



From threat to ally: Generative AI's evolution in higher education

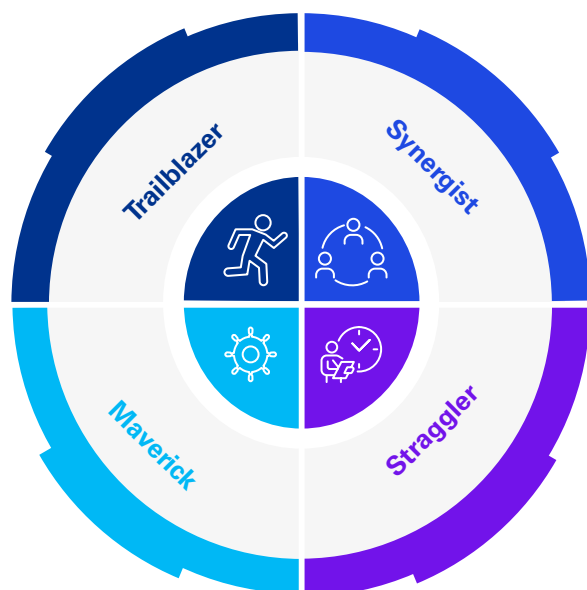


Initially perceived as a potential threat to academic integrity and critical thinking, generative artificial intelligence (GenAI) is now valued for its transformative potential. Higher education institutions are adopting GenAI technologies to enhance educational outcomes, streamline operations, and foster innovation. Here we explore how various institutions approach the evolution towards embracing GenAI as an ally.

Initial perspective on GenAI

Colleges and universities initially approached GenAI with caution, fearing it could lead to academic dishonesty and undermine intellectual rigor. They were concerned that GenAI's humanlike text generation could encourage students to complete assignments dishonestly and bypass traditional learning, weakening their critical thinking and reasoning skills. Essentially, institutions wondered if this technology was a threat to their mission of educating students.

Despite these valid concerns, institutions recognized that GenAI could be a powerful tool to fulfill their mission, particularly through automation, personalized learning, and operational efficiencies. The key challenge was to balance harnessing GenAI's benefits while addressing its potential risks.



Evolving perspectives and adoption approaches

In recent days, the perception about GenAI at colleges and universities has evolved. They started forming an allyship with GenAI, leading to varied approaches in integrating GenAI into their operations. A range of factors drives the shift from initial apprehension to strategic AI adoption. Drawing on extensive interactions with academic institutions, KPMG has identified four categories based on learning centers' level of engagement and resource allocation:

1. Trailblazers: These forward-thinking institutions are at the forefront of GenAI adoption, making substantial investments and spearheading innovative applications. They cultivate dynamic ecosystems through strategic partnerships. Trailblazers continually explore groundbreaking technologies and redefine what AI can do for academia.

2. Synergists: These institutions focus on collaboration with peer institutions, develop collective strategies, and share investments to realize value for everyone. Synergists build networks and foster environments that enhance innovation and resource sharing across the academic community.

3. Mavericks: These colleges and universities prioritize independent experimentation, developing tailored GenAI solutions to address their specific needs. Mavericks might develop custom AI tools to enhance academic experiences through data analysis and personalized learning pathways. Mavericks promote continuous improvement and innovation in their educational offerings by adapting GenAI technologies to their unique institutional challenges.

4. Stragglers: Cautious and often limited by resources or outdated systems, these schools face challenges transitioning to modern AI tools. Their passive learning and minimal engagement lead to slow adoption and missed innovation opportunities, relying heavily on traditional methods and struggling to keep pace with technological advancements, limiting growth and transformation.

Three ways institutions are investing in GenAI

Institutions are adopting various strategies to leverage GenAI’s transformative potential and enhance their educational offerings. Here are three primary areas that institutions are investing with respect to GenAI:

1 | Advancing the technology through research

Institutions are investing in AI research and infrastructure aimed at advancing GenAI technologies and applications.

