Planning Guide for AI:
A Framework for School Districts

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In collaboration with Michigan Virtual, CIESC is proud to present this Planning Guide for AI: A Framework for School Districts.

An earlier version of this publication was authored by our good friends at Michigan Virtual and has been modified for this release. They are a founding member of the VLLA and serve as a supplemental online course provider for students and offer extensive online professional development programming for educators in Michigan. They also operate the Michigan Virtual Learning Research Institute which has launched an AI Lab to help school leaders leverage AI to support teaching, learning and business operations. As a 25-year-old nonprofit organization, Michigan Virtual also provides quality school consulting services nationwide for organizations who want a collaborative partner with strategic planning, micro school creation, AI implementation, systemwide transformation, and other innovations to personalize education.

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Artificial Intelligence (AI) Integration Framework for School Districts

	Investigating	Implementing	Innovating
Leadership & Vision	District leadership is beginning to understand the potential uses of AI to assist with teaching, learning, and operations; however, they have not endorsed the widespread use of AI tools or developed a plan.	The district leadership has created a plan, along with an implementation team, to incorporate AI into various aspects of teaching, learning, and operations. The plan aligns with their strategic priorities and includes a baseline risk assessment.	Leaders at all levels understand the district's overall vision and harness AI to enhance operational efficiencies and maximize student learning outcomes while leveraging the distinct human talents of educators and staff.
Policy, Ethical, & Legal Considerations	The district is in the early stages of examining the policy, ethical, and legal considerations associated with using AI to support teaching, learning, and operations, including the potential risks and appropriate access for all student populations.	The district is establishing policies, reviewing ethical guidelines, and strengthening a legal framework to address the challenges associated with AI technologies, including student privacy, data protection, and responsible AI practices. There is consideration of how AI can be used to support all student populations, aiming to address equity gaps.	The district has adopted Board-approved policies, robust ethical guidelines, and a strong legal framework, demonstrating a commitment to accountability, data privacy, compliance, and continuous improvement in AI. The district has a plan to evaluate the impact of AI, including efforts to narrow educational equity gaps.
Instructional Framework	Educators are independently exploring the potential of AI-powered tools to enhance their productivity; however, little effort is being directed to change instructional practices.	Educators are beginning to use AI tools to scale personalized learning activities. The tools enable teachers to develop and deliver tailored instructional activities and resources that meet the unique needs and preferences of students.	The district's instructional framework enables educators and students to use AI to accelerate personalized learning, foster learner ownership, leverage intelligent tutoring services, enable data-driven decision-making, or assist with teaching and educator administrative tasks.
Learning Assessments	Educators are beginning to explore how AI tools can enhance formative measures in quizzes, tests, projects, and performance-based assessments.	Educators use AI tools and technologies to create assessments aligned with personalized learning goals measuring higher-order thinking skills and competencies.	Educators and students use AI to holistically assess learning experiences and outcomes, including creativity, critical thinking, inventive problem-solving, and the application of knowledge in real-world situations.
Professional Learning	The district is in the early stages of developing a plan for professional development opportunities focused on AI tools and resources, leading educators to take the initiative to seek training independently.	Educators have access to a variety of professional development opportunities to support the adoption and integration of AI-based teaching tools and approaches aligned with the district's vision for student learning. Educators have the necessary expertise to teach AI ethics to students.	Educators have developed a strong understanding of AI, including ethical considerations, and have incorporated its use into reimagining learning pedagogies and assessment strategies. They are using AI systems and tools that generate personalized professional development solutions.
Student Use	Students are being introduced to the basic concepts of AI and its potential applications in a handful of classes. They are developing an awareness of ethical considerations related to AI use but have a limited understanding of responsible practice.	Students engage with AI technologies in a variety of classes, demonstrating growing competence. They have explored the ethical implications of AI and have begun to collaborate on projects emphasizing the responsible and ethical application of AI tools. Evidence of student use/proficiency is limited.	Most students utilize AI to support their learning goals, critically assessing AI's societal impact, including biases, privacy concerns, and fairness issues, while making informed judgments about the authenticity and origin of content. Evidence of use/proficiency is well documented.
Business & Technology Operations	The district is beginning to explore the use of AI to automate routine administrative tasks. A review of the technology ecosystem needed to support AI integration district-wide is being scheduled.	The district integrates AI to enhance business operations and create efficiencies. Updates to the technology ecosystem needed to support AI integration are planned or already completed.	The district uses AI to optimize most business functions. The district has a robust technology ecosystem and staff to support AI integration.
Outreach	Communication with staff, parents, and community stakeholders regarding the use of AI to support teaching, learning, and business operations is limited.	The district prioritizes regular interactions with students, parents, staff, and other stakeholders to gauge community readiness, provide awareness training, address concerns, and foster a collaborative environment.	The district's communication plan engages all stakeholders in the use of AI. Two-way interactions with staff, community partners, and experts help gauge the community's comfort level with AI, while also exploring new opportunities.

