The Artificial Intelligence (AI) Adoption Maturity Model

A Roadmap for School, College, and University Leadership

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ABSTRACT

While much has been written about the impact of Artificial Intelligence (AI) on education, there are few models for its ethical and responsible adoption. This white paper outlines the AI Adoption Maturity Model, a strategic framework for education institutions to integrate AI effectively, highlighting the governance and technical aspects, the transformation AI has made to education, the importance of fostering student Biological Intelligence (BI) as they prepare for an AI-driven future, and potential barriers. This paper guides leadership through five adoption stages of the Model: Exploration, Incorporation, Proliferation, Optimization, and Transformation, and provides actionable steps at each stage to assist institutions in adopting AI responsibly and effectively. The model addresses how teaching and learning can evolve with technology that aims to prepare students for a rapidly evolving workforce.

INTRODUCTION

Analytical Artificial Intelligence has been the catalyst for empowering users to design experiences and shape the digital world. Analytical AI is foundational in sectors that rely heavily on data-driven decision-making, offering the ability to harness large volumes of data for actionable insights. Google, YouTube, and Facebook are examples of analytical AI. However, analytical AI is inert and passive.

In 2021, Generative AI (AI) made its debut. This dynamic advance demonstrated the ability to introduce coherent text and complex images. Unlike analytical AI, Gen AI is trained to generate text and images and synthesize data while sharing them conversationally with the user. As AI continues to mimic human interactions, so does its use. In fact, because of this comfort level, ChatGPT, an AI tool, reached one million users in the first five days after its launch. As of August 2024, ChatGPT has 200 million active users every week, many of whom are students.

A recent survey by Rask AI revealed that 73% of students use AI tools, while 15% of professors do so. AI's vast capabilities include writing and creating content, answering questions, translating languages, summarizing complex books, and passing exams. As AI's use expands daily, blocking its use on campus will not eradicate its use off campus. The inevitability of AI's role in education underscores the need for responsible adoption and the potential consequences of ignoring its use.

Educational institutions worldwide are at a crossroads as they face rapid technological advancements. As society shifts fueled by AI's potential, fresh pedagogical strategies, innovative teaching methods, and creative learning adjustments are needed. This paradigm shift promises to better serve the digital generation and offer an optimistic future. The urgency of education

institutions to adapt to this digital generation is clear and pressing as the world becomes an AI-enabled and AI-powered society. Ignoring AI means risking being insignificant or graduating students who are irrelevant.

> **"The call for transformation is loud and clear: Shake up the existing educational model and move away from rigidity and control towards a more fluid and empowering approach. The time to act is now, or we risk failing in the mission to educate the young."**
> **- Erika Twani, 2023**

Therefore, education must transform, adapt to AI use, and adopt its benefits. This white paper proposes an **AI Adoption Maturity Model** (Model) as a guide to enabling the necessary infrastructure, moving it from a cost center to a strategic asset.

AI IS TRANSFORMING EDUCATION

In only a few years, AI has transformed traditional education. Current applications of AI in education include personalized learning, automated grading, adaptive assessments, data analysis, tutoring and coaching support, accessibility for disabilities, curriculum planning, and language translation. Those are just a few of its current applications, with more on the horizon. We must expand and rethink our view of education to include greater possibilities.

Educators' roles are changing. AI is transforming educators' roles, who will no longer be the source of all wisdom. AI allows students to fact-check any statement made in a classroom; therefore, educators must focus on cultivating lifelong skills in students that they will need for the future. Educators will be learning facilitators who assist students in asking meaningful, profound questions. They must motivate and assist students in working on real-world issues and developing actionable solutions. Educators must become focused on using AI to support students' innovations and creations that advance society. In the AI age, educators must concentrate on students' biological intelligence and learning autonomy.

