COMPLETE COLLEGE AMERICA

Generating College Completion

Charting a Path to Institutional AI Adoption for Student Success in Higher Education

January 2025

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About Complete College America

Complete College America (CCA) builds movements for scaled change and transforms institutions. Specifically, CCA drives systemic change that leads to better college completion rates; more equitable outcomes; and greater economic and social mobility, especially for historically excluded students. CCA operates at the federal, state, and institutional levels and works with its national network of forward-thinking state and higher education leaders. Since its founding in 2009, CCA and its network have introduced bold initiatives that help states and institutions implement data-driven policies, student-centered perspectives, and equity-driven practices.

I. The Context

Why Focus on AI for Student Success and College Completion?

With its increasing capacity to learn and solve problems, artificial intelligence (AI) is emerging as a transformative force in higher education. The use of generative AI—in tools such as ChatGPT, Claude, Gemini, and Copilot—is exhibiting particularly rapid growth.

AI's potential to enhance student success and improve college completion rates is significant and multifaceted, with AI offering benefits such as:

1. **Personalized learning**: AI can tailor educational experiences to individual student needs, learning styles, and pace, potentially increasing engagement and enhancing academic performance.
2. **Comprehensive support**: AI-powered tools can provide 24/7 academic support, from answering questions to offering study assistance, filling gaps in traditional support structures.
3. **Early intervention**: Predictive analytics powered by AI can identify students who are at risk of falling behind or dropping out, allowing for timely interventions.
4. **Streamlined administrative processes**: AI can automate many administrative tasks, freeing up resources for direct student support and facilitating smoother student journeys from enrollment to graduation.
5. **Enhanced accessibility**: Tools that use AI can improve access to education for students with disabilities, offering features like real-time captioning or text-to-speech services.
6. **Workforce readiness**: As AI becomes increasingly prevalent in the workplace, exposure to AI tools in higher education prepares students for their future careers.

To fully harness AI's potential for improving student outcomes, however, it's imperative to ensure that all colleges can access and adopt it. Unlike sectors that are rapidly advancing in AI innovation—such as healthcare, banking, and retail—higher education and its institutions risk falling behind. This lag could exacerbate existing inequities in higher education.

As we move forward, all institutions, regardless of their current resources or student

demographics, must have the opportunity to leverage AI for student success. This progress will require ongoing advocacy through actions such as:

- Equitable funding
- Strategic investments in digital learning infrastructure
- Collaborative efforts to share best practices in AI adoption

As CCA's Theory of Change notes, advancing AI for student success at the institutional and national levels requires shifts in policy, perspective, and practice.

By prioritizing AI adoption and innovation in higher education, we can create more inclusive, effective, and future-ready learning environments. In these spaces, we can accomplish the critical goals of:

- Boosting student success
- Increasing completion rates
- Better preparing graduates for an AI-driven world

How to Use This Brief

In Complete College America's recent playbook, *Attainment with AI: Making a Real Difference in College Completion with Artificial Intelligence*, we outlined over 170 practical use cases for AI in higher education. The compendium was one of the first resources for higher education leaders and practitioners on the use of generative AI.

Our hope was to propel institutional leaders' thinking toward applications and uses of AI that would make a meaningful impact on student outcomes, rather than promote adoption of AI for the sake of implementing new technology.

Since we released our initial playbook and position paper, in November 2023, we have observed the narrative around AI in higher education shifting in a positive direction. Most colleges are now moving toward a more strategic approach, taking measured steps to explore AI's potential while carefully navigating its challenges—setting the stage for a transformative era in higher education.

In our 2023 playbook, we analyzed the practical use cases of AI against the dimensions of **Prioritization** and **Operational Area**. To help simplify this complex topic, we organized our AI use cases into three operational areas of higher education:

1. **Organizational Effectiveness**
2. **Teaching and Learning**
3. **Student Experience**

We also proposed a three-step framework for applications of AI for student success:

- **Do Now:** Immediate steps that institutions can take to begin their journey with AI. We included what is, at minimum, the first step to begin work on these tasks throughout the playbook.
- **Do Soon:** Intermediate steps that build on initial efforts and move institutions closer to full AI integration. Institutions should adopt these practices only if they have access to protected and secure AI platforms.
- **Work Toward:** Long-term goals for institutions that have implemented initial and intermediate steps and are ready to fully integrate advanced AI practices into their operations, teaching, and student engagement strategies.

We believed these three steps would help readers identify and prioritize the opportunities for productivity, differentiation, and disruption that generative AI offers. We hoped to enable institutions to strategically harness AI's potential and drive meaningful impact.

Colleges and universities may still be in the early stages of the Do Now phase, but understanding the multiple dimensions of complexity involved in decision-making is crucial for effectively navigating the moment.

In *Generating College Completion*, we introduce two new dimensions through which to understand the use of generative AI:

- **AI Core Competencies**: The requisite skills, knowledge, and attitudes for successfully integrating AI within institutions. Schools need to cultivate these competencies to effectively adopt and integrate AI into their operations, teaching, and student engagement strategies.
- **AI Adoption Stage**: Institutions may be in one of the following stages of adoption:
  - **Observing**: Watching AI developments but not using the technology yet. Some of these institutions may also take an active anti-AI stance, taking steps to block its use
  - **Exploring**: Testing AI tools and features to see how they fit into their current systems
  - **Innovating**: At the forefront in creating and using the latest AI technologies

As college leaders review this new brief, we encourage them not only to determine whether they want to become innovators, explorers, or observers in AI adoption, but also to consider what they hope to achieve through this investment.

Leaders should articulate their goals for investment in generative AI. For example, is the focus on differentiating the institutional experience from competitors by dramatically overhauling the student experience? Is the focus on institutional productivity by rapidly increasing efficiency in back offices?

Stating the rationale and purpose of investments upfront is essential to gain buy-in, support, and strategic adoption at colleges and universities.

II. Introduction

Colleges across the country are experimenting with AI. Their use of AI might reflect one of the following scenarios:

- Building their own AI tools
- Procuring off-the-shelf solutions
- Proceeding with measured caution due to risk management or financial constraints

An increasing number of vendors are reaching out to college administrators. These companies frequently offer chatbots, AI detection tools, or partnerships with companies like OpenAI.

Before engaging with any specific vendor, however, it's crucial for institutions to determine their overall AI approach and strategy. This thoughtful planning can help administrators avoid being swayed by the first vendor that approaches them and instead make decisions that align with their institutional goals and needs.

Recent studies reveal some key statistics that help set the stage for an exploration of faculty and student use of AI:

- **89%** of higher education institutions surveyed are already developing AI strategies, and **59%** of those institutions list "concern about falling behind" as a primary motivator.[1]
- **59%** of students are regular users of generative AI, compared with about **40%** of administrators and **36%** of instructors.[2]

As they navigate competing priorities, colleges and universities have focused their initial AI investments mainly on training and policy development to keep pace with rapid innovation. In fact, **58%** of higher education leaders have indicated that generative AI development has affected their policies.[3]

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[1] Jenay Robert, *2024 EDUCAUSE AI Landscape Study* (EDUCAUSE). https://www.educause.edu/ecar/research-publications/2024/2024-educause-ai-landscape-study/introduction-and-key-findings

[2] Tyton Partners, *Time for Class 2024* (Tyton Partners). https://tytonpartners.com/time-for-class-2024/

[3] Ibid.