NOTE: The purpose of this rubric is to outline key planning considerations for the use of AI in school districts. Michigan Virtual developed this framework to assist educational leaders in assessing their preparedness as they create plans to leverage AI for teaching, learning, and operational functions. Leaders are encouraged to identify practical ways to measure and evaluate progress with their AI plans. They anticipate updating this framework on a regular basis. This framework and other resources on AI may be found at michiganvirtual.org/ai/

Introduction

The integration of artificial intelligence (AI) has emerged as a powerful practice with the potential to transform teaching, streamline business operations, and personalize learning. However, the successful implementation of AI-driven tools and practices will require careful planning and strategic alignment with a school district's educational goals, values, and priorities. This planning guide provides educators with practical insights and strategies to navigate the complexities of integrating AI in their districts. This process may be especially challenging for schools over the next few years as AI technology matures and education applications rapidly evolve.

This guidebook serves as a companion to the AI Integration Framework for School Districts, originally created by Michigan Virtual. Each domain of the rubric is explored in further detail, and key concepts are identified for school leaders to consider and plan activities around. School leaders can utilize this guidebook to develop a roadmap for working toward the level of AI integration that aligns with the district's aspirations. As stakeholders and teams come together, leaders can use this guidance to help identify areas where more information and research is needed, make informed decisions, address concerns, and ensure a successful and inclusive implementation of AI technologies.

Before addressing these items, school leaders should keep the following in mind:

What is AI?

Artificial intelligence refers to computer systems and programs that possess the ability to perform tasks that typically require human intelligence. These systems are designed to simulate intelligent behavior, such as understanding natural language, recognizing patterns, making decisions, and learning from experience. AI works by utilizing algorithms and large amounts of data to train computer systems, enabling them to recognize patterns, make predictions, and automate decision-making processes, ultimately enhancing efficiency and enabling new capabilities in various domains. AI technologies are becoming more and more common in the tools and systems that people and businesses use daily, such as navigation systems, healthcare, logistics planning, and recommendation algorithms used by entertainment and social media companies. More recently, the public application of generative AI powered by large language models (LLMs), which can produce text or images based on human input, has brought the topic of AI to the forefront of educational discussions.

Engage in Planning

Planning is a critical step in successfully integrating AI in school districts. It allows educational leaders to envision the potential benefits and risks associated with AI implementation. By engaging in thoughtful planning, districts can proactively address policy, ethical, and legal considerations and anticipate and mitigate potential challenges during implementation. Active involvement by boards of education is also essential, as they play a crucial governance role in informing the policies, risk assessments, and ethical considerations that govern AI implementation for the benefit of students, teachers, and the entire community. Collaborative planning between district leaders and board members provides a roadmap for systematic and sustainable integration of AI, maximizing its potential to positively impact teaching, learning, and operational functions.

Make it Local

Each school district is unique, with its own set of needs, aspirations, and challenges. Therefore, local dialogue and decision-making are crucial when planning for the integration of AI. Engaging in conversations with stakeholders, including educators, parents, students, school board members, and community members, allows for a complete understanding of the local context to foster buy-in and acceptance for AI initiatives.

Dedicate a Team

To effectively integrate AI in a district, it is crucial to establish an internal implementation team of various stakeholders from throughout the district. AI integration will conceivably affect every department within a school district, so ensuring those departmental perspectives are represented is important. The implementation team can play a key role in driving the planning and implementation process, coordinating efforts, and ensuring collaboration and communication among different stakeholders. By involving diverse perspectives and expertise, an implementation team can foster a holistic approach to AI integration.

