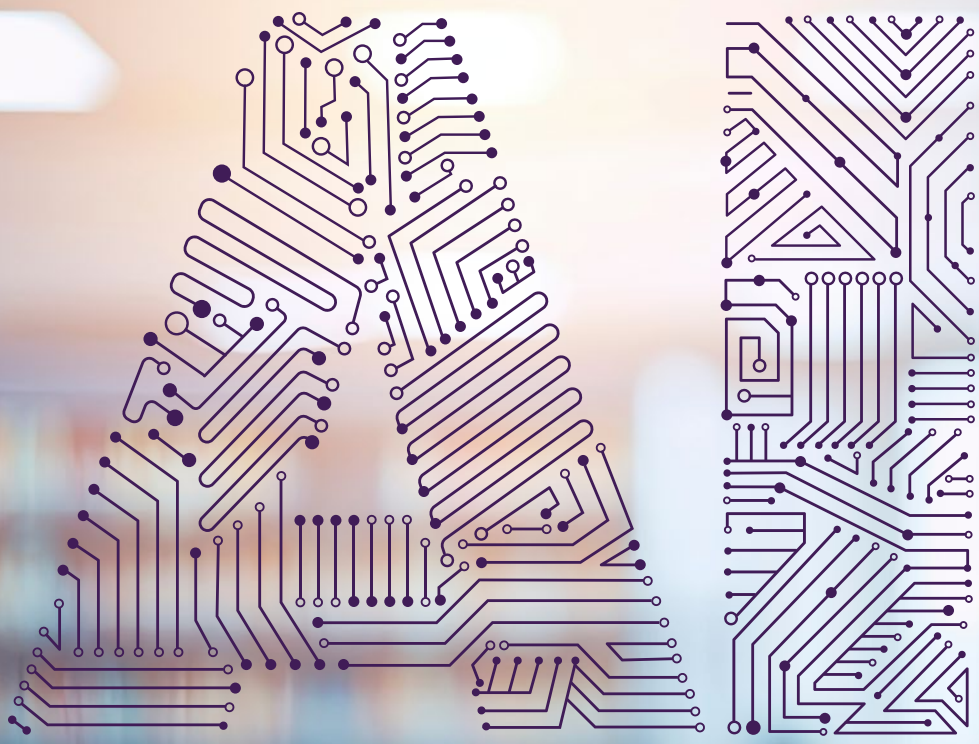

Artificial Intelligence in Louisiana Schools

Guidance for K-12 Schools

Updated 8.2.24

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TABLE OF CONTENTS

ABOUT THIS RESOURCE

INTRODUCTION

Recognizing the transformative potential of Artificial Intelligence (AI) in education and the complexities it introduces, the Louisiana Department of Education (LDOE) has developed this comprehensive guide. AI technologies raise data security and privacy concerns, but they also hold the potential to enhance teaching and learning practices. This guide aims to equip educators, leaders, and families with a foundation for understanding and harnessing the power of AI to improve teaching and learning practices in Louisiana.

VISION

The LDOE envisions a future where AI is a powerful tool to personalize learning, enhance teaching practices, and prepare students for careers. By equipping educators, leaders, and families with a deep understanding of AI, Louisiana schools will lead the nation in leveraging this technology to create safe, engaging, and innovative learning environments. The recommendations in this report offer information to school system leaders, school leaders, teachers and staff members, educational technology innovators, policymakers, and researchers to discuss the use of AI in all schools.

COMMITMENT

The LDOE is committed to empowering all students with the digital literacy skills necessary for the 21st century, preparing them for success in society and future career opportunities.

GUIDING PRINCIPLES

The LDOE has established Guiding Principles to ensure responsible and effective integration of AI technologies in Louisiana's K-12 classrooms.

- **Data Privacy and Security:** Robust data privacy and security measures must be in place to protect student information and ensure compliance with relevant regulations.
- **Ethical Considerations:** AI should be used according to ethical principles, including fairness and avoiding potential biases in algorithms and data.
- **Student-Centered Learning:** AI should personalize learning experiences, address individual student needs, and promote agency and ownership over learning.
- **Transparency and Explainability:** AI systems should be transparent and explainable, enabling educators and students to understand how decisions are made and ensuring accountability.
- **Professional Development:** Ongoing professional development ensures educators possess the knowledge and skills to integrate AI effectively into their teaching practices.

Disclaimer

This document is not intended to provide nor should it be in any way construed to offer legal advice to the recipients. The information provided in this document is for general information purposes only. It is strongly advised that schools and school districts considering the implementation and use of Artificial Intelligence should consult and work with their respective associated legal counsel in order to obtain legal advice relative to various applicable state and federal laws and regulations and ancillary issues. Assurances should be obtained from legal counsel who have thoroughly examined your proposed program for use of Artificial Intelligence to ensure that it is aligned with all applicable laws and ethical principles.

OVERVIEW OF AI

WHAT IS AI?

AI is a rapidly evolving technology that enables computers and machines to mimic human intelligence and problem-solving abilities. At its core, AI is driven by machine learning, a process that enables computers to learn and improve from experience without explicit programming. By analyzing vast amounts of data in various formats (text, images, audio, video), machines can identify patterns, make predictions, and solve complex problems.

Large Language Models (LLMs) are a particularly sophisticated type of AI. These models can understand, generate, and translate human language, making them capable of creating diverse content such as text, images, and audio. Google Gemini and ChatGPT are prominent examples of generative AI powered by machine learning and LLMs.

