Artificial Intelligence Guidance for Local Education Agencies

Version 1.0

Missouri Department of Elementary & Secondary Education

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Version History

Date	Description of Changes	Version
	Initial document created	1.0

Acknowledgments

Computer Science Advisory Council

With members selected by the Department of Elementary and Secondary Education (DESE), the council is made up of specialists in both education and computer science, working together to improve and maintain computer science education throughout Missouri. The council was tasked to develop guidelines for artificial intelligence for local education agencies (LEA).

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Introduction

Artificial intelligence (AI) is rapidly transforming the educational landscape, presenting both opportunities and challenges for students, educators, administrators, and communities. As AI tools become more advanced and accessible, they are increasingly being integrated into classrooms, school operations, and educational policy. To ensure these technologies are used effectively and ethically, it is critical that educational stakeholders understand AI's capabilities, limitations, and implications. This guidance document was developed to support Missouri's LEAs in navigating the integration of AI in a manner that enhances teaching and learning while maintaining student safety, data privacy, and academic integrity. Grounded in current research, national policy recommendations, and input from Missouri's Computer Science Advisory Council, this document provides a comprehensive framework for the responsible use of AI in education. It outlines key considerations for AI implementation, including professional development, instructional best practices, data privacy, and policy development. Designed to be flexible and responsive to evolving technology, this guidance empowers LEAs to create thoughtful, context-specific policies that align with local needs while preparing students for the demands of an AI-driven future. The primary purpose of integrating AI in schools should be to enhance student outcomes. AI can serve as a tool to empower educators and deepen engagement and academic growth across the learning environment.

Purpose

This guidance document is intended to assist Missouri LEAs, administrators, educators, and educational support personnel in navigating the responsible use of AI in education.

AI refers to computer systems and algorithms that mimic human intelligence or problem-solving abilities. AI is constantly evolving. As AI is used it continuously analyzes human language, enhancing its ability to interact effectively with users.

AI is rapidly surpassing expectations, indicating its inevitability in business, education, and the broader digital arena. Despite its benefits, AI tools may generate predictions that are not always accurate, potentially resulting in incomplete or misleading information. AI will generate confident predictions but can be flawed based on insufficient, biased, or flawed training data. As systems improve, these flaws may be reduced; however, human oversight will remain vital. This underscores the necessity for LEAs to address generative AI and its impact on both current education practices and prospective job market expectations for students. Generative AI is a type of AI that can create new content like text, music, or code based on what it has learned from existing data. As AI and machine learning skills become crucial for workforce readiness, educators must devise strategies to equip students for economic empowerment in an evolving landscape.

The 2024 *Future of Jobs Report* by the World Economic Forum projects significant transformations in the labor market within the next five years driven by the rise of AI. According to the report, 75 percent of the companies surveyed intend to integrate generative AI by 2027, leading to job displacement and new job opportunities. Other studies have suggested that 19 percent of the workforce could see more than half of their tasks automated by AI (Eloundou et al., 2023). Moreover, AI and machine learning are highlighted as the most crucial skills for retraining and enhancing one's capabilities in the coming five years (World Economic Forum, 2023). Educators and leaders must reflect on the strategies needed to prepare students for the ever-changing work environment.

The U.S. Department of Education Office of Educational Technology has published a report titled "Artificial Intelligence and the Future of Teaching and Learning", emphasizing the importance of developing policies for the rapidly advancing AI tools used in the classroom and our daily lives.

This document provides guidance to support all Missouri education professionals in navigating AI in education. This guidance enhances existing policies on technology use, data protection, academic integrity, and student support.

Legislative Context

Under the Revised Statutes of Missouri (Section 171.011, RSMo), school boards have local control to "make all needful rules and regulations for the organization, grading and government in the school district." This means LEAs may develop policies and procedures best suited for their stakeholders, including policies and procedures regarding use of AI. The Missouri Department of Elementary and Secondary Education (DESE) encourages all LEAs using AI to use it in a positive, proactive, ethical, and safe manner that benefits and enhances the learning community. This document supports that goal by highlighting key points for LEAs to consider when developing their policies.