THE BIOLOGICAL INTELLIGENCE (BI) PERSPECTIVE: THE LEARNING MODEL

Biological Intelligence (BI) is the basis of learning how to learn. BI includes the Intelligence Quotient (IQ), the Emotional Quotient (EQ), and the new paramount Adaptability Quotient (AQ). Understanding BI, and the importance of IQ, EQ, and AQ, is the learning model essential to preparing learners for an unpredictable future.

Developing IQ is crucial for problem-solving, systematic analysis, critical thinking, analyzing and synthesizing information, intellectual development, and academic achievement. Acquiring a high EQ, successful self-regulation, social awareness, managing interpersonal relationships, and maintaining mental well-being are vital in an increasingly automated world. Equipping learners with AQ, flexibility, and resilience to navigate rapidly changing technological advances and the evolving job market is essential. These three forms of BI ensure technical proficiency, emotional balance, adaptability, and capacity for individuals to thrive in the dynamic landscape shaped by AI advancements and learning autonomy.

AI AND THE AGE OF LEARNING AUTONOMY

The AI age is the age of student learning autonomy, taking charge of their learning processes, and developing their BI (See Figure 1). Learning autonomy is self-directed, with individuals pursuing their interests and passions and are motivated by intrinsic goals. AI facilitates personalized learning through technological inquiry and research, thus maximizing educational outcomes and increasing the learner's IQ. Challenging oneself to learn, facing dilemmas head-on, and resolving frustration builds EQ. A uniquely tailored academic journey fosters a lifelong love of learning, adaptability, AQ, and openness to new information and essential skills.

With the advent of AI, developing students' learning autonomy is increasingly vital. While AI offers personalized assistance and instant access to information, it has limitations. It can inadvertently foster student dependency and provide false information. Learning autonomy cultivates critical thinking skills that enable students to discern and evaluate AI information and navigate the vast digital landscape confidently and with adaptability.

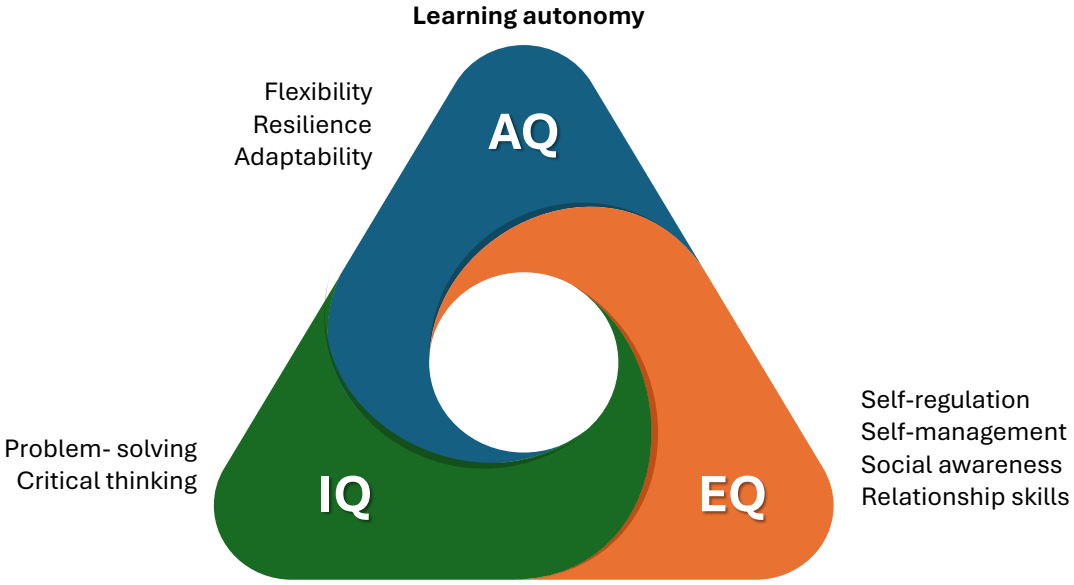

Figure 1. The fundamentals of BI development in the AI Era

THE AI ADOPTION MATURITY MODEL

Successful AI adoption in schools, colleges, and universities challenges today's technological infrastructure, governance, policies, and teaching and learning processes. To address this, we introduce the AI Adoption Maturity Model (Model), a framework that education institutions can use to implement and adopt AI effectively and efficiently. It is adapted from Info-Tech's AI Maturity Model (Wong, 2023) to include relevant aspects of teaching and learning for use by education institutions.