AI is already deeply integrated into our daily lives, from powering virtual assistants like Siri and Alexa to personalizing recommendations on streaming platforms. In Louisiana classrooms, AI offers the potential to transform education. It can:

- **Personalize learning:** Tailor instruction to each student's unique needs and pace.
- **Increase engagement:** Create interactive and immersive learning experiences.
- **Enhance efficiency:** Automate repetitive tasks, freeing teachers to focus on individualized support.
- **Provide data-driven insights:** Analyze student performance to identify areas for improvement.

In alignment with the LDOE's goals, integrating AI into classrooms is a crucial strategy for ensuring access to high-quality education for all learners. By embracing safe and ethical AI practices, Louisiana educators can leverage this technology to improve teaching and learning, providing students with the knowledge and skills they need to thrive.

HOW DOES AI IMPACT EDUCATION?

The LDOE recognizes AI's potential to improve learning across our state. AI in education refers to applying AI techniques to enhance learning and teaching processes. It extends beyond computer science, aiming to leverage machine intelligence to improve educational experiences across various disciplines.

This technology does not simply replicate human tasks. AI can analyze vast amounts of data to identify patterns and trends unseen by educators, allowing for a more impactful learning experience for every student in Louisiana. **However, AI is most effective as a supportive tool that empowers educators rather than serving as a replacement for their expertise.**

A Shared Responsibility: Ensuring Safe Use of AI in Schools

AI presents a transformative opportunity for Louisiana's education system, offering innovative ways to customize learning, streamline tasks, and enrich the classroom experience. However, the integration of AI also introduces new considerations for student safety, especially concerning data privacy and cybersecurity. The LDOE recognizes that ensuring the safe use of AI in schools is a shared responsibility among educators, school leaders, families, students, and other external stakeholders. Through these collective efforts, The LDOE seeks to foster a learning environment where AI is leveraged responsibly to empower Louisiana students.

CHALLENGES OF AI IN EDUCATION

NAVIGATING THE CHALLENGES OF AI IN EDUCATION

The advancement of AI presents new opportunities and complex ethical considerations for Louisiana's education system. AI can potentially transform the current teaching and learning practices landscape, but its integration raises essential questions about academic integrity and the authenticity of student work. The LDOE aims to navigate these ethical challenges, guiding AI's responsible and thoughtful integration in Louisiana classrooms. By fostering open dialogue and informed human decision-making, AI can enhance learning while maintaining the rigor and standards of academic integrity in K-12 classrooms.

Teachers can play an essential role in detecting student plagiarism with AI by:

- **Using plagiarism detection tools:** Several AI-powered plagiarism detection tools are available to help teachers identify instances of copied or unoriginal work. These tools compare student submissions against vast academic and online content databases, flagging potential matches and similarities.

- **Varying assignments and assessments:** Teachers can create diverse assignments and assessments that encourage original thought and discourage reliance on AI-generated content. By asking students to apply concepts to real-world scenarios, analyze data, or develop creative solutions, teachers can make it more difficult for students to replicate information.

- **Educating students about AI and plagiarism:** Teachers should proactively educate students about the ethical implications of using AI for academic dishonesty. By fostering open discussions about the responsible use of technology and the importance of academic integrity, teachers can empower students to make informed decisions and avoid plagiarism.

- **Requiring students to show their work:** Teachers can ask students to show their work or provide evidence of their learning process. This can involve submitting drafts, outlines, or notes alongside final assignments, demonstrating the progression of their thinking and the originality of their contributions.

- **Promoting critical thinking and originality:** Teachers should emphasize the importance of critical thinking and creativity in academic work. By encouraging students to question assumptions, evaluate evidence, and develop their unique perspectives, teachers can foster a culture of academic integrity and discourage reliance on AI-generated content.

By fostering open dialogue and informed human decision-making, AI can enhance learning while maintaining the rigor and standards of academic integrity in K-12 classrooms.

STRATEGIES TO MITIGATE PLAGIARISM AND CHEATING

One significant challenge in the current educational landscape is detecting the use of AI in student work when it is prohibited. Ensuring academic integrity in this context requires a multifaceted approach. No single method or strategy will entirely prevent plagiarism and cheating. However, a combination of education, technological tools, assessment design, and classroom management practices is essential to mitigate plagiarism and cheating effectively. The following strategies are designed to help educators in Louisiana K-12 classrooms address the complexities of AI-related academic dishonesty.

STRATEGIES

1. Education and Awareness

- **Teachers Use AI:** Teachers should undergo training to become proficient with AI tools for detecting academic dishonesty. Understanding the functionalities and limitations of these tools is crucial, especially given that AI-generated text does not have easily identifiable markers or metadata that can indicate its origin. Teachers should frequently use AI tools to detect the use of AI in student work effectively.
- **Teach Academic Integrity:** Educate students about the importance of academic honesty, the consequences of plagiarism and cheating, and the value of original work. Teach students how to cite sources and paraphrase correctly.
- **Digital Literacy:** Integrate digital literacy into current teaching and learning practices across all grade levels and content areas, helping students learn how to use AI tools safely, ethically, and effectively.

2. Tools and Methods for Detection

- **Plagiarism Detection Software:** Use plagiarism detection tools like Turnitin or Grammarly to scan student work. These tools compare student submissions against extensive databases of academic writing, websites, and publications to identify potential instances of copied content.
- **Lockdown Browsers:** Implement software such as GoGuardian during assessments and other activities to monitor students' use of technology.
- **Citation Analysis:** Review citations and references carefully to ensure they are accurate and appropriate. Check for consistency in formatting or the inclusion of sources that seem irrelevant to the topic.

