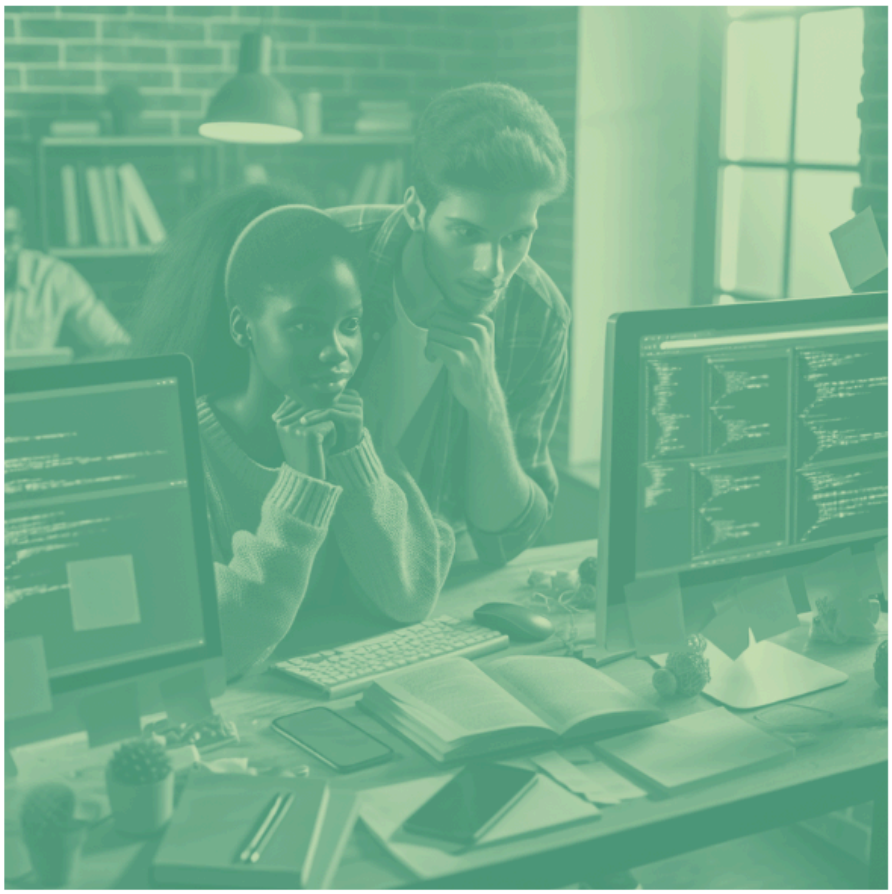
Guidance and Considerations for Using Artificial Intelligence in Oklahoma K-12 Schools



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OKLAHOMA Education

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Guidance and Considerations for Using Artificial Intelligence in Oklahoma K-12 Schools

This guidance provides recommendations for Oklahoma school districts and is not law or regulation. It is intended to support districts as they explore the potential applications of **Artificial Intelligence (AI)** in schools. AI is constantly evolving. It involves computers or machines accomplishing tasks that are typically completed by humans. AI is trained on datasets, which enable it to create content (**Generative AL or GenAI**) and perform tasks on our behalf. The more AI is used, the more it studies human language and improves its interaction with users.

Contents

Cover image created using Canvas Magic Media AI

ChatGPT is often the first tool that comes to mind when people think of AI . While ChatGPT is a powerful AI tool, it is only one of many resources available to educators. More information on these tools and resources can be found in the Resources section of this document on pages 16-17.

Governor Stitt's Task Force on Emerging Technologies: Artificial Intelligence Strategy to Support State Agencies in Oklahoma (2023) included information on the importance of incorporating AI into Oklahoma K-12 schools. The integration of AI into educational curriculum is crucial. By equipping teachers with the tools to utilize AI as a teaching aid and developing a curriculum that addresses AI, we can create interactive and innovative learning experiences that prepare students for the future.