Address Potential Concerns

Integrating AI may generate concerns within the school community, including fears related to student plagiarism or cheating. Other concerns may include fears of job displacement, ethical considerations, data privacy, and biases in AI algorithms. It is important for educational leaders to address these concerns proactively, emphasizing the value of AI as a tool that augments human capabilities and supports educators' work rather than replacing it. Districts can address potential concerns and build trust in AI integration by involving stakeholders in dialogue, providing transparent communication, and establishing comprehensive policies and ethical guidelines.

Leadership & Vision

As school districts embark on integrating AI technologies into their educational systems, strong leadership and a clear vision are essential for successful implementation. As this is such a nascent topic, many education leaders are still in the early stages of building expertise and understanding of AI technologies and their implications for teaching and learning. This can lead to uncertainties in selecting appropriate AI solutions, understanding their limitations and ethical considerations, and effectively communicating the benefits and risks to stakeholders. It becomes crucial for school leaders to seek learning opportunities, collaborate with experts, and engage in ongoing learning to enhance their understanding and ability to provide effective leadership toward a collaborative culture of innovation. When it comes to leadership and vision, three key areas are worth highlighting:

Align AI Efforts to Strategic Priorities

AI should be seen as a tool that enhances existing initiatives and instructional practices rather than a standalone solution. By aligning AI efforts with the district's strategic priorities, education leaders can ensure coherence and maximize the impact of AI on student outcomes. Education leaders should consider how AI can support the district's goals, whether it is improving student achievement, supporting educator professional development, or enhancing operational efficiencies. District leaders and school board members should incorporate AI into strategic planning to help create a clear roadmap for its integration and ensure that it serves the larger vision for the future of learning.

Leverage Uniquely Human Talents

While AI has transformative potential, it is essential to leverage the distinct human talents of educators and support staff. AI should not replace the role of educators; rather, it should complement their expertise and empower them to create more personalized and inclusive learning experiences. Consider how AI can automate routine administrative tasks, analyze data to inform instructional decisions, and provide personalized student support. By leveraging AI to enhance the work of educators, educators can create a system that capitalizes on the unique qualities of interpersonal communication, empathy, and creative problem solving resulting in more meaningful learning experiences for all students.

Explore New Learning Models

Integrating AI opens possibilities for new learning models that can better personalize instruction and foster inclusion. Traditional one-size-fits-all approaches can be transformed as AI technologies enable adaptive learning, intelligent tutoring systems, and data-driven student progress and need insights. Educators should consider how AI can enable differentiated instruction that meets the diverse needs of students, support students with special needs through personalized interventions, and provide targeted feedback for growth and improvement. By exploring new learning models empowered by AI, schools can create an educational ecosystem that promotes equity, engagement, and success for all students.

Potential Risks

- Education leaders may have limited knowledge and expertise in AI technologies, which can hinder effective decision-making and implementation.

- Integrating AI may face resistance from stakeholders who are skeptical or hesitant to embrace technological changes.

- Focus on AI may divert attention from existing district issues that need to be addressed before AI implementation can be given the requisite consideration it deserves.

Policy, Ethical, & Legal Considerations

School leaders must prioritize policy, ethics, and legal considerations when integrating AI into educational practices to create a safe, effective, and inclusive learning environment. Understanding relevant laws, ethical concerns, compliance with data protection regulations, and engaging legal expertise is crucial to protect stakeholders' interests and mitigate potential risks associated with AI integration. Four key areas to explore include:

Develop Policies and Guidelines

Establishing comprehensive policies and guidelines is essential for systematically addressing the ethical, legal, and data privacy dimensions of AI usage. Policies that address plagiarism, authorship, and properties of original work should outline the ethical principles that govern AI integration and guide decision-making processes. They should also address data privacy, informed consent, algorithmic transparency, and accountability issues. By developing clear policies, districts can provide guidance to educators, students, and other stakeholders, ensuring responsible and ethical AI use.

Prioritize Equity

Considerations of equity must be at the forefront of AI integration in education. As AI technologies influence decision-making processes, it is crucial to examine and address potential biases and ensure fairness and equity. Consider how AI tools may impact student access to resources, opportunities, and educational outcomes. By intentionally focusing on equity in AI implementation, districts can minimize disparities and create an inclusive learning environment for all students. Examples of equitable practices include using diverse and representative datasets, regularly evaluating AI systems for bias, and ensuring access to AI tools for all student populations.