3. Assessment Design

- **Embedded Assessments:** Use curriculum-embedded assessments that are familiar to the teacher, allowing the teacher to identify plagiarism easily.
- **Personalized Assignments:** Create unique and more customized assignments for individual students so that cheating is not as simple.
- **Open-ended Questions:** Use open-ended questions that require critical thinking and personalized responses, which are more difficult to plagiarize.
- **Project-based Assessments:** Encourage project-based learning where students must create original projects over time, making plagiarism more difficult.

4. Technology Integration

- **AI-assisted Writing Tools:** Use AI tools that help students write more proficiently by providing suggestions and corrections while ensuring they do not simply copy content. Tools like Google Docs with integrated AI features can be used to monitor originality.
- **Version Control:** Implement version control in assignments submitted digitally to track changes and ensure the student develops the work progressively.

5. Classroom Management

- **Clear Policies:** Establish and communicate clear policies on academic integrity and the consequences of plagiarism and cheating.
- **Device Orientation**: Ensure that devices are positioned where the teacher can see students' screens and actively monitor activity.
- **Regular Check-ins:** Schedule regular progress check-ins for long-term assignments to monitor student progress and provide feedback.

6. Stakeholder Involvement

- **Family Guidance:** Involve parents/guardians in discussions about academic integrity and the responsible use of AI tools. Encourage them to monitor their child's work and support the learning process.

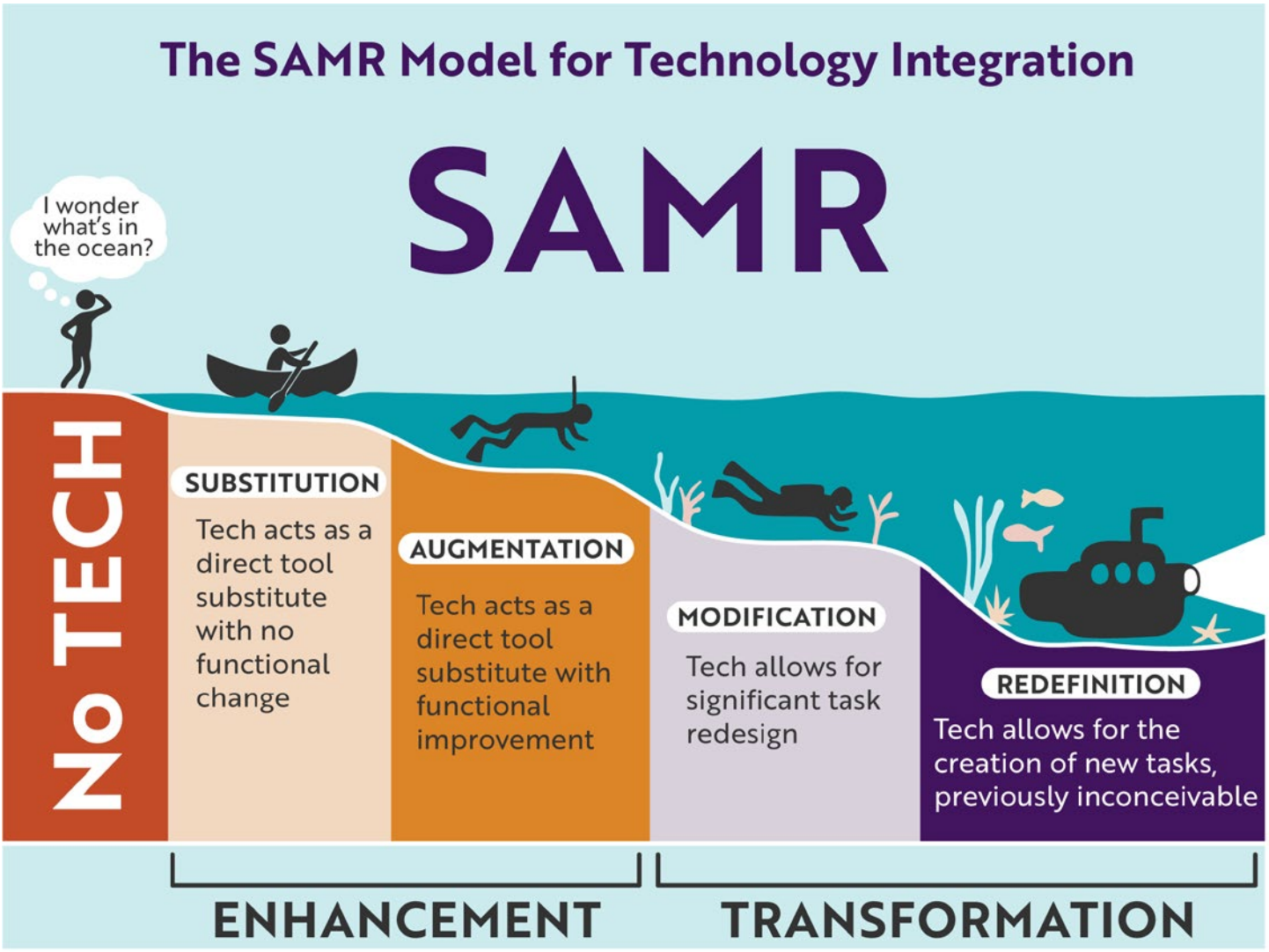
7. Continuous Improvement

- **Feedback Loops:** Establish feedback loops where teachers, students, and parents/guardians discuss the effectiveness of current strategies and suggest improvements.
- **Adapt and Evolve:** Regularly update policies and strategies based on new developments in AI technology and emerging trends in academic dishonesty.