Understanding AI in Education

Although we cannot predict the future, technology will continue to develop at an ever-evolving rate and will strongly impact our personal and professional lives. A 2023 report from LinkedIn estimates that by 2030, the skill sets needed for jobs will change by 65%. It is crucial to be proactive in developing policies and procedures regarding AI implementation in K-12 education. The first step is to realize the potential impact of AI in transforming our access and use of information.

While AI is a tool that can empower users, it should only be considered a middle component of any process. AI output is not designed to be the final step. All use of AI should begin and end with a human-centered approach. The initial step involves human inquiry. Once the AI tool provides output based on human inquiry, the final step involves human interpretation and reflection.

AI Programs for Oklahoma K-12 Students

Using AI in Oklahoma classrooms provides students with a foundational understanding of AI that is crucial for nurturing interest in this rapidly developing field. By strategically integrating AI concepts into the K-12 curriculum, it is possible to educate a generation that not only understands AI but also possesses the skills to innovate and lead in a world where AI is pervasive.

While our students are often labeled as “digital natives” due to their lifelong exposure to technology, it is still essential for them to become skilled in 21st-century learning competencies. Providing opportunities for students to question and evaluate information can help them become critical thinkers and problem solvers.

Empowering Oklahoma Educators with AI

Equipping Oklahoma's educators with the power of AI holds immense potential for transforming the state's educational landscape. Providing teachers with comprehensive training on AI tools can equip them with the knowledge and skills necessary to integrate these technologies seamlessly into their classrooms and administrative tasks. This strategic approach fosters a more efficient and innovative learning environment for all.

Educators who are proficient in using AI tools can deliver personalized instruction, tailoring their approach to meet each student's unique learning needs. As a result, educational outcomes could improve significantly. Moreover, leveraging AI for administrative tasks reduces the time spent on routine activities, allowing teachers to focus more on direct student interaction and curriculum development.

