculum content and suggest localized additions or replacements aligned with the host country's context. ▪ GenAI platforms like ChatGPT and Claude can assist faculty in adapting course materials with culturally relevant themes. ▪ AI-powered translation tools such as DeepL, enhanced with AI-driven post-editing, can provide accurate translations of technical content—including legal, medical and policy terms—while preserving cultural nuances.
Localized case study generation	▪ AI tools can help generate real-world case studies by synthesizing content from local news sources and academic databases. ▪ They can also adapt existing case studies by incorporating region-specific data, cultural context and industry-relevant challenges to enhance local relevance.
Curriculum alignment with the local industry needs	▪ AI can analyse local job trends, labour market data and skill demand reports to identify emerging industry needs. ▪ Based on these insights, it can help recommend new modules, electives and courses that align more closely with the local hiring requirements.

Arden University's AI-enabled multilingual curriculum as a driver for global expansion

Arden University is a private UK-based institution that received degree-awarding powers from the UK government in 2015. With multiple campuses across the UK and a presence in Germany, the university offers flexible learning through fully online and blended delivery modes. Arden provides undergraduate and postgraduate programs across a wide range of disciplines, catering to both domestic and international students.

Overview of Arden University's strategy

- Private equity firm Brightstar Capital Partners has acquired a 50% stake in Arden University, marking a significant investment aimed at transforming the university's educational delivery model.
- Arden plans to leverage the capital infusion to implement an AI-powered tutoring system and translate its entire curriculum into over 150 languages, thereby lowering barriers for international students.
- This initiative is part of Arden's broader strategy to expand its footprint across the Middle East, Latin America and select European markets, including Spain.
- By offering UK student visa sponsorship for both in-person and remote-learning campuses, the university is positioning itself as a globally accessible institution, fostering enrollment growth and diversification of its student mix.
- Arden's global expansion and integration of AI in curriculum delivery serve as a strategic model for other HEIs aiming to modernize and scale their offerings internationally.

Source: EdTech Innovation Hub, Abode2 and EY-P analysis

Emerging technologies such as virtual exchange and XR-powered immersive learning are gradually transforming global education, making it more accessible, inclusive and engaging for students

5,3 Virtual exchange and XR-powered immersive global learning

Virtual exchange (VE) is a form of online international education that connects students and educators across borders through technology-enabled collaborative learning. Unlike traditional study abroad programs, VE allows participants to engage in cross-cultural dialogue, joint projects and shared coursework without the need for physical travel. This model broadens access to global education by removing financial, geographic and logistical barriers, making international learning experiences more inclusive.

Shanghai Jiao Tong University's Virtual Exchange Program

- Shanghai Jiao Tong University's (SJTU) Virtual Exchange Program, offered under the Jiao Tong Global Virtual Classroom (GVC) initiative, provides international students from partner universities with access to high-quality virtual courses. These courses are delivered either synchronously or asynchronously.
- Designed to foster global academic collaboration, the program enables students worldwide to engage with SJTU's faculty and curriculum without the need for physical relocation.
- Below, we outline the key features that make this initiative a valuable opportunity for global learners.

Academic features

- Courses offered through the program span both undergraduate and postgraduate levels, covering a wide range of disciplines including science, engineering, agriculture, medicine, humanities and social sciences.
- All courses are taught in English, ensuring accessibility for a global student audience.
- Upon completion, academic transcripts are issued directly to students' home institutions, facilitating credit transfer and academic recognition.

Eligibility

- To be eligible for recommendation in the program, applicants must meet the below requirements:
  - Must be enrolled at a partner university during the semester
  - English proficiency required (IELTS 6.0, TOEFL 90, or equivalent)
  - Must meet home university's virtual exchange criteria

Cost

- The program is offered free of cost to students from partner universities, effectively removing financial barriers and ensuring equitable access to global learning opportunities.

XR-powered immersive learning refers to the use of extended reality technologies to create highly interactive and engaging educational experiences. In the global education context, XR dramatically improves access by enabling students from different regions to participate in shared virtual classrooms, laboratories and cultural experiences without the need for physical travel. When combined with AI, XR platforms can provide enhanced learning experiences and adapt content to diverse linguistic and cognitive needs, thereby making education more inclusive and engaging across borders.

Virtual campus tours are a powerful tool for HEIs to attract prospective students by offering an immersive and informative glimpse into campus life

Example: University of Michigan's XR studio for global immersive learning

- The University of Michigan's XR studio at the Center for Academic Innovation is a pioneering initiative that redefines global education through immersive technology.
- Designed for both on-campus and global learners, this state-of-the-art studio uses XR, including virtual, augmented and mixed reality, to create cinematic learning environments where instructors can teach from simulated locations.
- Inspired by virtual production techniques from shows such as The Mandalorian, the studio employs large LED screens and cameras to render 3D environments to provide learners with interactive settings.
- Faculty collaborate with media producers and learning experience designers to align immersive content with learning objectives, making education more engaging and accessible worldwide.

Source: University of Michigan and EY-P analysis

HEIs have also started offering AI-powered virtual campus tours to help prospective students explore facilities, departments, and student life from anywhere in the world. These tours often include interactive maps and views of classrooms and libraries, making it easier for students to visualize their future environment. Virtual tours also provide insights into campus resources, helping students make informed decisions with no need to travel. This approach enhances accessibility and supports students in feeling more connected and prepared before arriving on campus.

Example: HEIs partnering with Appily to create virtual campus tours

- Appily is a comprehensive college planning platform under EAB, launched in September 2023, as a rebranding of Cappex.
- It integrates tools from various knowledge partners to assist students in their pursuit of higher education.
- Appily offers AI-powered virtual tours that provide immersive and interactive experiences, allowing prospective students to explore campuses remotely, thereby enhancing engagement and interest in institutions.
- HEIs can customize these virtual tours to highlight specific departments and facilities, aligning with their branding and recruitment objectives.
- Appily provides analytics on user interactions, enabling HEIs to gain insights into prospective students' interests and refine their outreach strategies.
- The platform boasts a robust network of over 4,000 partner universities and colleges, including some prominent institutions such as Harvard University, Yale University and University of Chicago.

Source: EAB, Appily and EY-P analysis

While virtual exchange and immersive learning hold significant promise for expanding access to global education, HEIs must remain mindful of the challenges that accompany their adoption. Language diversity and accurate translation remain persistent barriers, with AI-powered tools often struggling to interpret varied accents and dialects. Data privacy concerns add another layer of complexity, and many AI-based applications risk presenting a narrow cultural perspective that limits exposure to diverse worldviews. Institutions will need to approach implementation with care, ensuring these risks are mitigated to realize the full potential of AI in education.

AI has the potential to revolutionize the international student experience by offering tailored support at every stage

5.4 International student lifecycle: Admissions, retention and career support

While AI has advanced personalized digital education, its use in the international student lifecycle remains underexplored. This presents a key opportunity to enhance student engagement through AI at each stage of their journey, from pre-arrival to re-entry in their home country. At the 35th Annual European Association for International Education Conference in Toulouse, a world-cafe session highlighted insights on AI's role in transforming international student services.[64]

Pre-arrival

- The pre-arrival phase is vital and AI can simplify it by personalizing guidance, streamlining communication and offering interactive tools to support a smooth transition.
- AI-powered chatbots and tools can automate responses to common student queries by analyzing frequently asked questions. This not only delivers personalized information instantly but also saves valuable time for both students and administrative teams.
- AI can help match students with universities or programs aligned with their skills and goals, helping them make informed choices and boosting their chances of academic success.
- Simplifying information is key in the pre-arrival phase, where students often face complex requirements like visas and academic prerequisites. AI can analyze individual needs and present relevant content, making essential information more accessible to students.

Arrival

- The arrival stage can be challenging for international students and AI tools can offer real-time support to help them navigate their new environment and settle in smoothly.
- AI chatbots can offer 24/7 support by instantly answering common questions about campus life and local logistics, easing the stress of arriving in a new country.
- AI-generated campus maps and visual tools, enhanced with geolocation features, can make exploring a new environment easier and more engaging for students.
- To address the need for better integration, AI-driven buddy systems or local guide apps can connect international students with local peers, fostering community and offering personalized support.

Stay abroad

- The study abroad experience can be both exciting and demanding and AI tools can support students by helping them manage academic and personal challenges.
- AI can monitor student performance by analyzing grades and engagement to identify those at risk of academic failure. It can also send timely reminders and suggest personalized study adjustments to keep students on track.
- AI can help analyze students' digital interactions to detect early signs of stress, anxiety, or other mental health concerns, enabling timely support and intervention.

Pre-departure

- As students approach the end of their studies abroad, the transition phase can feel overwhelming with administrative tasks and personal planning. AI can ease this burden by automating routine processes, allowing students to focus on personal growth and future goals.
- Automating tasks like checkout surveys, pending payments and contract closures through AI can streamline the often-complex process of wrapping up administrative responsibilities before departure.
- AI can help students turn international experiences into career-ready skills by guiding self-assessment and showcasing personal and academic growth in ways that appeal to employers.
- AI can streamline pre-departure planning by organizing events, scheduling meetings and sending reminders, ensuring students leave with clarity and a strong sense of connection.

Source: 64 European Association for International Education and EY-P analysis

LeverageEdu and ApplyBoard are leading the way in providing personalized support to students throughout their international academic journeys

Returning to home country

- The often-overlooked returning phase is key for students readjusting to life in their home country. AI can support this transition by helping them translate international experiences into career and personal growth.
- Alumni platforms can strengthen connections among returning students through targeted networks based on shared experiences, helping them maintain global ties and advance professionally.
- AI tools can offer personalized career guidance by matching international experience with suitable roles and industries, while also helping students craft strong CVs and cover letters.
- By analyzing student data, AI can measure the impact of international programs, helping institutions improve offerings while making students feel heard. This data also enhances testimonials, creates learning opportunities and provides actionable feedback.

Examples: AI-powered platforms supporting the international student lifecycle

LeverageEdu

- LeverageEdu's AI-powered course finder simplifies the search for ideal study abroad programs.
- By inputting key details like career goals, academic background and budget, students receive AI-powered personalized course and university recommendations.
- This tailored approach streamlines decision-making, making international education planning more efficient and aligned with individual aspirations.

ApplyBoard

- ApplyBoard has introduced Abbie, an AI advisor aiming to transform the study abroad experience for students. Its key features include personalized guidance, end-to-end support across the entire study abroad journey, 24/7 accessibility for assistance and multilingual support capabilities.
- In addition to Abbie, ApplyBoard offers an AI-powered SOP letter generator that helps students craft personalized statements highlighting their qualifications. This tool significantly reduces the time spent on writing and editing, making the application process more efficient.
- ApplyBoard also offers an AI-powered interview practice tool specifically for UK and US applicants. It allows students to rehearse realistic interview questions and provides detailed feedback reports to help them identify and improve key areas.

Source: LeverageEdu, EdTechReview, ApplyBoard, ApplyBoard product features 2025 and EY-P analysis

AI-powered tools can transform students' transnational education journey by providing end-to-end support, from pre-arrival preparation to post-return reintegration. As more platforms adopt these technologies, global education can become increasingly personalized and accessible for students worldwide.

AI is reshaping transnational education (TNE) by removing geographical barriers, enabling curriculum localization, supporting virtual exchange, powering immersive learning and enhancing the student lifecycle

Conclusion

AI is reshaping TNE by removing physical and geographical barriers, making global higher education more accessible. AI-powered access to global classrooms is transforming international education by personalizing learning, enabling real-time translation and supporting seamless collaboration. Leading EdTech platforms, in partnership with global universities, now offer diverse, cost-effective programs across disciplines and formats. The integration of AI tools further enhances the delivery and accessibility of these transnational offerings.

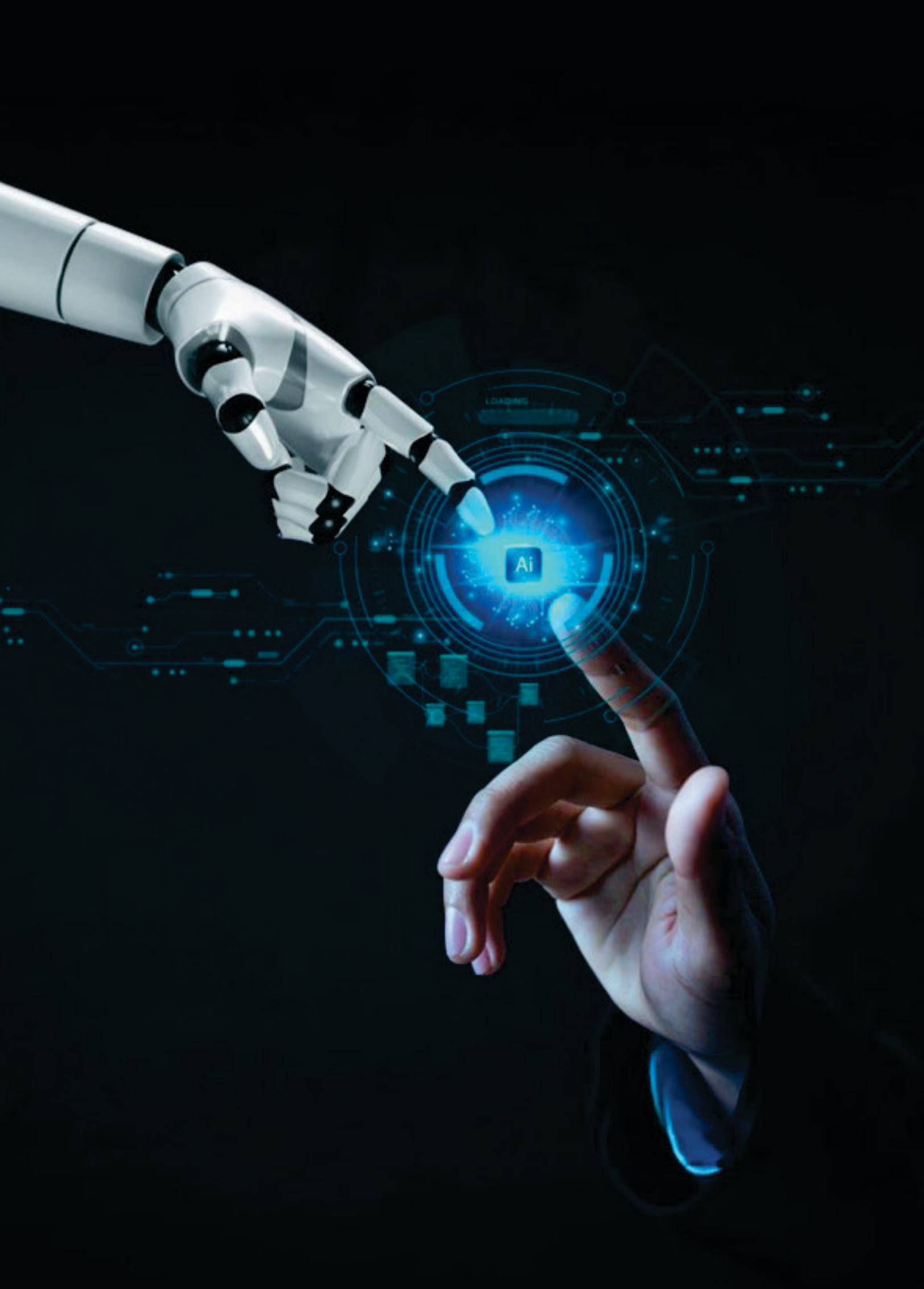
In addition to online programs, when setting up overseas campuses, institutions must adapt their global curricula to local socio-economic contexts and cultural norms. This includes using regionally relevant case studies and aligning programs with local labor market needs to ensure graduates are job-ready.