What is Artificial Intelligence

AI encompasses computer systems and algorithms that mimic human intelligence or problem-solving abilities. Most modern AI systems incorporate a learning component, enhancing AI's performance over time through the process of learning from new data. This process is commonly known as machine learning and, in more complex scenarios, deep learning. While the future impact of AI remains unpredictable, its integration into our lives and education processes is inevitable. Schools should establish policies and procedures to effectively use AI in education. While AI serves as a powerful tool, it should supplement human thought and decision-making rather than replace it.

Many people do not realize the frequency with which they interact with AI in daily activities. Social media platforms employ AI algorithms to curate posts and ads. Virtual assistants such as Alexa, Siri, and Google Assistant use reactive AI to respond to voice commands. They respond to specific inputs or situations without learning from past experiences. Navigation systems integrates AI to optimize routes, especially in response to traffic or weather conditions. Predictive text employs AI to anticipate and suggest the completion of sentences as users type.

AI has a long history in education, with applications spanning decades. Current uses include voice-to-text applications, adaptive learning technologies for online lessons and assessments, automatic grading, and predictive search engines. The emergence of generative AI (GenAI) tools such as ChatGPT has sparked renewed interest and introduced new challenges in integrating these technologies into schools and classrooms. GenAI tools can produce new content such as text, images, or music based on patterns learned from training data significantly faster than humans, often in minutes.

GenAI tools are designed to create text, images, audio, video, or code based on user prompts, and predict outcomes based on input to generate unique content each time. These tools mimic human communication and creation patterns, showing potential value for education. For instance, the development of "tutor bots" aims to provide students with personalized coaching through conversations that resemble human interactions, blending technology with traditional teaching methods. Education professionals need to understand that AI tools, including GenAI, learn from vast global datasets, inherently embedding biases into the outputs. Similar to how humans are shaped by genetics and upbringing, GenAI reflects the algorithms and datasets used in their training, which may not always align with educational objectives. AI can be biased because humans are often biased, and humans are the ones training the AI tools. Moreover, current GenAI models cannot fully explain how or why they produce specific outputs, often providing statistically optimal answers based on their training data.

Education professionals should view GenAI as a tool to enhance rather than replace their work. This approach acknowledges the potential benefits while maintaining a critical awareness of inherent biases and limitations in AI technologies.

Challenges and Benefits of AI in Education

AI presents challenges and benefits for all areas of education. AI has the potential to transform education by offering both exciting opportunities and significant challenges for students, educators, and administrators. AI-powered tools can personalize learning experiences, automate administrative tasks, and provide valuable insights through data analysis, enhancing efficiency and accessibility. With that comes concerns about equity, data privacy, and the potential for over-reliance on technology. As AI evolves educators will have to adapt to the rapidly changing educational landscape.

Students

Challenges

- Intellectual Property: AI can create a risk of copyright infringement.
- Plagiarism: AI may produce content too similar to existing works.
- Bias: Training data biases can result in unfair and incorrect outputs.
- Inaccuracy: AI-generated information may sound/appear accurate but be incorrect.
- Overreliance: As AI becomes more integrated into everyday tasks, people may rely on it to do work that traditionally requires critical thinking and learning. For instance, students may use AI to write essays, complete assignments, or answer questions without fully understanding the underlying concepts.
- Loss of Human Interaction: The use of technology for quick, easy information creates a risk of reduced human interaction, which can lead to a potential increase in loneliness, isolation, and anxiety.

Benefits

- AI can provide individualized explanations or practice problems tailored to students' needs.
- AI can assist students in brainstorming, organizing, and refining their writing.
- AI can create study materials such as practice tests, gamify academic content, and create audible study aids such as podcasts.
- AI can help design logos or other graphics for groups.
- AI can help promote self-directed learning.
- AI can potentially serve as a personalized tutor.
- AI can provide differentiated context for students with varying needs (accessibility).
- AI can facilitate creativity in student work.
- AI can summarize complex texts or provide simplified versions for students who need additional support.
- AI can offer immediate feedback on student responses or formative assessments.

Building-level (Schools and Administrators)

Challenges

- AI may violate copyright and intellectual property laws. Additionally, AI models often process sensitive data, raising concerns about compliance with regulations of Europe's General Data Protection Regulation (GDPR) or the Health Insurance Portability and Accountability Act (HIPAA).
- There is a wide range of comfort levels of educators with the use of AI. It is important to acknowledge that some educators have legitimate concerns about the use of AI, such as students cheating, overreliance on AI, AI replacing teachers, as well as AI giving non-factual information.