But even well-developed policies[4] only create the framework through which an institution may adopt AI. They do not actually address the decisions required and the resource implications of AI adoption. Focusing only on training and policy development has left institutions with a shortfall in managing critical needs related to AI adoption, such as:

- Technical infrastructure
- Data management strategies
- Comprehensive change

The function and form of an institution's AI adoption and strategy beyond professional development and training can vary greatly. Factors such as costs, capacity, goals, and even attitude and culture can play a significant role in how an institution adopts AI.

An analysis of several AI readiness reports reveals six essential core competencies that encompass the requisite skills, knowledge, and attitudes for successfully integrating AI within institutions.[5-8]

[4] For a deeper dive into institutional AI policies, review the Western Interstate Commission for Higher Education Cooperative for Educational Technologies (WCET) AI policies and practices resource. https://wcet.wiche.edu/practice/artificial-intelligence/

[5] EDUCAUSE and AWS, *Higher Education Generative AI Readiness Assessment* (EDUCAUSE, 2024). https://library.educause.edu/resources/2024/4/higher-education-generative-ai-readiness-assessment

[6] Informatica, *CDO Insights 2024: Charting a Course to AI Readiness* (Informatica, 2024). https://www.informatica.com/lp/cdo-insights-2024-charting-a-course-to-ai-readiness_4656.html

[7] Cisco, *AI Readiness Index: Intentions Outpacing Abilities* (Cisco, 2024). https://www.cisco.com/c/m/en_us/solutions/ai/readiness-index.html

[8] AI Singapore, *AI Readiness Index (AIRI)* (AI Singapore, 2024). https://aisingapore.org/innovation/airi/

III. Investing in Your Institutional AI Competencies

As institutions progress from establishing baseline requirements to actively engaging with AI technologies, they must simultaneously cultivate a set of core competencies to effectively integrate AI into their operation. The following chart presents six key areas of AI competency. Each plays a vital role in shaping an institution's ability to leverage AI for student success and operational excellence.

Competency	Potential Investments
Mission Alignment Ensuring AI initiatives support the institution's mission and strategic plan and possess clear, effective, and measurable outcomes	▪ Leadership development ▪ Data on student perspective regarding AI ▪ Strategy to align AI investments with institutional mission and goals
Resource Management Understanding, forecasting, and managing the full spectrum of short- and long-term costs associated with AI adoption	▪ Charge-back infrastructure ▪ Purchase process for AI vendors ▪ Vetting process for procurement
Responsible Use Establishing and enforcing AI policies, frameworks, and/or guidelines that address transparency, bias, fairness, and compliance with regulatory requirements	▪ Policy development ▪ Training plans ▪ Monitoring for security, responsible use, and compliance ▪ Data governance
Data and Tech Infrastructure Developing and managing data infrastructure to support AI applications, ensuring data security, scalability, and accessibility	▪ Servers ▪ Graphics Processing Units (GPUs) ▪ Licensing fees ▪ Partnership costs ▪ Maintenance and update charges ▪ Implementation support ▪ Integration with current tech stack ▪ Data cleaning and preprocessing tools ▪ Data privacy and security solutions

Talent Development  Upskilling faculty and staff on AI through training and development opportunities and promoting interdisciplinary collaboration and lifelong learning	▪ Employee training ▪ Budget for competitive wages for sought-after technical staff such as data scientists, AI specialists, information technology (IT) professionals, and project managers
Change Management  Fostering a supportive institutional culture that embraces innovation, agility, and adaptation	▪ Faculty release time ▪ Employee stipends ▪ Communication resources ▪ Project planning capacity and tools

By understanding and investing in both the prerequisites and these core competencies, institutions can create a comprehensive framework for AI adoption that accomplishes the important goals of:

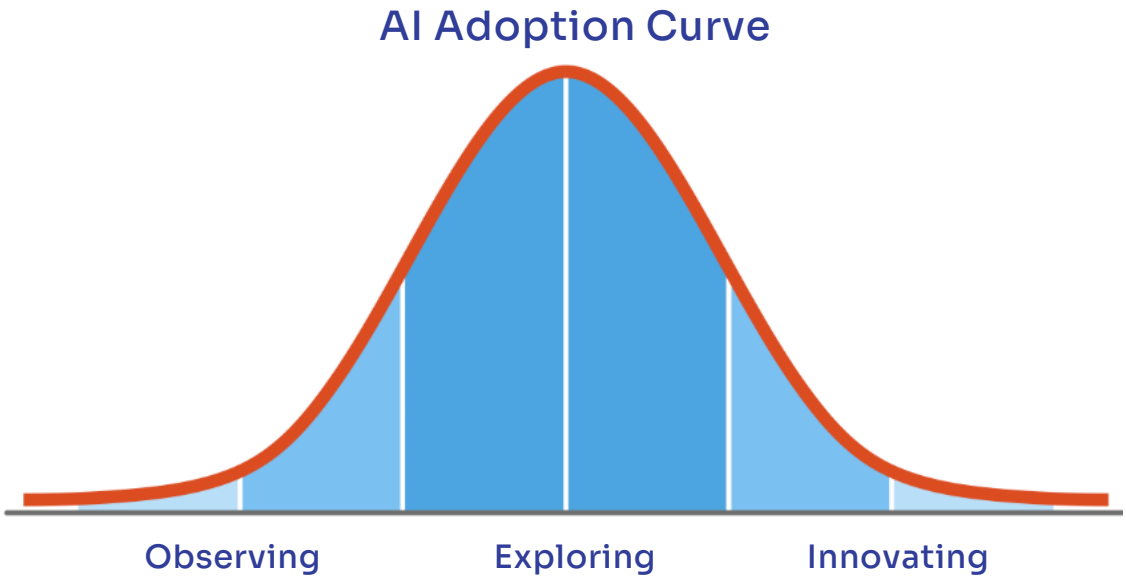
- Aligning with their mission
- Supporting their stakeholders
- Driving meaningful outcomes

Without intentional focus on developing the resources, skills, knowledge, and behaviors aligned with AI adoption core competencies, institutions may find that there is an imbalance between competencies. This discrepancy may create gaps that can hinder, complicate, or undermine progress.

This paper outlines seven potential institutional AI adoption scenarios. These scenarios are not mutually exclusive. One department within an institution may be in a more innovative stage of AI adoption, while another is still in the exploratory phase. Colleges and universities also may opt for a hybrid approach, integrating elements from each scenario outlined below.

Institutions can progress through stages of adoption and adapt their strategies accordingly.