Getting started means that the institution's infrastructure must ensure that its learning community's technological environment is safeguarded with privacy, security, inclusiveness, transparency, safety, and accountability. These are responsible AI principles by which the learning community can feel safer when using such technology.

Institutions can use the *Maturity Model Assessment Tool*[1] to establish a starting point and develop a clear plan to adopt AI specifically for their environments. In parallel with this assessment, educators may establish the skills to focus on first. The AI tools will support that objective, which will roll out campuswide.

"Most school systems struggle to turn improvements into action at scale. Our research demonstrates that to make changes stick, it is not enough for leaders to know 'what' interventions to use. It also requires understanding 'how' to implement them well at scale. In many systems, well-intentioned changes fizzle out."

- McKinsey & Co

AI adoption in educational institutions requires a strategic, well-structured approach. This Model provides a comprehensive framework that guides institutions through the complexities of integrating AI into their teaching and learning environments. By starting with a clear assessment of current capabilities and focusing on targeted skill development, institutions can effectively address the challenges posed by AI, ensuring that their technological infrastructure supports responsible and inclusive use. As educators and students become proficient in leveraging AI tools, institutions can progressively advance toward higher maturity levels, ultimately creating a dynamic, future-ready learning environment.

[1] https://bit.ly/ai-assessment-tool

THE MATURITY LEVELS

The Model effectively integrates pedagogy and technology to collectively support institutional objectives and enhance student learning in the AI era. The Model assists institutions in evaluating their current status and planning their progression towards a dynamic AI-enabled environment. The Model comprises five levels[2]: Exploration, Incorporation, Proliferation, Optimization, and Transformation (See Table 1). Once the organization reaches the Transformation Level, it will dramatically simplify and automate deployment and operations for organizational agility while ensuring user privacy and security.

Dimension / Maturity level	Exploration	Incorporation	Proliferation	Optimization	Transformation
AI Governance	Awareness of AI's potential	AI model development	AI model deployment	Corporate governance	Driven by ethics and societal considerations
Data Management	Silo-based	Data enablement	Data standardization	Data is a shared asset	Data can be monetized
People	Few skills	Skills enabled to implement silo-based apps	Skills development for all departments	Skills development for all departments	AI-native culture
Process	No standards	Focused on specific business outcomes	Operational	Self-service	Driven by innovation
Technology Infrastructure and AI Enablers	No dedicated infrastructure or tools	Infrastructure and tools driven by POCs	Purpose-built infrastructure, custom or commercial-off-the-shelf (COTS) AI tools	Self-service model for AI environment	Self-service model for any IT environment
Teaching and Learning	Limited AI awareness	Basic AI use in all disciplines	Real-world problem solving using AI	Industry collaboration to enhance learning	Student, staff, and educator learning autonomy

Table 1. Dimensions of the AI Adoption Maturity Model and its five levels

1. Exploration Level: The Foundation of Awareness

At the Exploration Level, institutions are just beginning to use AI and explore AI's potential. Since no formal AI governance structure is in place, and AI is viewed as an emerging tool rather than a strategic asset, AI is either based on random educator or IT initiatives or prohibited. At this stage, most institutions rely on traditional EdTech systems (e.g., learning management systems, student information systems, etc.). The generated data from these systems are siloed, with each system operating independently, making it difficult to share or centralize data for AI-driven insights. Teachers, staff, and students have only a basic awareness of AI concepts, and their exposure is limited to initial workshops or introductory sessions. There is little to no experience among teachers, staff, and students on the effective use of AI in education.