Benefits

- Generate examples of a concept they are teaching.
- Analyze data by automating complex tasks, identifying patterns, and creating visuals.
- Edit communications to stakeholders.
- Quickly generate lesson ideas, examples, or activity prompts.
- Collaborate on projects, for teachers as well as for students.
- Assist in differentiating instruction by analyzing data freeing educators for instructional activities.
- Support teaching and learning for all stakeholders.
- Facilitate creativity in educators' instruction.
- Integrate technology to enhance educational experiences can elevate the role of educators without diminishing their essential presence in the classroom.

District-Level (Leadership and Policy)

Challenges

Data privacy is a significant concern considering advancements in computer science and AI. To maintain the privacy and security of student data, the following actions must be considered:

- Evaluate the security protocols of the AI system, including encryption, authentication, and authorization processes, to safeguard against data breaches and cyber threats. There are various national organizations that have information on specific AI systems privacy and security standards.
- Define clearly what constitutes personally identifiable information for students, educators, and schools and remind users that this information should not be used with generative AI tools.
- Provide all users explicit training on protecting data privacy, including reminders of what qualifies as personally identifiable information.
- Avoid including identifiable student information when entering data into AI systems.
- Obtain explicit parental/guardian permission for students under 18, ensuring that parents/guardians are fully informed about the nature, capabilities, and limitations of the AI technology, as well as the data privacy and security measures in place.
- Many generative AI tools have age restrictions on usage, usually on students under the age of 13.

- Free tools often come with tradeoffs in regard to privacy, security, and safety of your data. Know those risks before you log on.

Benefits

- Data analysis.
- Personalized tutors.
- Assist in staff evaluations by analyzing performance data and offering personalized feedback.
- Automating repetitive tasks.

Stakeholders (Parents and Community)

Challenges

- Concerns about cheating and not learning the content.
- Similar to the digital divide, AI could create a divide between students who can access AI and those who can't, whether it's for economic reasons or lack of adequate quality internet.
- Effectively applying the knowledge and skills to navigate the digital environment (i.e., digital literacy) and use AI responsibly and effectively (AI literacy).
- The wide range of comfort levels and experience with the use of AI.
- Educating stakeholders on "deepfakes" and updating policies to address cyberbullying. AI for Education has created a resource called Uncovering Deepfakes that can be used as a tool for staff and students.
- Creating an AI Acceptable Use Policy (AUP): LEAs need to clearly outline AI usage and expectations for students, staff, and community stakeholders.

Benefits

- Homework-helping applications and personalized tutors.
- Increased accessibility for a variety of individuals with special needs.
- LEAs can create Chatbots or AI agents to increase stakeholders' engagement or access.
- Increased stakeholder engagement by initiating conversations to address concerns related to the use of AI.

Addressing Common Challenges

- Accuracy and Reliability
    - Concern: AI may produce inaccurate information which could mislead or confuse students.
    - Response: It is important to teach students to fact-check by using other credible sources. Responsible use of AI means understanding that it does not always produce accurate information due to its limitations.
- Student Dependence
    - Concern: Students may over rely on AI tools, hindering critical thinking and creativity, and possibly reducing their problem-solving skills.
    - Response: Educators should model how they use AI as a starting point for writing to show students how to analyze AI responses so that they can craft appropriate prompts.