Stages of AI Adoption



- **Observing**: Institutions that are watching AI developments but aren't using the technology yet. Some institutions that are observing may also take an active anti-AI stance, taking steps to block its use.
- **Exploring**: Institutions that are testing AI tools and features to see how they fit into their current systems
- **Innovating**: Institutions that are at the forefront, creating and using the latest AI technologies

Adoption Stage	Description	Example
Observing	Take a Wait-and-See Approach	Institution is not anti-AI but is not actively developing a strategy. These institutions are not necessarily opposed to generative AI but are either too busy to consider adopting it or wish to avoid risk-taking.
	Engage in Anti-AI Efforts	Institution bans AI and may purchase AI detection products.
Exploring	Adopt AI EdTech Applications	Institution purchases an AI edtech product.
	Use New AI Features as Add-On to EdTech Products	Institution's chatbot adds generative AI features.
	Provide Decentralized Access to AI Tools	Institution purchases and distributes a set number of accounts, through products such as ChatGPT Pro, to users as needed.
Innovating	Build Your Own AI On Site	Institution builds its own AI on its premises.
	Partner with an AI Vendor	Institution partners with an AI vendor such as OpenAI or Claude.

Generating College Completion presents practical scenarios throughout the stages of AI adoption. It demonstrates how the core AI competencies apply on campuses.

It's crucial to note that AI adoption lacks a one-size-fits-all approach, however. The goal of this paper is to provide a clearer understanding of the skills, knowledge, and behaviors essential for AI adoption. It explores hypothetical examples and existing case studies that showcase benefits, drawbacks, and other critical considerations.

The hope is that higher education leaders use this resource as a reference point to navigate their path forward. It can inform actions such as:

- Raising awareness about the competencies needed for AI adoption
- Advocating for support, expertise, and resources from vendors
- Establishing partnerships with funders and private partners
- Pursuing increases to operating budgets and capital appropriations from policymakers

At the end of this report is a list of resources that may further aid in institutional decision-making.

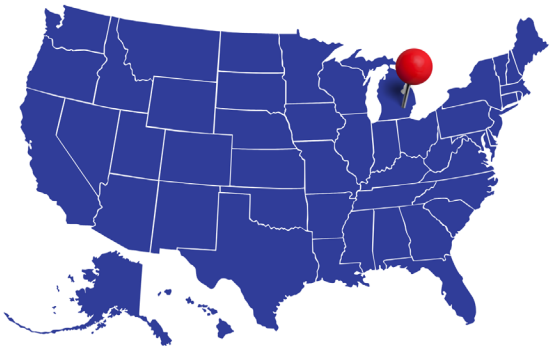
As Complete College America continues to advance and advocate for policies and support around generative AI for college completion, we can help your institution expand its own efforts.

A Note About This Resource

The details about costs, features, and types of AI technologies are a moving target. Much of the information about the pricing of these tools is also difficult to determine, as for-profit corporations often do not publish their pricing. On May 13, 2024, OpenAI announced the release of its newest model, ChatGPT-4o, to be available for free to all users.

As you reference this document, we urge you to consider it a guide for exploring the spectrum of AI adoption rather than a set of rules.

AI on Campus: Build Your Own AI On Site
University of Michigan



Carnegie Classification: Doctoral Universities: Highest Research Activity (R1)

Fall 2023 Enrollment: >50,000 students

Research Expenditures: $1.86B annually

In summer 2023, the University of Michigan (U-M) convened its own Generative Artificial Intelligence Advisory (GAIA) Committee to determine its next steps in the use of generative AI.

Robert Jones, U-M Information and Technology Services (ITS) executive director of emerging technology and support services, says the goal was to "lead the way in demonstrating fair, responsible, and forward-thinking access to this technology for our community."

Based on the committee's recommendations, the university's technology services collaborated with Microsoft to create three unique AI services:

1. **U-M GPT** provides free access to leading generative AI models like ChatGPT and U-M-hosted open-source language models. It works seamlessly with assistive technology, ensuring equitable access.
2. **U-M Maizey** allows faculty and students to create customized AI tools using their own datasets.
3. **The U-M GPT Toolkit**, designed for advanced AI designers, allows for the secure construction, training, and scaling of AI models.

Building your own AI on site requires a significant initial investment but offers the highest degree of control and customization, so it could lead to long-term savings and added value. Below are some potential trade-offs to consider with this AI adoption strategy:

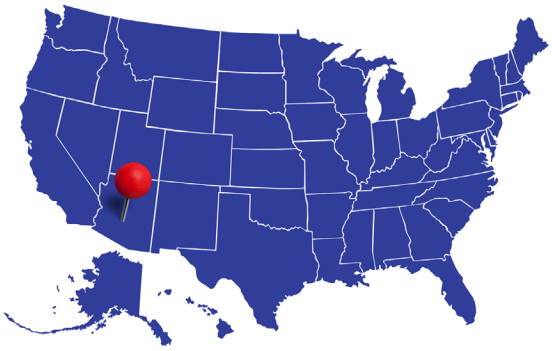
- **Benefits:** The institution can develop in-house expertise to create and maintain AI tools and platforms on site, offering the highest degree of control and customization. This approach enables the college or university to create AI solutions tailored to its specific needs and goals. This strategy helps to ensure alignment with the institution's strategic mission and values while enhancing the teaching and learning environment.
- **Institutional control:** This scenario provides full control over the AI development process. It enables the institution to directly manage every aspect of AI implementation, from design to deployment. Colleges can customize AI models and integrate them with existing systems, and they can ensure compliance with data privacy and security standards. Institutions can also set their own priorities for feature development and updates.

- **Risks:** Building and maintaining AI on site requires significant upfront investment in hardware, software, talent recruitment, and infrastructure. This scenario may divert resources from other strategic goals and necessitate a longer implementation time. Institutions are fully responsible for data security and privacy compliance, which can be resource-intensive. Additionally, the ongoing maintenance and updates required to keep the AI infrastructure current may strain the institution's resources. This approach also demands a high level of technical and functional expertise, which may require the hiring of new staff and continuous training for existing personnel.

Build Your Own AI On Site		
Competency	**Benefits**	**Considerations**
Mission Alignment 	▪ Full control over development process ▪ Minimizing of risks related to third-party services and outsourcing	▪ Significant upfront investment that may divert from other goals ▪ Longer implementation time
Resource Management 	▪ Long-term cost savings ▪ Higher-quality student-facing services	▪ Higher initial costs in hardware and software, talent recruitment, compliance, and infrastructure ▪ Limited scalability
Responsible Use 	▪ Better protection for data within the institution's own infrastructure ▪ Strengthening of user trust and acceptance through transparent in-house development	▪ Full responsibility for data security and privacy compliance
Data and Tech Infrastructure 	▪ Better integration with existing systems and processes ▪ Flexibility to customize and adapt AI models	▪ Requirement for continuous maintenance and updates ▪ Outdated data architecture
Talent Development 	▪ Opportunities to develop AI expertise ▪ Ability to design innovative learning experiences and intellectual property	▪ Need for new staff and faculty ▪ Training and development for current faculty, staff, and students
Change Management 	▪ Strengthening of future readiness and ability to adapt to emerging technologies	▪ Disruption of established practices, causing temporary inefficiencies ▪ Potential lack of institutional support

AI on Campus: Form Enterprise Partnership with an Existing AI Vendor

Arizona State University



Carnegie Classification: Doctoral Universities: Highest Research Activity (R1)

Minority-Serving Institution Status: Hispanic-Serving Institution (HSI)

Fall 2023 Enrollment: >145,000 students

Research Expenditures: Approximately $798M annually

In January 2024, Arizona State University (ASU) was the first higher education institution in the United States to partner with a generative AI company.