Virtual exchange connects students and educators globally through online collaborative learning, enabling cross-cultural engagement without physical travel. By removing financial and logistical barriers, virtual exchange makes international education more inclusive and accessible. HEIs are increasingly offering AI-powered virtual campus tours, allowing prospective students to explore facilities, departments and student life from anywhere. These tours feature interactive maps and immersive views of classrooms and libraries, helping students visualize their future environment with ease. While virtual exchange and immersive learning expand access to global education, institutions must address challenges like language barriers, data privacy and cultural bias to fully harness AI's potential.

While AI has advanced personalized digital learning, its role in supporting international students across the transnational lifecycle remains underutilized, presenting a key opportunity to enhance student experiences and institutional efficiency through intelligent engagement during each stage.

To enhance transnational education, HEIs must integrate AI to improve content access, enable real-time translation and support personalized learning. Localizing global curricula with region-specific examples, implementing VE and XR-powered environments, and partnering with AI-driven platforms for student support are some key strategies can be adopted by HEIs. We explore them in detail in Chapter 9.

As AI adoption grows in higher education, establishing ethical guardrails is essential, both in classrooms and outside academic settings. Addressing bias, ensuring transparency and safeguarding data privacy in AI tools require robust technical solutions and clear governance. We explore these themes in detail in Chapter 6.


LOADING
Ai

SECTION 06

Ethical adoption: The role of policy and governance

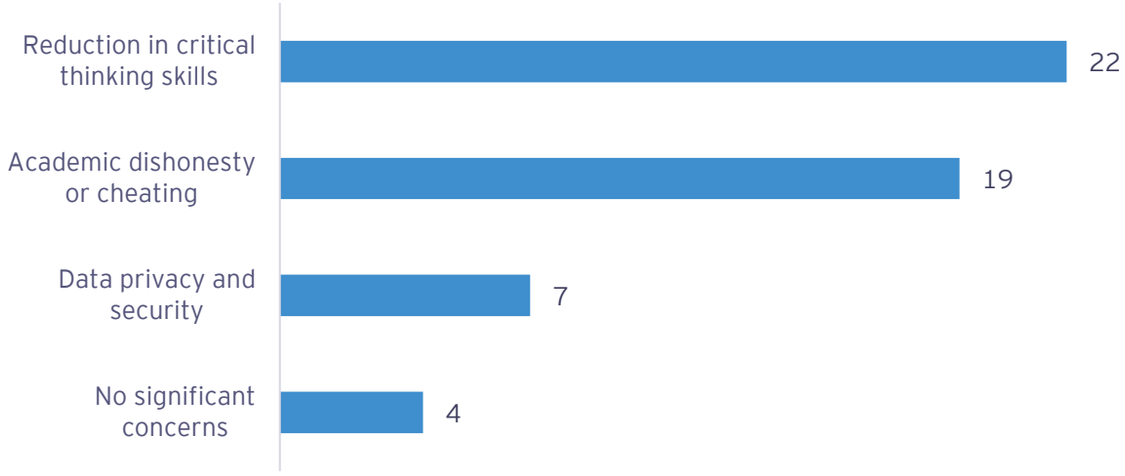


The growing use of AI tools in education raises concerns around student learning, particularly the risk of diminished critical thinking and increased academic dishonesty

With the rapid integration of AI tools in education, Indian HEIs must be increasingly aware of the associated risks. According to the FICCI-EYP survey, 22 out of 30 HEIs expressed concern over a potential decline in students' critical thinking skills, while 19 feared increased academic dishonesty due to AI misuse. Additionally, seven institutions highlighted data privacy and security as key concerns.

HEI concerns about students using AI tools

Q. What concerns, if any, do you have about students using AI tools?



Source: FICCI-EY-P AI Adoption in Higher Education Survey 2025

Beyond learning-related risks, HEIs also face challenges in teaching and assessment. Faculty may become overly dependent on AI for creating learning materials, while automated grading systems risk misinterpreting the nuanced aspects of student work. Additionally, the use of third-party AI tools to automate campus operations raises concerns about data privacy.

To effectively address these issues, institutions must move beyond reactive, ad hoc measures and adopt a strategic AI governance framework, one that includes robust policies, proactive working groups and regular reviews. The following sections explore these key risks and potential solutions in detail.



With growing AI adoption, stronger governance is vital to balance innovation with safeguards on accuracy, privacy and academic integrity

6.1 Setting guardrails for ethical AI in classrooms

Effective AI governance in higher education requires a clear understanding of the specific risks that arise in core academic activities such as teaching, learning, assessment and grading. While institutions face a broad spectrum of operational and reputational risks from AI adoption, the most immediate policy challenge lies in safeguarding academic integrity, ensuring equity in classrooms, and preserving the reliability of student evaluation.

Learning risks

- **Academic dishonesty through AI usage:** Students submitting AI-generated content as original work undermines learning outcomes and compromises institutional credibility.
- **Reduced development of critical thinking:** Excessive use of AI for brainstorming, explanations, or problem-solving can displace independent reasoning, leading to shallow understanding and delayed cognitive development.

Solution: Re-design curricula and assessments to emphasize independent reasoning and originality, supported by in-classroom assessments that reduce over-reliance on AI, while enforcing clear academic integrity policies to safeguard institutional credibility

Teaching risks

- **Over-reliance on AI-generated content and diminished faculty engagement:** Faculty reliance on AI for preparing lectures, slides or reading materials without critical review can lead to low-quality content delivery. This undermines academic rigor and may erode trust in faculty expertise.
- **Bias in instructional material:** AI-generated teaching aids may carry cultural or linguistic biases from training data, reinforcing stereotypes and fostering inequitable classroom dynamics.
- **Unequal faculty capacity to use AI:** Uneven faculty adoption of AI, driven by training gaps, leads to inconsistent student experiences across courses and departments.

Solution: Establish institution-wide guidelines and training to ensure AI is used as a supportive tool—reviewed critically for accuracy, bias and equity—while building faculty capacity to integrate it without diminishing engagement or academic rigor.

Grading risks

- **Inaccuracy of AI grading tools:** Automated grading tools may overlook nuance or amplify bias, leading to unreliable evaluations and misclassification of student performance.

Solution: Use AI grading tools only as supplementary aids, with faculty oversight to ensure fairness and contextual judgment, and re-design evaluation frameworks to combine automated efficiency with human validation.

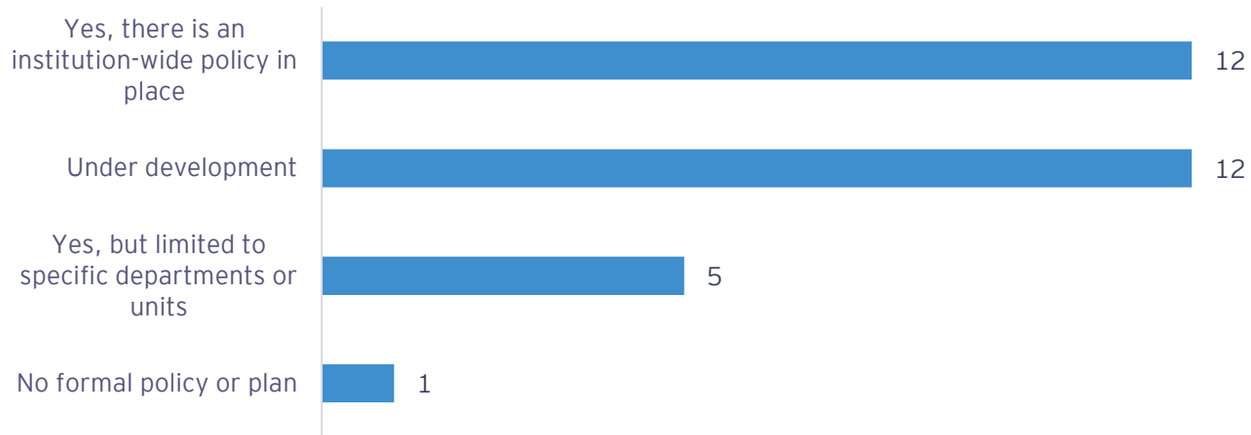
Source: EY-P analysis

To mitigate teaching-related risks, HEIs should establish well-defined AI policies that offer clear, actionable guidelines for faculty on the responsible use of AI in teaching

To effectively address the challenges of AI integration in learning, teaching and grading, HEIs must establish a clear institutional AI policy or vision. Institutions are gradually recognizing this need—12 out of 30 surveyed HEIs already have an institute-wide AI policy in place, while another 12 are actively developing one. Additionally, five HEIs have implemented AI-related policies at the departmental level.

State of AI formal vision or policy at HEIs

Q. Is there a formal vision, policy, or roadmap for AI adoption at your institution?

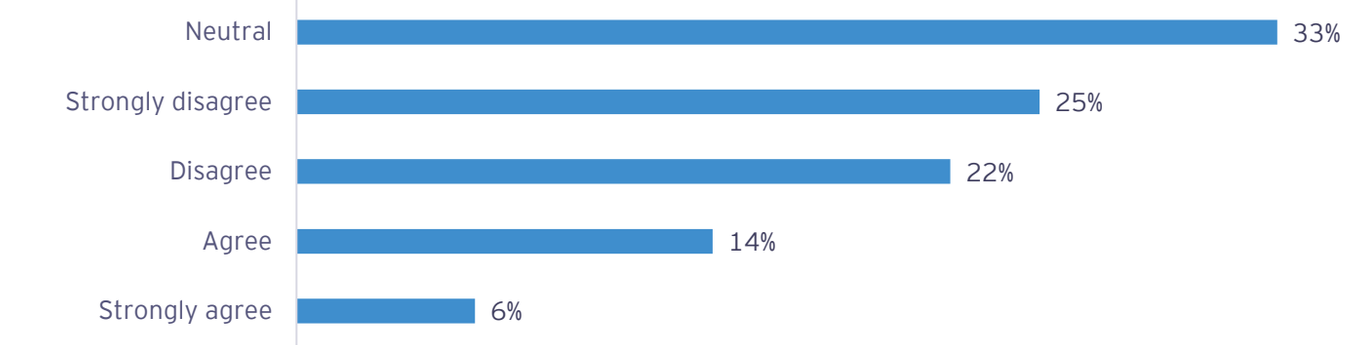


Source: FICCI-EY-P AI Adoption in Higher Education Survey 2025

Institutions must ensure faculty have clear guidance on using AI in teaching. However, findings from the Digital Education Council survey indicated that only 20% of faculty reported that their institution provided clarity on AI usage, and just 16% felt the guidelines were comprehensive and they were well aware of them.[2] By embedding clear and detailed AI usage guidelines within institutional policies or strategic visions, HEIs can effectively mitigate teaching-related risks associated with AI tools.

Lack of clarity on AI in teaching

Q. To what extent do you agree or disagree with the statement?
Statement: My institution has made clear how AI can and cannot be used in teaching



Source: Digital Education Council Global AI Faculty Survey 2025

Source: 2 Digital Education Council Global AI Faculty Survey 2025 and EY-P analysis

A well-defined AI policy offers clarity and direction to all stakeholders, while remaining adaptable to the rapid evolution of technology and educational needs

While the specific contours of an AI policy will inevitably vary across institutions, a well-considered framework usually balances two needs: 1) providing clarity to key stakeholders on acceptable and unacceptable uses of AI and 2) leaving space for adaptation to disciplinary norms, institutional missions and evolving technologies. The following functions are not prescriptive rules but illustrative considerations that HEIs may draw on when designing or updating their own policies:

Key functions	Illustrative considerations
Lay out institutional vision and establish scope	An AI policy in higher education should: ▪ **Clarify purpose and scope:** Identify whether it applies to teaching, learning, grading, or broader academic functions, while allowing departments or instructors to expand or restrict scope as needed. ▪ **Signal institutional values:** Emphasize academic integrity, fairness and transparency, but in a way that reflects institutional priorities. ▪ **Enable flexibility:** Recognize that not all disciplines or pedagogical models face the same risks or opportunities from AI.
Differentiate roles and responsibilities across stakeholders	HEIs must provide guidance to all stakeholders: ▪ **Students:** Define acceptable and unacceptable uses of AI. ▪ **Instructors:** Empower them with discretion to set course-specific rules and expectations. ▪ **Administrative body:** Establish baseline policies, manage institutional risks and oversee vendor and data governance.
Align on centralization/ decentralization of policy	Institutions can choose where to centralize or decentralize authority: ▪ **Instructor-led flexibility:** Some institutions may empower faculty to set course-level AI rules, recognizing disciplinary variation. ▪ **Departmental alignment:** Others may encourage departments to harmonize rules for coherence, particularly in multi-section courses. ▪ **Institutional baseline:** A baseline policy (e.g., disclosure expectations, reporting channels) ensures students face no conflicting or contradictory requirements.
Addressing misuse and conflict	Policies may also anticipate potential violations while allowing room for proportional corrective measures: ▪ **Penalties for misuse:** Institutions may set ranges of consequences—from warnings and resubmissions to formal disciplinary action—leaving scope for instructors to judge severity. ▪ **Redressal and appeal:** Students benefit from transparent mechanisms to challenge decisions or clarify misunderstandings, which can vary by an institution's governance structures. ▪ **Constructive orientation:** Beyond punitive measures, policies might stress education, e.g., encouraging students to revise work rather than immediately resorting to disciplinary actions.
Periodically review and revise the policy	HEIs should treat policy frameworks as dynamic, live documents subject to regular reviews, informed by structured faculty-student feedback loops, and aligned with evolving external standards, guidelines and technological innovations.

Source: EY-P analysis

The University of Sydney's innovative assessment model for integrating GenAI offers HEIs a practical blueprint for balancing academic integrity with innovation

University of Sydney's new assessment model for integrating GenAI in academics

Context

- The University of Sydney (USyd) has moved beyond high-level principles to a concrete, classroom-ready operating model ("two-lane" assessment), coupled with explicit student disclosure rules, course-level signaling (icons in course curriculum), and a staged change program beginning 2025. The design choices below illustrate how an HEI can preserve trustworthy assessment policies.

Policy overview

Element	Policy
Asssessment design: "two-lane" policy	USyd has developed a detailed typology of assessments, catgorized into "two-lanes", to provide a common vocabulary to course teams for assessment design: ▪ **Lane 1 - Secure Assessments (AI not allowed):** supervised, in-person assessments, including exams, practical tasks, interactive oral assessments; AI usage is generally not allowed, unless explicitly permitted by instructor ▪ **Lane 2 – Open Assessments (AI allowed):** unsupervised; AI use is expected and scaffolded. Includes take-home projects, portfolio development, research analyses and presentations.
Standardized unit-level signaling	Course curriculum for all classes must display a **"Use of AI" column**. Instructors can choose from among the following levels of AI use: ▪ AI prohibited ▪ AI allowed ▪ AI limited (for certain in-person tasks, unit coordinators might stipulate that a particular AI tool can be used in a particular way) ▪ Not applicable This policy design provides for in-context transparency and minimizes "unintentional cheating" due to unclear rules.
Student acknowledgement of AI use	Students are mandated to disclose AI use in assessments: ▪ **Baseline disclosure:** Name and version of AI tool used, the publisher, URL of the tool, brief description of how the tool was used ▪ **Course-specific requirements:** Instructors may ask for additional disclosures, including logs of inputs and outputs used
Baseline tool access	▪ USyd has made Microsoft Copilot available to all students; students are advised to use it in "protected mode" enabled by university safeguards

Actionable recommendations for HEIs

- Adopt a **binary contexts model** (secure vs. open) rather than a blanket permit/prohibit rule; concentrate invigilation where assurance is essential, and encourage responsible AI use in take-home assessments
- **Make rules obvious at the task level** (icon/label in the course curriculum) and require a standard acknowledgement template—optionally with prompt/output logs for higher-risk tasks.
- Provide a **baseline AI tool** with institutional credentials to improve equity and privacy controls.

Source: University of Sydney and EY-P analysis

An effective AI policy must be stakeholder-centric and designed with input from those it affects, ensuring the rules are practical to implement and enforceable in real-world settings

6.2 Stakeholder-driven frameworks for responsible AI use

A robust institutional AI policy cannot be developed in isolation by a single office. It is a social and technical instrument that must reflect the lived experiences, expertise, concerns and values of all stakeholders who will use, be affected by, or be responsible for AI systems.