- Academic Integrity
    - Concern: Students may use AI to cheat or complete assignments without truly understanding the material.
    - Response: Educators should restructure their learning environment to address how AI can and cannot be used in their classrooms, while also teaching students self-regulation. The use of conferences, formative assessments, and opportunities for students to demonstrate mastery are essential. It is important to assess and emphasize the student honor code of the school. Establishing clear guidelines to encourage respectful and responsible online behavior is vital to fostering ethical use of AI. Encourage the use of AI acceptable rating scales for both students and overall school AI use.
- AI Use in Assessments
    - Concern: Students may violate academic integrity standards.
    - Response: AI should not be used in standardized testing without explicit state approval. Establish AI academic integrity policies, clearly defining acceptable AI usage for students. AI can assist in many ways such as automated grading with educator oversight, AI-driven formative assessments to provide real-time student feedback, and adaptive testing to personalize student learning pathways.
- Data Privacy
    - Concern: Educators have concerns over how student data is collected, stored, and used by AI systems, raising privacy and security issues.
    - Response: Educators must teach students to be cautious about the information that they include in their prompts. Prompts should never contain personal data. It is also important that educators are aware of the age restrictions and data policies of any AI tools that they use with students.
    - Response: On the LEA level, LEAs should not allow their data or information to be used to train the vendor's models. This can be negotiated with the vendor. Know how your data will be used. Guardrails can be in place to keep your data safe. Guardrails are protocols and tools used to make sure AI systems operate within legal and technical boundaries.
- Job Replacement
    - Concern: Some educators fear AI may eventually reduce the need for human educators or diminish the importance of the educator's role.
    - Response: While AI can synthesize information, generate examples, and assist with conceptual understanding, it cannot determine the context that exists within the learning environment or develop empathy for learners based on students' body language and expressions. AI tools do not have the empathy or creativity that humans possess. Students still require a human presence to listen and show empathy, along with modeling the ability to make mistakes that exemplify a growth mindset.
- Equity and Access
    - Concern: Educators fear that not all students will have equal access to AI tools which could potentially widen the digital divide.

    - Response: Ensuring equitable access begins with helping educators understand how AI empowers learning. Schools can also allocate resources so that all students have access to the necessary technology.
- Forward Thinking Approach
    - Concern 1: Using AI will stifle creativity and originality.
    - Response: Encourage openness to AI, fostering innovation and creativity.
    - Concern 2: Future-proofing education and ensuring employability.
    - Response: Prepare students for AI's role in future careers.
    - Concern 3: Misinformation, the potential for misuse, and misunderstanding of AI tools.
    - Response: Educate teachers and students about the capabilities and limitations of AI.
    - Concern 4: Distrust, lack of transparency, and resistance to AI integration.
    - Response: Promoting stakeholder engagement by initiating dialogues with students, educators, parents/guardians, and the community to address any questions and concerns related to the use of AI in education is critical.

AI has the potential to empower students by creating a more personalized and adaptive learning environment. AI technologies can analyze individual student performance in real time, allowing for tailored instructional strategies that meet diverse learning needs and learning paces (Woolf et al., 2013). Additionally, it can facilitate student agency by enabling students to take ownership of their learning through tools that support attribution, helping them understand their strengths and areas for improvement. Furthermore, AI can encourage creativity by providing platforms for students to design projects, collaborate with peers, and explore innovative solutions to real-world problems. As the job market increasingly demands skills in technology and critical thinking, integrating AI into education can also prepare students for future careers by equipping them with essential competencies (Wang & Lester, 2023). Professional development should evolve to include training educators in the effective use of AI for themselves and their students, and empowering students to harness these tools for their academic and professional growth.

LEAs need to encourage educators and students to use AI tools to enhance creativity and ignite curiosity in exploring new ideas. AI tools that facilitate collaboration among students should be promoted and used. These tools can support personalized learning by identifying students with similar interests, learning styles, or abilities. Additionally, they allow students to learn from their peers' experiences. When evaluating these tools, it is crucial to prioritize evidence-based decision-making. This evaluation should include pilot programs and their assessment.

Best Practices for Implementing AI in Education

Responsible Implementation

The use of AI enables personalized learning and supports the needs of all students. When leveraging AI, ensure data privacy compliance, data retention, and robust security measures to protect student information. Additionally, acknowledge the presence of bias in AI algorithms and how it may affect student outcomes. Machine learning models are trained using vast amounts of online data. To combat this, empower students to recognize bias and encourage critical thinking, along with promoting empathy through instruction in digital citizenship focused on the appropriate and ethical use of computing

devices. Furthermore, ongoing professional development for educators and stakeholder engagement is essential to understanding how AI is used in education and addressing any questions or concerns.

Transparency

AI tools provide powerful capabilities, but it is crucial to foster a clear understanding of how they can and should be used. Educators should openly discuss the capabilities, limitations, and ethical considerations related to AI. When educators demystify AI, students can make informed decisions and engage with these tools effectively. Providing well-defined instructions ensures that users understand the boundaries and limitations, promoting responsible and effective use.

Rigor

AI can potentially enhance the quality and impact of student work. Rather than simplifying tasks, AI can provide students with opportunities to tackle more complex challenges. AI can assist in data analysis and problem-solving, as well as creative endeavors, allowing students to explore deeper concepts.