ASU kicked off an "AI Innovation Challenge." Shortly after announcing the partnership, the university invited proposals to receive access to ChatGPT Enterprise licenses to explore a project related to "actively shap[ing] the future of learning, research, and work."[9]

Of the close to 175 proposals submitted, the university accepted 105 into the first round and issued 863 licenses. The funding covered licenses for projects in teaching and learning that address topics such as:

- Course design
- Content development
- Faculty and student support tools
- Personalized feedback
- Study tools

Although it brings a host of benefits from a security and privacy standpoint, launching access to enterprise-quality licenses is a costly endeavor. By starting with this AI Innovation Challenge, ASU's leadership could act fast by empowering its employees' most innovative ideas—without committing to purchasing licenses for the entire institution.

- **Benefits**: An institution can use a vendor's technical infrastructure to create innovative tools and platforms, accelerating the development and adoption of AI solutions that enhance student experiences.

[9] Arizona State University. https://docs.google.com/presentation/d/1riHFFleAEKE_JUATeFdVBIeQSGDh23UqjbTxKP4E3Us/edit#slide=id.g2bdd25fa686_0_579

- **Institutional control:** This scenario serves as a middle ground between complete ownership of AI development and maintenance and total reliance on a vendor. During the early stages of partnership, institutions can retain control over selecting the specific AI applications that align with their strategic goals and requirements. They can also influence the customization and adaptation of these tools to meet their unique needs.

- **Risks:** While not as investment-heavy as the build-your-own scenario, it still requires significant upfront funding. Costs include those for the development of technical and functional expertise as well as long-term financial commitments. Relying on a vendor may lead to drawbacks such as reduced transparency into decision-making processes, dependency on the vendor's pricing structures, and possible misalignment with the institution's mission and values.

  Additionally, contractual obligations may limit the institution's ability to switch vendors or adapt quickly to new opportunities or challenges, which could affect the overall effectiveness and flexibility of AI adoption.

Form Enterprise Partnership with an Existing AI Vendor		
Competency	**Benefits**	**Considerations**
Mission Alignment 	▪ Initial applications of AI that closely align with institutional mission	▪ Significant upfront investments that may divert from other goals ▪ Partnering with a vendor that may not reflect the mission and values of the institution and likely will not share nonprofit motivations ▪ Potential impact on current or planned strategic initiatives
Resource Management 	▪ Potential for greater cost effectiveness than when building AI tools and platforms entirely in-house ▪ Ability to leverage vendor infrastructure to reduce internal resource strain	▪ Reliance on the vendor's pricing structures ▪ Contractual obligations that may limit institutional agility to change vendors ▪ Long-term financial commitments that may strain the budget if not carefully managed
Responsible Use 	▪ Benefiting from a major tech vendor's cybersecurity and infrastructure ▪ Increased compliance and regulatory support from established vendors	▪ Potential for reduced user trust and acceptance because data may leave the institution ▪ Lack of transparency into vendor decision-making ▪ Ensuring that vendor practices align with the institution's ethical standards and compliance requirements

Data and Tech Infrastructure 	▪ Vendor-provided technical support and infrastructure ▪ Faster deployment and implementation compared with building in-house	▪ Still requires AI adoption prerequisites such as cloud-based infrastructure ▪ Less flexibility to customize and adapt AI models ▪ Dependency on vendor for ongoing updates and maintenance
Talent Development 	▪ Ability to leverage vendor expertise rather than rely solely on in-house talent ▪ Vendor-provided training programs that can upskill existing staff	▪ Need for continuous training and development to keep pace with vendor updates ▪ Balancing vendor reliance with internal capacity building
Change Management 	▪ Increased employee buy-in and engagement through pilots and use case testing ▪ Quicker realization of the potential benefits of AI-enhanced learning for students as compared with building your own	▪ Disruption of established practices, causing temporary inefficiencies ▪ Potential lack of institutional support ▪ Need for strong internal champions to drive change and ensure successful adoption

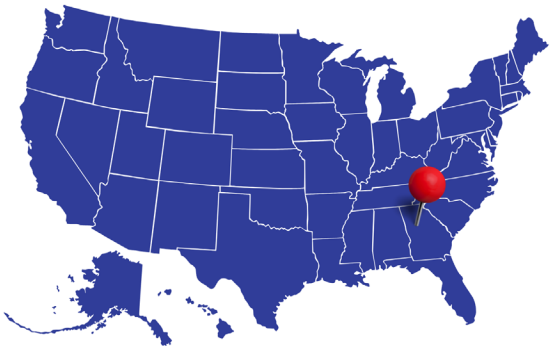
"At Arizona State University, our diverse AI adoption strategies allow us to tailor solutions to fit the unique needs of our community, supporting both innovation and responsible use. By combining in-house expertise in our CreateAI Platform with strategic partnerships, we ensure our approach is cost-effective and aligned with our mission of principled innovation, providing the best of technology in ways that serve everyone.

Starting on the journey with generative AI doesn't need to involve large-scale partnerships or a team of highly skilled AI engineers. The key is to begin engaging with generative AI in a way that aligns with your community's resources and goals. Scale can start at any level – big or small. By inviting our faculty and staff to be at the forefront of discovery, we are able to spark meaningful engagement and learning across all contributors. By taking that first step, any institution can begin to harness AI to better serve their students and community."

—Dr. Elizabeth Reilley, Arizona State University

AI on Campus: Use Stand-Alone Education/AI Applications

Morehouse College



Carnegie Classification: Baccalaureate Colleges: Arts & Sciences Focus

Minority-Serving Institution Status: Historically Black College/University (HBCU)

Fall 2023 Enrollment: Approximately 2,200 students

In fall 2024, Morehouse College is launching a groundbreaking pilot program introducing AI teaching assistants (TAs) into five courses in the following subjects: business, education, history, journalism, and sociology.

The college has never used traditional TAs, so this innovative approach with generative AI provides a unique opportunity to enhance student support where it was previously lacking. Trained on professors' notes and materials, the AI TAs will align with Morehouse's goals and offer valuable assistance.

Dr. Muhsinah Morris, senior assistant professor of education and the college's Metaversity director, is leading this initiative as part of her research in the Morris Research and Innovation (MRI) lab.

