Chapter 2

STAY SMART WITH AI

USING GENERATIVE AI IS MUCH LIKE switching from a handsaw to a power saw. The differences in speed and what you can accomplish are amazing. But you also must be super cautious and smart with how you use it. Just as you would not casually operate a power saw without some basic knowledge, you shouldn't use AI without understanding its potential impact. When operating a power saw, you would read the manual and take other safety precautions. It is no different with AI. You have to practice many safety measures. Both tools, if misused, can lead to serious consequences.

According to the famous basketball player Kareem Abdul-Jabbar (2023), "A tool is still a tool, whether it's a stick being used by chimps to fish for termites to eat, or an AI-driven supercomputer that powers a continent. What we do with our tools depends on our creativity, morals, and ability to reason. It will require all three of those qualities to properly and safely move forward with AI" (Abdul-Jabbar, 2023).

Scholars such as Eugene Volokh from UCLA echo these points. They are exploring the accountability aspects of AI-generated content and stress the necessity of clear ethical policies and guidelines. Such standards are crucial for responsible and ethical AI usage (Verma & Oremus, 2023). The integration of AI in educational settings also demands a comprehensive strategy, as noted by Helmore (2023). This calls for continuous dialogue, appropriate regulation, and responsible deployment of these advanced tools.

FIGURE 2.1 Six Steps to Stay Smart with AI.

According to authors Mike Ribble and Marty Park (2019), a comprehensive plan is essential not just for preparing for these opportunities but also for fully leveraging them. Leaders should collaborate with technology experts and a leadership team on campus to ensure there is adequate support and infrastructure. This collaboration will make the technology more effective and accessible for students and adults who use it.

In this chapter, we explore the limitations, concerns, and safety issues associated with using generative AI. As you study the challenges of using AI, consider these six ways to help you stay smart with AI.

1. Establish Safety Standards

THE PROBLEM

Debating the Digital Dilemma

Generative AI in education has sparked more safety research and discussions than ever before. Schools are responding in very different ways, highlighting a variety of perspectives. Some are banning AI in classrooms due to safety concerns, while others allow it with guardrails of responsibility. The potential for AI to improve education is immense, but the safety risks are just as significant. Like any interaction

with technology, leaders worry about data breaches and unauthorized access, which could expose sensitive information. These safety vulnerabilities present challenges. And if we don't address them, it could affect privacy, security, and trust in AI's role in education.

THE SOLUTION

Responsible Integration

When Google Apps for Education was introduced as a free tool for schools, I remember an understandable concern about its integration into schools. From 2012 to 2017, Google evolved from a novel option to the backbone of educational infrastructure, marking a transformative era in education (Sabbatini, 2017). This shift wasn't just about adopting new tools; it was about navigating the complex landscape of digital safety. I was a Google evangelist—so excited to launch these tools. However, our journey taught us the importance of a strategic approach to technology, focusing on safeguarding student data and ensuring a secure learning environment. Embracing the new AI tools with a plan will prove that with a focus on security, it's possible to harness the potential of new technologies while maintaining the trust and safety of our school communities.

A Strong Infrastructure

School leaders need to work in partnership with their school's IT specialists to responsibly use AI. These tech-savvy gatekeepers keep the campus technology secure to make sure everyone is safe, so include them at the very beginning. The framework has firewalls, hard passwords, and data encryption. Together, they conjure up a digital barrier, which works its magic in minimizing the risks of data breaches and unauthorized access. The collaboration between school leaders and IT specialists to create a secure digital barrier reflects the systems design approach advocated by ISTE Standard 3.4, Systems Designer.

An AI Use Policy

Safely integrating AI into schools involves an updated policy for using AI. This policy guides AI activities in education by outlining what to do and not to do. An effective policy is important for responsible integration in schools. It helps set up a framework for ethical considerations, privacy regulations, and safety guidelines. The goal is to promote safe, ethical, and effective uses of AI, which align with the school's educational mission. As you update your policy, consider comparing it to an Empowered Use Policy recommended by Scott McLeod (2014). Develop an AI use policy that includes guidelines for ethical considerations and privacy regulations and aligns with the principles of equity and responsible digital citizenship. This example

exemplifies ISTE Standard 3.1.d, Cultivate Good Online Behavior, which states, "Cultivate responsible online behavior, including the safe, ethical and legal use of technology."