Parallel to addressing the technical aspects, the Exploration Level introduces students to AI concepts and fundamental skills. Educational programs may include introductory courses on AI, coding, and data science, which help students build a foundation of knowledge. Institutions should also begin discussions around AI's effects on EQ to assist students in understanding AI's ethical

[2] https://bit.ly/maturity-levels

implications, and AQ to foster a mindset open to change and innovation. The key goal of the Exploration Level is to instill curiosity and a willingness to engage with AI as a transformative tool.

Exploration Level Actionable Steps:

The primary focus of the actions at this stage is raising awareness, building foundational knowledge, and creating a shared vision of how AI can support the institution's teaching and learning objectives. First, the institution must begin conversations about AI, understand its implications, and introduce AI in small-scale pilot projects aimed at modest objective achievements such as automating administrative tasks or supporting content generation activities. This will prepare the institution for more structured AI integration in the next stage.

The institution should:

- Conduct workshops or training sessions to introduce AI concepts to staff and faculty and to introduce them to AI's potential in teaching and learning.
- Run pilot programs using AI for course generation, lesson planning, or analyzing student data using Software-as-a-Service (SaaS)-based AI tools.
- Begin assessing existing data silos and consider a plan for data-sharing implementation.

2. Incorporation Level: Initial Integration and Skill Building

At the Incorporation Level, institutions begin to integrate AI into specific areas of the curriculum and administrative functions. This stage involves drafting AI policies, examining laws and regulations, and establishing governance frameworks that guide the implementation of AI initiatives. Teachers, students, and staff begin to develop AI-related skills that support their roles in teaching, learning, and administrative functions.

Institutions move beyond experimentation and testing technology to running AI pilots using SaaS tools more strategically. At this level, data silos are being broken and are being shared between core systems such as learning management systems (LMS) and student information systems (SIS). This early form of data sharing creates the foundation for future AI-driven insights.

AI use in the classroom will remain relatively limited. However, it may be introduced in specific tasks, such as using AI to provide tailored feedback or to assist with administrative tasks like attendance tracking.

At this level, there is a stronger emphasis on creating more advanced AI courses and projects that require critical thinking and problem-solving skills. EQ is further developed as students engage in collaborative projects that require empathy, teamwork, and ethical decision-making. AQ becomes increasingly important as students and faculty learn to adapt to the new tools and methodologies

being introduced. At the Incorporation level, the goal is to build confidence in using AI technologies and integrate them into daily educational activities.

Incorporation Level Actionable Steps:

At this stage, institutions begin to see AI's value as more than a tool for experimentation. Formalizing governance is crucial because it creates accountability and sets ethical and responsible AI use standards. Pilot projects for AI solutions using SaaS tools become more strategic and integrated into specific areas that demonstrate tangible benefits, such as improving learning outcomes through personalized instruction or increasing operational efficiency. Educators, students, and staff realize the practical use cases of AI in their day-to-day lives.

The institution should:

- Draft initial AI governance policies and frameworks that define roles, guidelines, and ethical guidelines for AI use within the institution.
- Launch AI pilot projects aimed at personalized learning or automating administrative processes using insights from earlier experiments.
- Implement data-sharing protocols between core systems (e.g., LMS, SIS) to support AI tools and ensure seamless integration.
- Invest in professional development programs for educators and administrative staff focused on building AI literacy and practical AI-related skills.
- Introduce AI projects or case studies that require students to apply AI to real-world problems.
- Implement a central data factory to enable centralized data sharing and more robust AI-driven insights.

3. Proliferation Level: Expanding AI Use and Building Competence

The Proliferation Level marks a significant expansion in the use of AI across the institution. AI applications are no longer confined to pilot projects but are implemented in multiple departments, affecting a broader range of educational and administrative processes. AI governance is firmly established, with formal structures ensuring accountability, ethical AI use, and adherence to standards. Teachers and staff regularly apply AI tools to their daily tasks, and AI processes become standardized across the institution. These processes ensure that AI applications are used consistently and effectively, allowing the institution to scale its AI initiatives.