Since 2021, Morehouse College has had a partnership with VictoryXR, launching the Morehouse Metaversity through that platform. VictoryXR, a leader in 3D spatial learning, collaborates with more than 100 higher education institutions. It has developed metaversities with funding from Meta, Facebook's parent company.

Building on this relationship, Morehouse is integrating VictoryXR's new 3D AI TAs into five undergraduate courses and the HBCU STEM Undergraduate Success Research Center (STEM US). These digital avatars of the courses' professors will answer questions, present historical maps, and showcase figures, leveraging VictoryXR's advanced technology to enrich the teaching and learning experience.

Dr. Morris underscores the importance of AI's conversational abilities: "Sometimes you want to have the conversation; you want it to be warm, and you want it to be like your instructor. The conversational piece is really important for [students] to feel comfortable and seen regardless of the modality."[10]

Unlike traditional chatbots, these AI assistants can help by:

- Presenting slides
- Manipulating 3D models
- Engaging in active teaching and assessments within a virtual learning environment

[10] Lauren Coffey, "Animated AI TAs Coming to Morehouse," *Inside Higher Ed* (2024). www.insidehighered.com/news/tech-innovation/artificial-intelligence/2024/07/09/animated-ai-tas-are-coming-morehouse

> "The biggest lesson I've learned developing the AI TAs for Morehouse is how effective they can be in any discipline and across industries. While the education landscape has traditionally been siloed in its work, this work is interdisciplinary and forces collaboration amongst many disciplines. I love that, because it is the future of work and what our scholars will encounter at the next level. True collaboration and integration of understanding at a deep level."
>
> —Dr. Muhsinah Morris, Morehouse College

- **Benefits:** The college or university can selectively integrate diverse AI products from the edtech market to enhance the institution's existing tech stack. Rather than committing to a single AI infrastructure, the institution can evaluate and adopt tools based on their suitability, practicality, and cost-effectiveness for specific needs.

  Institutions also can use pre-designed AI solutions without engaging new vendors, allowing colleges to maintain control with established edtech partners. This resource-efficient approach allows for ongoing relationships with vendors. It fosters collaboration and co-design opportunities, enhancing the overall effectiveness of the strategies and tools.

- **Institutional control:** While using standalone tools may limit customization options, institutions do retain control during the vetting and procurement process. This control allows schools to define their requirements for edtech and AI tools.

  Institutions can provide feedback to vendors, and if a feature proves ineffective, colleges and universities can easily discontinue that feature or fail to renew the contract. This flexibility helps institutions avoid significant development costs. Additionally, vendors often provide training and upskilling resources for implementing new features, ensuring that institutions can effectively use the tools they select.

- **Risks:** Institutions may face challenges with AI integration due to limited visibility into tool development and data management. These issues can hinder colleges' and universities' ability to enforce requirements and ensure alignment with needs.

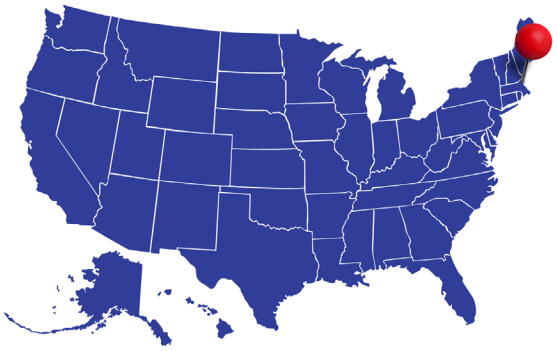
  Without traditional procurement processes for new AI features, institutions may have even less control over their breadth and alignment. Additionally, while the scenario allows for independent operation within the institution, it may lead to long-term issues, such as increased redundancies and multiple competing contracts of varying lengths—and these concerns may force the college to remain in partnership with edtech companies that have not delivered. The largest risk that institutions face is a lack of professional development that aligns with the school's vision. By relying on faculty who have personal experience scaling professional learning workshops, institutions can mitigate some of the risks.

Use Stand-Alone Education/AI Applications		
Competency	**Benefits**	**Considerations**
Mission Alignment 	▪ Flexibility to choose AI applications that best match the institution's needs and budget constraints ▪ Ability to act rapidly on implementing mission-aligned AI products	▪ Cost of AI platforms, which may delay or defer spending on other strategic investment priorities ▪ Potential for misalignment if various departments choose tools independently without centralized oversight
Resource Management 	▪ Potentially less resource-intensive than building in-house or large-scale partnerships ▪ Possibility of targeted investments based on specific needs	▪ Reliance on the vendor's pricing structures ▪ Contractual obligations that may limit institutional agility to change vendors ▪ Complex and resource-consuming nature of managing multiple vendor relationships ▪ Potential for redundancy or overlapping features if the institution has multiple contracts
Responsible Use 	▪ Greater control over data privacy and security, as AI applications are integrated into existing systems ▪ Opportunity to select vendors with strong compliance and ethical standards	▪ Lack of transparency into vendor decision-making ▪ Responsibility for ensuring data governance and compliance, which may require additional oversight and policies
Data and Tech Infrastructure 	▪ Ability to leverage vendor expertise rather than rely solely on in-house talent ▪ Faster feature releases from vendors, which help keep the institution up to date with the latest advancements	▪ Potential for less-thorough testing because of faster feature releases ▪ Decreased flexibility to customize and adapt AI models

Talent Development 	▪ Vendor-provided training and support to help upskill faculty and staff ▪ Encouragement for departments to explore and adopt AI tools suited to their specific needs	▪ Possibility of limited support or resources from AI vendors if the institution is not a major customer ▪ Vendor-provided technical support who may not have higher education industry-specific experience
Change Management 	▪ The option for leaders to focus change management efforts on specific units that platform adoption may affect ▪ Lower initial cost and risk compared with other scenarios, as the institution can start small and scale up as needed	▪ Lack of a centralized strategy, which may lead to fragmented AI adoption efforts ▪ Potential for missed opportunities for coordination and unified direction ▪ Risk that data and knowledge continue to be in disparate, siloed systems

AI on Campus: Rely on Existing EdTech Portfolio Offerings' Add-Ons or Included AI Features

Northern Essex Community College



Carnegie Classification: Associate Colleges: Mixed Transfer/Career & Technical-High Traditional

Minority-Serving Institution Status: HSI

Spring 2024 Enrollment: >4,500 students

In spring 2021, Northern Essex Community College (NECC) launched an AI chatbot to help students navigate the school's website, connect to resources, and get their questions answered more rapidly.[11] The chatbot runs 24 hours a day, seven days a week. It also speaks both English and Spanish, a critical point for the institution given its HSI status.

Named "Squire" in honor of NECC's mascot, the Knight, the bot starts all conversations by asking the student in both English and Spanish if they need help. One of the appeals of launching the chatbot was its ability to answer a wide range of student questions, relying on sources including human-entered responses, web-scraped information, and general knowledge about higher education, financial aid, and other relevant topics.