A Watchful Eye

Remember, technology is ever-evolving, and so are the associated risks. Continuous vigilance is essential. To keep the AI systems secure, they need regular updates and security audits. Verification is one of several ways to ensure safety and ethical standards are in place. Being proactive can help your school find weak spots before they become security problems.

Helpful Partners

When looking for specific platforms, select AI service providers or platforms that prioritize safety and follow established security standards. Vendor compliance is a crucial factor to keep in mind. Leaders at Open AI, the creators of ChatGPT, say they've added safety limits and guardrails to their programming. "There will be other people who don't put some of the safety limits that we put on," the CEO of ChatGPT said in an interview with *The Guardian* (Helmore, 2023). He continued, "Society, I think, has a limited amount of time to figure out how to react to AI, how to regulate, how to handle it." It is worth the time and effort to rigorously vet the vendor's history and product for alignment with your school's safety needs.

In addition to these technical measures, education about how AI tools are used is also vital. Regular staff training by experts about the best practices for AI safety can also help prevent human errors. This type of professional learning promotes digital literacy and encourages ethical decision-making and critical thinking about technology. Providing regular staff training on AI safety aligns with the goal of fostering continuous professional learning and promoting digital literacy as outlined in ISTE Standard 3.5.d, Navigate Continuous Improvement, which states, "Develop the skills needed to lead and navigate change, advance systems and promote a mindset of continuous improvement for how technology can improve learning."

AN EXAMPLE

Use your AI assistant to help create a Responsible Use Policy for AI. Consult experts in referenced articles for guidance by using details from publications and other resources in the prompt.

> Draft a detailed "Responsible Use Policy" that integrates the use of AI in [insert details, e.g., school campus grades K–12]. The policy will establish clear rules and guidelines for language use and monitor activity to ensure the technology is safe and used responsibly with appropriate consequences for misuse.

Instead of starting from scratch, you may just revise your current policy to add information about AI.

> Suggest ways to revise this Responsible Use Policy for technology in our school. Add information about using AI to guide students and staff in learning to use AI responsibly and ethically. [insert copy of current use policy].

2. Protect Data Privacy and Collective Good

THE PROBLEM

Privacy Predicament

Data privacy is of utmost importance in educational settings. Various laws and regulations are in place to safeguard personal information and ensure the safety and security of individuals' data. However, achieving comprehensive security goes beyond mere compliance with laws; it requires the implementation of robust regulations and explicit policies tailored to the specific needs of schools.

Several challenges may arise. First, schools and districts often handle a vast amount of personal information about students, staff, and their families, including academic records, health information, and contact details. Ensuring the privacy and security of this data is paramount, as any breach or misuse could have severe consequences for the individuals involved.

Second, AI systems, particularly generative AI, may inadvertently capture and store sensitive information from user prompts or conversations. Leaders may feel reluctant to put rules around generative AI, concerned that employees will feel untrusted; however, a lenient approach will leave organizations vulnerable to exposure.

THE SOLUTION

Compliance Cornerstone

Schools must implement proactive and stringent measures to prevent data from being retained or misused, even unintentionally. To handle this issue, explore the following steps on how to effectively comply with laws, policies, and guidelines that can ensure data privacy.

The Importance of Compliance

Schools are required to adhere strictly to privacy laws such as the Family Educational Rights and Privacy Act (FERPA). These regulations mandate rigorous steps to safeguard the confidentiality of student records. Compliance with these rules not only ensures legality but also builds trust with students, parents, and staff. Educating and monitoring compliance with privacy laws align with the principles of equity and responsible digital citizenship advocated by ISTE Standard 3.1, Equity and Citizenship Advocate.

Clear Privacy Policies and Guidelines

The privacy policy should be clear and easy to find. It should explain what data will be collected, how it will be stored, and who can see it. This policy for AI use should be included in the broader use policy for all technology use. The policy should cover the concerns of data security, human supervision, and critical thinking in AI-assisted activities. These guidelines help everyone understand privacy rules and commit to following them together. Creating comprehensive policies for AI use aligns with ISTE Standard 3.4, System Designers.