Technologically, institutions shift from SaaS tools to Commercial Off-The-Shelf (COTS) self-hosted AI solutions, providing greater control, customization, and scalability. Institutions deploy a centralized data-sharing layer that aggregates and stores data from the different systems being used, enhancing the institutions' ability to make data-driven decisions. This centralized data

repository is a crucial enabler of AI models, facilitating real-world problem-solving and driving improvements in student outcomes.

In teaching and learning, AI is a core integral component of various academic disciplines. Students engage in complex projects that require the application of AI to solve real-world problems. EQ is deepened as students are challenged to consider the societal impacts of AI, engage in discussions about bias and fairness, and work in diverse teams. AQ is crucial as the educational environment becomes increasingly dynamic, requiring students and faculty to learn and adapt to new AI-driven processes and tools continuously. At the Proliferation level, the goal is to create a learning environment where AI is seamlessly integrated, and students are equipped with the skills to use it effectively.

Proliferation Level Actionable Steps:

This stage marks a significant leap in AI experience. Institutions are no longer experimenting but are embedding AI into their day-to-day operations. The primary focus is scaling AI usage across the institution, weaving the AI tools into the fabric of the institutions' learning and operational environments, automating AI processes, and transitioning to more robust, customizable AI systems. Strengthening AI governance and data sharing are key priorities at this level.

The institution should:

- Initiate centralized data factory integration with AI systems to enable highly personalized adaptive learning scenarios, real-time insights, and decision-making.
- Assess the value of moving from COTS AI solutions to self-hosted solutions.
- Strengthen security measures across AI infrastructure and data systems to protect sensitive educational data from potential threats.
- Establish collaboration channels with industry partners to provide opportunities for students with hands-on learning using AI projects.

4. Optimization Level: Refining AI Integration and Enhancing Capabilities

Institutions have automated many of their processes at the Optimization Level and are leveraging AI to optimize operations and enhance educational outcomes. This stage involves refining AI tools, adjusting data management, and ensuring that AI systems align with the institution's strategic goals. Institutions at this level are focused on continuous improvement, using AI to drive efficiency and innovation.

From a technology standpoint, larger institutions are uniquely positioned to leverage their scale and the significant amount of data they generate for cost benefits. These institutions can shift to self-hosting AI solutions, which are better optimized for performance and institutional scalability

requirements. The central data factory plays a crucial role in this optimization. By integrating this centralized data repository with AI models, institutions can unlock real-time insights into student performance, operational efficiency, and curriculum effectiveness. Security remains a top priority, with multi-layered security protocols protecting sensitive educational data at every system level.

Students reach an advanced stage of learning as they work on higher-level AI projects, often in collaboration with industry partners. EQ is further refined through leadership roles in AI projects, where students must resolve complex ethical and interpersonal challenges. AQ becomes a defining feature of student success as they learn to thrive in a constantly changing environment with new challenges regularly arising. At the Optimization Level, the goal is to develop students who are competent in AI use and capable of leading AI-driven initiatives in various contexts.

Optimization Level Actionable Steps:

The institution focuses on establishing thought leadership in AI governance and full AI integration, innovation, and continuous improvement. AI drives leadership decisions and educational strategies, and custom AI models are tailored to the institution's evolving needs. At this level, teaching and learning are characterized by learning autonomy, where students and staff leverage AI to create highly personalized learning experiences.

The institution should:

- Conduct workshops or training sessions for educators and staff on best practices for integrating insights into teaching, learning, and administrative processes.
- Engage regionally and globally in setting the governance structures that drive ethical AI use and promote innovation.
- Invest in building bespoke AI models tailored to the institution's specific needs and strategic objectives, enhancing educational and administrative outcomes.
- Establish a mindset of continuous experimentation for cutting-edge AI tools, processes, and applications that push the boundaries of what AI can achieve in education.
- Use the centralized data layer to generate predictive insights that inform decision-making, improve student outcomes, and optimize institutional operations.