Since the public launch of ChatGPT in fall 2022, the vendor has offered more generative AI functionality, especially in the tool's administration. For example, the platform now allows users to use generative AI to draft more student-friendly responses to frequently asked questions.

Many institutions already have a combination of third-party and/or homegrown edtech products in their technology suite. The current state of the AI and technology landscape resembles an arms race in which technology vendors are attempting to integrate generative AI into their existing product roadmaps. Colleges should expect that any current tech offerings they have will soon begin to offer either add-on or included generative AI. And some colleges may explore building their own homegrown AI features to complement their existing technology.

- **Benefits**: The institution can rely on pre-designed AI use cases that don't require engaging new vendors, making it resource-efficient but vendor-controlled. If the college or university already has established trust with its current vendors, this scenario can foster enhanced collaboration and create more opportunities for co-design.

> "Having the new gen-AI features has been helpful. It has enabled us to provide more nuanced answers, especially for the questions where the bot was just scraping the site."
>
> **—Allison Dolan-Wilson, Northern Essex Community College**

[11] Ernie Greenslade, "Meet Squire, NECC's New Bilingual Chatbot," *NECC News* (2021). www.necc.mass.edu/newsroom/2021/10/26/meet-squire-neccs-new-bilingual-chatbot/

- **Institutional control:** Because they may already be working with a vendor, colleges and universities do not have the same level of authority to insist on certain vendor requirements that they do in the traditional procurement process.
- **Risks:** The edtech vendors that an institution already engages with may not offer the type of AI that is best suited for the school and/or its students. The institution may lack transparency into decision-making around the development of tools and the use of data.

Rely on Existing EdTech Portfolio Offerings' Add-Ons or Included AI Features		
Competency	**Benefits**	**Considerations**
Mission Alignment 	▪ Minimal disruption to current strategic investments	▪ Limited AI capabilities compared to standalone AI systems or partnerships with specialized AI vendors ▪ Potential for limited flexibility and innovation due to dependence on a single vendor
Resource Management 	▪ Option to leverage existing relationships with vendors ▪ Potential for cost savings when bundling AI features with existing technology subscriptions	▪ Possibility that existing tech product under contract may become more costly with the addition of AI
Responsible Use 	▪ Opportunity to rely on vendor's compliance and security measures	▪ Lack of control over issues like features, prioritization of use cases, timeline, design and development of AI tools, and responsible and appropriate use of data
Data and Tech Infrastructure 	▪ Few added technical requirements for new features because products already are operational	▪ Possible limitations to customization and scalability ▪ Dependence on vendor for updates and maintenance
Talent Development 	▪ Minimal requirements for technical capabilities	▪ Necessity of investment in functional training when introducing AI features to institutional stakeholders ▪ Potential for lack of necessary experience for technical support—whether it's little higher education industry-specific experience, or higher education experience but none in AI
Change Management 	▪ Integration of AI into existing workflows, minimizing disruption	▪ Risk that data and knowledge continue to be in disparate, siloed systems

Provision AI Accounts on a Case-by-Case Basis

Note: *This paper does not include an example for this scenario because many institutions likely already find themselves in some form of this instance, especially given that many AI providers now offer free versions.*

Institutions that provision AI accounts on a case-by-case basis provide licenses for popular AI tools to specific individuals or departments as needed. Some examples of cases that might warrant access to providing AI licensing in this scenario include:

- Research tools for faculty
- Support tools for student services
- Data analysis tools for administrative staff

These tools may not exist within a protected and secure environment, meaning users must be incredibly careful with what they share with AI and how they use the tools.

- **Benefits:** This approach allows for small-scale experimentation and flexibility. It enables quick adaptation to new AI advancements without large-scale investments.
- **Institutional control:** Provisioning licensing on a case-by-case basis grants control to the institution by allowing targeted deployment of AI. During the vetting and procurement process, institutions can set specific criteria for selecting AI tools, ensuring that those tools meet the institution's standards for functionality, security, and compliance. Colleges and universities can also monitor and adjust usage patterns, reallocating licenses as necessary to maximize efficiency and effectiveness.
- **Risks:** While this scenario offers flexibility and cost-effectiveness in the short term, it comes with long-term challenges that merit careful consideration. The decentralized approach may lead to inconsistent adoption and usage of AI tools across the institution, making it harder to maintain a cohesive AI strategy. The reliance on infrastructures that are not protected and secure can increase the risk of data breaches and compliance issues, as data is not isolated in dedicated environments; this concern also reduces the value of the product.

  Additionally, managing multiple licenses and contracts can cause excessive administrative overhead and redundancy. These issues can complicate data integration and compatibility between various AI applications and existing systems. Fragmentation can hinder the institution's ability to respond to opportunities and challenges quickly and uniformly, reducing the effectiveness of AI adoption.

Provision AI Accounts on a Case-by-Case Basis		
Competency	**Benefits**	**Considerations**
Mission Alignment 	▪ Flexibility to choose and implement AI tools that align with specific departmental or individual needs	▪ Decentralized approach that may lead to inconsistency in AI use across the institution
Resource Management 	▪ Cost-effective for smaller institutions or departments ▪ Ease of managing and distributing licenses on an as-needed basis	▪ Difficulty in monitoring and managing decentralized data privacy and security ▪ Potential for higher long-term costs due to lack of bulk purchasing discounts
Responsible Use 	▪ Ability to control and monitor use of AI tools within individual departments or for specific projects	▪ Potential for misuse or abuse of AI applications by users without sufficient oversight ▪ Risk of data breaches or unauthorized access as multiple applications may have different levels of security measures
Data and Tech Infrastructure 	▪ Ability to adopt different AI tools to match specific needs	▪ Difficulties in data integration and compatibility between different AI applications and existing systems ▪ Inconsistent experiences for users of AI applications' varied interfaces and functionalities
Talent Development 	▪ Encouragement for faculty and staff to explore and experiment with AI tools, fostering a culture of innovation	▪ Potential for insufficient vendor-provided support ▪ Need for internal training programs to ensure effective use and integration of AI tools
Change Management 	▪ Option for gradual introduction and scaling of AI tools, reducing resistance to change	▪ Possible lack of a coordinated strategy, which may lead to fragmented AI adoption efforts and missed opportunities for collaboration

Take a Wait-and-See Approach

Note: *We include this approach because many institutions that have not taken an active stance on AI may find themselves in this category. However, we believe that the "wait-and-see" approach is not an approach at all. Rather, adopting a wait-and-see stance can create a void, which can result in unmonitored, scattershot, and siloed use of AI on campus. In early 2024, 20% of survey participants stated that they didn't know if their policies were being impacted by AI, while another 22% stated that their policies were not impacted by AI.*[12]

In this scenario, institutions opt to refrain from purchasing AI tools or providing organization-wide AI guidelines. These institutions may have opted to let other, more risk tolerant institutions of higher ed lay the groundwork and do the early learning around AI adoption. Alternately, some institutions may wish to experiment with AI but lack capacity and resources due to other competing demands, which impede them from making progress on AI adoption.