Multiple Layers of Data Security

Securing personal data is not a one-time setup. It is an ongoing process because of the complexities of AI and data analytics. Make sure there are many security layers, such as encryption and secure data storage solutions. Redundancy in security measures is important because it makes it harder for unauthorized people to access information.

Regular Audits and Monitoring

Conducting regular audits for privacy compliance is another crucial step. Audits should go beyond just checking laws; they should also examine how data is accessed in the AI system. By monitoring how AI tools are used, you can identify and address privacy risks early. By focusing on protecting privacy, you're reducing risks and using AI responsibly. You are also protecting student and staff information, which can increase trust in AI systems used on your campus. Conducting regular audits aligns with ISTE Standard 3.4, System Designers.

AN EXAMPLE

To illustrate how AI assistance can help address compliance with laws, policies, and guidelines, especially in regard to privacy in educational settings, try this prompt.

> Develop an AI-powered training module for educators and staff. The module will use interactive scenarios to teach the significance of privacy laws such as FERPA. Activities will feature practical simulations to illustrate responsible management of student data. Include elements of gamification to ensure the training is both informative and engaging, maintaining the interest of all participants.

3. Guard Against Over-Reliance on Technology

THE PROBLEM

Dependency Dilemma

I am a fan of science fiction. In some ways, AI feels as if I have my own robot, like R2-D2 or BB-8 droids from the Star Wars saga. It can simplify complex tasks and improve results in minutes. But just as R2-D2 couldn't save the galaxy by itself, AI cannot independently solve all problems or make decisions without human guidance and oversight. It is merely a tool to improve our capabilities, not a replacement for human judgment and expertise. An over-reliance on this technological ally can lead to some serious pitfalls. AI cannot fully grasp the complexities of human interaction. Overreliance can lead to a neglect of the emotional and situational nuances, which humans uniquely understand. While the AI chatbot may seem like a potent lightsaber, remember it won't become a Jedi Master of Creativity on its own.

THE SOLUTION

Synergistic Partnerships

Rather than solely depending on an AI computer program, blend its capabilities with your own intuition—your "Jedi wisdom"—to cocreate effectively. Here are some ways to combine the practicality of AI with the richness of human intellect.

Prioritize Human Interaction in Communication

AI can help us communicate in various ways, especially through email, texting, and social media. But it is important to note these tools cannot replace the human aspects of communication. Handwritten notes and face-to-face conversations still

hold incredible value in an educational setting. They convey nuances and emotional subtleties a machine just can't capture. Technology should enhance communication, not supplant it. In a publication on the future of teaching and learning with AI, the authors compare AI technology to riding an electric bicycle, but not to operating a robotic vacuum (Cardona, et al. 2023). With the electric bike, you are in control. The technology helps propel you in ways you couldn't on your own. But with the robotic vacuum, it works on its own and sometimes ends up sucking the socks left under the bed. The idea that technology should enhance communication, not replace it, aligns with the principles of equity and promoting digital citizenship advocated by ISTE Standard 3.1, Equity and Citizenship Advocate.

Remember, AI is Just a Machine

When working with an AI language model, it can feel as if you are conversing with a human, especially when it uses kind words, such as "please" and "thank you," or says "I'm sorry." Experts caution against thinking of AI models as humans. "No, they haven't decided to teach themselves anything, they don't love you back, and they still are not even a little bit sentient." The models are machines and not intelligent agents (Marcus and Luccioni, 2023). To maintain a good perspective about using AI, it is important to understand exactly how it works.

Critical Thinking and Expertise Are Irreplaceable

While it might seem easy to simply copy, paste, and publish a response from an AI chatbot, verifying its suggestions is essential and requires both time and critical thinking. It's important to cross-check the information with other credible sources to ensure accuracy. Understanding how and when to use AI is key to minimizing errors. The tool is adept at analyzing data and offering recommendations, but human insight and expertise are crucial for interpreting, validating, or challenging these outcomes. Maintaining this equilibrium is vital to ensure AI remains a helpful aid rather than an unverified source of authority. Overdependence on technology can result in errors, so a balanced approach is necessary.