5. Transformation Level: Achieving AI-Native Culture and Full Autonomy

The Transformation Level represents the pinnacle of AI maturity, where the institution has fully integrated AI into all aspects of its operations and has adopted an AI-native culture. At this stage, AI is not just a tool but a fundamental part of how the institution functions, driving innovation and enabling new ways of teaching, learning, and administration. Institutions are recognized as leaders in AI innovation, both in governance and in the application of AI across teaching and learning.

Ethical and innovative AI governance drives institutional strategy beyond ethical compliance, ensuring that AI initiatives are cutting-edge and aligned with the institution's ethical standards.

Institutions leverage their investments in the central data factory and AI infrastructure to develop custom AI models tailored to their needs. The central data factory evolves as an analytics factory, producing real-time, predictive insights that empower decision-making through teaching and learning, administration, and organizational strategy.

In teaching and learning, AI has thoroughly redefined the student experience. Learning autonomy is a reality for students, staff, and educators, who are empowered to take complete control of their learning journeys through personalized AI-driven pathways. Students at this level also gain deep expertise in AI and related fields. They can develop new AI technologies and lead AI research. EQ is highly developed, as students are adept at working in interdisciplinary teams, managing complex projects, and considering the broader societal implications of their work. AQ is a hallmark of graduates from institutions at the Transformation Level, as they are adaptable and proactive in shaping the future of AI and its applications. The objective is to produce graduates who are autonomous learners, capable of navigating and leading in an AI-driven world with confidence, creativity, and ethical responsibility.

BUILDING AN AI-OPTIMIZED TECHNOLOGY ECOSYSTEM: A CIO'S GUIDE

As institutions move toward AI-driven learning and operations, a well-designed infrastructure is essential for scalability, flexibility, and security. This section focuses on three key pillars that enable institutions to support advanced AI applications: the Digital Learning Environment (DLE), the Central Data Factory, and Identity Management and Security. Together, these elements ensure that the institution's AI initiatives can scale effectively while safeguarding sensitive data.

The DLE represents a unified, integrated ecosystem where tools and systems support users' needs seamlessly. The key feature of the DLE is its flexibility—tools are interchangeable as long as they deliver the best user experience. This environment is made possible by a unified user interface on top of various systems, standardized integrations, and AI-driven features, including Generative UI for personalized interactions. With this architecture, the DLE ensures that the best tools can be leveraged without locking the institution into a single vendor, making the system adaptable to evolving educational requirements.

The Central Data Factory is the foundation that powers the DLE, serving as the hub for all institutional data. This central repository aggregates data from disparate systems (LMS, SIS, financial, etc.), enabling real-time insights, predictive analytics, and personalized learning experiences. The critical feature of the Central Data Factory is its use of standardized

communication protocols for education data and systems, ensuring that tools within the DLE can be easily swapped or upgraded without disrupting data flows. Moreover, the Central Data Factory is a gateway for managing sensitive identity and PII data, feeding directly into secure Identity Management.

As the institution's AI ecosystem expands, securing user identities and protecting personal information becomes paramount. Identity Management solutions, including multi-factor authentication (MFA) and role-based access control (RBAC), ensure that access to sensitive data is tightly controlled. The Central Data Factory plays a crucial role by providing a single entry point for identity and PII data across systems, ensuring consistent security policies are applied across the entire ecosystem. AI-driven threat detection adds a layer of protection, safeguarding against emerging cyber threats while maintaining compliance with regulations.

BARRIERS TO AI ADOPTION

As society embarks on this teaching and learning transformation precipitated by AI, barriers and resistance may impede progress. Knowing and addressing these barriers is a crucial part of AI adoption.