INTEGRATING AI INTO CLASSROOM INSTRUCTION

THE SAMR MODEL: A MODEL FOR EFFECTIVE AI IMPLEMENTATION

As with any technology integration in education, the Substitution, Augmentation, Modification, Redefinition (SAMR) model should be applied to assess the potential of AI in the classroom.[1] By analyzing AI tools through the lens of SAMR, educators can determine how AI can be used to substitute traditional tasks, augment existing practices, modify learning experiences, or even redefine how students learn and interact with content. This model ensures that AI is not just used as a replacement for teaching and learning but is thoughtfully integrated to enhance and transform the learning process.



(Adapted from SAMR Model by R. Puentedura and S. Duckworth, 2010. Reprinted with permission.)

1 Adapted from SAMR Model by R. Puentedura and S. Duckworth, 2010. Reprinted with permission.

AI INTEGRATION TIERED APPROACH

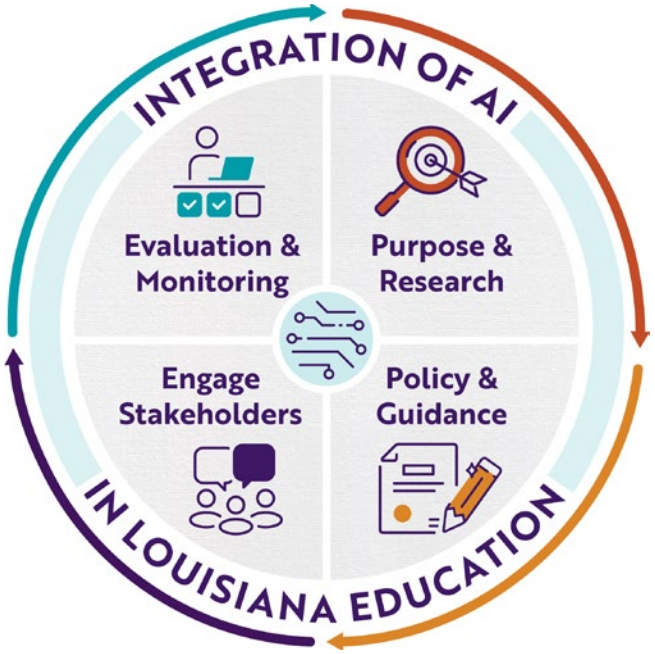
One approach to integrating AI in instruction is a tiered system that clearly defines appropriate levels of AI tool usage. This model outlines four distinct tiers: "AI-Empowered," where AI tools are actively promoted for specific educational purposes; "AI Enhanced," where AI is permitted under certain conditions and with specific guidelines; "AI-Assisted," where AI usage is restricted to particular situations or subject areas; and finally, "AI-Prohibited," where certain AI applications are deemed inappropriate for classroom use. This tiered approach provides clear guidance for educators and students, ensuring responsible and effective integration of AI technology in the learning environment. The model below includes content-centered examples at each integration tier with connections to the Substitution, Augmentation, Modification, Redefinition (SAMR) model for technology integration.

AI-Empowered (Redefinition)	Students are encouraged to fully engage with AI under human supervision, citing sources and carefully reviewing all generated content for accuracy. This tier of AI integration connects to the transformational component of the SAMR model in which AI technologies can help **redefine** the task, thus transforming the learning process. For example, students could use AI-powered design software to create 3D models of their drafted work, ensuring accurate measurements and calculations.
AI-Enhanced (Modification)	Students may use AI as a tool to transform the learning process, but sources should be cited, and all generated content should be reviewed for accuracy. This AI integration tier connects to the SAMR model's enhancement component, where AI technologies can help **modify** the task. For example, students could use AI to analyze data in preparation for a science project and create a detailed report that they can articulate to their audience.
AI-Assisted (Augmentation)	Students may use AI as a feedback tool, but they should create all of the assignment's content themselves. This tier of AI integration connects to the **augmentation** component of the SAMR model, in which AI technologies are used as a tool to improve functionality, although the content remains the same. For example, students could use AI tools as a thought partner for brainstorming ideas for a class assignment.
AI-Prohibited (Substitution)	AI tools are not permitted for assignments or tasks specifically designed to evaluate students' core knowledge and skills. This tier of AI integration connects to the **substitution** component of the SAMR model, in which AI technologies are not used, but other technologies may still be integrated. For example, students could create and deliver a slideshow presentation to share their research and explain how their task connects to earlier learning in the course without using AI as a tool.

LDOE FRAMEWORK FOR AI INTEGRATION IN K-12 EDUCATION

LDOE's framework for AI integration is a comprehensive approach designed to maximize AI's benefits in schools while remaining informed and transparent about its implementation. In a fluid cycle, K-12 AI integration unfolds not linearly but as a continuous process of exploration and refinement. With its interconnected elements, this framework empowers K-12 education to embrace AI's potential while prioritizing student safety and preparing them for a future where technology plays an ever-increasing role.