Address Legal Risks and Challenges

Integrating AI in educational environments brings potential legal risks and challenges that must be proactively addressed. These may include concerns regarding data privacy and security accessibility and the impact of AI on district employment and workforce dynamics. Engaging in risk assessment and mitigation strategies is essential to safeguard students' privacy and ensure the responsible and unbiased use of AI technologies. Districts can build trust and confidence in AI implementation by leveraging legal expertise to identify and address these risks and challenges.

Potential Risks

- Without policies and guidelines that are effectively communicated and enacted, schools may be at risk of non-compliance with certain laws and regulations, leading to legal repercussions and reputational damage.

- If schools lack proper vetting and oversight, they may be at risk of unauthorized access, data breaches, or misuse of sensitive information, compromising the privacy and security of students and staff.

- The absence of policies and guidelines may lead to inconsistency in the selection, implementation, and use of AI tools across schools or districts, hindering equitable and standardized educational experiences for students.

Instructional Framework

It is important to recognize that AI has the potential to support teachers in powerful ways and enable new learning models for students. Educators need to examine and understand how AI can enhance teaching and learning practices while leveraging the distinct human talents of teachers and support staff. New instructional frameworks may develop as districts expand their use of AI tools and resources. The following items deserve focused attention:

Focus on Enhancing Instructional Practices and Efficiency

AI-powered tools have the potential to significantly increase efficiency and enhance instructional practices for educators. By automating routine administrative tasks, such as grading and data analysis, AI frees up valuable time for teachers to focus on higher-order instructional activities that require human expertise, such as providing personalized feedback, fostering creativity, and emotional support. Educators can leverage AI to analyze student data, gain insights into student progress, and make informed decisions to tailor instruction to individual needs. This shift allows teachers to focus more on building relationships with students, facilitating meaningful discussions, and providing personalized guidance.

Consider Pedagogical Changes

The integration of AI in education can foster new learning models that go beyond traditional classroom structures. Intelligent tutoring services powered by AI algorithms can provide personalized learning support, adapting to each student's pace and learning style. AI-based adaptive learning platforms can offer personalized learning pathways, resources, and assessments that cater to student's unique strengths and areas for growth. These technologies enable students to learn at their own pace, promoting self-directed learning and allowing for greater autonomy in the learning process.

Explore Roles of Educators

With the integration of AI, the role of educators will continue to shift toward being facilitators, mentors, and guides in the learning journey. Educators will play a crucial role in curating and contextualizing educational resources, designing authentic learning experiences, and guiding students' critical thinking and problem-solving skills. They will also continue to provide social and emotional support, fostering collaboration, and creating a supportive learning environment while focusing more on assessing the learning process rather than the output. By embracing AI, educators can leverage technology to amplify their impact and create more personalized and meaningful learning experiences for students.

Potential Risks

- School districts may face the challenge of limited instructional leadership to design, implement, and support new learning models that rely on AI technologies. This challenge can be further amplified by the absence of available research on best practices in this field.

- The absence of a clear instructional framework can lead to teacher resistance and a lack of buy-in. Teachers may feel overwhelmed or unsure of how to integrate AI tools into their instruction, leading to reluctance and limited adoption.