The core aim of stakeholder-centered policy development is therefore twofold:

(a) To produce rules and processes that are practicable and enforceable in the day-to-day functioning of the university

(b) To generate legitimacy and trust by giving those affected a real voice in shaping how AI is governed

This section presents practical ways to involve stakeholders, explains governance structures that turn policy into action, and outlines clear steps institutions can follow.

Below we list three practical reasons why a stakeholder-centric approach is essential

1. Different stakeholders engage with AI in distinct ways: faculty prioritize assessment integrity, researchers seek clarity on data and IP, IT and privacy teams focus on data flows and contracts, while students are both users and subjects of AI-driven campus services.
2. AI policies that overlook operational realities, such as LMS configurations or research data archiving, are likely to fail at implementation.
3. Policies developed inclusively are more likely to gain acceptance and be sustainable, as those responsible for implementation have a stake in their design—a theme consistently reinforced in sector guidance and practitioner reports.

Three practical models can be adopted by institutions for organising people who will build an AI policy. Each has trade-offs; the right choice depends on institutional size, governance culture and risk appetite.

Central steering committee with cross-cutting advisory groups

- A **central steering committee** led by a senior academic or a senior officer sets **strategic objectives**, resolves trade-offs, and approves **institutional AI policy**.
- This body is supported by **domain-specific advisory groups** focused on teaching and learning, research, data and privacy, legal and procurement, libraries and student experience.
- These groups draft guidance within their areas of expertise, while the steering committee integrates inputs, resolves conflicts and finalizes policy.
- This governance model balances senior authority with domain expertise and is widely adopted in higher education, typically in **medium to large institutions**.

Source: ResearchGate, Oxford Academic, EDUCAUSE and EY-P analysis

Institutions should adopt a governance model aligned with their structure, creating a framework that ensures stakeholder inclusion while maintaining clear decision-making

Federated or multi-unit governance

- Under this model, faculty members and professional services maintain responsibility for domain-specific AI applications, guided by a set of **lightweight central principles** and supported by a **small central secretariat for coordination**.
- This approach is particularly effective in institutions where **colleges or schools operate with significant autonomy** or have **diverse use cases,** such as the contrasting needs of arts and engineering departments.
- It avoids the pitfalls of imposing uniform rules across varied disciplines, but it does require strong coordination mechanisms, including standard templates, shared registries, and centralized review processes for high-risk projects.
- The federated model is especially common in environments where local practices and disciplinary norms are deeply embedded.

Living or adaptive governance

- Living governance approaches policy as a **dynamic and evolving framework** rather than a fixed document.
- It integrates a **permanent oversight board**, a **continuous ethics review process** for new initiatives and regular SWOC (Strengths, Weaknesses, Opportunities, Challenges) and impact assessments.
- These elements work together to revise governance rules in response to emerging risks, evolving use cases and changing regulatory landscapes.
- This model acknowledges the rapid pace of change in generative and foundation AI technologies, emphasizing the need for governance systems that learn and adapt through pilots, audits and iterative updates.
- Adaptive governance models are increasingly recognized in the literature on organizational AI governance as essential for managing uncertainty.

A typical stakeholder framework designed to balance inclusion and decision clarity may include the following layers:

- **Strategic or decision layer (AI Governance Board):** Senior leadership including the Provost, CIO, or Legal Counsel, alongside senior academic and external advisors as needed, are responsible for setting institutional positions, making escalation decisions and allocating resources.
- **Domain working groups:** Domain-specific groups including faculty and students, researchers, student services (such as disability and wellbeing teams), libraries and scholarly communications, data protection and privacy, procurement and contracts and IT/security teams are responsible for drafting operational guidance within their areas and reviewing proposed AI tool adoptions.
- **Ethics and risk review panel:** Multidisciplinary reviewers, including ethicists, methodologists and student representatives, evaluate projects flagged as medium or high risk, such as those involving student profiling or sensitive data. This process mirrors human-subjects review but is tailored for AI governance.

Source: ResearchGate, Oxford Academic, EDUCAUSE and EY-P analysis

The growing use of AI tools heightens data privacy risks, which HEIs must address through robust internal controls aligned with regulatory requirements

6.3 Data privacy, bias and transparency in AI tools

While classroom-level risks primarily fall within teaching, learning and assessment, the use of AI tools also raises significant questions of data governance. Many AI platforms rely on student submissions, engagement patterns, or biometric information for functionality. Improper handling of such data can expose institutions to breaches of privacy, regulatory penalties and reputational harm. Unlike classroom practices, these risks are best addressed at the institutional level, through contracts with technology providers, compliance mechanisms and centralized governance structures. Faculty policies should align with these safeguards but not be burdened by them.

India's Digital Personal Data Protection (DPDP) Act , 2023 sets out the regulatory backdrop for personal data, including student-related data. It establishes obligations for data fiduciaries, defines data principals' rights, and provides for penalties and the establishment of a Data Protection Board.

However, the DPDP Act currently covers only digital personal data, leaving collections in non-digital contexts or hybrids outside its purview. The rules introduced in 2025 are still in draft form, with full implementation pending. Legal scholars point to gaps in addressing AI-specific risks, such as algorithmic opacity, consent in automated decision-making and bias—areas not yet fully regulated.

Regardless of legal loopholes, it is imperative that institutions looking to integrate AI applications, do so taking into consideration all aspects of privacy, transparency and bias mitigation, not just to future-proof implementation and sidestep legal hurdles, but to uphold their role in creating a learner-centric ecosystem that prioritizes student safety and wellbeing. The below table lists common privacy risks in higher education, along with their potential consequences and mitigation strategies.

Risk category	Higher education use case	Potential consequences	Mitigation approach
Excessive data collection	Online proctoring capturing video, keystrokes and environment scans	▪ Invasion of personal privacy ▪ Student discomfort	Only collect necessary data by enforcing data minimization
Weak data security	AI platforms lacking proper safeguards	▪ Data breaches ▪ Identity theft	▪ Clearly outline internal security controls ▪ Conduct periodic audits
Cross-border data flows	Storing student data on servers abroad	Non-compliance with Indian jurisdiction	Push for local storage or equivalent safeguards to ensure data security
Opaque secondary use	Essays repurposed to retrain vendor models	▪ Violated consent ▪ Reputational risk	▪ Insert explicit usage clauses ▪ Offer opt-out options

Source: Ikigai Law, DLA Piper, Indian Journal of Law and Legal Research and EY-P analysis

AI systems carry inherent risks of bias and transparency, which HEIs must mitigate through bias audits, robust oversight and thorough review of vendor disclosures

AI systems often inherit biases present in their training data. In the Indian higher education context, this might appear as language models favoring Standard English over regional dialects, assessment tools misinterpreting diverse writing styles or analytics that correlate socio-economic indicators with academic outcomes, potentially reinforcing existing inequities.

To counter this, institutions must focus on both technical remedies like bias audits, inclusive datasets, model calibration and institutional safeguards, such as faculty oversight and fair appeal mechanisms. This table outlines two use cases that may exhibit biases, detailing their potential impact and the corresponding oversight mechanisms that can be implemented to mitigate risks.

Tools	Bias example	Potential equity impact	Mitigation approach
AI tools in admissions	Algorithms prioritize certain school boards, urban applicants, or polished application essays (often AI-edited)	Applicants from rural or marginalized backgrounds face systemic disadvantage in selection	Audit admissions algorithms regularly; ensure diverse datasets; embed fairness criteria in decision pipelines.
Automated grading tools	Favour standard English syntax structures	Disadvantages students with non-standard English or from non-English medium backgrounds	Incorporate multilingual testing and diverse data
	Penalizes certain handwriting types	Penalizes students for handwriting rather than content	Offer varied input methods such as manual reassessment

Transparency is the cornerstone of trust in AI. However, students and faculty are often left in the dark about how AI systems generate evaluations or recommendations. This lack of clarity can erode confidence and compromise academic autonomy. To address this, institutions can adopt a three-layer transparency framework that ensures clarity and informed engagement with AI systems.

Transparency layer	Stakeholders involved	Example policy measure
Algorithmic	▪ Vendors ▪ Policymakers	Engage vendors to provide clear and comprehensive disclosures about the underlying logic, training datasets and known limitations of their AI systems to HEIs.
Institutional	▪ Administrators ▪ Governance boards	Publish annual AI governance statements and openly communicate how AI systems are deployed, monitored and governed across academic processes. They should also provide channels to question, review or appeal AI-generated outcomes.
User	▪ Students ▪ Faculty ▪ Researchers	Acknowledge and disclose AI use in accordance with institutional policies.

Source: EY-P analysis

HEIs can adopt governance best practices and align institutional policies with national and international frameworks to support responsible AI integration

UNESCO's 2021 Recommendations on the Ethics of Artificial Intelligence underscores transparency, fairness, and human oversight as foundational ethical principles. It also outlines key action areas, particularly in data governance, education and research, to guide responsible AI development and deployment.

To ensure responsible adoption of AI, HEIs can refer to the following best practices and institutional governance strategies:

Participatory governance	Including faculty and students in AI oversight committees strengthens legitimacy and enhances the committee's responsiveness to diverse academic perspectives.
Aligning with frameworks	▪ HEIs can refer to established frameworks such as the UNESCO's Recommendations on the Ethics of Artificial Intelligence and the Beijing Consensus on the Ethics of Artificial Intelligence to guide their institutional philosophy and principles on AI use. ▪ The IndiaAI Safety Institute, established in January 2025 under the IndiaAI Mission, can be a valuable partner for higher education governance for Indian HEIs. Currently, policy advisories are issued by various bodies, including NITI Aayog, MeitY, UGC and AICTE.
Contractual safeguards	Incorporate contractual clauses that mandate compliance with the principles of the DPDP Act, including limitations on data collection and strict prohibitions against unauthorized secondary use.
Cybersecurity and Internal Controls	Upgrade IT systems and adopt software, including cybersecurity measures and models to detect bias, to safeguard privacy and maintain internal quality control on third-party tools.
Third-party audits	Conducting regular, independent audits of AI systems is essential to ensure ongoing compliance with privacy and fairness standards.

Conclusion

As AI becomes embedded across higher education, institutions must anchor its use in strong policy and ethical governance. This requires setting clear classroom guidelines for AI integration, redesigning curricula and assessments to preserve integrity, and extending responsible-use codes of conduct to research, administration and student services.

Equally critical are transparent procurement processes for AI tools, mandatory bias audits, and strict data privacy safeguards aligned with national regulations. By coupling innovation with accountability and human oversight, institutions can harness AI to enhance learning and operations while protecting trust, fairness and academic values.

Source: UNESCO, ChemRxiv, IndiaAI and EY-P analysis



SECTION 07

AI and the Sustainable Development Goals



AI is emerging as a powerful enabler for accelerating progress toward SDGs, with multiple HEIs leveraging innovative use cases across disciplines

7.1 AI's contribution to achieving the SDGs

The Sustainable Development Goals (SDGs) represent a global call to action that demands integrated efforts across governments, industry, civil society and academia. HEIs are uniquely positioned within this ecosystem, serving as knowledge creators, innovation hubs, and incubators of future leaders and practitioners.

In recent years, frameworks such as the Times Higher Education (THE) Impact Rankings and QS Sustainability Rankings have emerged as structured ways to assess and benchmark how universities are advancing their contributions to the SDGs. The THE Impact Rankings evaluate sustainability performance across four key areas—research, stewardship, outreach and teaching using calibrated indicators tailored to each SDG.[65] Similarly, the QS Sustainability Rankings assess institutions on three pillars: environmental impact, social impact and governance, each measured through weighted indicators organized under thematic "lenses."[66] Together, these frameworks provide actionable insights for HEIs to align their strategies with global sustainability benchmarks.

AI adds a powerful new dimension to this effort. As an enabler rather than a standalone solution, AI strengthens, supports, and speeds up the pathways through which HEIs can achieve sustainability goals. From accelerating research and optimizing resource management, to deepening community engagement and enabling evidence-based decision-making, AI can amplify institutional impact when integrated thoughtfully into broader strategic agendas. In doing so, it not only enhances the ability of HEIs to meet the demands of the SDGs but also helps build more resilient, future-ready institutions.

The table below illustrates how AI contributes to advancing SDGs by mapping key use cases to practical implementation examples.

SDG	AI use case	Example
SDG 1 – No Poverty	ML-based targeting of social assistance	▪ With support from partners and academic institutions like UC Berkeley and Northwestern University, the Government of Togo used ML and mobile phone data to remotely identify, enroll and deliver payments to over 138,500 impoverished citizens affected by COVID-19 lockdowns. ▪ This ML approach improved targeting accuracy by 8–14%, demonstrating the power of AI in enhancing social protection delivery.[67] [68]
SDG 2 – Zero Hunger	AI-powered crop disease diagnostics	▪ Nuru is a DL-based object detection model developed by PlantVillage at Penn State University, in collaboration with other partners, as a public good to diagnose plant diseases and pests directly in the field. The model does not require an internet connection to operate. ▪ Nuru diagnosed symptoms of cassava diseases at a higher accuracy (65% in 2020) than agricultural extension agents (40–58%) and farmers (18–31%). Its accuracy was further enhanced (74–88%) by increasing the number of leaves assessed per plant.[69]

Source: 65 THE, 66 QS Rankings, 67 World Bank, 68 GiveDirectly, 69 Frontiers and EY-P analysis

AI is aiding progress on the SDGs - from enhancing medical diagnostics and mapping disaster zones to monitoring biodiversity

SDG	AI use case	Example
SDG 3 – Good Health and Well-Being	AI for medical imaging diagnostics	▪ Researchers at Moorfields Eye Hospital and UCL Institute of Ophthalmology have developed RETFound, the first AI foundation model in ophthalmology. ▪ Trained on 1.6 million retinal images using self-supervised learning, RETFound can detect sight-threatening eye diseases and predict systemic conditions like heart attacks, strokes and Parkinson's disease. ▪ RETFound is being released as an open-source AI model, enabling global institutions to use and build on it to improve health outcomes.[70]
SDG 5 – Gender Equality	AI fairness audits	▪ The Gender Shades project at MIT Media Lab, exposed significant racial and gender bias in commercial facial analysis systems, which are used to detect, analyse and recognise human faces. ▪ The study found error rates of up to 34.7% for dark-skinned women, compared to less than 1% for light-skinned men, highlighting disparities in AI performance. ▪ These findings prompted major tech companies to audit and improve their models.[71] [72]
SDG 7 – Affordable and Clean Energy	Mapping solar adoption via satellite AI	▪ Stanford researchers developed DeepSolar, a DL framework that analyses satellite imagery to map solar photovoltaic panels across the US. ▪ It uncovered key deployment patterns, including peak population density at 1,000 capita/mile², strong correlation with income up to US$150K, and a solar radiation threshold of 4.5 kWh/m²/day that triggers adoption.[73]
SDG 9 – Industry, Innovation and Infrastructure	Autonomous materials exploration via robotics-AI	▪ Researchers at the University of Liverpool developed a mobile robotic chemist that autonomously conducted over 688 experiments in eight days to discover high-performance photocatalysts for hydrogen production, achieving results six times more active than initial formulations.[74]
SDG 11 – Sustainable Cities and Communities	AI for rapid disaster mapping	▪ Carnegie Mellon University along with other researchers and partners developed the xBD dataset, a large-scale open-source dataset for assessing building damage using satellite imagery across 22 disaster events in 15 countries. ▪ It includes around 700,000 buildings annotations, enabling remote evaluation of disaster impact.[75]
SDG 13 – Climate Action	AI climate forecasting	▪ IceNet, developed by the British Antarctic Survey and The Alan Turing Institute, is a DL model that forecasts Arctic sea ice up to six months ahead based on satellite observations and climate data. ▪ It achieves 92–97% accuracy and runs 2,000 times faster than traditional physics-based models. ▪ It can quickly incorporate real-time data to deal with changing sea conditions.[76]
SDG 14 – Life Below Water	Reef habitat mapping	▪ The Allen Coral Atlas, led by Arizona State University, in collaboration with other partners, produced a comprehensive map of the world's shallow water coral reefs. ▪ Using nearly 2 million satellite images, the Atlas supports marine spatial planning and reef conservation efforts across several countries.[77]
SDG 15 – Life on Land	Biodiversity monitoring via AI	▪ Wildlife Insights, developed by a consortium of institutions including the Smithsonian Conservation Biology Institute, the Zoological Society of London, among others, uses AI to automatically classify species in camera trap images. ▪ Its core model, SpeciesNet, is an open-source model, trained on over 65 million images and can identify more than 2,000 species. ▪ The platform has accelerated biodiversity monitoring and conservation planning.[78]