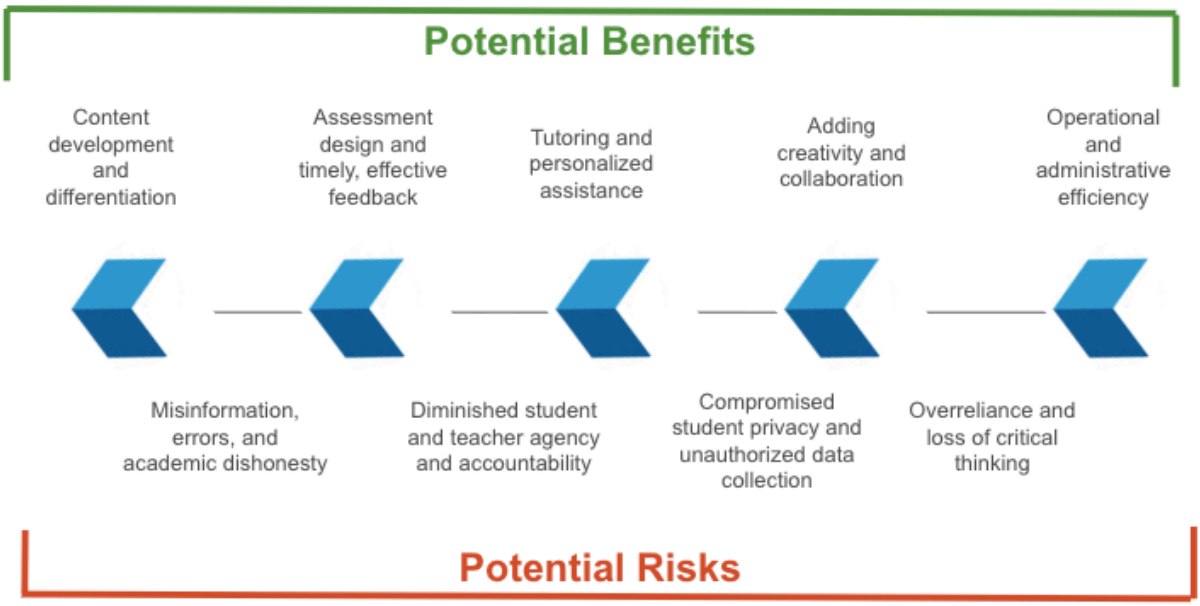
AI Literacy

AI literacy encompasses understanding the principles, concepts, and applications of AI. It also involves knowing how to use AI, recognizing its limitations, and considering its implications. Foundational concepts of AI literacy include elements of computer science, as well as ethics, psychology, data science, engineering, statistics, and other areas beyond STEM. AI literacy equips individuals to engage productively and responsibly with AI

technologies in society, the economy, and their personal lives. Schools can create opportunities for educators to collaborate and consolidate lessons learned to promote AI literacy across disciplines.

Benefits and Risks

As with all new technologies, AI presents potential benefits and risks that can affect instructional practices and student learning experiences. While AI contributes to the enhancement of 21st-century skills, it also requires a greater emphasis on digital literacy and critical-thinking. The responsible use of AI is crucial to maintaining academic integrity.



Modified from Code.org, CoSN, Digital Promise, European EdTech Alliance, Larimore, J., and PACE (2023). AI Guidance for Schools Toolkit. teachai.org/toolkit

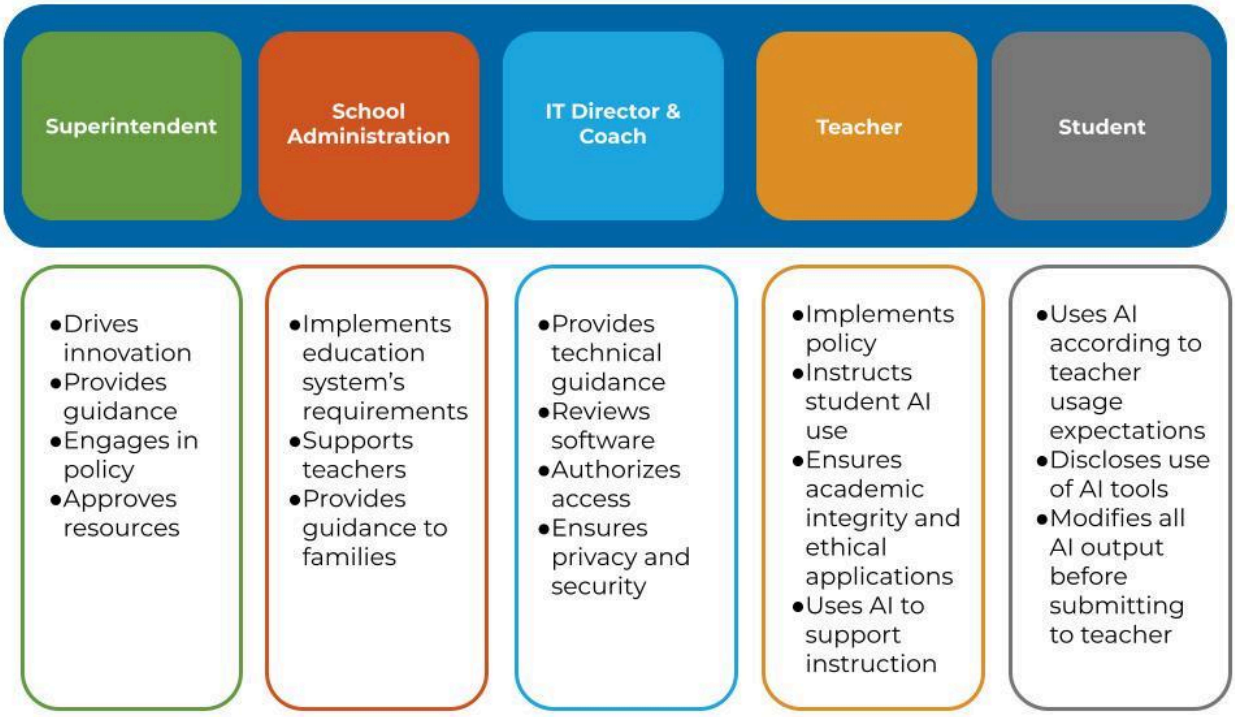
From personalized learning to efficient assessment, AI provides a wide range of benefits. Educators can leverage these tools thoughtfully to foster student growth. AI allows educators to personalize learning experiences to fit the needs of individual students. Adaptive learning systems can analyze student performance, preferences, and learning styles. They then adjust content, pacing, and difficulty levels accordingly. Personalized learning fosters engagement and better improves retention of learned knowledge.