Conversations Are Critical

School leaders must start and sustain discussions about AI in schools. Conversations are critical. A focus on safety and ethics should spark constructive discussions but not lead to fear. We need more discussion about how to use AI with school faculty and with children instead of judging it. Instead of debating AI use, I urge you to engage in informed conversations on how to leverage these tools in schools.

As AI becomes more available, educators need to work with AI companies to help improve the tool. Many companies are willing to work with teachers to solve problems and get their input. It's smart to take a pause in using AI with students

until the school staff are comfortable. But do not stop trying to understand how it works. Teachers must take the lead in finding ways to use AI tools in the classroom. Conversations will help. The importance of initiating and sustaining discussions about AI aligns with the principles of visionary planning and stakeholder engagement advocated by ISTE Standard 3.2, Visionary Planner.

AN EXAMPLE

The concept of "Synergistic Partnerships" between human intellect and AI in a school is both innovative and timely. Here is a way to illustrate this concept effectively. Host workshops with simulated scenarios illustrating how AI tools are used in conjunction with human decision-making. These workshops can demonstrate how AI can provide data-driven insights, while educators use their expertise and judgment to make the final decisions.

> Create three real-life scenarios for a school setting. In each scenario, the AI tools are used in conjunction with human decision-making. These will be used in a workshop to demonstrate how AI can provide data-driven insights, while educators use their expertise and judgment to make the final decisions.
>
> List 1) the context, 2) an AI Tool available on our campus (provide name), and 3) a description of the scenario.

4. Analyze for Bias and Ethics

THE PROBLEM

AI's Promises and Pitfalls

AI has great potential to improve our lives, but humans train these systems. Since people decide what information to include in the training, and they decide how to structure the information, the machines respond with subjectivity and bias. Users must recognize how the limited data and potential for bias can skew an AI's responses. Because biases exist in our society, the chatbots have the potential to amplify them in a harmful and unhealthy way.

Dr. Joy Buolamwini, who calls herself a "poet of code," founded the Algorithmic Justice League. She discussed possible bias on the TED stage (2016) and brought up concerns, particularly in facial recognition and biometrics. Policing, education, and healthcare use these technologies. Her research shows that if the teams building

these models lack diversity, the bias can continue and intensify. Non-inclusive teams and skewed data can make algorithms produce unfair and prejudiced results. Her work highlights this as a significant drawback of AI systems. Lack of transparency around how these tools function can impede accountability.

THE SOLUTION

Ethical Endeavors

If we develop AI in a more inclusive and ethical way, we can enjoy its benefits and avoid setbacks to progress and equality. Ongoing collaboration is crucial among tech companies, researchers, policymakers, school leaders, and the public to develop powerful and responsible AI. How can you as a school leader protect against bias? Start by understanding how bias shows up.

Understand AI Limitations

As with any technology, we must use it with great care. AI algorithms, like all algorithms, depend on the data they are given. We must be vigilant to make sure bias is not baked into AI systems (Cardona, et al., 2023). So, it is important to teach everyone, including faculty and students, about the limits and biases of AI. Armed with this knowledge, users can assess AI-generated content with a critical eye. The key is to be aware of its limitations and biases and to integrate human expertise for a more responsible and wise application of AI tools. When human intelligence collaborates with AI, the result is often more ethical, accurate, and impactful. This solution aligns with the principles of equity and digital citizenship advocated by ISTE Standard 3.1, Equity and Citizenship Advocate.

Evaluate AI Tools Thoroughly

Before using AI tools in your school, make sure to test them as you would with any other resource. Check for fairness across gender, race, ability, and other factors. An independent audit can uncover hidden biases. Vetting AI before adoption prevents perpetuating discrimination through automated systems. Take the time to examine tools rather than immediately deploying them.

Require Human Oversight

For any high-stakes decisions driven by AI, make it a requirement to review perspectives. Set up a team of volunteers who can monitor and review decisions with input from other stakeholders. Technology should complement human intelligence rather than replace it. So, let AI help make decisions, but expect your people to always have the final say in important matters. Combine AI's abilities with human judgment and ethics. Schools can use AI safely by being vigilant and careful to protect students

from risks. To adopt AI wisely, we need ongoing education, careful tool selection, and human supervision. This idea aligns with the principles of empowering leadership and human intelligence advocated by ISTE Standard 3.3, Empowering Leader.