Source: 70 INSIGHT, 71 MIT News, 72 AIES, 73 Stanford, 74 Nature, 75 CMU, 76 Alan Turing Institute, 77 CORAL, 78 Albase and EY-P analysis

HEIs can embed AI into their SDG agenda to forge strategic partnerships and demonstrate a strong commitment to a sustainable future

For universities, advancing the SDGs with AI is not just about operational efficiency or ticking compliance boxes, it is about positioning themselves at the heart of global problem-solving. HEIs that embed AI strategically within their SDG agenda demonstrate societal relevance, enhance their ability to secure funding and partnerships, and reinforce their credibility as institutions committed to building a sustainable future. Amid evolving expectations from students, governments and employers, HEIs that actively integrate value creation for the SDGs will stand out as leaders in sustainability and innovation. The following points outline how AI can accelerate this journey:

- **Driving impact through AI-enabled research:** Harness the power of AI to produce evidence-based insights and innovative solutions that directly shape policy, inform industry decisions, and support community-driven practices.
- **Shaping global sustainability narratives:** Leverage AI-driven research on the SDGs to position the university as a thought leader in international sustainability discourse, driving influence across academia and global forums.
- **Aligning incentives with purpose:** Create an environment where faculty, staff, and student initiatives that connect AI with the SDGs are actively recognized, meaningfully rewarded and strategically scaled to maximize impact.
- **Building cross-sector coalitions for sustainable impact:** Forge strategic global partnerships with governments, NGOs and industry leaders among others, in line with SDG 17, to ensure that AI research and innovation translate into tangible outcomes aligned with the SDGs.
- **Embedding SDGs into core strategy:** Integrate AI-enabled progress on the SDGs into the university's core mission, moving beyond operational initiatives to make sustainability a foundational driver of research, education and institutional decision-making.

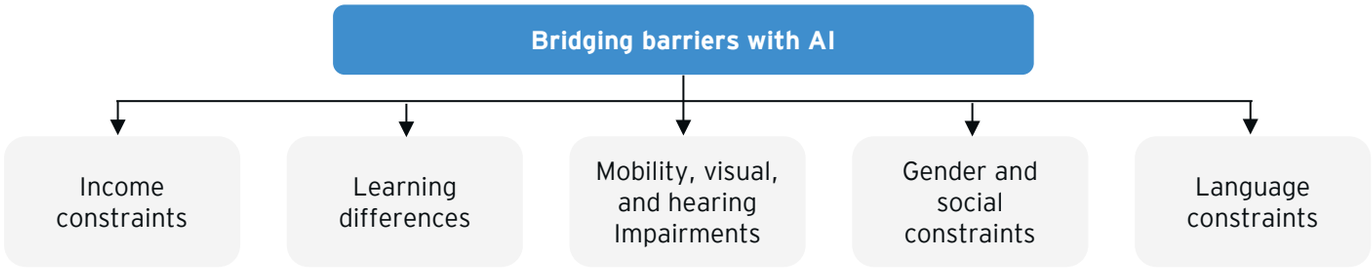
While AI is reshaping how universities contribute to the SDGs at large, its impact on education itself (SDG 4: Quality Education) is equally profound. One of the most pressing challenges for HEIs is ensuring equity and inclusion—bridging divides of income, gender, geography and language. AI offers powerful tools to address these barriers, enabling universities to expand access and create more inclusive learning environments. The next section explores how HEIs are applying AI to enhance equity and accessibility in higher education.

Source: EY-P analysis

AI is reshaping education by improving quality, expanding access and promoting equity by bridging divides across income, gender, geography and language

7.2 Promoting equity, inclusion and accessibility through AI

HEIs play a vital role in expanding access to education, yet barriers such as economic status, gender, geography and language persist. AI has the potential to be a powerful equalizer in bridging these gaps and driving inclusive learning.



Income constraints

- **Challenge:** Students from low-income backgrounds often lack access to higher education opportunities, private tutoring, career guidance and supplementary learning resources—creating barriers to AI education in particular.
- **AI as an equalizer:** AI-driven platforms can democratize access by providing low-cost, personalized learning and guidance at scale.
- **Example:** SWAYAM, a Government of India initiative, reflects the core principles of India's National Education Policy—access, equity and quality—by offering free online courses to underserved communities. Its portfolio ranges from technical foundations (Introduction to Artificial Intelligence, IIT Delhi) to applied courses (AI/ML Using Python, AI in Physics, AI in Accounting), ensuring that even learners without financial means can engage with emerging AI knowledge.[79]

Learning differences

- **Challenge:** Students with learning difficulties such as ADHD, dyslexia, dysgraphia often go undiagnosed or unsupported, leading to lower academic achievement and retention.
- **AI as an equalizer:** AI-powered tools can identify early patterns of learning struggles, recommend tailored interventions and provide assistive technologies such as text-to-speech, spelling correction and personalised reading pathways.
- **Example:** Microsoft Immersive Reader is an AI-powered tool that enhances reading comprehension by making text more accessible and reducing cognitive load. It offers features like customizable text display, read-aloud with word highlighting and translation into over 100 languages.[80]

Mobility, visual and hearing impairments

- **Challenge:** Students with physical disabilities such as visual and hearing impairments face barriers in classroom participation, peer interaction and assessments.
- **AI as an equalizer:** AI-enabled speech recognition and real-time captioning tools improve classroom accessibility, while gesture-recognition and voice synthesis technologies can facilitate communication and active participation.
- **Example:** Hofstra University (a private institution based in Hempstead) uses Otter, an AI-powered transcription tool, to provide real-time note-taking accommodations for students with disabilities, making the process efficient and cost-effective.[81]

Source: 79 SWAYAM, 80 Teesside University, 81 LinkedIn and EY-P analysis

By integrating AI into efforts for equitable education, HEIs can enhance student outcomes, meet global inclusion benchmarks and align with NEP's vision for accessible learning

Gender and social constraints

- **Challenge:** Women and students from marginalised groups may face social restrictions, lack of mentorship and cultural biases that limit their participation in education.
- **AI as an equalizer:** AI-enabled mentorship platforms can connect students to diverse role models globally. Predictive analytics can flag patterns of attrition among female students and trigger targeted interventions. Virtual learning environments reduce geographic and cultural barriers for women in conservative contexts.
- **Example:** MentorNet is a mentorship platform that connects students and early-career professionals in STEM fields with experienced mentors. The platform uses AI-based algorithms to connect mentors and mentees. It has matched over 40,000 pairs to date, proving AI-powered mentorship can be an equalizer for gender constraints.[82]

Language constraints

- **Challenge:** Language barriers hinder comprehension and restrict students' access to global knowledge, particularly in multilingual contexts such as India.
- **AI as an equalizer:** AI-powered NLP tools—such as translation, real-time transcription and voice-enabled chatbots—can bridge language gaps, making global content more accessible in local languages.
- **Example:** IGNOU has introduced its MBA programs in Hindi and Odia to advance multilingual learning. The program content has been adapted into regional formats using AICTE's AI-powered translation tool, Anuvadini, thereby making management education accessible for students who prefer to study in their local language.[83] [84]

By integrating AI into efforts toward equitable access, HEIs can expand student pipelines, reduce dropout rates and meet global benchmarks for inclusion. Crucially, this approach aligns with the goals of NEP 2020, which emphasizes accessible and technology-enabled education. AI can help bridge systemic gaps, making quality education more attainable for diverse and underserved communities.

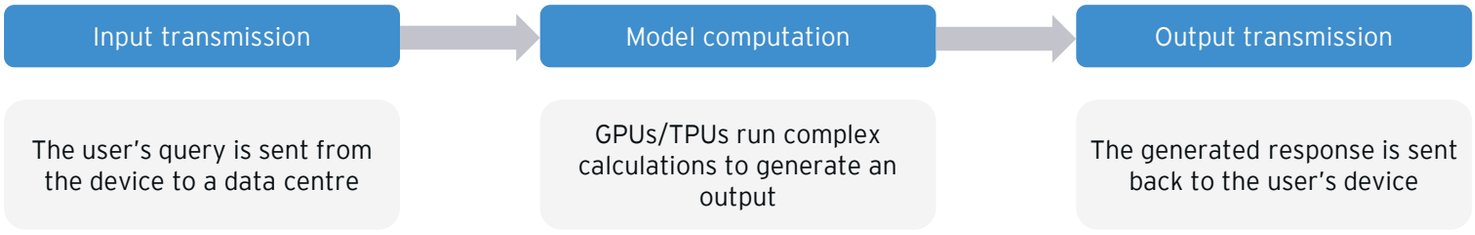
While AI holds immense promise for advancing learning and inclusion, it also carries a significant environmental cost. Training and deploying large AI models demand substantial computing power, consuming energy not only during computation but also through data transmission, high-performance hardware and cooling systems. The following section highlights how HEIs can embed AI while being environmentally conscious.

Source: 82 CIO Insight Hub, 83 NDTV Education, 84 Anuvadini and EY-P analysis

The high energy demands of AI models are prompting many HEIs to adopt sustainability measures to reduce their environmental footprint

7.3 Environmental impact of AI use

Behind the seamless experience of interacting with AI systems lies an invisible but resource-intensive infrastructure. Each query to a large language model (LLM) activates processes that consume considerable energy and computing power. When a user submits a query to an LLM, the request is transmitted over the internet to a remote server housed in a data center. These servers are equipped with high-performance hardware, such as GPUs or TPUs, designed to handle the intensive computations required by models with billions or even trillions of parameters. The process typically involves three key stages: input transmission, model computation and output transmission.



Model computation is the most energy-intensive stage. A ChatGPT query uses about 10 times more energy than a typical search engine query, while its carbon dioxide emissions per query are roughly 340 times higher.[85] Typically, training a large AI model requires more energy than running it (inference), though inference costs can accumulate significantly over time with usage. AI data centers are often carbon-intensive due to their heavy computational loads and cooling requirements.

Technology companies such as Google and Microsoft are turning to nuclear energy to power the data centers that support large-scale GenAI models. While nuclear energy provides carbon-free electricity, questions remain about environmental risks, safety and costs.

Some HEIs are recognizing AI's environmental impact and are adopting sustainability measures in their operations. Below are a few examples:

HEI	Sustainability initiative
University of Cambridge	The University of Cambridge, in collaboration with Dell Technologies, has built a cutting-edge high performance computing infrastructure that delivers up to 20x greater AI performance and five times more simulation power than previous systems, transforming the scale and speed of research, thereby contributing to energy efficiency.[86]
Harvard University	Harvard University's Kempner AI Cluster is one of the fastest systems in the world. It stands out for its sustainability too, operating entirely on carbon-free energy sourced from solar arrays and a hydroelectric power station.[87] [88]
Massachusetts Institute of Technology (MIT)	MIT's Lincoln Laboratory Supercomputing Center is advancing sustainable computing by capping power usage to lower hardware temperatures and scheduling AI model training during periods of low grid demand, reducing both energy consumption and environmental impact.[87] [89]

Source: 85 Kanoppi, 86 University of Cambridge, 87 EAB, 88 The Harvard Gazette, 89 MIT News and EY-P analysis

HEIs must balance AI's energy demands with its societal benefits by adopting responsible AI frameworks that prioritize sustainability

AI's environmental footprint, from megawatt-scale data center operations to significant carbon emissions, is increasingly under scrutiny. Yet, the technology holds transformative potential in areas such as accelerated drug discovery, enhanced climate modeling for disaster prediction, and expanded educational access for underserved communities.

The challenge for HEIs is to balance the societal benefits of AI with a commitment to minimizing its environmental impact. In order to achieve this, HEIs should consider the following:

Adopting energy-efficient policies and systems:

- HEIs should consider adopting high-performance computing and energy-efficient hardware to enhance system performance, thereby minimizing environmental impact.
- Additionally, leveraging services of certain major cloud service providers can further support sustainability goals. These platforms offer tools for tracking and reporting carbon emissions associated with cloud usage, enabling HEIs to make data-driven decisions toward greener operations.

Prioritizing purposeful AI innovation:

- Prioritize AI initiatives that generate tangible social impact over those that are purely experimental or consume significant resources with limited practical benefit.
- This approach ensures that investments in AI contribute meaningfully to societal well-being while promoting responsible and sustainable innovation.

Building AI sustainability awareness:

- Equip students and staff with the knowledge to understand the sustainability implications of AI technologies, enabling informed decision-making that aligns with environmental and ethical goals.

AI is both a carbon-intensive technology and a driver of societal progress. HEIs should adopt responsible AI frameworks that consider environmental impact alongside ethical, academic and social factors.

Conclusion

HEIs should harness AI to accelerate sustainability research, shape global narratives, build impactful partnerships, and embed AI into core strategies to signal long-term commitment to a sustainable future. As an equalizer, AI can help HEIs bridge gaps in income, gender, geography and language, thereby advancing equity and inclusion in education. At the same time, HEIs must adopt AI sustainability practices such as energy-efficient infrastructure and responsible model deployment to reduce carbon impact and ensure long-term responsible innovation. These efforts would reflect a growing commitment to responsible AI development that balances innovation with environmental stewardship.

To fully leverage AI in education, HEIs must invest in faculty training and establish continuous learning support systems. Partnering with EdTech firms and industry can help align faculty development with evolving workforce needs. These themes are explored in detail in the next chapter.

Source: EY-P analysis

SECTION 08

Faculty of the future: Capacity building and upskilling



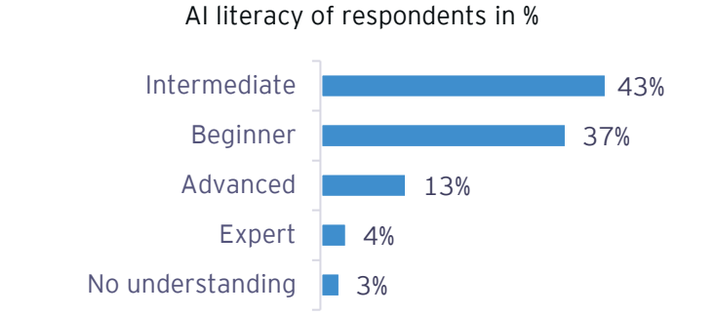
As AI adoption accelerates across higher education, limited faculty literacy and training gaps present significant risks to its responsible and effective use

AI is reshaping higher education, but the preparedness of faculty, staff and administrators remains uneven. While AI tools are already widely used by students, faculty and staff are still seeking structured training and clear institutional support. Training needs extend beyond foundational literacy, encompassing technical skill-building, pedagogical applications, academic integrity and ethics. Institutions must therefore adopt a differentiated approach, tailoring upskilling programs for teaching faculty, non-teaching staff and administrators.