Curiosity

AI should ignite curiosity and expand student inquiry. By incorporating AI tools, educators can encourage exploration beyond the classroom. Students can use AI to investigate real-world problems, analyze patterns, and discover connections. This curiosity-driven approach fosters a genuine desire to learn. Thoughtful integration of AI can transform the learning experience, making it more engaging, personalized, and impactful.

Ensuring Human Oversight

Educators and students must assess AI-generated results to ensure accuracy and avoid bias. Both parties must review the outcomes provided by AI to confirm its validity and reliability. AI can sometimes yield incorrect or misleading conclusions due to algorithm limitations or the quality of the data when training the AI. AI always produces an output, which can result in an AI "hallucination" which is a confident sounding but factually incorrect output. In education, depending solely on AI without critical assessment may result in errors in student evaluation, skewed research insights, or misguided decisions in classroom instruction. By consistently evaluating AI-generated results, educators and students can verify the accuracy of AI-generated results, make informed adjustments, and ensure responsible use of AI to enhance learning without perpetuating inaccuracies or bias. This practice encourages critical thinking and upholds the integrity of the educational process.

Integrating technology to enhance educational experiences can elevate the role of educators without diminishing their essential presence in the classroom. Finding a balance between the human touch and technological advancements is key.

The rationale for consistent, thorough human oversight includes the following potential problems:

- Bias in AI systems: AI models can unintentionally perpetuate or amplify biases present in data. A 2018 study by MIT Media Lab found that facial recognition software had significantly high error rates for women and people of color due to biased training data (Study finds gender and skin-type bias in commercial artificial intelligence systems | MIT News | Massachusetts Institute of Technology).

- AI “hallucination” or “fabrication”: AI models can be prone to “hallucinations,” where they produce confident sounding but factually incorrect output.
- Ethical considerations: AI systems lack ethical judgment and cannot make decisions based on human values.
- Contextual understanding: AI models cannot comprehend nuance or contextual information unless explicitly told in the prompt.

Human oversight should include the following steps/techniques:

- Evaluate AI tools critically: Educators and administrators should thoroughly evaluate AI tools that are going to be used in the classroom. This involves examining their purpose, data sources, and any potential biases.
- Monitor student interaction with AI: Educators should observe and monitor how students interact with AI, in addition to evaluating AI results.
- Promote critical thinking: Encourage students to question and evaluate AI-generated content.
- Stay informed: Keep up to date with the latest best practices, ethical concerns, and methods of using AI in the classroom. Additionally, engage in continued professional development focused on AI and new technologies.
- Understand the limitations of AI: Recognize that AI is unable to handle tasks that require human judgment and emotional intelligence or unstructured tasks, nor is AI able to understand context without explicit instruction.
- Make sure AI is being used in a non-discriminatory manner. Avoiding Discriminatory Use of AI (ed.gov) will provide clarity regarding existing legal requirements under civil rights laws that the Office of Civil Rights enforces.
- Engaging in critical thinking when evaluating AI results. Emphasizing the importance of having content knowledge in all subjects to be able to think critically about the AI results.

AI Integration

Professional Development

In response to the rapid advancement and pervasive impact of AI across industries, it is crucial to provide educators with targeted professional development to integrate AI tools confidently and effectively into their teaching practices. High-quality, ongoing professional development will ensure a human-centered approach to AI education, emphasizing ethical and responsible use among educators, students, and stakeholders while cultivating AI competencies across all grade levels and disciplines. As things change rapidly in the world of AI, having ongoing training and discussions will keep educators on pace with the rapid development of AI. Educators can deepen their understanding of AI’s functionality, purpose, and limitations through more opportunities for follow-up implementation activities, as well as discussions with colleagues and experts. By properly training educators to embed appropriate AI literacy alongside foundational human skills, which cannot be replicated by AI (i.e., learner mindset, empathy, critical thinking), both educators and students are prepared for a future where AI is integral to teaching, learning, and everyday life.

Considerations

GenAI is an emerging technology that continues to evolve and impact all aspects of industry and the economy. LEAs should infuse AI literacy into all grade levels and curriculum areas to prepare students for the world they will enter upon graduation. AI literacy begins with supporting educators' understanding of how AI works and how it can be used in education.