Provide AI Ethics Training

To stay smart with AI, ensure your campus staff receives AI ethics and bias training. Discuss appropriate use cases and limitations. Teachers need to understand how to use AI-powered resources in the classroom responsibly. Continuous education about responsible AI use helps faculty recognize problems. It also reinforces the value of vigilance for staff and students. Ethics training aligns with the principles of continuous professional learning and responsible technology use advocated by ISTE Standard 3.5, Connected Leader.

AN EXAMPLE

Analyzing what you have included or excluded from the data you collect may help you uncover biases and anticipate consequences. In this example, the AI assistant helps you analyze the type of data to collect for a specific issue or situation.

> Act as a school leader. Your goal is to collect inclusive and ethical data to help with a specific issue. List examples of data I can collect so that I can better understand this issue and ways to solve it: [insert topic of study, e.g., students are not arriving at school on time].

Let the AI chatbot help you design a training session that focuses on staying smart with AI.

> Design a half-hour training session for educators to enhance their understanding about the capabilities and concerns of AI, specifically [insert details, e.g., analyzing for bias, protecting privacy]. The goal of the session is to empower them to make informed decisions about when and how to integrate AI technology into their teaching practices. Engage participants by using a game or small-group interaction to learn the information.

5. Promote Access for All

THE PROBLEM

The Digital Divide

During my time teaching at a high-poverty elementary school, I saw firsthand how the digital divide can create significant challenges for students. Many of my students didn't have access to computers or the internet at home, and even in the classroom, technology resources were limited. As AI becomes more prevalent in education, we must address this issue of unequal access head-on. If students from under-resourced communities can't utilize AI tools, they risk falling behind their peers who do have access to these powerful technologies.

There are several obstacles that can prevent schools from fully integrating AI, including budget constraints, lack of teacher training, and skepticism about adopting new technologies. But the achievement gap could widen even further if we don't overcome these hurdles. Unequal access to AI isn't just an educational issue—it's a civil rights issue. Students who don't have the same technological opportunities may face barriers to future success. The immense potential of AI in education can only be fully realized if all students, regardless of their backgrounds, can benefit from it.

We cannot allow the transformative power of AI to become a privilege enjoyed only by those with means. Every student deserves access to the tools that will prepare them for the 21st century world and workforce. As AI becomes more integrated into schools, as highlighted by Michael Gaskell (2024) in his article "How School Leaders Can Address the Inequities of the AI Digital Divide," it's going to be up to school leaders to make sure this integration is equitable. This means ensuring all students have access to the technology, training, and support needed to benefit from AI-powered learning experiences.

THE SOLUTION

Bridging the Gap

What if AI could be a force for equity, not a tool for exclusion? To ensure all students thrive in an AI-powered future, our priority must focus on achieving digital equity. This requires not only fair and responsible use of AI in education but also a commitment to continuous improvement in school practices. Let's explore key strategies school leaders can use to prioritize inclusion:

Empowerment and Digital Literacy

Teachers need to become comfortable using AI before granting students access. Equipped with adequate training in digital literacy and informed about AI, teachers can effectively guide students in navigating and harnessing the full potential of AI in their learning journey. This aligns with the principles of empowering leadership and professional agency advocated by ISTE Standard 3.3, Empowering Leader.

Continuous Evaluation and Improvement

Regularly review the impact of AI tools used in your school. Are the tools improving outcomes equitably across student groups? Gather feedback from teachers, students, and families. Find areas to improve and address concerns. Be prepared to refine implementation strategies based on impact evaluations and stakeholder input. Evaluating AI systems helps fix problems and ensures they support all types of learners. This aligns with the principles of systems design and continual improvement advocated by ISTE Standard 3.4, Systems Designer.

Prioritize Partnerships

Working with a mix of people and perspectives is key to bringing out the best in what we do, especially with AI in education. It's all about understanding different needs. Why not team up with organizations like ISTE and others in your local community who can help identify any biases or issues that could affect underserved students? This approach supports active involvement with all stakeholders, as recommended by ISTE Standard 3.2, Visionary Planner, and promotes fairness and digital responsibility, in line with ISTE Standard 3.1, Equity and Citizenship Advocate.