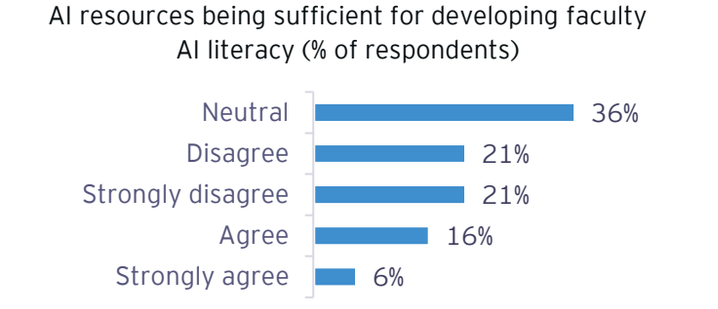
8.1 Identifying AI training needs for faculty and staff

According to a survey conducted by the Digital Education Council, which gathered insights from 1,681 respondents across 28 countries, 61% of faculty members reported using AI in their teaching workflows. The survey highlighted several popular use cases, including creating teaching materials, assistance with administrative tasks, and educating students on how to effectively use and evaluate AI in the classroom. Despite the widespread adoption of AI in education, 88% of the respondents disclosing AI use indicated that their usage remains minimal to moderate, reflecting a cautious and measured approach to adoption. Furthermore, only 17% of faculty members consider their proficiency in AI to be at an advanced to expert level. The limited confidence in AI expertise may be linked to the perceived insufficiency of AI training resources offered by HEIs, with only 6% of faculty indicating full satisfaction with the AI literacy resources available to them. In the FICCI-EY-P survey, time constraints emerged as the primary hindrance to faculty upskilling, reported by approximately 43% of respondents. Technical skills, such as programming and data analysis, were identified as the primary areas where faculty require upskilling, reflecting the substantial time investment needed to achieve proficiency in these domains.

Faculty's proficiency in AI

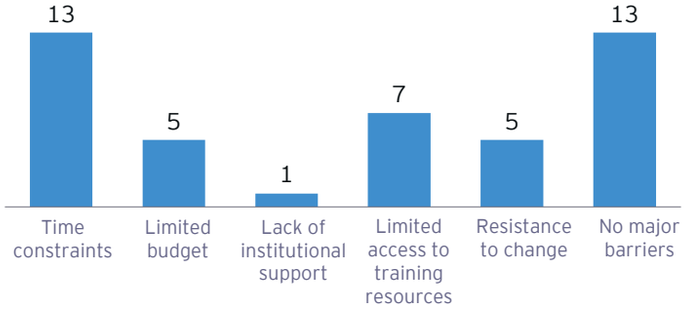


Faculty sentiment on AI literacy resources

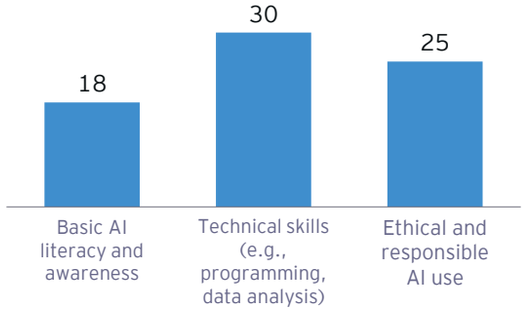


Source: Digital Education Council Global AI Faculty Survey 2025

Barriers to upskilling



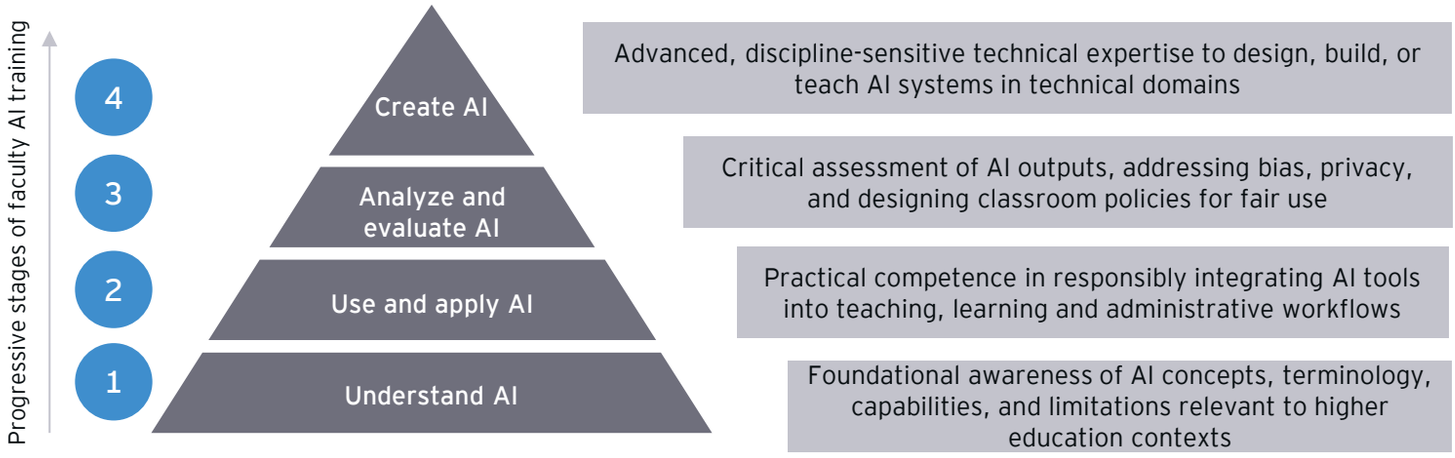
Training requirements of faculty and staff



FICCI-EY-P Survey on AI Adoption in Higher Education

A framework for addressing diverse training needs to account for the progression from awareness to advanced expertise

The *Barnard College/IMATS & CEP Framework for AI Literacy* provides a structured model for developing faculty capacity in artificial intelligence, conceptualizing engagement as a four-level progression from understanding to creation.



Source: Barnard College/IMATS & CEP Framework for AI Literacy and EY-P analysis

	Training need and relevant stakeholder groups	Sample competencies for faculty (non-exhaustive)
Basic AI literacy and awareness	**Understand AI** *(leadership, faculty, administrators)*	▪ Understanding how large language models (LLMs) generate text, images and summaries ▪ Distinguishing between machine learning, rule-based automation and generative AI ▪ Identifying AI already embedded in higher education tools such as adaptive learning systems and plagiarism detection software ▪ Establishing foundations for ethical AI use, including interpreting key terms such as training data, bias, hallucination and algorithmic opacity
	Use and apply AI *(Faculty, administrators in departments using GenAI)*	▪ Applying prompt engineering techniques to refine outputs from generative AI tools ▪ Integrating AI into teaching tasks such as quiz generation, grading assistance and lesson planning ▪ Designing student assignments that allow transparent and ethical use of generative AI ▪ Developing classroom policies on appropriate student use of AI tools
Ethical and responsible AI Use	**Analyze and evaluate AI** *(Faculty, IT staff – for designing privacy safeguards)*	▪ Auditing AI-generated outputs for reliability, accuracy and evidence of hallucinations ▪ Evaluating automated grading and recommendation systems for bias and transparency ▪ Safeguarding student privacy when engaging with cloud-hosted AI systems
Technical skills	**Create AI** *(Faculty teaching courses in Fundamental or Applied AI research, IT staff – for developing proprietary applications)*	▪ Designing natural language processing applications for disciplinary use (e.g., text mining in humanities, sentiment analysis in social sciences) ▪ Applying computer vision techniques in lab-based disciplines such as engineering or life sciences ▪ Building generative AI-driven teaching aids, such as domain-specific chatbots or adaptive simulations

Source: EDUCAUSE and EY-P analysis

To support effective AI integration, HEIs should establish robust support systems that promote continuous learning for faculty and staff

8.2 Building institutional support systems for continuous learning

A sustainable response to the rapid evolution of AI in higher education requires institutional systems that enable faculty and academic staff to continuously update their skills and adapt their practices. Continuous learning is not merely an optional professional development activity; it is a structural necessity to ensure that teaching, assessment, and research remain aligned with the ethical and pedagogical standards of a changing knowledge ecosystem. Building such systems involves combining flexible program formats, accessible resources, and collaborative platforms that encourage experimentation as well as critical reflection.

International experiences provide valuable inspiration for program design. Institutions that have made progress in AI capacity-building for educators often adopt a layered approach that balances scalability with depth. Four pathways for faculty upskilling stand out as especially relevant for faculty upskilling:

Micro-credentials and short modules (baseline training):

- These directly address the need for basic literacy and shared ethical foundations, offering all faculty and staff a common vocabulary for engaging with AI. Typically lasting two to six weeks, they focus on AI concepts, classroom applications and responsible use.
- The University of Central Oklahoma's AI Basics for Faculty micro-credential is a self-paced online program that equips educators with foundational knowledge of AI and its ethical, instructional and practical applications. It is also open to external participants, making it accessible for a broader audience of faculty and staff.[90]

MOOCs and flexible online certificates (scalable enrichment):

- MOOCs enable faculty to gain deeper applied skills beyond baseline literacy, such as implementing NLP or computer vision workflows, conducting data-driven research, and deploying ethically informed AI methods. Institutions can curate tracks in areas like applied AI, machine learning, ethical design and offer financial or logistical support to ensure participation across disciplines.
- Johns Hopkins University's Certificate Program in Applied AI is a five-month online offering covering supervised learning, anomaly detection, prompt engineering and natural language processing, with real-world case studies and project work across domains.[91]

In-person workshops and conferences (collaborative innovation):

- These forums map closely to the need for ethical evaluation and pedagogical redesign, offering space for cross-disciplinary dialogue, peer exchange, and experimentation with classroom policies. Short, immersive gatherings enable faculty to critique tools, discuss risks and co-create teaching strategies.
- Banaras Hindu University's Inter University Centre for Teacher Education organized a two-day in-person workshop on 13 and 14 February 2025, focused on integrating AI into digital pedagogy. The event aimed to build faculty capacity and promote professional development through effective use of AI in higher education.[92]

Extended seminar series and public learning (deep engagement):

- Semester-long or year-long interdisciplinary seminars, integrate faculty, staff, and students in ongoing reflection on the social and pedagogical dimensions of AI. These programs embed AI literacy into the institutional culture and support sustained inquiry.
- The University of Texas at Austin's Department of Computer Science, in collaboration with the Good Systems program, offers a one-semester credit course titled Essentials of AI for Life and Society. Open to students, staff and faculty, the course provides foundational AI literacy while exploring the ethical and societal impacts of AI technologies.[93]

Source: 90 University of Central Oklahoma, 91 Johns Hopkins University, 92 IUCTE, 93 UT Austin and EY-P analysis

Dedicated AI centers offer continuous support for faculty adaptation to emerging technologies

Building faculty development hubs for AI in pedagogy and practice is increasingly seen as a valuable addition to institutional strategies. While programs such as micro-credentials or workshops provide important entry points for faculty upskilling, hubs offer a longer-term mechanism for sustaining adaptation as technologies evolve. By curating resources, creating spaces for experimentation, and fostering cross-disciplinary dialogue, they complement existing professional development pathways and embed AI capacity-building into institutional culture. Florida Atlantic University's Faculty AI Hub illustrates how this approach can be operationalized in practice.

Florida Atlantic University – Faculty AI Hub

Overview

- Florida Atlantic University (FAU) has embedded AI into its institutional strategy through a suite of initiatives under the FAU Artificial Intelligence and Human Cognition Initiative. Central to this is the Faculty AI Hub, a university-wide resource dedicated to helping instructors and staff integrate AI responsibly into teaching, learning and research. Key features of the hub are highlighted below.

Core offerings

The Faculty AI Hub serves as a centralized platform for professional development, offering:

- **AI Teaching Resources Repository:** A curated collection of teaching guides, assignment templates, and classroom activities designed to integrate AI tools responsibly into course design.
- **Prompt of the Month:** A rotating practical exercise where faculty explore how different AI prompts can be used to design assignments, enhance feedback, or generate study materials.
- **AI Playground:** A sandbox environment where faculty can experiment with generative AI tools (e.g., large language models and text-to-image systems) before adopting them in courses.
- **Training programs:** Multiple delivery formats are available through the AI Skill Academy with self-guided online courses as well as live, workshop-based formats to deepen engagement in pedagogy and provide a platform for peer learning; additionally, a set of courses developed by Association of College and University Educators (ACUE) is offered to help faculty build foundational knowledge

Key insights

- FAU's Faculty AI Hub demonstrates how an HEI can create a sustainable system for continuous AI upskilling. For institutions seeking to replicate the model, a key opportunity lies in extending these structures into discipline-specific technical training, possibly in partnership with computer science departments or external providers.

Source: Faculty AI Hub | Florida Atlantic University and EY-P analysis

Faculty development initiatives delivered with industry and EdTech partners can help scale faculty upskilling in AI

8.3 Partnering with EdTech and industry for training

Partnerships with EdTech firms and industry are increasingly vital for faculty training in AI, as technological advances often outpace internal capacity-building structures. External providers can offer access to specialised expertise, scalable courses, and real-world applications that complement institutional programs. Such collaborations also reduce costs and accelerate adoption, though institutions must guard against over-reliance on vendors and ensure that training content aligns with ethical and pedagogical standards. ~53% (16) of the respondents to the FICCI-EY-P survey indicated that they had entered into partnerships for faculty-staff training, many of whom were industry partners such as IBM, Oracle, etc. Below, we highlight some notable examples of such collaborations.

HEI	Industry partner/program	Details
Anna University	Organized a Faculty Development Programme (FDP) in collaboration with the Information Security Education & Awareness initiative, supported by MeitY	The university conducted a five-day FDP on AI-powered cybersecurity from 6 to 10 January 2025.[94]
M S Ramaiah University of Applied Sciences	NVIDIA expert-led FDP on AI in higher education	The two-day FDP, held on 19-20 May 2025, provided participants with in-depth exposure to GenAI, accelerated computing and data science.[95]
University of Texas, Austin	Partnered with Grammarly for Education for a pilot program to explore effective use of GenAI in classrooms	Developed a faculty guide to getting started with GenAI based on inputs collected through the pilot program. This handbook includes instructional activities, lesson plans, and customizable templates designed to help faculty develop their own tailored materials.[96]
National Institute of Education, Singapore	Partnered with a large cloud services provider to launch a Technology for Education Centre	The three-year partnership aims to drive educational innovation and develop digital competencies for educators. The center is designed to help educators integrate AI into teaching and learning.[97]
Clark Atlanta University (Georgia, USA)	IBM SkillsBuild	The university has a partnership with IBM SkillsBuild to give professors AI training, including learning how to use WatsonX and Granite models; includes providing labs for code generation, data classification.[98]
University of Oxford	Microsoft – AI and Machine Learning Support Competency Centre	As part of a strategic partnership, Oxford launched a competency center with Microsoft in 2024 to provide staff and faculty with training and support in AI and machine learning. The initiative includes pilots of Microsoft 365 Copilot and structured resources to build educator capacity for using AI tools in teaching, administration and research.[99]

Source: 94 Anna University, 95 RUAS, 96 UT Austin, 97 National Institute Of Education, 98 Clark Atlanta University, 99 Oxford University and EY-P analysis

The OpenAI–IIT Madras Learning Accelerator illustrates how industry–academic collaboration can enhance faculty AI skills and shape pedagogy

OpenAI and IIT Madras launch Learning Accelerator to upskill educators in AI

Overview

In August 2025, OpenAI launched the *Learning Accelerator* in India, its first country-specific initiative designed to scale access to artificial intelligence in education. The program was established in collaboration with the Indian Institute of Technology (IIT) Madras, the All India Council for Technical Education (AICTE), the Ministry of Education and the non-profit ARISE. Its goals are threefold: to expand AI literacy among educators and students, to provide hands-on access to generative AI tools, and to generate new research on the pedagogical and societal impacts of AI.