Overall, this framework offers a holistic approach to integrating AI into K-12 education in Louisiana. The goal is to create a responsible, effective, and sustainable environment that leverages AI to enhance teaching, learning, and educational outcomes by addressing research, policy and guidance, stakeholder engagement, and continuous evaluation.



Purpose & Research: This component emphasizes the importance of defining clear objectives for AI integration. Thorough research is conducted to explore evidence-based practices, understand AI's potential benefits and challenges, and identify appropriate AI tools and resources that support specific educational goals. This ensures that AI implementation is purposeful, well-informed, and tailored to the Louisiana educational context.

Policy & Guidance: This component addresses the need for clear guidelines and policies that govern AI's ethical and responsible use in educational settings. It involves developing frameworks for data privacy, ensuring access to AI resources, and establishing standards for designing and implementing AI tools. Policy and guidance provide a structured approach to navigating the complexities of AI integration and ensuring that it aligns with legal, ethical, and educational principles.

Engage Stakeholders: Recognizing that AI integration impacts various stakeholders, this component emphasizes active engagement and collaboration. Educators, administrators, students, parents, policymakers, and community members are involved in the process to gather diverse perspectives, address concerns, and build support for AI initiatives. This collaborative approach promotes trust, ownership, and shared responsibility in shaping the future of AI in education.

Evaluation & Monitoring: This component focuses on assessing the impact of AI implementation in educational settings. It involves tracking student progress, measuring the effectiveness of AI tools and resources, and identifying areas for improvement. Regular monitoring ensures that AI initiatives align with educational goals and adapt to the changing needs of students and educators.

The framework presented serves as a foundational roadmap for navigating the complexities of AI integration in the K-12 environment. Successfully implementing AI technologies hinges upon a multifaceted approach beyond mere technological adoption. The following sections will explore the critical aspects that must be considered alongside this framework to ensure a responsible, ethical, and effective integration of AI in schools.

This guidance document will explore necessary **safeguards** to protect student data and privacy, address potential biases, and maintain transparency in AI decision-making processes. In addition, it will examine the **technical considerations** involved in selecting and deploying AI tools, ensuring interoperability and accessibility, and managing the infrastructure required to support AI applications.

Furthermore, a comprehensive understanding of the **relevant laws and policies** governing the use of AI in education is essential to ensure compliance and avoid legal pitfalls. Lastly, the importance of providing adequate **training and support** to educators, school leaders, and students to effectively leverage AI tools and foster a culture of innovation and continuous learning will be emphasized.

SAFEGUARDS FOR AI IN EDUCATION

As AI technologies continue to develop, school systems, individual schools, and staff must implement intentional safeguards to ensure the safety of students and employees. The recommendations below are designed to minimize the safety risks associated with using AI in Louisiana education.

SCHOOL SYSTEM LEVEL

Considerations	Recommendations for School Systems
Data Storage and Usage	School leaders should be aware of federal regulations like FERPA and COPPA and state-specific data privacy laws, such as the Louisiana Student Privacy Law (R.S. 17:3914) (See Relevant Laws and Policies). The school system must implement secure data storage practices, obtain parental consent when necessary, and provide transparency when AI systems collect, process, and utilize student data.
Software Approval Processes	Comprehensive software approval processes should be established and diligently followed to mitigate risk and maintain system integrity. All governing laws and policies should be considered to ensure AI software's safe and ethical integration in schools. These processes should be approved with the input of stakeholders (e.g., educational technology personnel, school leaders, teachers, and families) to ensure transparency and informed selections.
Transparency and Stakeholder Engagement	School systems should proactively engage stakeholders in discussions about integrating AI into K-12 classrooms. This includes providing transparent, accessible information about the specific AI tools used, their purpose, potential benefits and risks, and measures to ensure student privacy and data security.
Continuous Improvement Processes	With AI rapidly evolving, processes should be developed to maintain effective AI integration in Louisiana schools. School system leaders should ensure staffing decisions allow for the close monitoring of AI integration initiatives. Additionally, school systems should ensure continuous improvement is based on a cycle following the LDOE's Framework for AI Integration in K-12 Education.
Policies and Procedures	School systems should ensure that educational technology policies (i.e., acceptable use agreements) reflect AI integration and use in K-12 schools. Changes to these documents should include a definition of AI, appropriate uses in education, and implementation procedures. LDOE Digital Learning and the TeachAI Toolkit provide helpful resources for updating these policies and procedures.
Closed System Applications	Closed system applications refer to software or platforms operating within a controlled environment, often without an internet connection. Closed-system AI applications are preferred in educational settings because they provide greater control over data privacy and security.
Data Sharing Agreements	In compliance with R.S. 17:3913, Data-Sharing Agreements (DSAs) between AI vendors and LEAs must be crafted to ensure compliance with privacy regulations and safeguard sensitive student information, including video and audio recordings, among other data. The LDOE website provides more details regarding DSAs.
Educational Software for Monitoring	School systems should consider using educational software designed to monitor students' use of technology, filter content, and mitigate the improper use of technology. School system leaders should inform school leaders of software available to them.