Educators can also use AI to increase efficiency and productivity. The automation of routine administrative tasks can free up time for educators to focus on teaching. AI-assisted grading can accelerate assessment processes, providing timely feedback to students. Additionally, educators can use AI to assist in creating engaging content and adapting it to various learning styles, helping educators tailor content to a variety of student abilities. AI tools can adjust lesson complexity and provide scaffolding to help learners connect content to context.

While AI offers immense potential, educators must navigate these risks carefully. AI-generated content may inadvertently disseminate misinformation or inaccuracies, leading students to unknowingly rely on flawed information. AI algorithms with errors can affect learning outcomes by giving incorrect answers or recommendations. Additionally, some AI systems gather data on student behavior, preferences, and performance without proper consent, which raises privacy concerns. Unauthorized data sharing could compromise student confidentiality.

Roles and Responsibilities for AI in Education

All stakeholders, including educators, administrators, policymakers, and students, should actively participate in the process of deploying and implementing AI in educational settings. Doing so ensures that AI technologies are harnessed effectively to enhance student learning and achievement.



Adapted from TeachAI

Navigating Academic Integrity in AI

As AI becomes an integral part of writing, from scholarly articles to news updates and emails, it is imperative to reconsider our traditional notions of plagiarism and academic integrity. As AI continues to shape education, labeling all AI-assisted work as "cheating" is shortsighted. Instead, educators must adapt their teaching methods and expectations to accommodate this new reality.

To address this shift, educational institutions may consider implementing an AI Acceptable Use Rating Scale, which can serve as a vital component of a

school AI adoption plan. The scale's purpose is to establish a common understanding, clear expectations, and a shared language regarding AI usage by students.

AI Acceptable Use Rating Scale

This scale applies to any of the thousands of Artificial Intelligence tools in which the model generates new content (text, images, audio, video, code, etc.) This includes, but is not limited to, Large Language Models such as ChatGPT, Google Gemini, etc., Image creators such as Dall-E3, Adobe Firefly, and any tools with built-in generative AI capabilities such as Microsoft CoPilot, Google Duet, Canva, etc.).

	Level of AI Use	Full Description	Disclosure Requirements
0	**NO AI Use**	This activity is to be completed entirely without AI assistance. AI **MAY NOT** be used at any point during the activity. This level ensures that students rely solely on their own knowledge, understanding, and skills.	No AI disclosure required. May require an academic honesty pledge that AI was not used.
1	**AI-Assisted Idea Generation and Structuring**	No AI content is allowed in the final submission. AI can be used in the activity for brainstorming, creating structures, and generating ideas for improving work.	AI disclosure statement must be included disclosing how AI was used. Link(s) to AI chat(s) must be submitted with final submission.
2	**AI-Assisted Editing**	No new content can be created using AI. AI can be used to make improvements to the clarity or quality of student-created work to improve the final output.	AI disclosure statement must be included disclosing how AI was used. Link(s) to AI chat(s) must be submitted with final submission.
3	**AI for Specified Task Completion**	AI is used to complete certain elements of the task, as specified by the teacher. This level requires critical engagement with AI-generated content and evaluating its output. The student is responsible for providing human oversight and evaluation of all AI-generated content.	All AI-created content must be cited using a proper citation. Link(s) to AI chat(s) must be submitted with final submission.
4	**Full AI Use with Human Oversight**	Students may use AI throughout the activity to support their own work in any way the educator allows. AI should be a 'co-pilot' to enhance human creativity. The student is responsible for providing human oversight and evaluation of all AI-generated content.	Cite the use of AI using a proper citation. Link(s) to AI chat(s) must be submitted with final submission.