1. *Educators fear that AI will eventually replace them*.
   The Forbes Opinion Poll of Teachers and AI (2024) indicates that 30% of educators fear job displacement. This notion requires a change in educators' mindsets as it overlooks the fundamental and impactful role that human connection and empathy play in teaching. While AI can assist with tasks like grading, content delivery, and even personalized learning pathways, it cannot replace the higher-order IQ skills educators provide to enhance students' ability to reason, problem-solve, analyze, and evaluate. Through mentoring and personalized support, educators must develop students' EQ: emotional intelligence, resilience, and self-awareness. AQ, adaptability, flexibility of thought, and robust thinking are what educators provide. AI can enhance the educational process by supporting teachers and shifting their roles from commonplace tasks to truly focusing on students' intuition, creativity, and relational skills. Instead of replacing educators, AI is a tool that empowers them to be more efficient in their roles.

2. *Educators are unable to use AI effectively*.
   An astonishing 87% of educators have never received professional development in AI[3]. AI literacy will enable education institutions to integrate AI tools effectively, enhance teaching and learning methodologies, and prepare students for future careers where AI skills are

[3] Edweek Research Center.

indispensable[4]. Educators and staff must be equipped to teach with and about AI, ensuring that students are users of AI technology and critical thinkers about its implications.

Most institutions start AI adoption by providing professional development for educators in prompting. While knowing how to write effective prompts is essential, it lowers the expectations regarding educator AI proficiency. Educators will never be prompt engineers. Every month, a new AI technology requires a different form of prompting. There is not enough time for teachers to become experts in all tools. The best approach is a broad understanding of AI and its capabilities and using specific tools to enable the institution's teaching and learning objectives to reach fruition.

3. *Not all Educational Institutions need AI*.
   Many education institutions may be skeptical of fully embracing AI because it is based on students precisely retrieving content into exams. In other words, **today's students learn to have answers, but in the AI era, they must learn to ask questions**. The right question, or prompt, takes users to an infinite world of information and possibilities.

   A recent study by Goldman Sachs estimates that 300 million jobs may be replaced by AI, such as office administrative support, legal, architecture and engineering, business and financial operations, management, sales, healthcare, and art and design. At the same time, AI will create new jobs at such a pace that it will require us to change professions three to four times in our lifetime. However, these changes will benefit us all. AI adoption can increase annual global GDP by 7%, or almost $7 trillion (Goldman Sachs). AI is expected to contribute $16 trillion to the global economy by 2030 (PWC).

4. *AI limits students' capacity to think and process information*.
   Some educators argue that AI limits students' capacity to think and process information, diminishing their learning capacity. They are correct from the perspective of a curriculum-based education system. But now it is time to transform our mindset and explore new possibilities by combining learning and technological innovation into a new education paradigm. AI is far from being the answer to all our questions, but it is a tool that helps us become more productive. AI augments the performance of various professions, especially those emphasizing critical thinking and complex problem-solving skills. These AI tools augment biological intelligence to increase productivity, which has never happened before.

[4] According to the LinkedIn Future of Work Report, English-language job postings mentioning GPT or ChatGPT have increased 21x globally since November 2022.

For example, imagine a group of students who want to diminish the use of plastic worldwide. They research the subject for a couple of weeks and refine their prompts when using AI tools. Their brainstorming sessions are "heard" by Microsoft's Copilot, an AI itself, which later summarizes the conversation into a paper with the conclusions and a concept idea. Students then ask Copilot on LinkedIn to find potential investors who are more likely to invest in an idea like theirs. The Copilot designs a PowerPoint presentation using Dall-E AI-generated images and the concept paper that will resonate with these investors.

The students' plastic-less solution is to create an app, which they want to demonstrate the prototype to potential investors. They ask ChatGPT to write the code, which students can cut and paste on GitHub, and voila! They have a demo prototype. These students are not experts on environmental cleaning. They have never met investors before and are not presentation designers or coders. But they know how to ask questions – or create prompts.