SCHOOL BUILDING AND CLASSROOM LEVEL

Considerations	Recommendations for Teachers and Staff
AI as a Partner	Teachers can improve their instructional practices and increase planning efficiency by leveraging AI as a thought partner. Students may also use AI in this same way to receive real-time feedback and individualized interventions. The AI Integration Tiered Approach offers a framework for determining appropriate situations for utilizing AI tools.
Academic Dishonesty	Integrating AI technologies in education presents new challenges concerning plagiarism and other unethical uses. However, academic dishonesty can be mitigated by teaching ethical and responsible use of AI in K-12 schools.
High-Quality Instructional Materials	Integrating AI technologies should maintain the integrity of high-quality instructional materials used for instruction.
Human Decision-Making	AI technologies should not be the sole instructional decision-maker. Instead, AI should help enhance learning experiences and facilitate learning.
Monitoring Use	Schools should have clear directives on how AI-driven technologies will be used and monitored in the classroom. Teachers and facilitators should actively monitor student use of software and devices to ensure a focused and productive learning environment. Effective monitoring includes regular check-ins and feedback within educational software, utilizing screen-sharing tools, and reviewing student progress. Classrooms should be arranged to allow greater visibility of student screens. School leaders should ensure that faculty and staff are familiar with the educational software and tools to monitor students' use.
Transparency and Stakeholder Engagement	Schools should ensure transparency with stakeholders regarding AI integration in K-12 classrooms. Schools should engage stakeholders in discussions and effectively communicate information regarding AI use in the classroom. Access a Sample Parent Letter.

TECHNICAL CONSIDERATIONS

Using AI in classrooms presents technical benefits and challenges. As Louisiana schools integrate AI, leaders should consider the following recommendations to leverage teaching and learning practices and increase access to relevant technology.

Considerations	Recommendations
Cybersecurity	Educational technology personnel should prioritize data privacy and security related to AI technologies. Protocols should be established and maintained to protect student data and ensure compliance with federal and state laws. LDOE Digital Learning provides helpful resources for cybersecurity incident prevention.
Network and Hardware	AI integration in schools significantly increases bandwidth usage due to data-intensive applications like intelligent tutoring systems, cloud-based services, and real-time collaboration tools. AI-driven video content, adaptive learning systems, and Internet of Things (IoT) devices continuously exchange data, further straining network resources. To manage these impacts, schools may need to upgrade their network infrastructure and implement bandwidth management policies to prioritize educational activities.
Alignment to Educational Goals and Priorities	Integrating AI technologies in K-12 schools should include alignment with the educational goals and priorities outlined by the school or school system. AI should enhance students' learning experiences rather than diminish them. For example, AI tools could offer personalized assistance and assignment feedback based on individual students' needs.
Responsible and Acceptable Use	School systems should update responsible and acceptable use policies, including AI technologies. These guidelines should promote the ethical use of AI in education. For example, adding an addendum to these policies can effectively address this need. LDOE Digital Learning and the TeachAI Toolkit provide helpful resources for updating these policies.
Digital Citizenship	Digital citizenship guidance and resources should be updated to include using AI technologies as a safe and responsible digital citizen. These efforts to teach digital citizenship should be ongoing and frequent across all grade levels, content areas, and learning environments. LDOE Digital Learning provides helpful resources for leaders and teachers to promote digital citizenship. **Digital Citizenship–Cybersecurity for Students** **Digital Citizenship–Elementary Student Guide** **Digital Citizenship–Parent Guide** **Digital Citizenship–Student Guide (Secondary)** **Digital Citizenship–Teacher Guide**
Guided Use	AI technologies should be integrated into the learning environment under the guidance and supervision of educators. These learning experiences should ensure that students use AI technologies to promote more profound levels of learning that lead to significant learning transfer (e.g., deeper learning, authentic intellectual work, rigorous and relevant learning, etc.). LDOE Digital Learning provides guidance and resources for teachers and leaders following the Substitution, Augmentation, Modification, Redefinition (SAMR) model.

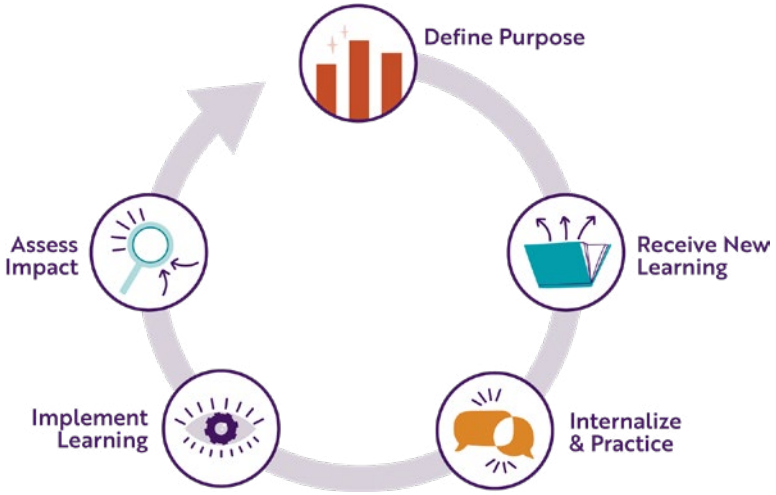
RELEVANT LAWS AND POLICIES

The integration of AI in Louisiana K-12 schools requires an understanding of existing laws and policies that govern student rights, data protection, and the use of technology. The figure below provides an overview of current educational laws and policies and their application to AI technologies. The LDOE recommends that all schools consult their legal counsel before integrating technologies that could compromise student and employee privacy.