Engage in Anti-AI Approach

Note: *We do not condone this approach but include it so all stakeholders reviewing this brief can understand where their institution may currently fall on the Spectrum of AI Adoption. As mentioned in the Note to Readers, this group is actively shrinking as institutions are recognizing that AI is not just a passing trend.*

Many institutions initially responded to the introduction of Generative AI to the public by banning its use altogether. Some institutions remain interested in detecting, preventing, and penalizing the use of AI, rather than balancing these concerns with the possible merits of its use. According to EDUCAUSE's recent landscape analysis, only 18% of reported policies fall into the "extremely or somewhat restrictive" approach.[13] Colleges and universities that take this approach may direct many of their resources toward AI detection software and policies that prohibit the use of AI.

- **Risks:** Institutions in this scenario risk overlooking the possible benefits of AI for staff, faculty, and administrators. Moreover, an increasing body of research suggests that the use of AI detection tools can be problematic and may exacerbate equity issues. In some scenarios, institutions are more interested in detecting, preventing, and penalizing the use of AI than in balancing these concerns with the possible merits of its use. For example, Vanderbilt University publicly announced its choice its choice to turn off AI detection features in its system due to its lack of reliability and the risk of false positives.[14] Additionally, research has shown that AI detectors tend to be biased against non-native English speakers.[15]

[12] Jenay Robert, *2024 EDUCAUSE AI Landscape Study* (EDUCAUSE). https://www.educause.edu/ecar/research-publications/2024/2024-educause-ai-landscape-study/introduction-and-key-findings

[13] Ibid.

[14] Vanderbilt University, "Guidance on AI Detection and Why We're Disabling Turnitin's AI Detector" (Vanderbilt University, 2023). www.vanderbilt.edu/brightspace/2023/08/16/guidance-on-ai-detection-and-why-were-disabling-turnitins-ai-detector/

[15] Andrew Myers, "AI-Detectors Biased Against Non-Native English Writers" (Stanford University Human-Centered Artificial Intelligence (HAI), 2023). https://hai.stanford.edu/news/ai-detectors-biased-against-non-native-english-writers

IV. Prerequisites for Institutional AI Competencies: Leveling the Playing Field

Realizing AI's potential will require overcoming significant and ongoing funding disparities,[16] particularly for institutions like community colleges and Minority-Serving Institutions (MSIs) such as Tribal Colleges and Universities (TCUs), HBCUs, and HSIs.

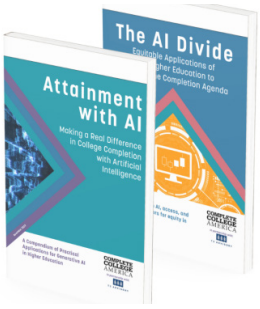
Additionally, for HBCUs, excellence relies on deep interpersonal connections—among students, between students and faculty, and within the community, who now must foster those relationships online. Historical inequities have created infrastructure and personnel gaps, including the acquisition and setup of technology needed to meet today's digital demands.

Complete College America's work on the HBCU Digital Learning Infrastructure project revealed the baseline needs for AI innovation. By working through this taxonomy and the companion digital learning assessment tool, schools can establish the foundation to ensure that technological adoption reflects the inherent value and capabilities of their institutions. They can work toward providing culturally responsive experiences and equitable resources to support the growth and spread the positive impact of AI for students, faculty, staff, administrators, and the community.

More from Complete College America

Complete College America offers serveral resources to assist you in navigating AI for student success on your campus. Visit completecollege.org/ai-resources to view the resources and download the guides.

These materials include CCA's position paper on increasing equitable adoption of AI and information on CCA's Council on Equitable AI.

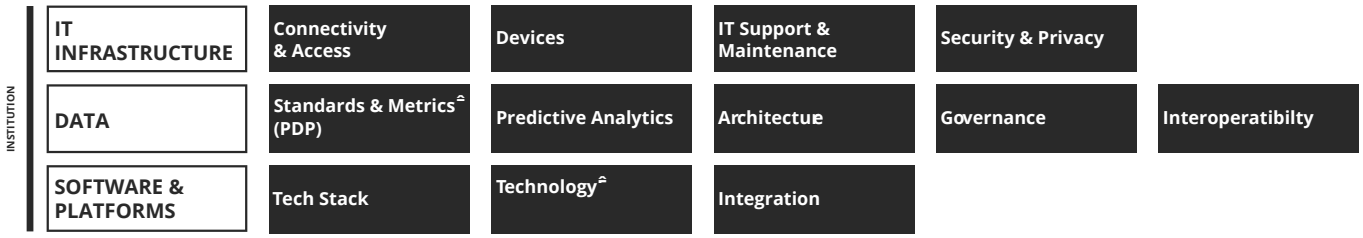


[16] Complete College America, *Critical Connections: Funding HBCUs' Digital Infrastructure Is Essential for Meeting U.S. College Completion Goals* (Complete College America, 2024). https://completecollege.org/CriticalConnections

Foundation

- **Vision:** Have we integrated AI into our educational framework and institutional strategic plans?
- **Policy:** What framework are we using to guide the creation of guidelines or policies in AI? What procurement provisions do we need to create or update?
- **Communication:** When, how, and with what frequency are we communicating to our institutional stakeholders?
- **Planning & Change Management:** Who can and should lead this work internally? Who should be part of the team?
- **Funding:** Are there ongoing funding sources to support AI initiatives and technological upgrades? How can we use existing funds, such as the Fund for Improvement of Postsecondary Education (FIPSE), for AI-related projects?

Institution



- **IT Infrastructure:** Do we have a reliable cloud infrastructure and a negotiated relationship with a cloud service provider? Do we have the legal resources and expertise to ensure compliance with data privacy laws and regulations? Have we budgeted for the legal costs associated with setting up the necessary infrastructure for AI adoption?
- **Data:** Are our databases capable of securely storing and managing large volumes of data? What security measures do we have in place to protect sensitive data from breaches? Do we have comprehensive systems to monitor and track data access and changes?

For a more detailed inventory of AI readiness considerations—especially as they relate to governance, ethical use, and technical infrastructure—see pages 4, 10, and 11 of *Higher Education Generative AI Readiness Assessment* by EDUCAUSE and AWS.[17]

[17] EDUCAUSE and AWS, *Higher Education Generative AI Readiness Assessment* (EDUCAUSE, 2024). https://library.educause.edu/-/media/files/library/2024/4/higheredgenaireadinessfillin.pdf

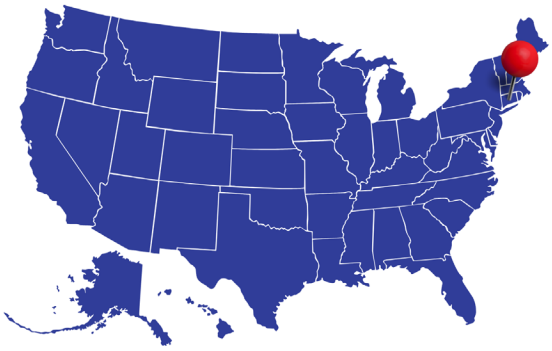
Faculty & Staff

- **Professional Development:** What training programs are available to improve AI literacy among faculty and staff? How are we supporting faculty and staff in integrating AI tools into their teaching and administrative roles?
- **Teaching and Learning:** What systems are in place to help faculty and staff adopt AI technologies? How can we streamline our procurement processes to facilitate transparent and intentional adoption of AI?