- Failure to align AI integration with the district's educational goals and priorities can result in a fragmented implementation that inadequately addresses student needs and fails to support the desired learning outcomes.
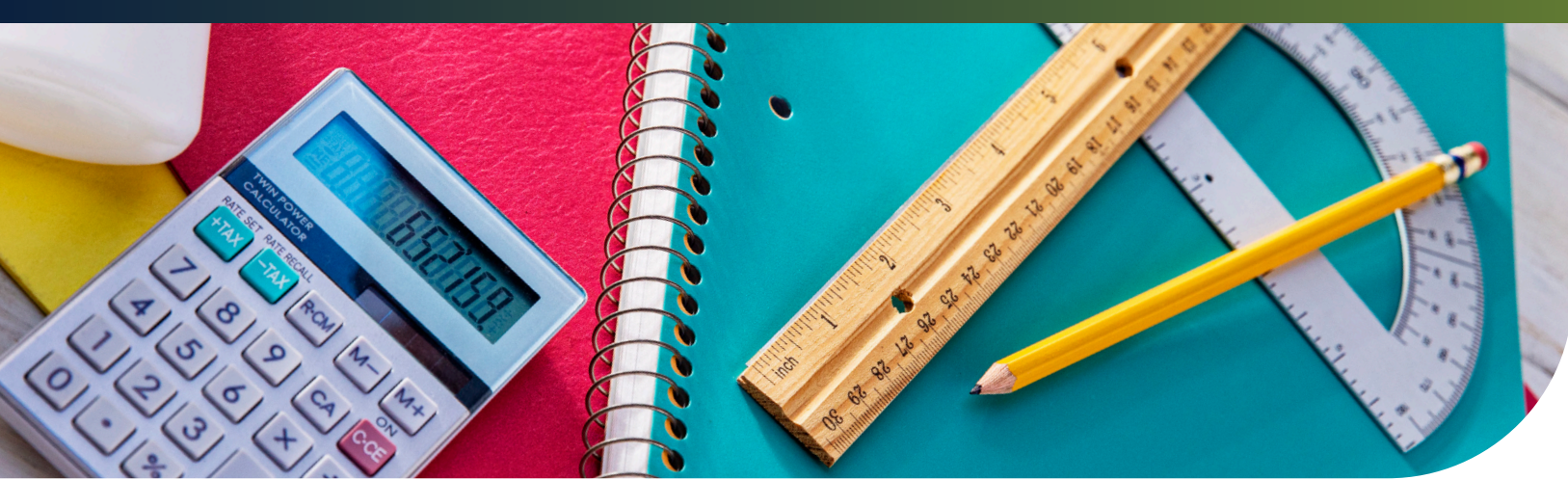
Measuring Student Learning & Assessments

AI has the potential to support and improve the assessment process, enabling educators to holistically evaluate students' knowledge, skills, and competencies. Understanding how AI can promote new assessment practices that go beyond traditional measures and foster a more inclusive and personalized approach to evaluating student progress is important. Key areas to explore further include:

Deepen Analysis of Student Learning

AI integration in assessments can broaden the scope of the evaluation, going beyond rote memorization and standardized tests. By leveraging AI, educators can assess complex skills such as creativity, critical thinking, inventive problem-solving, and the application of knowledge in real-world contexts. AI-powered assessment tools can analyze student responses, identify patterns, and provide insights into students' deeper understanding and higher-order thinking skills. This comprehensive assessment approach can enable educators to gain a more nuanced view of student learning and provide targeted support where needed.

Personalize Feedback through Formative Assessment

AI tools can be effectively integrated into or used to create formative assessments to support learning and provide personalized feedback. AI algorithms can analyze student performance in real-time, identify areas of strength and weakness, and provide tailored feedback to guide students' learning journeys. Through adaptive assessments and AI-powered feedback, students can also receive more immediate guidance and support.

Ensure Fairness & Validity and Minimize Biases

When integrating AI in assessments, it is crucial to address issues of fairness and validity and minimize biases. Educators must leverage AI algorithms that are designed and monitored to ensure that assessments are fair and unbiased across diverse student populations. It is essential to consider cultural, linguistic, and socio-economic factors to ensure equitable assessment practices for all students. Regular evaluation and calibration of AI systems can help identify and correct potential biases, promoting fairness and ensuring the validity of assessment results.

Promote Student Agency

AI integration in assessments can promote student agency and active participation in the learning process. By leveraging AI-powered tools, students can take a more active role in self-assessment and reflection. The depth of analysis provided by AI-powered systems can empower students to set their own goals, track their progress, and make informed decisions about their learning paths. This increased agency encourages students to take ownership of their learning, promotes metacognition, and fosters a growth mindset.

Potential Risks

- At present, the informational output of many generative AI tools can often be unreliable or inaccurate. If assessment practices incorporate their use, especially for grading and feedback, educators will need to closely validate and cross-check that output to avoid errors in assessment outcomes.

- The introduction of AI-powered assessments may impact student motivation and engagement. If students perceive assessments as impersonal or solely focused on test performance as measured by an AI system, it may undermine their intrinsic motivation and enthusiasm for learning.

- AI-powered assessments primarily rely on standardized metrics and algorithms, which may overlook subjective aspects of student work, such as creativity, originality, or unconventional problem-solving approaches. Districts should preserve assessment methods that recognize students thinking outside the box or expressing themselves uniquely.