Adapted by Karen Leonard for the Oklahoma State Department of Education (OSDE) from the work of Dr. Leon Furze, Dr. Mike Perkins, Dr. Jasper Roe FHEA, & Dr. Jason Mcvaugh Link to Original Work.

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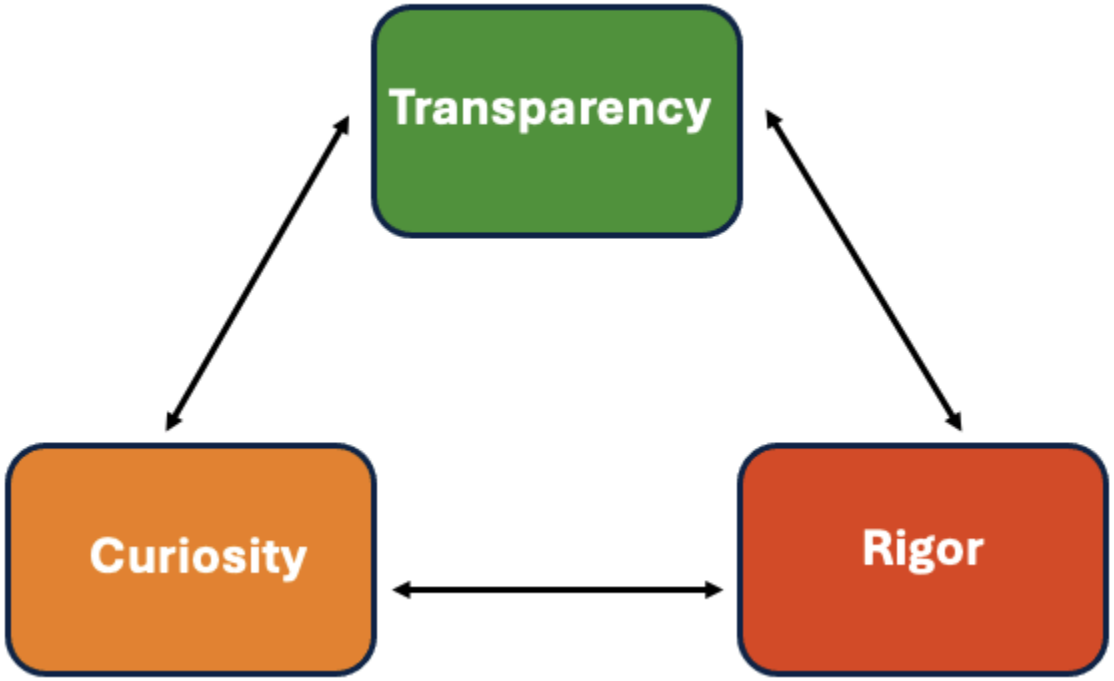
Three Essential Elements for Integrating AI in the Classroom



Created in conjunction with Michael Hanegan

Educators should consider three essential elements for integrating AI in the classroom:

1. **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 teachers 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.
2. **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. For instance, AI can assist in data analysis, problem-solving, and creative endeavors, allowing students to explore deeper concepts.

3. **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.

Guidance and Considerations

In the ever-evolving landscape of education, technology integration has become inevitable. However, the fundamental relationship between educators and their students remains irreplaceable. While no form of technology can fully substitute for the human touch, AI can serve as a powerful tool to enhance and augment educational experiences.