Core elements

- **Distribution of AI tools**: The initiative will provide **500,000 ChatGPT licenses** to students and educators across India. This scale of access is intended to normalize generative AI use in teaching, research and administration.
- **Educator training modules**: Alongside licenses, OpenAI has committed to delivering structured training programs aimed at faculty and technical institute educators. While details are still emerging, the training will focus on responsible AI use, ethical classroom integration, and building faculty confidence in AI adoption.
- **Research collaboration with IIT Madras**: OpenAI has awarded **US$500,000** to IIT Madras to study AI's impact on pedagogy, learning outcomes and cognitive neuroscience. The research aims to evaluate how AI can enhance teaching and learning, and findings will be shared publicly to inform policy and product design.
- **Policy-level scaling**: Through AICTE and the Ministry of Education, the program is positioned to extend beyond elite institutions, reaching technical institutes, schools and universities nationwide.

Implications

The Learning Accelerator represents a significant step forward for faculty development in India, where, for many institutions, professional development opportunities are limited, particularly in AI. By pairing access to advanced AI tools with educator-specific training, the OpenAI–IIT Madras Learning Accelerator illustrates the potential of large-scale, multi-stakeholder partnerships in advancing faculty AI development. By combining tool access, educator training and rigorous research, the initiative demonstrates a pathway for embedding AI into national education systems. Its design highlights the importance of aligning industry expertise, government coordination and academic leadership. For higher education institutions globally, the case underlines both the opportunities and the challenges of scaling faculty AI training through industry partnerships.

Source: OpenAI and EY-P analysis

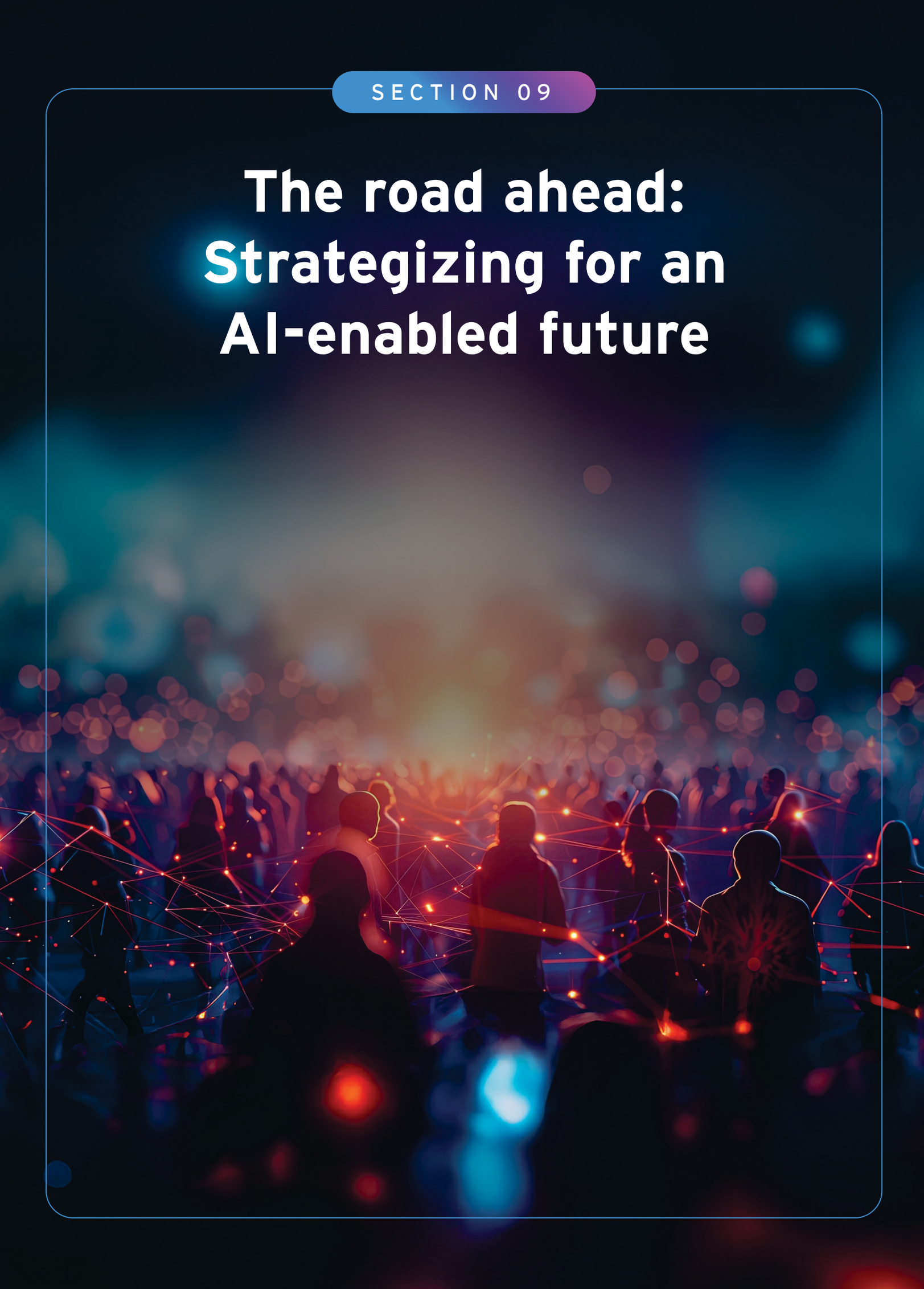
Conclusion

Faculty development is central to ensuring higher education adapts responsibly to the rapid evolution of AI. This chapter highlighted three complementary dimensions: identifying distinct training needs across literacy, ethics and technical competence; building institutional mechanisms such as hubs and centers to embed continuous learning; and forging external partnerships with EdTech and industry to access specialized expertise and scalable training. Together, these approaches show that sustainable faculty upskilling requires both internal infrastructure and external collaboration, enabling institutions to cultivate a teaching workforce prepared for an AI-enabled academic future.



SECTION 09

The road ahead: Strategizing for an AI-enabled future



The FICCI-EY-P survey identified key strengths and gaps across parameters such as use of AI applications and Data and technology systems capability

9.1 Institutional visioning and readiness

In July–August 2025, a survey on AI adoption was conducted across higher education institutions in India. Findings from 30 HEIs were used to identify trends across parameters such as AI application use in teaching, learning, campus operations, curricula upgradation for AI relevance and areas of AI-related research. These insights were then used to categorize institutions across three maturity levels and to design a diagnostic tool and implementation roadmap to help them chart their progress toward AI goals.

Six pillars of AI adoption assessed in the survey



AI tools deployment

- *AI applications were assessed as indicators of adoption maturity, spanning teaching-learning tools (adaptive platforms, tutoring, analytics, grading, wellbeing, generative content, counseling) and campus operations (academic, IT, procurement, facilities, finance, HR, external relations)*



Curriculum and employability

- *Curriculum and employability was assessed through questions on AI integration in STEM and domain programs, literacy across disciplines, delivery modes, curriculum updates, online and credentialing options, career services and external partnerships*



Research and innovation

- *Research and innovation assessed institutional engagement in fundamental, applied and interdisciplinary AI research, policies on AI productivity tools and partnerships supporting research, development, training and innovation initiatives*



Data and technology systems capability

- *Technology readiness was mapped across core systems supporting AI adoption, including WiFi, LMS, digitization, cloud, high-performance computing, use of AI tools in IT services, presence of unified data platforms and self-rated preparedness levels*



Faculty capacity building

- *Faculty capacity building was assessed through adoption of generative AI in creating teaching materials, faculty development programs to build AI competencies, perceived barriers to faculty upskilling, and partnerships dedicated to training and professional development*



Policy and governance

- *This pillar focused on whether institutions view AI as a strategic priority, examining the existence of adoption roadmaps, policies on student use of AI tools, and dedicated funding for implementation*

Survey respondents included leadership, faculty and administrators from thirty higher education institutions of varying size by enrolments, institutions offering multiple disciplines and as well as engineering institutes. A range of responses showcasing varying levels of maturity and trends in adoption across the assessed parameters was evident from an analysis of the responses. The following pages present an overview of the current state of AI adoption in India, with institutions grouped into distinct categories depending on their maturity.

AI maturity among HEIs spans nascent pilots, evolving integration, and transformative system-wide adoption

Nascent	Evolving	Transformative
Early experimentation, minimal adoption, absence of cohesive strategy	Expanding adoption, selective integration and emerging institutional coordination	System-wide AI maturity with embedded processes and sustained governance
Institutions at a nascent stage of AI adoption: ▪ Minimal adoption of AI-powered technologies in academic contexts and campus operations ▪ AI-relevant curriculum updates pending; AI literacy resources available but not an integral part of curriculum ▪ Limited engagement in AI-related research ▪ Gaps in data and technology systems capability in terms of adoption of foundational technologies ▪ Faculty development programs not offered ▪ AI adoption in the experimental phase, with small-scale pilots being undertaken **7 such institutions were identified through the survey.**	**Institutions with moderate AI integration across six pillars:** ▪ AI applications used across select use cases in teaching and learning and campus operations ▪ STEM curricula updated for AI, and delivered via workshops, electives and specializations ▪ Engagement in applied AI research, via research centers or small, independent teams ▪ Moderate technology readiness; gaps observed in adoption of foundational technologies ▪ Faculty development programs for over half such institutions ▪ Mixed priorities; for some HEIs AI is a strategic priority while others are still experimenting with pilots **12 such institutions were identified through the survey.**	**Institutions with strong AI integration across six pillars:** ▪ AI applications leveraged to enhance pedagogical impact and drive efficiencies in campus operations ▪ Both STEM and domain-relevant curricula updated for AI and delivered via multiple formats, including dedicated degrees ▪ Engagement in multiple areas of AI-related research, via a dedicated research center ▪ Strong data and technology systems readiness in terms of adoption of foundational technologies and investment in high-compute infrastructure ▪ Faculty development programs in place, often through partnerships ▪ AI treated as a strategic priority with dedicated resources including institutional budgets **11 such institutions were identified through the survey.**

The following pages present a breakdown of trends across each of the six pillars.

AI teaching tools evolve with institutional maturity, progressing from GenAI pilots at nascent stages to predictive analytics and adaptive platforms at scale

AI tools deployment

- *Use of AI applications among HEIs varies, with nearly a third (9 out of 30) of HEIs using no AI applications for academics whatsoever and ~40% (13)[1] using three or more. AI uptake for departmental uses[2] is slightly higher, with ~57% (17 out of 30) HEIs reporting using AI in three or more departments.*
- *Among AI applications for academics, the top use cases emerged as: Generative AI (~53%, 16), AI-powered tutoring or chatbots (~40%, 12), Automated grading and feedback systems (~37%, 11), and personalized or adaptive learning platforms (~37%, 11).*
- *Among AI applications for campus operations, departments most actively using AI tools included: IT Shared Services (~57%, 17), External Affairs (~53%, 16), Academic Affairs Office (~53%, 16).*

Nascent

Teaching and learning use cases:

Limited adoption of AI tools, including GenAI

Top use cases:

Limited data available

Evolving

Only **~1** AI tool adopted on average, in addition to GenAI

Top use cases:	#
AI chatbots/tutors	4
Personalized / Adaptive learning platforms	3

Transformative

Average of ~3-4 AI applications in use, in addition to GenAI

Top use cases:	#
Automated grading and feedback systems	8
Predictive analytics for student success and retention	7
AI chatbots/tutors	7
Personalized / Adaptive learning platforms	7

AI-powered Edtech tools used by survey respondents

LLMs and chatbots

- ChatGPT
- Claude
- Gemini
- Copilot
- Perplexity
- Khanmigo
- Socratic

Writing and research assistants

- GrammarlyGO
- Elicit
- Genei
- Iris.ai
- NotebookLM
- Notion AI

Teaching and learning aids

- Moodle (with AI plugins)
- Canvas
- WOOCLAP
- WOOFLASH
- Duolingo Max
- Quizlet AI
- TutorAI
- Geleza
- Kiwi
- ExamCram

Learning material creation assistants

- Midjourney
- Plotagon
- Sora
- Vibe
- Gamma
- Napkin AI
- Canva AI
- Roshi
- Pawtoon
- Piktochart

\# Number of HEIs that have adopted a particular use case

1. % of HEIs, followed by absolute number of HEIs
2. Six departments/functions were explicitly highlighted as options for selecting AI adoption in the FICCI-EY-P survey: academic affairs office, IT shared services, procurement, facilities management, audit/finance and human resources and external affairs

Campus operations are emerging as a key frontier for AI adoption, with usage primarily concentrated in IT shared services, external affairs and academic affairs departments

AI tools deployment

Nascent	Evolving	Transformative
AI applications in campus operations:		
Limited adoption of AI tools, including GenAI	AI applications adopted across an average of **~2 departments**[1] across campus operations	AI applications adopted across an average of **~4 departments**[1] across campus operations
Top departments using AI:	***Top departments using AI*** | ***#***	***Top departments using AI*** | ***#***
Limited data available	Academic affairs | 6	IT Shared services | 10
	IT shared services | 5	External affairs | 9
	External affairs | 5	Academic affairs | 8
		Procurement | 8

AI-powered tools used by survey respondents for campus operations

Analytics and business intelligence

- Power BI with AI Insights
- Splunk AI
- Ellucian Insights
- PredictiveHR
- Anthology AI

Cloud and AI platforms

- Microsoft Azure AI
- IBM WatsonX
- Intel AI Servers
- Intel Xeon Scalable Servers

Campus and student management

- Moveworks
- IBM TRIRIGA
- CampusNexus AI
- Ready Education
- Involvio
- StarRez
- Vaave
- Kenverse

Security and surveillance

- Cisco Meraki
- Verkada

Others

- AI Guru (placement assistant)
- DegreeSight (Transfer credit evalutation)
- Nuance Dragon (speech-to-text)
- Salesforce Einstein

1. Six departments/functions were explicitly highlighted as options for selecting AI adoption in the FICCI-EY-P survey: Academic Affairs Office (Grading/Transcript support, course registration-related queries, scheduling, etc), IT Shared Services (IT support, Systems Access and Migrations, Upgrades testing, User access management, database management, etc), Procurement (Vendor management, invoicing, etc), Facilities Management (Facilities reporting and scheduling, Access Key Management, Predictive Maintenance, Security, etc), Audit/Finance and Human Resources (Invoicing, Payroll, financial reporting, etc), External Affairs (Alumni Relations, Admissions, Marketing, Community Relations)

AI integration is strongest in STEM disciplines and is gradually expanding to domain-specific courses. Delivery spans electives, workshops and full-degree programs, with uptake varying across HEIs

Curriculum and employability

- *~71% (21) of HEIs have updated their STEM curricula for AI relevance, while ~60% (18) have updated curricula in domain-relevant courses.*
- *Delivery formats commonly leveraged for delivering AI-integrated content include: Specializations in existing programs and electives (~70%, 21), workshops and seminars (~67%, 20) and dedicated degrees (~63%, 19), with the number of formats offered by an institution showing considerable variation across the sample.*

Nascent	Evolving	Transformative
Curriculum Updates:		
Limited curriculum updation; 6 out of 7 HEIs in this group have not updated curricula for AI relevance	~67% (8) HEIs have updated STEM curricula for AI relevance, but updates to domain-relevant curricula pending	Curricula updated across both STEM and domain-relevant courses for AI relevance
Delivery formats for AI curricula:		
AI curricula delivered through ~2 delivery formats on average	AI curricula delivered through ~3 delivery formats	AI curricula delivered through ~5-6 delivery formats; most delivery formats leveraged, from full-time degrees to workshops and seminars
Top formats for AI curricula delivery:		
#	#	#
Workshops / Seminars 4	Electives 8	Dedicated degrees 11
Specializations 3	Specializations 7	Specializations 10
Electives 3	Workshops / Seminars 6	Workshops / Seminars 10
Use of digital career services platform:		
Limited	Moderate	Extensive

HEIs are advancing AI research through diverse modes and fields, supported by broad-based collaborations with industry, research organizations and public institutions

Research and innovation

- *Applied AI and fundamental AI* (e.g., algorithms, machine learning models) *emerged as the most active areas of research with ~77% (23) and ~67% (20) HEIs reporting engagement in such research.*
- *Half of the surveyed HEIs conduct AI-related research via a research center, while for another ~36% (11) research is mostly undertaken by individual faculty in small teams.*

Nascent	Evolving	Transformative
Areas of AI-related research:		
Limited engagement in AI-related research[1]; with only 3 HEIs reporting AI-related research	Most HEIs engaged in applied AI research[1]	AI-research conducted across multiple areas including fundamental, applied and interdisciplinary AI [1]
#	#	#
Fundamental AI 3	Applied AI 11	Fundamental AI 11
Applied AI 2	Fundamental AI 6	Applied AI 10
Interdisciplinary 1	Interdisciplinary 3	Interdisciplinary 8
Mode of Engagement:		
Limited data available	AI-related research undertaken both via a mix a research centers and individual faculty or small independent teams	AI-related research mostly undertaken via dedicated research centers
#	#	#
Research center 2	Individual faculty / teams 7	Research center 8
Individual faculty / teams 1	Research center 5	Individual faculty / teams 3

AI research partnerships cut across industry, academia and government

Respondents to the survey reported engaging in AI-related research partnerships across a wide spectrum of entities. These include industry partners such as automotive and electrical companies, chemicals and plastics manufacturers, and biopharma and biotechnology firms.