LEAs should consider expanding AI literacy by providing:

- professional development workshops.
- micro-credentials or micro-badges (short competency-based recognition that demonstrates mastery in an area).
- guided share sessions (e.g., Ed Camp, educator-led professional development breakout sessions).
- access to the DESE Computer Science webpage for the latest professional development in the areas of AI and Computer Science provided through the Computer Science Education Grant Fund.
- access to the DESE Computer Science listserv for discussions on AI and computer science education for K-12 students.

To achieve AI integration, high-quality professional development should be provided with consideration to the following areas:

- Understanding AI and its ethical and practical considerations
- Addressing any teacher reluctance towards integrating AI
- Defining ethics and fostering a culture of integrity in the use of AI
- Access to AI
- Educator/staff productivity
- Pedagogical practices
- Student engagement and learning
- Teaching/demonstrating how AI will play a part in future jobs of students

Prompt Engineering

Prompt engineering is the process of designing and refining prompts to get the desired responses from AI models. This process involves understanding how to frame questions and instructions in a way that leverages its capabilities, ultimately improving the relevance and quality of the output.

As AI becomes increasingly integrated into education, prompt engineering emerges as a key skill for educators and students alike. Effective prompt engineering — the process of designing and refining prompts to elicit the desired responses from AI models — is essential for maximizing the utility of AI tools in education settings.

Well-Designed Prompts

A well-developed prompt enables the AI to provide meaningful and useful results. A well-developed prompt also reduces ambiguity, saves time, and ensures more efficient use of AI tools in education. Key benefits of a well-developed prompt include:

- Encouraging accurate and clear AI responses.
- Saving time by minimizing the need for repeated queries.
- Improving productivity and the learning experience by providing more relevant information.

Types of Prompts

Different types of prompts elicit different types of responses from AI. Educators should select the prompt type based on their instructional goals. Prompts should be focused, clear, detailed, and tailored to a certain audience of the output. Once there is an output, evaluate that information and refine it by giving additional instructions. Below are some examples.

- Direct Prompts: Asking the AI specific questions.
    - Example: What are the components of a computer?
- Open-ended Prompts: Encouraging creativity or expanding on an idea.
    - Example: How might AI influence education in the next decade?
- Instructional Prompts: Providing step-by-step instructions on the desired output of the prompt.
    - Example: Explain how photosynthesis works in five steps.
- Role-based Prompts: Ask the AI to assume a specific role to tailor the response.
    - Example: As a history educator, explain how *Brown v. Board of Education* changed education and civil rights.
- Refinement of Prompts: The ongoing process or dialogue of fine-tuning your results.
    - Example: Can you explain that in simpler terms?

There are many prompt methods and prompt libraries that can be used to get the AI results that an educator wants.

- The Five “S” Model presented by AI for Education (aiforeducation.io, 2023)
    - Set the scene. Provide the AI context on the role, expertise, and environment it should use to guide the output.
    - Be specific in the instructions. Clearly define the task and provide details on what you would like included.
    - Simplify your language. Use a conversational approach affording unnecessary jargon.
    - Structure the output. Give specifics on format and audience.
    - Share the feedback. Share specifics on what needs to be revised to meet your needs.
- A quick and simple guide to prompting:
    - Who: Identify the role and audience. Who will be using the output and what audience is the information intended for? Is it professional? Is it for a seventh grade science class?
    - What: Define the task and voice. What is the desired outcome from the AI and in what tone should it be delivered?

    - Why: Clearly state the goal for the task.
    - Where: Provide the context of the task, including background information, what to exclude, and any limitations.

By teaching how to create an effective prompt, teachers can help students effectively interact with AI tools, fostering critical thinking and improving learning outcomes in the process.

AI Policies

Regulations

Several regulations are relevant to the use of AI:

- Family Educational Rights and Privacy Act (FERPA) — AI systems must protect the privacy of student education records and comply with parental consent requirements.
- Children's Online Privacy Protection Act (COPPA) — AI chatbots, personalized learning platforms, and other technologies collecting data on children under age 13 must adhere to COPPA.
- Individuals with Disabilities Education Act (IDEA) — AI must be implemented in a way that allows students with disabilities to have equal access to educational opportunities.
- Children's Internet Protection Act (CIPA) — Schools must ensure that AI content filters align with CIPA protections against harmful content.
- Section 504 of the Rehabilitation Act — Schools must ensure that their digital content and technologies are accessible to students with disabilities, in both physical and digital environments.
- Americans with Disabilities Act (ADA) — A civil rights law that protects people with disabilities from discrimination.