Professional Learning

In planning for the integration of AI in school districts, it is crucial to prioritize professional development opportunities that equip educators with the knowledge and skills necessary to effectively leverage AI tools and resources. It is essential to recognize the importance of professional learning in preparing educators in the following ways:

Access a Variety of Professional Learning Opportunities

To support educators in navigating the complexities of AI integration, providing a range of professional development opportunities is vital. These can include workshops, webinars, conferences, and online courses that explore AI concepts, ethics, and practical applications in the classroom. By offering diverse avenues for professional learning, educators can choose the approach that best aligns with their needs and preferences, fostering a culture of continuous growth and innovation.

Empower Educators to Integrate AI Ethically

As AI becomes increasingly prevalent in educational settings, it is imperative to equip educators with the knowledge and skills to teach AI ethics to students. Professional development programs should explore ethical considerations related to AI, such as privacy, bias, and responsible AI use. Educators can then effectively guide students in understanding the implications and ethical dimensions of AI, enabling them to become responsible digital citizens and critical thinkers in an AI-driven world.

Support for Evolving Assessment Strategies

Teachers and other staff will need training on effective strategies to engage students in appropriate ways to learn how they used AI to generate work products, complete assignments, and take tests. Educators will also need assistance in refining and clarifying learning objectives for students when activities or lessons leverage the use of AI tools, as well as in ensuring alignment between learning objectives and the capabilities of different AI tools. Educators should also be provided with opportunities to collaborate to develop rubrics and grading criteria that measure the process of using AI tools for graded work. Furthermore, educators should be supported in using AI tools to develop authentic, project-based assessments that foster higher-order thinking skills and promote student agency.

Leveraging AI for Personalized Professional Learning

AI can play a transformative role in providing personalized professional development solutions for educators. Through AI-powered platforms, educators can access targeted resources, recommendations, and learning pathways that cater to their specific needs and interests. These tools can analyze educators' preferences, areas of expertise, and professional goals to deliver personalized learning experiences, enabling educators to continuously enhance their practice.

Potential Risks

- Schools may be unable to allocate sufficient resources, such as funding, time for training, and technological infrastructure, leaving educators without the necessary support to effectively integrate AI into their teaching practices.

- As with any professional development, without continuous follow-up, coaching, and feedback, the knowledge and skills acquired during professional development sessions may not be effectively translated into practice.

- AI-focused professional development initiatives should align with the district's strategic goals. Lack of professional development can lead to missed opportunities for pedagogical innovation. Teachers may not be aware of the full potential of AI tools or how to creatively integrate them into instruction, limiting their ability to leverage AI for improved teaching and learning outcomes.

Student Use

As schools explore the potential of AI technologies to enhance learning experiences, it is essential to understand how students will engage with AI tools and systems. Educators need to prioritize how students will use AI and empower them to use it responsibly in the following areas:

Introduce Students to Basic AI Concepts and Applications

To adequately prepare students for an increasingly automated AI-driven world, it is crucial to cultivate their AI literacy by introducing them to fundamental concepts and applications in this field. This can be done through age-appropriate activities, interactive demonstrations, and engaging discussions. By building a foundational understanding of AI, students can develop the necessary knowledge and skills to be active participants in shaping the future of AI technologies.

Provide Access for Students

Planning for the integration of AI should prioritize accessibility to ensure that all students, regardless of their backgrounds or abilities, can engage meaningfully with AI tools and resources. This includes providing inclusive and accessible platforms, accommodating diverse learning preferences, and addressing access gaps to ensure equitable access for all students. By promoting accessibility, we can foster an inclusive learning environment where every student can benefit from AI technologies.

Establish Expectations for Ethical AI Use

Ethics play a critical role in the use of AI technologies. It is essential to establish guidelines and set expectations for ethical AI use, encouraging students to consider the social and ethical implications of AI applications.

This can include discussions on privacy, bias, and the responsible use of AI tools. By providing clear guidelines, students can develop a sense of digital citizenship and responsible AI usage.

## Provide Resources to Understand Capabilities and Limitations

To support students in understanding the capabilities and limitations of AI technologies, it is important to provide resources that address these topics. This can include informational materials, videos, and interactive platforms that provide prompt generation support and facilitate critical thinking and reflection. Equipping students with knowledge about AI capabilities and limitations allows them to make informed decisions and navigate the AI landscape responsibly.