Students

- **Access and Equity:** How are we ensuring that AI technologies are accessible to all students, particularly those from groups that historically have been excluded? What measures are in place to provide a culturally responsive AI experience for students?
- **Learning and Development:** How are we using AI to personalize learning experiences and support student success through portals and our tech stack? What resources are available to help students develop AI-related skills and competencies?

AI on Campus: Establish the Foundation
Charter Oak State College



Institution Type: Public, Distance Education

Carnegie Classificiation: Baccalaureate College: Arts & Sciences Focus

Fall 2023 Enrollment: Approximately 1,700 students

Charter Oak State College (COSC) took a proactive approach to AI readiness by establishing an AI Advisory Group in summer 2023. This diverse group, comprising internal stakeholders and external experts, monitors developments in generative AI and makes recommendations related to academic policy and practices. The work addresses key elements of the Foundation prerequisite for AI adoption.

One of the advisory group's key accomplishments is the development of a document with an AI ethics statement and AI principles. The statement and principles outline COSC's commitment to responsible AI use, emphasizing: transparency, quality and integrity, privacy and security, and equitable access.

The group also created an AI framework for Bloom's taxonomy, demonstrating how to strategically deploy AI to enhance traditional learning frameworks at each cognitive level.

To support implementation, the advisory group developed a comprehensive set of resources for faculty, staff, and students:

- AI-related resources in the Faculty Resource Center
- Access to the "Teaching with AI" course from Auburn University's Biggio Center for the Enhancement of Teaching & Learning
- Connecticut Citizens AI Academy repository of classes

The group also established clear policies for student fair use of generative AI and faculty guidelines for integrating AI tools in instruction.

By focusing on these foundational elements—ethical principles, educational frameworks, training resources, and clear policies—COSC has established a groundwork for responsible AI adoption. This approach ensures that, as the college moves forward with AI integration, it does so with a well-informed, ethically grounded, and pedagogically sound strategy.

"At Charter Oak State College, we recognize the transformative potential of artificial intelligence and are committed to integrating it in ways that enhance our educational mission while upholding our core values. The AI Advisory Group's work has been instrumental in ensuring that our approach to AI is not only innovative but also ethically responsible. By establishing a strong foundation through ethical principles, educational frameworks, and comprehensive resources, we are empowering our faculty, staff, and students to harness AI in ways that promote transparency, equity, and excellence in learning."

—Dr. David Ferreira, Charter Oak State College

V. Additional Resources

Attainment with AI: Making a Real Difference in College Completion with Artificial Intelligence—Complete College America

This AI playbook provides practical ideas and concepts to help higher education institutions and systems employ generative AI for student success, completion, and equity. It categorizes more than 170 use cases and more than 30 sample prompts within three key operational frameworks: organizational effectiveness, teaching and learning, and student experience.

The AI Divide: Equitable Applications of AI in Higher Education to Advance the Completion Agenda—Complete College America

This position paper complements the *Attainment with AI* playbook by exploring the imperative for equity as systems, states, and institutions adopt AI and as technology companies expand their AI tools. The paper urges thoughtful policies and oversight to alleviate the risk that AI will amplify the unequal privilege that has historically created a system of inequity in higher education.

Choosing a Predictive Model Vendor: A Guide for Colleges—New America

New America's guide helps administrators assess predictive analytics vendors on their commitment to ethical data use, including data integration, algorithm transparency, privacy, and staff training. It provides tools for asking key questions and understanding the answers to ensure ethical use of predictive analytics.

Cisco AI Readiness Index

Cisco surveyed 8,161 senior business leaders responsible for AI integration and deployment across 30 markets in North America; Latin America; Europe, Middle East, and Africa (EMEA); and Asia Pacific. The AI Readiness Index provides a global perspective on AI integration by evaluating readiness in six areas: strategy, infrastructure, data, governance, talent, and culture.

Framework for Implementing AI in State Education Agencies (SEAs)—ILO Group

This state-level framework from ILO Group recommends actions for state education leaders to take to effectively integrate AI into K-12 education, focusing on statewide considerations and specific applications.

Generative AI Committee Report—University of Michigan

U-M developed this report to examine the transformative impact of generative AI on campus life. It summarizes major insights, guiding principles, and overarching recommendations.

Higher Education Cloud Vendor Assessment Toolkit—EDUCAUSE

The Higher Education Information Security Council (HEISC) Shared Assessments Working Group created this EDUCAUSE toolkit in collaboration with Internet2 and the Research & Education Networks Information Sharing & Analysis Center (REN-ISAC). The resource outlines a standardized approach to assessing vendor security and data protection in higher education. The toolkit aims to help institutions balance cost savings with security and privacy.

Higher Education Generative AI Readiness Assessment—EDUCAUSE and Amazon Web Services (AWS)

EDUCAUSE and AWS introduced this assessment to evaluate how colleges are preparing for and managing generative AI tools. The assessment features a set of questions that cover various aspects of AI adoption, including strategy, capacity, infrastructure, and the development of skills and policies.

People: AI's Most Powerful Prompt—Slalom

This report by Slalom emphasizes a human-centric approach to AI adoption in businesses, urging a focus on people and value alongside technological change. It outlines critical dimensions for AI-enabled transformation, advocating alignment of AI strategies with organizational purpose to create positive impacts for employees and customers.

Time for Class 2024—Tyton Partners

Tyton Partners' survey of over 3,000 higher education stakeholders highlights that students are leading the way in generative AI use despite facing digital tool challenges. The report emphasizes the need to assess generative AI's impact and address access issues.

"Understanding the Costs of AI Projects"—RapidCanvas

RapidCanvas offers a guide that helps businesses understand the costs and trade-offs of adopting AI, exploring issues such as data, infrastructure, talent, and compliance. The guide describes various AI project approaches and decision-making factors, providing a framework to align AI strategies with business needs and resources.

Content Partner

T3 ADVISORY

About T3 Advisory

At T3 Advisory, our mission is to empower higher education institutions, nonprofits, and other organizations to achieve sustainable, practical change. We are dedicated to fostering student success, equity, and innovation through customized, co-designed strategies that balance big-picture vision with actionable details. Our commitment to equity and student success drives us to create inclusive, impactful solutions that transform educational landscapes.

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- **Dr. Elizabeth Reilley**, Executive Director of AI Acceleration at Arizona State University

The authors consulted ChatGPT-4o during the drafting of this paper, primarily when identifying the fullest range of costs an institution might face when adopting AI and ensuring consistency within the competency rubrics for each scenario.

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