They also collaborate with specialist research organizations working in fields such as oceanography, geophysics, nanotechnology, genomics and drug development.

In addition, institutions highlighted partnerships with technology and education players, including edtech platforms, cybersecurity training companies, and US-based AI firms at the frontier of research.

Finally, collaborations extend to public and knowledge institutions, such as government bodies, national space agencies, academic publishers, and other HEIs, reflecting the breadth of stakeholders engaged in advancing AI research.

Fundamental AI research

- Computer Vision, NLP, ML, Mobile Robotics

Applied and interdisciplinary AI research areas

- **Applied research:** Agriculture, Engineering, Biology, Healthcare, Bioinformatics, Law, Management
- **Interdisciplinary research:** AI+Ethics, AI+Business, Trust in Human-AI Interaction

1. Engagement in AI-related research across three areas was explicitly mentioned in the survey: Fundamental AI research (e.g., algorithms, machine learning models), applied AI research (e.g., use of AI in healthcare, education, agriculture), Interdisciplinary AI research (e.g., AI + ethics, AI + policy)

Data and technology systems capability shows uneven progress, with steady adoption of high-compute technologies but persistent gaps in cloud infrastructure, data platforms and administrative digitization

Data and technology systems capability

An analysis of HEIs' technology readiness shows an interesting trend: ~70% of surveyed HEIs, across maturity levels report investing into high-compute technologies, which are necessary for advancing research and updating STEM and AI-integrated domain-specific curricula, even as investment into enabling technologies[1], necessary for AI-tool integration and enhancing campus operations shows gaps.

Nascent	Evolving	Transformative
Adoption of enabling technologies:		
Some enabling technologies adopted[1]; gaps exist across digitized administrative recordkeeping, cloud infrastructure and unified data platforms	Most enabling technologies adopted[1]; gaps exist across cloud infrastructure and unified data platforms	Strong adoption of enabling technologies[1] across the board, including establishing unified data platforms
Technologies with major gaps in adoption:		
Unified data platform: # 2 Digitization of administrative recordkeeping: # 4 Cloud infrastructure: # 4	Cloud infrastructure: # 6 Unified data platform: # 7	
AI Use in IT services departments:		
Low adoption; Only ~2 HEIs reported using AI tools in IT shared services departments	**Uneven adoption**; ~42% (5) HEIs reported using AI tools in IT shared services departments	**High adoption**; ~91% (10) HEIs reported using AI tools in IT shared services departments
Investments in high-compute technologies:		
Moderate adoption; ~4 HEIs reported investing into high-compute technologies	**Moderate adoption**; ~58% (7) HEIs reported investing into high-compute technologies	**High adoption**; ~90% (10) HEIs reported investing into high-compute technologies

1. Enabling technologies mentioned in the survey: Uninterrupted WiFi, Learning Management System (LMS), digitization of administrative recordkeeping, cloud infrastructure, unified data platform

HEIs are aligning strategy and student policies with AI adoption, but uneven faculty training underscores a critical gap in capacity building

Faculty capacity building

- *~63% (19) of surveyed HEIs offer faculty development programs for AI upskilling, but uptake differs markedly depending on institutional maturity.*
- *Time constraints (~43% ,13 HEIs) and limited access to training resources (~23%, 7 HEIs) were cited as major barriers to faculty training.*

Nascent	Evolving	Transformative
Faculty development programs:		
▪ **Low** uptake: Only 1 out of 7 HEIs reported having a faculty development program for AI upskilling	▪ **Moderate** uptake: ~67% (8) HEIs reported having a faculty development program for AI upskilling ▪ ~50% (6) HEIs reported entering into partnerships for AI training	▪ **Extremely high** uptake: All 11 HEIs reported having a faculty development program for AI upskilling ▪ ~82% (9) HEIs reported entering into partnerships for AI training

Policy and governance

- *~60% (18) of surveyed HEIs reported considering AI as a strategic priority with dedicated resources, while another ~33% (10) are exploring it as a potential opportunity and exploring small-scale pilots.*
- *~40% (12) surveyed HEIs have institution-wide formal visions or roadmaps in place, an additional ~17% (5) have department specific policies, while others are in the process of drafting plans.*
- *~87% (26) HEIs allow student use of AI with guidelines and restrictions in place, often with access to tools through institutional subscriptions, indicating that rising student adoption is driving swift institutional responses in policy and teaching practice.*

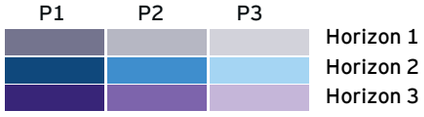
Nascent	Evolving	Transformative
Institutional stance toward AI:		
▪ Most HEIs still **experimenting** with AI; ~4 out of 7 reported undertaking pilots to explore AI as an opportunity	▪ ~50% (6) of HEIs reported treating AI as a strategic priority, while the rest perceive it as a potential opportunity and are undertaking small-scale pilots	▪ ~91% (10) HEIs reported treating AI as a strategic priority and all 11 had dedicated institutional budgets for AI
Policies on student use of AI:		
▪ **Lack of policies**; 3 out of 7 HEIs have no formal policies on student use of AI, while another 2 are still developing a policy	▪ ~75% (9) HEIs reported allowing student use of AI with clear guidelines and restrictions ▪ Additionally, ~4 indicated providing institutional support in terms of subscriptions to AI tools	▪ ~82% (9) HEIs reported allowing student use of AI with clear guidelines and restrictions ▪ Additionally, ~6 indicated providing institutional support in terms of subscriptions to AI tools

Assessing current stage maturity can help institutions benchmark progress and identify best practices along their AI adoption journey

The framework presented here is designed to serve both as a diagnostic tool, helping institutions identify their current stage of AI maturity, and as a roadmap to guide adoption toward the next stage. Priorities shift across horizons as institutional needs evolve. In Horizon 1, the focus is on responding to disruption and maintaining competitiveness; in Horizon 2, emphasis shifts to strengthening offerings and building scalable systems; and in Horizon 3, institutions concentrate on advancing research, innovation and sector-wide leadership.

	Horizon 1 **Exploring AI** Exploring use cases in pedagogy, updating curricula and policy	Horizon 2 **Institutionalizing AI** Institutionalizing adoption and building robust systems	Horizon 3 **Innovating with AI** Driving transformation at scale through innovation and startup incubation
AI tool deployment	AI tools piloted across key use cases in select courses	AI applications expanded across classroom and campus operations use cases	Robust suite of AI tools deployed for internal use, including institutional subscriptions and customized/proprietary applications
Curriculum and employability	Curricula updated across existing programs to ensure a future-ready pool of graduates	Program portfolios expanded to include AI-focused degrees, specializations and electives, and programs co-developed with industry partners	Lifelong learning ecosystems offering stackable micro-credentials and AI-enabled pathways for continuous reskilling in place
Research and innovation	Exploratory AI projects supported within existing departmental research agendas	Interdisciplinary AI labs and research centers set up with joint industry collaborations	Dedicated accelerators created to support AI start-ups through industry partnerships and venture funding
Data and technology systems capability	Core IT systems upgraded and unified data dashboards implemented	Enterprise data systems leveraged, with secure access to shared GPU/TPU capacity through cloud platforms	High-performance AI infrastructure operational, including dedicated clusters and data centers
Faculty capacity building	Faculty development programs in place for foundational AI literacy and pedagogical applications	Conferences organized to disseminate best practices in AI-enabled teaching and share emerging research	Institutional hubs developed to drive innovation in AI-enabled pedagogy and teaching practices
Policy and governance	Fair-use policies published and communicated to students, with working groups established to evaluate potential use cases	Institutional vision articulated and communicated through a comprehensive policy document and adoption roadmap	Effective governance mechanisms observed in practice; policies reviewed, updated and communicated at least bi-annually

KEY - Priority



Source: EY-P analysis

Horizon 1

Exploring AI

Exploring use cases in pedagogy, updating curricula and policy

P1

AI tools piloted across key use cases in select courses

Fair-use policies published and communicated to students, with working groups established to evaluate use cases

Curricula updated across existing programs to ensure a future-ready pool of graduates

Pilot adoption to be context specific, targeting institutional gaps through low-cost, high-impact interventions
Automated grading can ease workload where STRs are high and TAs limited; generative AI tools can be used to update fast-changing curricula; adaptive systems support learners with varied prior knowledge; and recommendation engines guide course choices in multidisciplinary settings – the point is that use cases will differ for each HEI and initial adoption must be driven by strategic, informed choices.

Establishing governance and oversight for responsible AI use
Clear, well-communicated policies set baseline expectations for AI use and assessment, especially important as students rapidly adopt LLMs and other tools for tasks like citations, which can create risks of unintentional academic integrity breaches. Working groups to be assembled to oversee pilot adoption of AI tools and evaluate effectiveness; this group needs to prioritize AI literacy even in the absence of formal institutional provision.

Immediate updates to curriculum to be prioritized
For final-year students in highly disrupted fields, this will ensure employability on graduation. Parallel adjustments can begin for younger cohorts, while thinking on program-level redesign can be initiated, although this remain a secondary, longer-term consideration better aligned with Horizon 2 transformation goals.

P2

Faculty development programs in place for foundational AI literacy and pedagogical applications

Core IT systems upgraded and creation of unified data dashboards initiated

Responsible adoption should begin with faculty AI literacy and pedagogical efficacy
This will ensure confident classroom use. Early investment in technical upskilling is equally critical to equip faculty to design and deliver domain-relevant and advanced programs, anchoring both immediate adoption and future innovation.

Campus-wide AI adoption demands robust digital infrastructure
Ensuring campus-wide, uninterrupted WiFi coverage, upgrading LMS, establishing unified data platforms, and provisioning for cloud storage is a prerequisite, ensuring interoperability and reliability. These upgrades establish the foundation for scalable AI applications in institutional operations, academic delivery and student experience.

P3

Exploratory AI projects supported within existing departmental research agendas

Strategic prioritization of AI research initiatives
Early adoption should prioritize lightweight, easy-to-adopt research productivity tools, while resource-intensive projects—such as applied AI, interdisciplinary themes and STEM innovations—should be anchored in departmental strengths. Aligning initiatives with existing capabilities enhances relevance, optimizes resource utilization, and builds credibility to scale future research directions.

KEY

- Priority 1
- Priority 2
- Priority 3

Overall investment required:

Low

Investment required

- Low
- Medium
- High

Key investment areas:

P1	P2	P3
Pilot AI tools	Upgrade core IT systems	Research funding
	Faculty development programs	

Horizon 2

Institutionalizing AI

Institutionalizing adoption and building robust systems

P1

AI applications expanded across classroom and campus operations use cases

Enterprise data systems leveraged, with secure access to shared GPU/TPU capacity through cloud platforms

Institutional vision articulated through a comprehensive policy document and adoption roadmap

Scaling AI integration in academics and campus operations

- AI application deployment in classroom use cases must build on pilots conducted in the previous stage to reshape learning models in the classroom; in this stage, faculty and students are fluent in AI tool-use and applications are seamlessly integrated into teaching and learning workflows
- AI applications for intelligent campus operations to be deployed across departments and functions such as procurement, facilities management, admissions, etc. to automate manual processes

Leveraging data infrastructure and high-performance computing for AI

- Enterprise data systems, including unified data platforms developed in H1, can enable improved data-driven decision-making at the institutional level, and enhance student experience through applications developed for campus functions such as meal planning, room booking, etc.
- Institutions requiring access to high-compute infrastructure such as GPUs and TPUs for running or training AI/ML models can enter into arrangements for cloud-based sharing as this is less capital-intensive than purchasing hardware.

Comprehensive AI policies and responsible governance

The proliferation of AI-driven applications across campus necessitates the development of a comprehensive policy document detailing appropriate-use policies across use-cases and stakeholders, data protection safeguards in place, governance frameworks and review mechanisms. This policy must be well-communicated, extensively discussed and documented to create a culture of responsible AI use.

P2

Program portfolios expanded to include AI-focused degrees, specializations, electives, and programs co-developed with industry partners

Interdisciplinary AI labs and research centers set up with joint industry collaborations

Expanding and modernizing AI-focused programs

Conduct a cross-disciplinary review of program portfolios to identify opportunities for AI-focused programs and update curricula and course offerings to respond to increasing student demand and match peer institutions' offerings. Co-developing programs with industry and establishing clear employment pathways can provide a scalable model to update offerings without stretching existing faculty capacity.

Scaling AI research through strategic collaborations

AI research must evolve beyond small-scale exploratory projects by individual teams and transition into dedicated research priorities supported through labs, research centers, industry collaborations and HEI partnerships. This approach is essential to achieve scalable impact and establish a strong position as a leading research hub

P3

Conferences organized to exchange AI teaching practices and research

Shaping best practices in AI-enabled learning

HEIs can take a leadership role among peers by organizing conferences focused on curriculum redesign, assessment, classroom instruction and other aspects of pedagogy, helping to establish best practices for a rapidly evolving AI- and tech-enabled learning model.

KEY

- Priority 1
- Priority 2
- Priority 3

Overall investment required:

High

Investment required

- Low
- Medium
- High

Key investment areas:

P1

- Increased opex for AI applications for academic and campus operations
- Investments in cloud-based compute capacity (GPU/TPU)

P2

- Establishment of research hubs

Horizon 3

P1

Dedicated accelerators with industry partnerships and venture funding linkages set up to incubate AI-driven startups

High-performance AI infrastructure operational, including dedicated clusters and data centers

P2

Institutional hubs developed to drive innovation in AI-enabled pedagogy and teaching practice

Lifelong learning ecosystems offering stackable micro-credentials and AI-enabled pathways for continuous reskilling in place

P3

Effective governance mechanisms observed in practice; policies periodically reviewed, updated and communicated

Robust suite of AI tools deployed for internal use, including institutional subscriptions and proprietary applications

Innovating with AI

Driving transformation at scale through innovation and startup incubation

Fostering AI innovation and entrepreneurship
Establishing dedicated accelerators positions HEIs as active contributors to the AI innovation ecosystem. By supporting start-ups, providing incubation resources, and connecting ventures with industry partners and investors, institutions can drive entrepreneurship, create commercial pathways for research, and reinforce their reputation as engines of economic growth alongside their educational mission.

Enabling frontier research through advanced infrastructure
For institutions aiming to lead in advanced AI domains, high-performance infrastructure is a key differentiator. Dedicated clusters and data centers provide the capacity needed for frontier research and enterprise-scale applications, supporting faculty, students and start-ups at scale. These investments position universities as innovation leaders, signaling ambition and competitiveness within the global AI research and education landscape.

Establishing institutional AI teaching hubs
Institutional hubs can bring together multi-stakeholder expertise—including faculty, instructional designers, learning scientists and edtech partners—to continuously reassess and update AI-enabled teaching models. These hubs curate evidence-based practices, provide shared resources, and standardize evaluation frameworks so successful approaches can be scaled across departments, translating research into measurable classroom impact and enhancing teaching quality at scale.

