AI in K-12: An IT Admin's First Steps to Secure, Ethical and Purposeful AI Deployment

ChatGPT hit the public-facing internet in November 2022; two months later, it hit 100 million users, making it the "fastest-growing consumer application in history." Afraid of AI's potential effect on learning and academic integrity, some school districts banned it from their schools. Less than a year later, some districts reversed these policies, aiming to embrace AI instead of scorning it. So, how can schools move from fear to a thoughtful, secure, and ethical AI strategy?

A variety of reactions from schools isn't surprising. Many districts had no guidance about how to handle AI. How to handle it in schools isn't obvious for anyone. However, with many technology trends, like the advent of computers in schools or the internet, it's likely that AI is here to stay. And ignoring it is the worst way to go. A **high schooler in 1982** sums up this sentiment nicely, addressing the increasing presence of computers:

> Whether you like or dislike computers or are or aren't interested in them, you had better get used to hearing about them in the media. The experts predict that computers are going to be with us a long time and will be as commonplace in the home as the telephone by the year 2000.

We now know just how ubiquitous computers became. The same questions that once surrounded computers in education now apply to AI. Schools that resisted computers eventually adapted; the same will likely happen with AI. The real question isn't if AI belongs in education, but how we ensure it benefits the learning environment and students, rather than harming them.

What is AI?

First, let's define what we mean by "AI." Artificial intelligence is technology that mimics human intelligence for decision making, problem solving, content creation and more. Depending on who you ask, AI isn't at the point where it can replace human creativity, but its capability to analyze large sets of data certainly does exceed our own. This can make it valuable in a number of use cases, especially considering the unconquerable amount of data the internet offers.

AI doesn't just come in the form of chatbots like ChatGPT; it's now behind tools like Siri, self-driving cars, security software and image generators/editors. We use AI-backed tools in our daily lives — if students aren't already using them, they will in the future. So why not teach them how to use them in a responsible way? If school decision makers have a deep understanding of AI's many forms, they're better equipped to acknowledge the nuance behind its use and help students develop a healthy relationship with AI.

AI tools can enhance learning

Like many powerful tools, AI can be used for both good and bad. As mentioned in the recent **EU AI Act,** developers of AI have the responsibility to create AI software that respect human rights. This means their creators have to understand the implicit biases and potential harms their tools could invoke. If schools choose their AI-backed software wisely, they can reap significant benefits for learners and educators alike. But what benefits?

Companions for teachers

Teachers have a lot on their plate: grading, lesson planning, professional development, parent communication, and classroom instruction. AI can take away some of this burden so teachers can focus on the irreplaceable human element that helps students thrive. AI can:

- Develop lesson plans

- Grade assignments

- Simplify research and content creation

- Make it easier to understand where students are struggling

AI gives teachers some of their precious time back — students can reap these benefits too.

Access to resources

Since AI is good at processing a lot of data, it can act as a gatekeeper for information that could be hard to find. Or AI-driven platforms can be used to generate digestible content from online data, like interactive simulations or online libraries. This makes it easier for students to find resources on their own.

Immediate feedback

AI can offer instant and detailed feedback on student performance, helping them understand their own strengths and weaknesses. This timely feedback comes when the material is still relevant and front-of-mind, improving comprehension and learning outcomes. Teachers can then use this feedback to adapt their future lessons.

Personalized and equitable learning

Teachers can't be everywhere at once and often don't have the time or resources to cater lessons to each learner. AI can fill this gap by analyzing student performance and adapting learning materials, pace and difficulty levels accordingly. This helps students focus on the areas of a lesson they struggle with the most.

- Learners with disabilities benefit from AI too.

- Live captions on videos or streams can help those with hearing loss.

- Translators and AI writing tools can help students who are learning in different language than one they speak at home.

- Voice or image recognition software are useful for a variety of use cases too.

These tools, and others, help level the playing field for learners of all abilities. Embracing AI in your school impacts equity in other ways too. Students with their own devices can access and use AI as they desire, and students from wealthier backgrounds can afford other resources, like a personal tutor. Students without these luxuries can get left behind, especially in a world where AI will only become more prevalent. With school-provided access to AI, students from economically disadvantaged backgrounds can access personalized learning that's better suited to their needs.

Data-driven adaptations

Schools hold a lot of data about students: their home life, health history, school performance and more. AI-backed programs can predict which students may be at risk of underperforming or dropping out. With early intervention based on these insights, schools can help support these students and adapt resources to meet their needs.
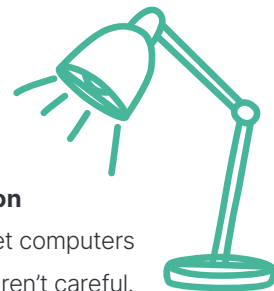
AI implementation requires intention.

While AI's future presence and usage may be inevitable, it's wise for every school to be thoughtful about their AI adoption and mindful of the nuances behind AI deployment. Let's explore a few of these considerations.

Device management and app deployment

Because of the various risks AI platforms can pose, admins should take care that students access AI in approved ways. Mobile device management (MDM) software helps both deploy apps and enforce restrictions — so students can access only IT-approved apps. Content filtering solutions also prevent students from accessing unvetted AI software.

Maybe schools want students only to have access to AI at certain times, like during a lesson showing how to use generative AI. Or they want to prevent access, like when students need to prove their competency in an essay. Content filtering solutions can take care of this too.

Data privacy, security, compliance

As mentioned earlier, schools carry a lot of sensitive data. Schools are subject to regulations like the Children's Online Privacy Protection Rule (COPPA), Family Educational Rights and Privacy Act (FERPA) and General Data Protection Regulation (GDPR). Many if not most AI models include cloud access and may transmit data to servers outside the school's control. It's important to vet any chosen software to ensure that it handles any data responsibly.