AN EXAMPLE

This prompt helps you find organizations that support professional learning for educators. The AI assistant can improve your network and broaden your understanding of AI's abilities and limitations.

> Provide a list of organizations, including ISTE, which offer educators a safe community for learning, advocating and gaining information about AI products.

6. Assess for Accuracy

THE PROBLEM

The Reality Riddle

An issue with AI responses, as with any information found online, is the lack of guarantee for accuracy as a single source (McClennen and Poth, 2022). This can get tricky. It means educators and students must be cautious and critical thinkers when using AI-generated content. This problem can cause the spread of false information and harm educational outcomes. Despite its confident, sophisticated, and authoritative tone, AI tools can provide incorrect information.

THE SOLUTION

Content Confirmation

To address this challenge, encourage your staff to verify information from reliable sources. This is an essential skill in the age of AI, and it is something to teach and practice. Think of AI's outputs only as a starting point, rather than the final answer. To get better at telling if information is true, try these strategies.

Double-Check Your Facts

I have used AI to help me cook my Thanksgiving ham and to plan a vacation, and it worked out great. But when using an AI tool for academic learning, I recommend comparing responses with several platforms and with information from experts. You can find helpful information from articles in databases such as the Education Resources Information Center (ERIC), and professional communities like ISTE or ASCD. This aligns with the principles of staying informed and utilizing resources effectively advocated by ISTE Standard 3.5, Connected Leader.

Compare Notes

Many AI tools that aim to boost student engagement are becoming available to schools. It's essential, however, to do your homework before diving in. Prior to using a new program that promises to enhance student engagement, make sure you learn the facts. Research the program with your AI assistant and conduct an internet search of experts on the topic. These actions emphasize the need to compare new programs promising to enhance student engagement and align with the principles of visionary planning and informed decision-making advocated by ISTE Standard 3.2, Visionary Planner.

Keep the Context in Mind

AI tools work well for many situations, but schools have unique needs. For instance, an AI tool advertised as working well in a suburban high school may not yield the same results in an inner-city elementary campus. Keep your school community's unique needs and context in mind when evaluating the suitability of any AI tool.

AN EXAMPLE

This example begins with a prompt to ask about effective programs for academic success. It then builds on the first response to ask for additional information in subsequent prompts. For this prompt, I used Google's Gemini, which sometimes provides links for further research.

> List educational programs that use generative AI and claim to increase student engagement in creative writing through technology.

Next, ensure the program meets ISTE standards, as ISTE provides evidence-based perspectives for confirming or challenging technology programs. Try the following prompt to verify how the program aligns with these standards.

> This educational program claims to increase student engagement through technology: [Insert name of the program, e.g. "Writesonic"]. Analyze this program and compare it to the standards for technology reported by the International Society for Technology in Education (ISTE).

Discussion Questions: Stay Smart with AI

While it is true AI can make mistakes, its advantages are significantly greater. The synergy of AI and human supervision forms a robust partnership. This chapter offers insights into staying smart with AI. As you navigate this new tool with these safeguards in mind, AI will become a valuable and ethically responsible component for shaping how we learn in schools.

Use these questions with your team to discuss how to stay smart with AI tools in a school setting.

1. How do we ensure the accuracy of AI-generated outcomes when using AI tools on our school campus? What steps or strategies do we use to confirm and verify the results?
2. What safety measures do we have on our campus for using AI tools in education? How do we prioritize the well-being and privacy of students and stakeholders?
3. How do we navigate the ethical considerations that arise from using AI tools in our school?
4. How can we keep up with the changing ethical guidelines and best practices for using AI?
5. How can we educate and include stakeholders, such as parents and the community, about AI tool safety and accuracy in schools? How do you foster trust and address any concerns or misconceptions?
6. How do we track and test the safety and accuracy of AI tools over time? How do we ensure continuous improvement and change as needed?
7. How can we involve students in discussions and the decision-making process related to the safety, ethics, and accuracy of AI tools? How do you empower them to voice their opinions and contribute to shaping AI practices in the school?