Developing lifelong learning ecosystems
Building lifelong learning ecosystems is essential for navigating a labor market defined by continuous reskilling and upskilling. By embedding stackable micro-credentials and AI-enabled learning pathways, institutions can engage not only traditional students but also working professionals and alumni. This positions universities as strategic providers of ongoing education, enhancing their relevance and influence in a skill-driven economy.

Mature AI governance and accountability
At this stage, governance mechanisms are not merely aspirational but demonstrably effective, guiding AI adoption across the institution. Policies are reviewed and updated at least biannually to reflect emerging technologies and risks, with revisions clearly communicated to faculty, staff and students. Such practices sustain accountability, reinforce trust, and ensure institutional credibility in managing AI adoption responsibly.

Seamless integration of AI across campus operations
At this stage, AI tools are fully embedded into campus operations and evolving learning models, supporting day-to-day teaching, assessment and administration. Institutional suites are anchored by robust vendor agreements, deployed in secure environments with stringent data privacy safeguards and customized to institutional workflows. This system-wide consolidation represents a shift from adoption to seamless integration.

KEY

- Priority 1
- Priority 2
- Priority 3

Overall investment required:

High

Investment required

- Low
- Medium
- High

Key investment areas:

P1

- Start-up incubators and accelerators
- High performance AI infrastructure

P3

- Creating a hub or institute for studying pedagogical practices, including those in AI

Collaborative ecosystems can unite academia, industry, government and society to drive inclusive, ethical and innovation-led AI adoption

9.2 Building collaborative ecosystems

Collaborative ecosystems are essential for building an AI-enabled future that is inclusive, ethical and innovation-driven. By uniting academia, industry, government and civil society, these ecosystems can foster shared expertise, accelerate responsible AI adoption and ensure that technological progress serves broader societal goals. Here is how various stakeholders can contribute to building a vibrant ecosystem:

Government as the enabler



- **Shaping collaborative governance:** Governments can create national AI governance frameworks that are inclusive, ethical and adaptable to technological change. These frameworks should engage multiple stakeholders, including industry and academia, and incorporate policy instruments such as regulatory sandboxes and co-regulation mechanisms. Governments can also guide HEIs in aligning AI policies with national education and innovation goals.
- **Focusing on AI-first applications:** Building collaborative ecosystems between academia, government and industry can accelerate AI-first applications in social sectors. Rather than duplicating costly foundational models, resources can support post-training open-source models for context-specific, population-scale outcomes.
- **Strengthening public–private partnerships:** Governments can foster collaborative AI ecosystems by forming PPPs that combine public oversight with private innovation to bridge resource and expertise gaps, promote ethical AI development and enhance AI literacy.
- **Leading global research efforts:** Governments have the potential to lead global efforts in AI by coordinating international research agendas, supporting AI applications for SDGs, and engaging stakeholders such as civil society and academia to guide responsible AI use.

International networks



- **Making global curricula accessible to all:** HEIs can expand their offerings globally by integrating AI-enabled adaptive learning, online tutoring and real-time translation, making education more inclusive for remote and underserved students.
- **Delivering joint programs:** HEIs from different countries can collaborate to offer joint programs in AI, delivered through virtual classrooms, joint research labs and startup bootcamps across both campuses.

Higher education as a driver of shared capacity



- **Expanding shared infrastructure:** Collaborations could enable pooling of critical resources such as cloud infrastructure, data repositories, GPUs and XR or virtual labs, creating mutual benefits for all participating institutions.

Source: ET Education, The Digital Regulation Platform, WEF, US Department of State, Allen, Library Journal, The Alan Turing Institute, The Alan Turing Institute and EY-P analysis

HEIs should collaborate with industry to co-develop curricula and advance research, while recognizing tech companies as key partners in upskilling

HEI-industry linkages



- **Co-developing curricula with industry:** HEIs should look to co-develop AI curricula and career pathways in partnership with industry to ensure alignment with evolving skill demands. This collaboration can help bridge academic learning with practical expertise, enhancing student readiness for the AI-driven workforce.
- **Fostering research and innovation:** HEI-industry partnerships foster innovation by combining academic research with real-world industrial challenges.

Partnership with EdTechs and technology companies



- **Co-creating with EdTechs:** Indian HEIs must move beyond viewing EdTechs as mere service providers and instead embrace them as strategic co-innovators. This shift enables the co-creation of AI-driven, context-sensitive solutions tailored to India's diverse educational landscape. AICTE has showcased the impact of such collaborations through initiatives like NEAT (National Educational Alliance for Technology). Under NEAT 4.0, AICTE has partnered with 22 EdTech firms to introduce 40 AI-driven tools on the NEAT portal, enhancing learning through adaptive content, skill assessments, and real-time feedback for improved learning outcomes.[100]
- **Leveraging upskilling program by technology companies:** HEIs should look to partner with technology companies such as IBM, which offer upskilling programs for faculties and students, [101] [102] enabling better alignment of educational outcomes with real-world technological needs. A prominent example being OpenAI's Learning Accelerator initiative in India, which aims to scale access to AI in education.

Successful integration of AI in higher education depends on strategic partnerships that bring together academic expertise, industry-driven innovation and supportive policy frameworks. Such collaborations ensure that AI tools are not only cutting-edge but also pedagogically sound and ethically aligned. By leveraging the strengths of each stakeholder, institutions can create future-ready collaborative ecosystems that are inclusive, adaptive and impactful.

Source: 100 Dataquest, 101 IBM SkillsBuild for students, 102 IBM SkillsBuild for educators and EY-P analysis

Enhancing learning outcomes and empowering student agency are key to ensuring that AI-driven transformation remains student-centric

9.3 Keeping students at the core of AI-driven transformation

In the rapidly evolving landscape of AI in education, it is imperative that students remain at the heart of every innovation. AI should not merely optimize systems but improve learning outcomes, empower diverse learners to overcome barriers and address individual needs. By centering students in design and deployment, institutions can ensure that technology serves as a tool for equity, engagement and lifelong growth.



Improved learning outcomes

- **Adopt adaptive learning systems:** HEIs should adopt AI-powered adaptive learning platforms that personalize learning paths based on individual progress, helping students overcome specific challenges through dynamic assessments and timely interventions.
- **Support mental health and well-being:** Beyond academics, AI tools for mental health and well-being can offer proactive support to students in need, fostering a more holistic learning environment.
- **Integrate AI into the curriculum:** Integrating AI into the curriculum across disciplines through modules on AI fundamentals, ethics, bias and data privacy will prepare students to engage with technology responsibly and critically.
- **Incorporate student feedback:** Finally, AI can continuously analyze student feedback to refine pedagogy and teaching methods, ensuring that pedagogy evolution is guided by student needs.
- **Encourage critical thinking:** HEIs can support students in developing critical thinking and problem-solving skills using AI-powered virtual tutoring and chatbots that employ the *Socratic* method, encouraging students to think deeply about problems and challenge ideas, rather than providing direct answers to questions.



Improved student agency

- **Leverage predictive analytics for academic counseling:** To empower students in an AI-driven academic landscape, HEIs should leverage predictive analytics to recommend courses aligned with each student's academic performance, interests and career aspirations. These insights can guide learners toward relevant programs while also ensuring high-demand job roles.
- **Scale access to support services through AI-driven systems:** By analyzing global education trends and individual student data, AI can recommend optimal programs, scholarships and career trajectories, making higher education more personalized and globally connected. For example, The University Network's Scholarship Bot is an AI-powered assistant that helps students discover scholarships tailored to their academic profiles and personal needs.[103]

Source: 103 TUN , TopUniversities, AI.business, UNIRANKS, Times Higher Education, and EY-P analysis

Overcoming linguistic, geographical and socio-economic barriers is essential to ensuring that students remain at the center of AI-driven educational transformation



Overcoming barriers

- **Offer multilingual support:** HEIs should look to adopt AI-powered translation tools and offer real-time multilingual support, enabling students from diverse linguistic backgrounds to engage with educational content seamlessly.
- **Eliminate geographic barriers:** HEIs can look to offer virtual exchange programs, supported by AI, to allow students to participate in cross-border collaborations and cultural dialogues without the need for physical travel, thereby eliminating geographical barriers.
- **Support students with diverse learning needs:** AI systems can detect early signs of academic hurdles and recommend tailored interventions. HEIs can turn toward assistive technologies such as text-to-speech, spelling correction, and adaptive reading pathways to empower students with diverse learning needs to thrive.
- **Bridge the socio-economic divide:** AI-driven platforms can enable HEIs to deliver personalized learning experiences at scale and at low cost, helping narrow socio-economic disparities.
- **Provide guidance and mentorship:** AI-enabled mentorship platforms can enable HEIs to connect students with diverse role models across the globe, fostering aspiration and broadening perspectives.
- **Support under-represented student groups:** Predictive analytics can also identify patterns of attrition, especially among female students and trigger targeted interventions by HEIs.

HEIs must place students at the center of all decisions, designing curricula and policies that enhance learning outcomes, strengthen student agency, and remove barriers such as language, location and socio-economic constraints.

Source: EY-P analysis

Government can catalyze AI adoption in education by providing actionable teaching frameworks, ethical use principles and sector-specific data protection rules

9.4 Shaping a national vision for AI in higher education

As AI continues to transform higher education, the government must play a pivotal role in shaping a national vision that guides its responsible and effective integration. This includes establishing comprehensive frameworks for teaching and ethical AI use, ensuring data privacy and security, and promoting equitable access to AI-powered learning. Strategic investments in core infrastructure, faculty development and research are essential to support innovation and adoption. By fostering a collaborative ecosystem, the government can help co-develop tools and practices that enhance learning outcomes and institutional capabilities.

Focus area	Recommendation
 **Teaching and learning applications**	▸ Guidelines should provide practice-oriented direction for educators on embedding AI in teaching and assessment and on engaging with students and parents. They must move beyond tool descriptions to address the implementation-level concerns of teachers and learners. ▸ Governance frameworks must guide the responsible use of AI in education, addressing concerns such as academic integrity, algorithmic bias, transparency, and explainability in student-facing tools.

The role of the government

- **Develop national guidance frameworks** (through AICTE, UGC) that provide recommendations on AI in pedagogy, designed in consultation with educators at different levels (K-12 and higher education). These frameworks should also articulate principles for responsible and ethical use, ensuring that AI-enabled pedagogy upholds academic integrity.
- **Establish a national advisory body on AI in education and pedagogy** that convenes educators, technologists, ethicists, and child development experts to continuously study AI's classroom impact and update teaching standards. This body may issue evolving guidelines, best practices and reference materials — ensuring they stay current with fast-changing technologies.

 **Privacy and security**	▸ Safeguarding student and institutional data requires frameworks that clarify application of the DPDP Act in education, set rules for anonymization and data sharing and establish oversight mechanisms.

The role of the government

- **Issue sector-specific data protection guidelines** for education, clarifying how the DPDP Act applies to higher education institutions and EdTech partners.
- **Establish protocols for data anonymization, storage and sharing**, ensuring interoperability and security across AI-enabled platforms used by HEIs.
- **Integrate privacy and security compliance requirements** into the accreditation and audit frameworks of UGC, AICTE and NAAC.

AI adoption in education must advance equitably, supported by multilingual tools and targeted funding, and sustained by continuous faculty upskilling

Focus area	Recommendation
Equitable access to AI-based curricula and education	▸ Ensuring equitable access to AI in education requires systemic mechanisms that enable the integration of AI-based curricula and pedagogy across diverse institutions, disciplines and student demographics. Policy interventions must focus on addressing structural disparities so that opportunities do not remain concentrated within well-resourced HEIs.

The role of the government

- **Provide targeted funding and subsidies** to state universities and under-resourced institutions to build capacity for AI adoption in teaching, research and curriculum development.
- **Support the development of multilingual and accessible AI tools**, making AI curricula usable across India's linguistic and socio-economic spectrum.
- **Track disparities through a national adoption dashboard**, enabling targeted interventions where access gaps persist.

Focus area	Recommendation
Faculty development	▸ Faculty development requires structured and continuous programs that build skills needed to integrate AI into teaching and research. Training should go beyond one-off workshops to include sustained professional development, updated content on emerging technologies, and opportunities for faculty to innovate in their pedagogical practices.

The role of the government

- **Leverage national digital learning portals** such as Karmayogi Bharat[104] to deliver and mandate structured AI upskilling programs for faculty, ensuring training content in these programs is current and relevant and reflects fast-changing AI capabilities.
- **Establish regional training hubs** (through IITs, IIITs and central universities) to provide blended learning opportunities, combining online foundational courses with in-person advanced training.

Source: 104 iGot Karmayogi and EY-P analysis

Driving AI adoption in education requires long-term investment in research, alongside robust infrastructure for compute, software and data

Focus area	Recommendation
Research	Advancing AI in education requires providing support to a wide network of institutions. Centres of Excellence are an important first step, but their reach must extend to support faculty and researchers from diverse HEIs in contributing to global knowledge on AI-enabled education.
The role of the government	▪ **Expand funding beyond flagship Centres of Excellence,** creating competitive grant schemes that enable researchers in state public universities, colleges, and private HEIs to contribute to AI-in-education research. ▪ **Support interdisciplinary research programs** that bring together computer science, education, psychology, linguistics and domain-specific disciplines to design and test AI-enabled teaching and learning tools.
Infrastructure investment	Effective AI integration in higher education requires investment in core infrastructure, including compute resources, licensed software, high-speed internet and datasets, along with shared infrastructure models that give smaller HEIs meaningful access.
The role of the government	▪ **Sustain and expand the National Supercomputing Mission** to make high-performance computing resources (GPUs, cloud services) accessible to a wider range of HEIs. ▪ **Negotiate national-level licensing agreements** with providers of widely used AI software, lowering costs for institutions that cannot afford enterprise tools individually. ▪ Sustain efforts to **create and disseminate anonymized, high-quality open datasets.**
Ecosystem development	An AI-in-education ecosystem should be anchored in platforms for experimentation and innovation, enabling HEIs, industry and startups to co-develop AI tools and scale them from pilots to wider adoption.
The role of the government	▪ **Organize innovation challenges and hackathons** that bring together students, faculty, startups and industry to co-develop solutions for Indian higher education. ▪ **Create regulatory sandboxes** where institutions and developers can test AI tools in controlled environments to ensure safety and scalability. ▪ **Strengthen international partnerships** through joint research programs, bilateral or multilateral agreements and funded exchanges to enable Indian ecosystem players to co-create and scale globally.

From early pilots to innovation leadership, sustained progress in AI adoption depends on student-centric design, faculty and industry collaboration and strong governance

Conclusion

AI adoption in Indian higher education is progressing unevenly, with institutions ranging from early pilots to system-wide integration. The diagnostic tool and adoption roadmap presented in this chapter illustrate that achieving maturity requires a phased approach—starting with low-cost, high-impact pilots, progressing to institutionalized systems and governance, and ultimately advancing toward innovation leadership and lifelong learning ecosystems.

A thriving AI-enabled future in education depends on a strong collaborative ecosystem, with the government serving as a key facilitator. Strengthening global networks, enabling infrastructure sharing, and forging strategic partnerships with industry, EdTechs, and technology firms are critical to building an effective collaborative environment.

Students must remain central to this transformation. AI should enhance learning outcomes, expand student agency, and bridge linguistic, geographic and socio-economic divides, ensuring technology acts as an enabler of equity and engagement rather than a driver of exclusion.

To harness AI's potential in higher education, the government must lead with a clear national vision. This includes establishing ethical teaching frameworks, ensuring data privacy and promoting equitable access. Strategic investments in infrastructure, research and faculty development will be essential to realizing this vision.

A phased, student-centric and collaborative strategy—anchored in strong policy, robust infrastructure and ecosystem support—offers the clearest pathway for institutions to harness AI responsibly and shape the future of learning.



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