2 | Delivering institutional excellence

Institutions are adopting AI for their internal administrative and academic purposes to improve efficiency and effectiveness. This includes using AI for personalized learning, enrollment effectiveness, curriculum management, transfer articulation, etc.

3 | Leading the talent agenda

Institutions understand their role in building the workforce for the future and the need for that workforce to possess AI skills. Academicians have been creating new courses and certification programs and embedding AI in their courses to meet the future workforce demands.

By investing in research, institutional excellence, and talent development, higher education institutions are contributing to the adoption and evolution of GenAI.

Applications of GenAI in higher education

GenAI is transforming various facets of the educational experience. Through these applications, academic institutions are enhancing educational processes and readying students for a future deeply influenced by AI technology.

1

Enhancing course curriculum and personalized learning: Institutions are now utilizing GenAI to create personalized learning experiences, streamline grading, and provide timely interventions. Some universities have developed customized Generative Pre-trained Transformers for students, faculty, and staff to engage in personalized tutoring, interactive study guides, and research assistance. Faculty can create interactive and course-specific AI tools, enhancing teaching and curriculum development.

2

Optimizing academic and administrative processes: Institutions are testing AI learning tools to further integrate the technology into their curricula. For example, Claude, a new Anthropic tool, encourages students to provide proof for their answers, fostering deeper engagement with the materials. Claude’s functionalities include creative engagement, advanced reasoning, visual analysis, and code generation, allowing students to summarize complex information and generate personalized study plans. Some universities are using Claude to evaluate transfer syllabi, significantly improving the efficiency of this traditionally time-intensive process.

3

Supporting campus infrastructure and services: Institutions are also improving campus infrastructure and services using GenAI. Some have implemented smart campus infrastructure projects, where AI manages energy consumption, optimizing building performance and reducing operational costs. Other universities are utilizing AI to enhance dining services, offering checkout-free grocery options and personalized food recommendations.

4

Advancing career services: Universities are leveraging AI to enhance career services, providing students with tailored job recommendations and résumé building tools. For instance, AI-driven platforms teach students how to harness AI in their job search and professional development.

5


Innovating information technology (IT) modernization: GenAI is leveraged for modernizing their IT infrastructure, migrating legacy systems to cloud platforms to enhance agility and innovation, often collaborating with major tech companies for support. They are also upgrading to high-performance computing systems, which significantly accelerate research projects and improve overall data management capabilities.

GenAI's impact on institutional roles

Integrating GenAI into your learning requires collaboration among key stakeholders for successful adoption, strategy alignment, policy development, and governance. Though each role has a distinct perspective, their collective efforts are essential to fully harness GenAI's potential.



Technologists lay the groundwork for GenAI integration by focusing on infrastructure, vendor selection, and implementation logistics. They streamline IT operations and provide the necessary tech support, aligning the institution's capabilities with GenAI adoption goals.



Academicians focus on ethical applications, academic research, and curriculum evolution. They integrate AI literacy into programs, addressing plagiarism detection and ethical AI use to uphold academic integrity. Their efforts advance academic programs and research to include the latest GenAI developments.



Administrators leverage GenAI to enhance operational efficiencies and achieve institutional outcomes. Their role involves improving administrative processes, transforming the workforce, and optimizing student services. Additionally, they engage alumni and donors through targeted initiatives supported by GenAI.

Together, these stakeholders can align the institution's AI strategies, define and update policies and procedures, and support governance and synergies. These roles create a cohesive strategy that harnesses GenAI's potential to enhance educational outcomes, streamline operations, and foster innovation that remains informed by technological advances that are ever changing.

A path forward: Considerations for institutions

To facilitate your organization's transition from perceiving GenAI as a threat to leveraging it as a strategic asset, KPMG recommends a structured four-step approach:

1

Building a sound policy foundation

Institutions should develop and implement thorough GenAI policies. Clear guidelines are essential to promote ethical usage and mitigate risks. Institutions must define where and how GenAI should be used, ethical parameters, and methods to evaluate data sources and potential biases.