Responsible Implementation of AI in K-12 Education

The use of AI allows for the personalization of learning and supports the needs of all students. When leveraging AI, it is critical to ensure data privacy compliance, data retention, and robust security measures to protect student information. Additionally, it is important to recognize the presence of bias in AI algorithms and how this may impact student outcomes. Machine learning models are trained using vast amounts of data collected online, but not all online information is necessarily accurate or reliable. To address this, equip students with the ability to recognize bias, foster critical thinking, and promote empathy through digital citizenship education related to the appropriate and ethical use of computing devices. Furthermore, it is important to provide ongoing professional learning for educators and engage in conversations with stakeholders—students, community members, educators, and families—to understand how AI is being used in education and address any questions or concerns.

Use of AI

AI enables educators to create customized lessons that align with individual student needs and the overall school environment. Personalized feedback, targeted interventions, and language translation capabilities can address educational disparities and ensure accessibility for multilingual learners. Accessibility features like voice typing, screen readers, and voice recognition can further enhance learning. By automating administrative tasks, AI allows educators to focus on instruction and supporting student needs. AI helps streamline routines, analyze data, unpack educational standards, and prepare students for a future where AI is prevalent.

Educators who effectively incorporate AI integrate it across various subject domains, aligned with each content area's Oklahoma Academic Standards.

- In *Computer Science and Educational Technology*, integrating AI involves exploring the profound impacts of computing on society. Students delve into topics such as usage considerations, privacy, and the implications of AI-driven decision-making. They learn about algorithms, machine learning, and how AI shapes our digital landscape.
- Within *English Language Arts*, students engage with AI by critically evaluating source validity. They learn to discern reliable information from misinformation, considering the role of AI in disseminating content. Research skills become essential as they investigate AI-related topics, and effective communication includes discussing AI's societal impact.
- In *Fine Arts*, the focus shifts to the ownership of digital work. Students explore how AI-generated art blurs the lines between human and machine creativity. They analyze the various dimensions of using AI tools to create visual or auditory content, considering questions of authorship and originality.
- *Health Education* incorporates discussions on online safety in the context of AI. Students learn about privacy risks and the responsible use of AI-driven health apps. Understanding the potential consequences of sharing personal data with AI systems becomes crucial.

Implementation Guidance and Considerations

Enhancing, not Replacing:

- Augment educational experiences without replacing the essential role of educators in the classroom. Balancing the human element with technology is key.

Ethical Use:

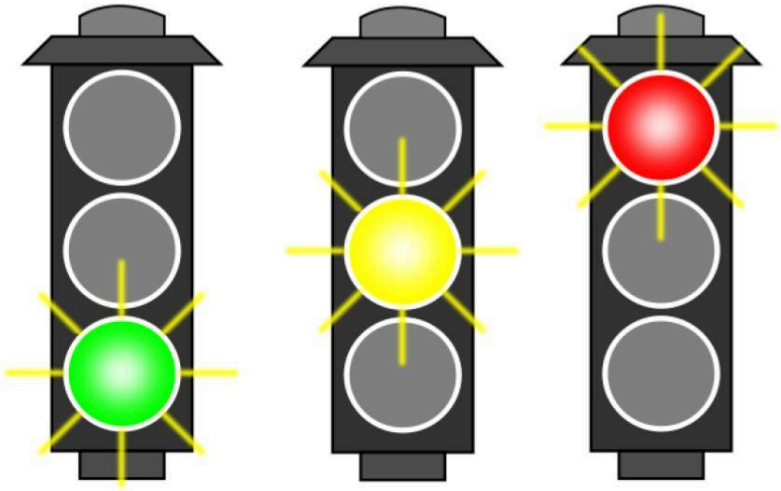
- Establish guidelines promoting respectful and responsible online behavior, fostering ethical use of AI.

Stakeholder Engagement:

- Host conversations with students, educators, parents, and the community to address questions and concerns regarding AI use in education.