Data Privacy

Data privacy is a significant concern when considering advancements in computer science and AI. To maintain the privacy and security of student data, the following actions must be considered:

- Evaluate the security protocols of the AI system, including encryption, authentication, and authorization processes, to safeguard against data breaches and cyber threats.
- Define clearly what constitutes personally identifiable information for students, educators, and schools and remind users that this information should not be used with generative AI tools.
- Provide all users explicit training on protecting data privacy, including reminders of what qualifies as personally identifiable information.
- Avoid including identifiable student information when entering data into AI systems.
- Obtain explicit parental/guardian permission for students under 18, ensuring that parents/guardians are fully informed about the nature, capabilities, and limitations of the AI technology, as well as the data privacy and security measures in place.
- Many AI services assert that they safeguard your data or do not gather it, yet it is wise for your organization to verify if these safeguards exist. Generally, it is more reliable to believe the

promises of larger or reputable AI tools like ChatGPT, Copilot, or Gemini, rather than an unknown tool discovered on the internet.

Cyclical Process

LEAs should adopt a cyclical process for their AI policies to ensure continuous improvement, adaptability, and effective resource allocation. As AI technology rapidly evolves, regularly reviewing and updating policies allows LEAs to integrate the latest advancements, manage potential risks like bias and privacy concerns, and remain compliant with evolving regulations. This approach fosters stakeholder engagement by incorporating diverse perspectives from educators, students, parents/guardians, and the community, ultimately building support for AI initiatives. Moreover, assessing the impact of AI tools on teaching and learning through a cyclical process enables LEAs to make evidence-based adjustments, enhancing educational outcomes. By promoting transparency and accountability, this method ensures that AI policies are ethical, effective, and aligned with educational objectives.