Quality control and accuracy

You've probably heard about generative AI citing studies that don't exist, misrepresenting certain information or delivering information that is simply incorrect. This is a real problem to look out for, especially at the early stages of AI implementations. While that falls onto users, students and teachers should know that AI can make mistakes and requires verification. User education is a role IT and leadership may have to consider

(See: "Professional development")

Balancing automation and human interaction

People don't get into teaching to sit back and let computers take over. But AI can be a slippery slope if we aren't careful. AI makes our lives easier, and it can be easy to let it take over too much if we aren't intentional. This can worsen the learning experience for both students and teachers — hence the importance of establishing thoughtful AI policies.

Bias and fairness

AI models are trained on data created by people and, unfortunately, not all of this is fair or represents everyone equally. In fact, AI has been **shown to perpetuate biases,** like flagging non-native English speakers' writing as incorrectly AI generated, or assigning job roles like "secretary," "physician's assistant," and "flight attendant" as feminine and "fisherman," "lawyer," and "judge" as masculine.

While this may seem subtle, students are especially vulnerable by these biases and lack of fairness. Educators and administrators should be aware of these issues so they can adjust and educate accordingly.

Professional development

As we've already hinted at, responsible use of AI requires intention and training. Teachers and staff may need training to effectively integrate AI into their curriculum and lessons. Schools should prioritize professional development so educators can use AI to its fullest potential, without increasing gaps between technology users of differing skills.

Lesson plans and academic integrity

AI can write essays, solve complex math problems and even generate computer code — all features that make it easier for students to cheat and harder to verify student competency. Content filtering solutions can help here too, by blocking access to generative AI when students need to prove they understand the material.

AI's power features require teachers to adapt their lesson plans and evaluations to address this. Teachers must be familiar with AI to know how their lessons should change; embracing AI can evolve teaching and learning.

IT policies shape the evolution of AI.

IT and school administration policies can influence:

- What AI software is available for use

- How and when students can access AI tools

- Teacher competency with AI

- The privacy and security around AI use

This is no small responsibility, but a wealth of software solutions can assist. In terms of policy development, UNESCO offers some guidance in their book, **Guidance for generative AI in education and research.** We'll summarize some of their key recommendations here — read the full document for detailed guidance.

Promote inclusion, equity and diversity

AI adoption is likely inevitable, and preparing students for this future is necessary. The content AI outputs is related to those who produce content, and design and use AI models. This means that overcoming biases and exclusionary content starts with making it accessible to users of all genders, ethnicities, special educational needs, socio-economic status, geographic location, displacement status, and beyond.

Protect human agency

Generative AI may mimic human intelligence, but it shouldn't be allowed to usurp it. Users should understand how AI use impacts their education and wider lives. This relates to the data AI may collect from users, exposure to human-generated creative output, overt dependence on AI, and students' development of cognitive abilities and social skills. Schools should encourage and consider feedback from teachers and learners about AI when deciding if AI access should be available school-wide. High-stakes decisions should not be left to AI tools.

Monitor and validate generative AI systems for education

Not all AI is appropriate for all learners. Schools should continually monitor to make sure that chosen AI tools are free of biases, are ethical by design, do no predictable harm to students and are educationally appropriate. Generative AI can output deepfake images, fake news or hate speech, which should quickly be addressed.

Develop AI competencies

Learners should be taught about the human and technological dimensions of AI and its impact. This means teachers need to understand AI technologies as well. In fact, some jurisdictions *require* proper education for staff using AI, like those under the EU AI Act. Schools should regularly review the competencies needed by teachers to use and teach AI.

Much of these changes require the administration or IT leaders to intervene, and not every reader will have the ability to make these implementations. After all, it also depends on the AI developers themselves and how they address these concerns. Ideally, by educating a diverse student body, they can eventually become creators themselves, helping eliminate some of these issues around AI's intrinsic biases.

But in the meantime, software tools like MDM and content filtering can help with IT-related concerns. Hopefully, your school offers all students access to devices. MDM can deploy approved AI apps to enrolled devices, making them readily available for use. Or if access to certain AI applications is seen as overtly biased or detrimental, content filtering can prevent students from accessing them.

You're probably wondering, "Ok, but what can I do *right now* to address AI in schools?" This is a good place to start:

AI readiness checklist for IT admins

Going through this checklist puts your school in a good position to start their AI journey.

☐ **Develop AI policies:** With learner/educator feedback and regulations like the AI Act, GDPR, and COPPA, determine what AI tools are acceptable, based on their relevance to education, data collection, appropriateness and how they address biases.

☐ **Audit existing AI usage:** Identify where AI is already present in apps, learning tools and IT workflows.

☐ **Evaluate risks vs. benefits:** Align AI use with school policies and data privacy laws.

☐ **Implement AI governance:** Set rules on which AI tools are allowed, how they are monitored and when they should be restricted.

☐ **Secure AI-integrated devices:** Use MDM and content filtering solutions (like Jamf) to enforce AI-usage policies across school-issued iPads/Macs.

☐ **Train educators and students:** Offer AI literacy training so staff and students can use it ethically and effectively. Educators should know the risks and challenges surrounding AI usage and be able to explain this to their students.

Want to make AI adoption more effective? Jamf offers tools to restrict or allow AI applications in your school. And with access policies that go further and give teachers the ability set rules right in the classroom, AI can seamlessly integrate into lessons — or be blocked completely.

See it for yourself: request a free trial!