Security, Privacy, and Safety

As with all technology, AI systems used in education must ensure student security and the privacy of personal information.



Low Risk (green)	Medium Risk (yellow)	High Risk (red)
ENSURE RESPONSIBLE USE AI tools and applications that do not require the use of personally identifiable information (PII). Implementing data anonymization and security measures can help mitigate residual privacy risks.	**USE WITH CAUTION** AI applications that collect personal data such as learning analytics, engagement metrics, and assignment feedback. Enhanced security protocols, transparent data practices, and clear communication on usage expectations can help mitigate these risks.	**USE WITH EXTREME CAUTION** AI applications that collect sensitive information, like student demographics or personal identifying information. It is crucial to implement robust security measures, strict adherence to user consent, and continuous data monitoring may help mitigate these risks.

Relevant Regulations to AI in Education

These regulations are relevant to the use of AI in education settings:

- 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 13 must adhere to COPPA.
- Individuals with Disabilities Education Act (IDEA) - AI must not be implemented in a way that denies students with disabilities equal access to education opportunities.
- Children's Internet Protection Act (CIPA)- Schools must ensure AI content filters align with CIPA protections against harmful content.
- Section 504 - The section of the Rehabilitation Act applies to both physical and digital environments. Schools must ensure that their digital content and technologies are accessible to students with disabilities.

The Future of AI in K-12 Education

The future of K-12 education is likely to be deeply intertwined with evolving AI tools. While the development of Artificial General Intelligence (AGI), a hypothetical AI capable of human-like intelligence, is still distant, more focused AI applications can personalize learning experiences. These tools, coupled with strong human educators, hold the potential to create a future where education is not only more engaging but caters to the individual needs of every student.

Acknowledgments

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OSDE also recognizes Michael Hanegan for his contributions as an Intellectual Property Architect.

Resources

K-12 School Leaders

- "AI and Our Kids: Common Senses Considerations and Guidance for Parents, Educators, and Policy Makers 2023" (Common Sense Media)
- US Dept. of Education Office of Educational Technology: Artificial Intelligence
- TeachAI Guidance for Schools Toolkit
- AI and the Future of Teaching and Learning (US Department of Education)
- Leveraging the K-12 Gen AI Readiness Checklist: A Guide for District Leadership (Consortium for School Networking)
- Bringing AI to School: Tips for School Leaders (International Society for Technology in Education)
- AI Product Reviews (Common Sense Media)
- A Guide to AI in Education (Google for Education)
- ISTE Standards for Students (International Society for Technology in Education)

Staff Development

- aiEDU
    - AI Toolkits
- ASCD
    - Planning Professional Development on ChatGPT
- Code.org
    - "AI 101 for Educators"
- Google
    - Advancing Education with AI
- Microsoft
    - Microsoft Learn

Resources for Teaching Students

- AI for Education
    - Downloadable Resources for Classrooms
    - Introduction to AI for Students

    - Prompt Library
- aiEDU
    - Curriculum Library
- Common Sense Media
    - AI Literacy Lessons for Grades 6-12
- International Society for Technology in Education (ISTE)
    - Hands-on AI Projects for the Classroom: Elementary
    - Hands-on Projects for the Classroom: Secondary
    - Hands-on Projects for the Classroom: Electives
    - Hands-on Projects for the Classroom: Ethics and AI

Academic Integrity

- Combating Academic Dishonesty (University of Chicago)
- Promoting Academic Integrity in Your Course (Cornell University)
- Strategies for Teaching Well When Students Have Access to Artificial Intelligence (AI) Generation Tools (George Mason University)

Ethical AI Procurement

- AI Ratings System (Common Sense Media)
- Emerging Technology Adoption Framework (Digital Promise)

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Washington Office of Superintendent of Public Instruction. Human-Center AI Guidance for K-12 Public Schools, 18 January 2024. Retrieved from https://ospi.k12.was.us/ai