2

Adopting trusted AI principles

Implement a robust framework based on fairness, transparency, explainability, accountability, data integrity, reliability, security, privacy, safety, and sustainability. These principles support the design, build, and deployment of GenAI systems in a trustworthy and ethical manner, which is crucial for mitigating risks associated with GenAI.

3

Reexamining target operating models

Adapt operating models to integrate GenAI. This includes revising risk and governance mechanisms, workforce strategies, performance measures, staff training, and budget allocations to support GenAI adoption. Institutions must align their technological strategies with broader institutional goals and missions.

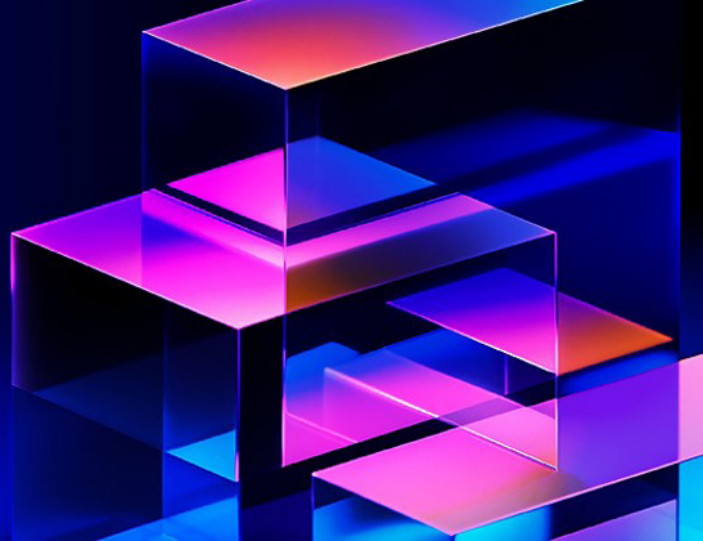
4

Leveraging the culture of transparency

Foster a collaborative environment where insights and developments related to GenAI are shared within and across institutions. Higher education institutions inherently possess a culture of collegiality and transparency, which can be leveraged to enhance collective learning and innovation.

How can KPMG support your AI journey?

KPMG Advisory blends the knowledge and experience of technologists and domain specialists to understand your unique goals and challenges, providing tailored strategies and technologies for desired outcomes. Our AI team can implement solutions effectively, while our Trusted AI framework helps establish policies and an operating model to enhance GenAI adoption. A connected campus enables the integration of AI for enhanced institutional achievements, and our workforce transformation team collaborates with departments such as human resources, finance, and IT to streamline processes and transform operations. In summary, KPMG Advisory can be your trusted consulting firm for navigating the complexities of AI adoption and beyond.



Why KPMG

KPMG brings the experience, resources, and commitment needed to help colleges and universities tackle today's most complex challenges. With over 500 education-focused professionals—including former university leaders and innovators—we've partnered with more than 1,450 institutions globally, offering deep experience across academic operations, student services, and technology transformation.

Our multidisciplinary teams leverage advanced capabilities in AI, cybersecurity, cloud, and data analytics to drive sustainable growth and innovation. From compliance and risk management to financial reporting and tax strategy, KPMG provides integrated, cross-functional support tailored to higher education.

We offer purpose-built solutions like KPMG Powered Enterprise for Higher Education, helping institutions improve student services, streamline operations, and enhance outcomes. Our long-standing commitment to higher education is reflected in our values, our relationships, and our investments in leadership development and lifelong learning initiatives.

Contact us



Quimby Kaizer
Education Advisory Sector Leader
Principal
KPMG LLP
T: 571-544-5224
E: qkaizer@kpmg.com



Saravanan Subbarayan
Education Technology Leader
Managing Director
KPMG LLP
T: 410-949-8500
E: ssubbarayan@kpmg.com

Some or all of the services described herein may not be permissible for KPMG audit clients and their affiliates or related entities.

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation.

© 2025 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved. The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization. USCS33272-1A

Learn about us:



kpmg.com