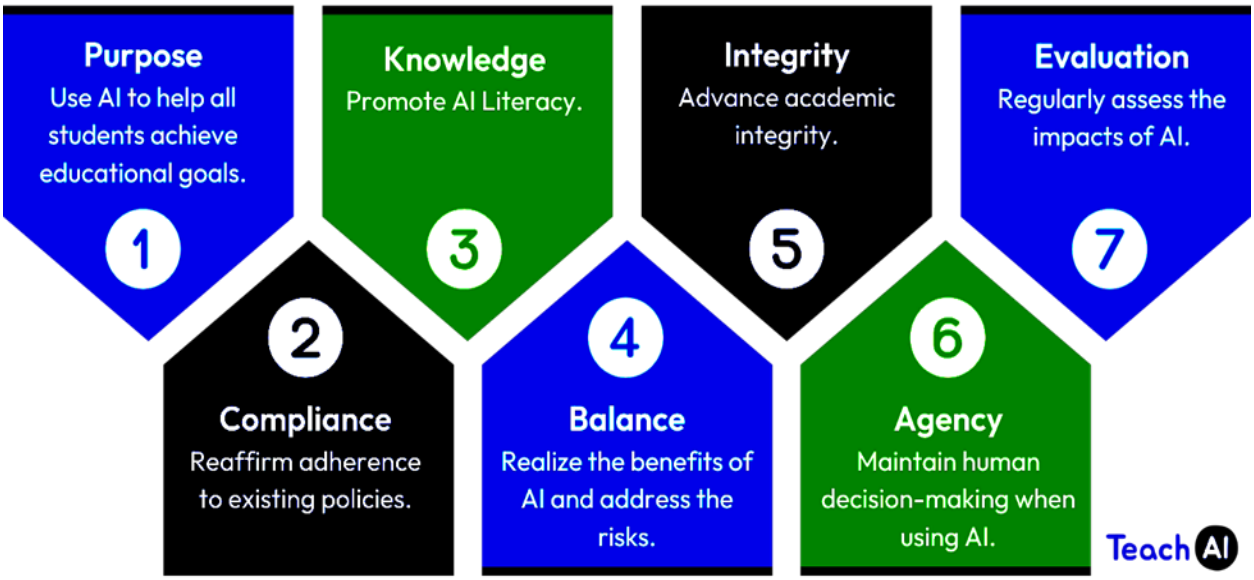

Image: https://www.teachai.org/toolkit-principles

Procurement

When procuring AI tools for education, ensure that all purchases align with defined educational goals that support teaching, learning, and equitable student outcomes. Privacy and ethics must be prioritized by selecting vendors that comply with data security standards and ethical guidelines for AI use in schools. AI tools must align with all state and federal data privacy laws. Evaluating AI vendors' security protocols and policies will help to protect students and educators. Engaging stakeholders in the procurement process ensures the tools meet diverse needs and address potential concerns. Including teachers will ensure buy-in and use within the classroom. Informational technologists should always play a part in procurement to maintain data security standards and guidelines. Develop a pilot testing protocol for introducing new AI platforms or AI-integrated products. Ongoing monitoring of AI systems is vital to assess effectiveness and maintain compliance with evolving regulations.

Addressing Fairness and Potential Bias

As AI becomes more integrated into educational practices, addressing access remains a critical concern for both students and educators. Significant gaps may exist in student access to AI tools, stemming from age restrictions, the availability of paid versions, and inconsistent network access. These gaps can create barriers to fair learning opportunities. For educators, access to AI resources in the classroom can be limited by factors such as institutional policies and technological infrastructure. Moreover, the ethical use of AI in education is paramount, as the potential for bias in algorithms can exacerbate existing inequities if not carefully managed. Ensuring that all students benefit from AI-driven tools requires a commitment to fairness, emphasizing the need for inclusive policies that provide access to diverse resources. Professional development should explore these access-related challenges and highlight the importance of fostering an ethical framework that promotes fairness, accountability, and transparency in AI applications within education.

Productivity and Efficiency

The integration of AI into pedagogical practice can enhance productivity and efficiency among educators. By leveraging AI as a collaborative tool, educators can devote more time to instructional planning, design, and delivery. AI-driven platforms can assist in differentiating instruction by analyzing student performance data to recommend personalized learning pathways. Additionally, educators can use AI to create tailored assessments that align with learning objectives and monitor student progress in real time. Planning lessons and developing comprehensive syllabi can be streamlined with AI's ability to suggest relevant resources and activities based on curriculum standards. As security remains a paramount concern, care must be taken to safeguard sensitive student information through advanced data protection protocols. Professional development should explore how such applications of AI not only enhance instructional effectiveness but also empower educators to focus on fostering meaningful student engagement and outcomes.

When crafting policy for AI usage, prioritize supporting students in achieving their education goals. An effective policy should focus on facilitating and enhancing student learning outcomes. The following should be considered when developing guidance for AI use.

- Develop specific AI use guidelines tailored to support staff, teachers, students, departments, etc.
- Use AI to enhance the learning rather than simplifying.
- Use AI to ignite the curiosity of the learner.
- Outline appropriate use, academic integrity expectations, and consequences for misuse.
- Consider a student honor code to reinforce integrity.
- Promote communication throughout the process to address success and concerns.
- Develop methods to teach AI literacy using resources such as aiEDU and AILit Framework.
- Foundational Policy Ideas for AI in Education contains Informational briefs, policy ideas, and presentation materials for stakeholders.
- The AI Toolkit for K-12 Education, developed by the Missouri School Boards' Association and The Center for Education Safety, is a go-to resource for all things AI in Missouri K-12 education.
- EDSAFE - Policy Stack.pdf provides a step-by-step method for policy progression and approach to adapting AI policy and AI tool procurement.

When developing policies regarding AI in the school learning environment, recognize that AI technologies and their applications are rapidly evolving. Therefore, any policy must be adaptable and inclusive of both current AI tools and emerging devices that incorporate AI capabilities. As AI continues to advance, new uses and devices will enter the education landscape, making it critical for policies to remain flexible and responsive to these changes to ensure they remain relevant and effective in guiding the responsible use of AI in schools. Securing approval for a broad comprehensive AI policy from the local board of education — and ensuring adherence to school protocols — will enable the procedural document of the schools to be more thorough and revised as necessary without going through the process of getting the board's consent. Artificial intelligence is set to become increasingly integrated into our teaching methods. It would be advantageous for an organization to appoint an AI Coordinator to aid in navigating the quickly evolving landscape both inside and outside the classroom.

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