Laws or Policies	Relevance to AI Technologies
Family Educational Rights and Privacy Act (FERPA)	Schools should use due diligence when integrating AI technologies in K-12 classrooms to protect students' educational records. Student data should not be stored or utilized with AI technologies in a way that risks the privacy of protected student information.
Louisiana's Employee Information Laws – LA R.S. 17:3884; LA R.S. 17:440	LA R.S. 17:3884 protects school employees' personally identifiable evaluation data and results, including, but not limited to, student learning targets, teacher observations, and value-added teacher assessment data. LA R.S. 17:440 prohibits using social security numbers as a personal identifier for school personnel. Schools should exercise due diligence when integrating AI technologies into these processes to protect employee information.
Children's Internet Protection Act (CIPA)	CIPA relates to AI use in schools by requiring schools to protect students from harmful material, including when AI systems access or filter online content. This includes filtering content on school networks and devices and ensuring that students' online activities are closely monitored to maintain a safe and secure online environment.
Children's Online Privacy Protection Rule (COPPA)	COPPA places the responsibility on service providers used in schools to ensure they obtain verifiable parental consent before collecting any personal information from children under 13 through their AI-powered platforms.
Individuals with Disabilities Education Act (IDEA)	Emerging AI technologies have the potential to serve students with exceptionalities by offering innovative ways to ensure equal access to their education. However, such technologies should be used only if they do not interfere with eligible students' safety, privacy, and access to a free, appropriate public education.
Louisiana's Law for Statewide Educational Technology Plan– LA R.S. 17:3921.2	AI technologies should be considered in school systems' digital literacy instruction and technical practices as outlined in the strategic goals of Louisiana's Statewide Educational Technology Plan.
Louisiana's Student Transparency and Privacy Laws– LA R.S. 17:3913; LA R.S. 17:3914	LA R.S. 17:3913 pertains to transparency in educational practices. This law emphasizes transparency by requiring educational institutions to disclose information and processes related to educational policies and practices. LA R.S.17:3914 focuses on student information, privacy, legislative intent, definitions, prohibitions, parental access, and penalties.
Section 504 of the Rehabilitation Act (Section 504)	Some AI technologies can provide students with Section 504 protections, accommodations, and modifications in accordance with their plans. AI can increase teachers' efficiency in accommodating students' needs and modifying assignments.
Title VI of the Civil Rights Act of 1964 (Title VI) and the Equal Educational Opportunities Act of 1974 (EEOA)	AI technologies have the potential to ensure that English learner (EL) students have increased access to meaningful and equal educational experiences. Through AI-powered linguistic tools and intelligent tutoring systems (ITS), language acquisition, background knowledge, and skills can be improved across all content areas.
Bulletin 110	This BESE bulletin relates to technology education content standards.
Bulletin 104	This BESE bulletin relates to Louisiana K-12 Educational Technology Standards.

TRAINING AND SUPPORT

Comprehensive, cyclical training and ongoing support are imperative for implementing AI technologies in the educational setting. Training and support on using AI in K-12 schools should closely follow The LDOE's high-quality professional learning cycle, including feedback and coaching to build understanding and capacity.



Participants	Recommendations
Educational Leaders	Integrating AI in K-12 schools should include high-quality professional learning for school system leaders and administrators. Educational leaders should understand AI's potential in education, its implications for teaching and learning, and how to provide ongoing support to personnel. Including educational leaders in a team of experts to inform the integration of AI in education is crucial for maintaining a shared understanding of AI technologies in K-12 schools. See Instructional Leadership Team (ILT) Agenda for a sample ILT agenda and template.
Teachers and Staff Members	Teachers and staff members should receive high-quality professional learning on integrating AI in the classroom to improve student outcomes and research-based best practices. To ensure the effective integration of AI technologies in the classroom, ongoing support and a structured process for feedback are essential for teachers and staff. Collaboration among educators, school staff, and AI experts fosters a shared understanding of AI, promotes its appropriate use, and maximizes the benefits for student learning. For additional resources and tools to support teachers in utilizing AI effectively, refer to AI-Powered Tools for Teachers.
Educational Technology Staff Members	Educational technology staff members supporting K-12 classrooms should receive high-quality professional learning on integrating AI technologies in schools, data security, privacy, and troubleshooting technical issues. Including educational technology leaders in a team of experts to inform AI integration in education is crucial for ensuring safety and data privacy.
Students	Students should have foundational knowledge about AI concepts and use, then progressively learn to use these tools and applications more complexly as they progress through their educational journey. This approach ensures that students build upon existing knowledge. At the same time, ongoing support allows them to troubleshoot any issues, ask questions, and discover new ways to leverage AI to improve their learning.
Families and Guardians	School systems should ensure that family communication deepens their knowledge of AI's role in education, its benefits, and the concerns surrounding its use. Including parents and guardians in a team of experts to inform the integration of AI in education is crucial for maintaining transparency and a shared understanding of AI technologies. Access a Sample Parent Letter.
Community and Industry Partners	School systems should engage community stakeholders in discussions and initiatives regarding the integration of AI in education. This can foster a collaborative relationship between schools and the community to advance education. Including community members and industry partners in a team of experts to inform AI integration in education is crucial for maintaining transparency and ensuring safety.