5. *ChatGPT and similar are the recommended AI tools to use.*
   While tools like ChatGPT are powerful, generic tools might not always provide the most effective results for educational institutions. Choosing education-specific AI tools that understand student behavior, learning outcomes, and educational processes is important. These AI solutions offer specialized features like automated grading, personalized feedback, curriculum generation, and step-by-step, more aligned with academic goals. Furthermore, industry-specific solutions often have built-in compliance features, ensuring they meet privacy regulations such as FERPA and GDPR.

   While ChatGPT and general-purpose LLM models can be useful for initial exploration, adopting customized AI tools for long-term integration will yield more relevant insights and results tailored to the education sector. Therefore, educational institutions should prioritize training with a wide range of AI tools designed specifically for their industry over generic AI models.

6. *I can adopt AI as a standalone implementation*.
   Standalone implementations of AI tools will lead to fragmented deployments that do not deliver their full potential and fail to provide significant value to warrant the investment made. AI solutions should be integrated into the broader EdTech ecosystem and aligned with the institutional educational objectives. Having a holistic approach to implementing AI solutions that incorporates AI into a centralized system, such as the central data factory, ensures data flows between the AI and other systems that truly deliver on its promise of transformative teaching and learning.

7. *The cost of adopting AI at a large scale is high*.
   While there is an initial cost of adopting AI at a large scale, such as hiring AI professionals and purchasing subscriptions, the long-term benefits often outweigh these expenses. Over time, AI can automate time-consuming tasks, streamline operations, and reduce inefficiencies, ultimately leading to cost savings. Additionally, many AI platforms are becoming more accessible, with scalable solutions that cater to various budgets, including cost-effective cloud-based systems and open-source AI tools. Increased productivity and personalized learning outcomes can improve educational success, which offsets the upfront investment. Rather than being prohibitively expensive, adopting AI is increasingly a strategic and affordable investment for institutions aiming to innovate and grow.

8. *The institution's current privacy policies are good enough*.
   Institutions must implement systems that prevent exposing personally identifiable information (PII) to ensure compliance with privacy laws such as FERPA and GDPR. One practical approach is to leverage a central system, which can anonymize sensitive data before AI models process it. By utilizing data encryption and tokenization, the central system ensures that PII is not shared across systems while allowing AI models to function effectively. Additionally, role-based access control (RBAC) and multi-factor authentication (MFA) should be implemented to limit access to sensitive information to authorized personnel only. This layered approach to identity and data management secures PII and ensures that the institution complies with privacy regulations while using AI systems.

9. *There is no need to implement AI governance and policies*.
   Developing AI governance and policies is equally critical as AI technologies evolve. A mere 7% of education systems currently provide guidance on using generative AI[5]. Establishing robust AI policies will protect students' privacy, ensure ethical AI use, and position the institution as a leader in innovative education practices.

ARE YOU READY TO GET STARTED?

Until now, learners had access to resources available in schools and technology with vertical content. But society is at an inflection point in its history as we can shift the use of AI in education in the right direction. The proper use of AI develops students' learning autonomy, with the ultimate goal of fostering competencies and habits of mind, which will be part of students' lives forever. AI expands students' knowledge horizons, entices them to ask more questions, and sparks a desire to explore the unknown. It enables society to reach the next level of intelligence, ask significant questions, and seek original, pioneering answers.

[5] UNESCO

Adopting AI in educational institutions is essential. By adopting the proposed Model, institutions can strategically implement AI and move to a dynamic AI-enabled environment. This transformation requires a clear strategy, investment in infrastructure, faculty training, industry partnerships, and a commitment to ethical AI use.

Although integrating AI into education will be challenging, ultimately, it will be rewarding. Institutions that embrace AI will enhance their educational offerings and prepare their students with the skills needed to thrive in an AI-driven world.

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