RESOURCES

GLOSSARY OF COMMON TERMS

Terms	Definition
Adaptive Learning Platforms	AI-powered systems that adjust learning content and difficulty based on student performance.
Algorithmic Transparency	The ability to understand how an AI system arrives at its decisions.
Bandwidth	A network or internet connection's maximum data transfer rate measures how much data can be sent over a specific connection in a given time. Many AI programs integrate OpenAI or other large data sets, which can use up a large portion of available bandwidth and slow down computer performance.
Chatbots	AI-driven programs that simulate interactive human conversation using pre-set rules and Natural Language Processing (NLP). In education, chatbots can be used for tutoring, answering student queries, and providing learning support.
Cybersecurity	Cybersecurity protects systems, networks, and data from unauthorized access, use, disclosure, disruption, modification, or destruction. Artificial Intelligence (AI) plays an increasingly important role in cybersecurity by helping to analyze vast amounts of data to identify threats, automate security tasks, and improve overall security posture.
Computer Science	Computer Science is the study of computers and algorithmic processes, including principles, hardware and software designs, implementation, and their impacts on society. It forms the foundation of Artificial Intelligence (AI), which emerges as a specialized branch of computer science. AI involves creating algorithms and models to enable machines to perform tasks that typically require human intelligence, such as recognizing speech, making decisions, and interpreting complex data. Thus, AI applications are deeply rooted in and driven by fundamental principles of computer science.
Data Governance	Data governance is the process of managing the availability, usability, integrity, and security of data in enterprise systems. It is based on internal data standards and policies controlling data usage. Effective data governance ensures that data is used properly and ethically.
Data Privacy	The aspect of digital technology that deals with the proper handling, processing, and storage of personal information to protect student and staff privacy and comply with legal standards.
Digital Literacy	The ability to find, evaluate, utilize, share, and create content using information technologies and the Internet.
EdTech	Short for "educational technology," this refers to the practice of integrating IT tools into the classroom to create more engaging, inclusive, and individualized learning experiences.
Educational Data Mining (EDM)	EDM refers to using data from student interactions with technology to identify patterns and improve learning experiences.
Explainable AI (XAI)	Making AI decision-making processes transparent and understandable allows teachers to see how AI arrives at student recommendations.

Terms	Definition
Generative AI	AI that can create new content, such as text, images, or music, based on the data on which it has been trained.
High Quality Instructional Materials (HQIM)	High-Quality Instructional Materials (HQIM) are comprehensive teaching resources that fully align with Louisiana state standards, outlining what students should know and be able to do at each grade level or course. They are considered high quality when they effectively support meaningful instruction, ensuring students can achieve these standards and develop the necessary skills and knowledge. Materials are evaluated to be determined as HQIM through the LDOE Instructional Materials Review Process.
Human Oversight	Teachers must maintain control over curriculum and student assessment, even with AI assistance.
Intelligent tutoring systems (ITS)	An AI-powered computer tutor that personalizes learning by assessing knowledge, offering targeted lessons, and giving immediate feedback.
Interoperability	Interoperability refers to the ability of different AI-powered educational tools to work together seamlessly.
Machine learning	A subset of AI that involves training algorithms on data, enabling them to improve over time without being explicitly programmed. Machine Learning is commonly used to personalize learning experiences in educational software.
Natural Language Processing (NLP)	It is a field of AI that gives machines the ability to read, understand, and derive meaning from human languages, enabling features like automated essay scoring or chatbots that can answer student questions. (example: ChatGPT)
Scalability	Scalability refers to whether an AI system can effectively handle a large number of students or diverse learning needs.

AI-POWERED TOOLS FOR TEACHERS

Incorporating AI-powered tools in the classroom can significantly enhance teaching efficiency and effectiveness. AI can help automate routine tasks, provide customized learning experiences, and offer real-time insights into student progress—the table below lists various AI-driven applications and software designed to support educators in their daily activities. **Please note that this list is provided for informational purposes only and does not constitute an endorsement of any specific tool or application; additionally, the use of certain AI tools may be subject to age restrictions, requiring users to be of a specific age or have parental consent to ensure compliance with privacy and safety regulations.**

1. Amira Learning

- **Function:** AI-powered reading tutor
- **Benefit:** A paid subscription provides access to Amira's personalized literacy tutoring. Note that use must include humans in the loop to ensure appropriate integration.
- **Age Band:** Recommended for students aged 5-12 with parental consent

2. ChatGPT

- **Function:** AI assistant
- **Benefit:** Free and paid versions are available for teachers to create classroom resources. Use must include humans in the loop to ensure accuracy and appropriateness.
- **Age Band:** Suitable for teachers and students aged 13 and above with parental consent

3. Education Copilot

- **Function:** AI assistant
- **Benefit:** Free and paid versions are available for teachers to create classroom resources. Use must include humans in the loop to ensure accuracy and appropriateness.
- **Age Band:** Suitable for teachers and students aged 18 and above

4. Google Classroom and ReadAlong

- **Function:** Classroom management and literacy
- **Benefit:** Google Classroom streamlines assignment distribution, grading, and student communication. Google ReadAlong is a language-learning app for children. Note that use must include humans in the loop to ensure appropriate integration.
- **Age Band:** Google Classroom is suitable for all ages, while Google ReadAlong is recommended for children aged 5-12 with parental consent

5. Khanmigo

- **Function:** AI-powered math tutoring
- **Benefit:** A paid subscription provides access to Khanmigo's personalized learning. Note that use must include humans in the loop to ensure appropriate integration.
- **Age Band:** Suitable for teachers and students with parental consent

6. Turnitin

- **Function:** Plagiarism detection
- **Benefit:** Automatically checks student submissions for plagiarism, ensuring academic integrity.
- **Age Band:** Suitable for teachers and students aged 13 and above with parental consent

Louisiana Association of Computer Using Educators (LACUE)
LACUE's Artificial Intelligence Dashboard

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