Assess Understanding of Responsible Practice

Assessing students' understanding of responsible AI practice is crucial in the integration process. Strategies such as project-based assessments, collaborative discussions, and reflections can provide insights into students' comprehension and application of ethical AI use. By incorporating these assessment strategies, educators can ensure that students have not only knowledge of AI concepts but also the skills to use AI responsibly.

Potential Risks

- Districts should avoid the perception of overreliance on AI tools or of constant monitoring by AI systems with which students interact, which could create stress, anxiety, or a sense of surveillance.

- Educators will need to continue to provide outlets for creative and original thinking by students, perhaps in the form of system prompts rather than system outputs, and avoid overreliance on what is produced by generative AI systems.

- Some AI tools are designed to provide tailored and personalized recommendations based on past preferences and patterns. While this can be beneficial, it also limits the element of surprise, serendipity, and unexpected discoveries that can arise from unanticipated learning experiences.
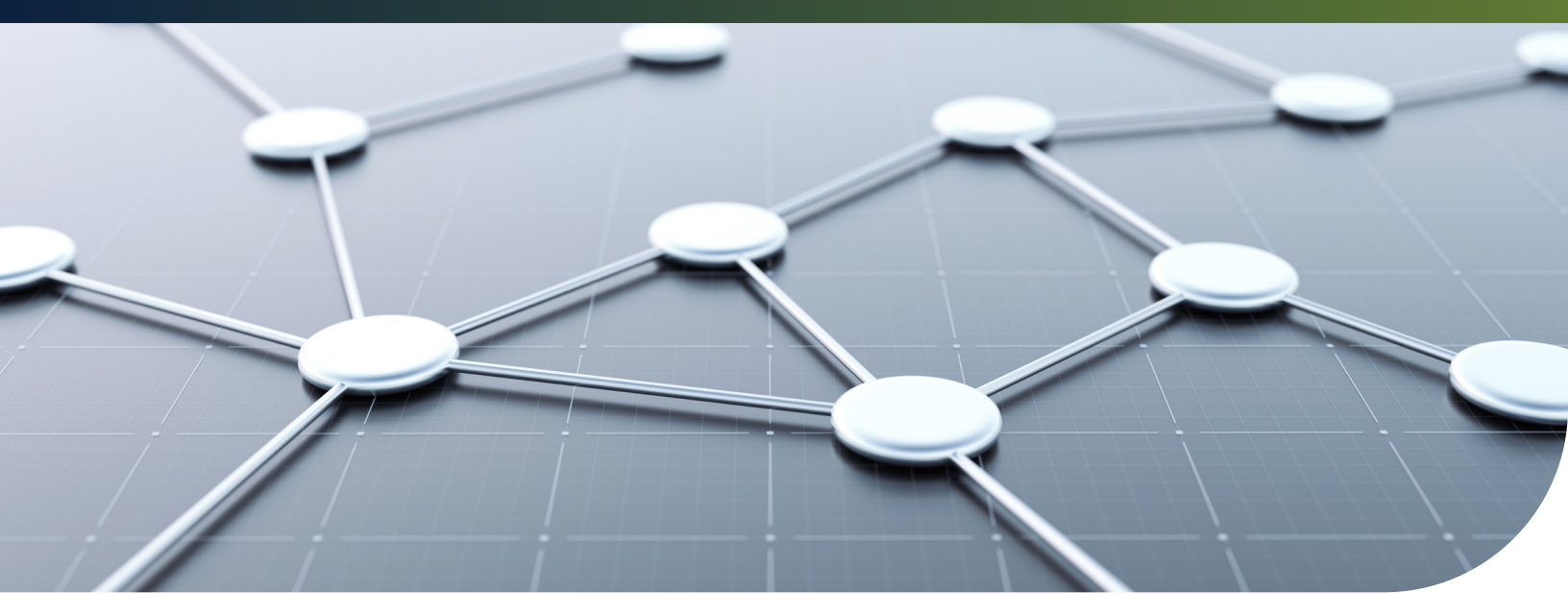
Business & Technology Operations

AI has the potential to significantly impact the business and technology operations of schools, revolutionizing administrative processes and enhancing efficiency. By embracing AI, schools can transform their business operations, freeing up valuable time and resources to focus on their core mission of delivering quality education. Successful integration of AI into school districts requires access to a robust technology ecosystem and a skilled staff capable of effectively implementing, managing and supporting AI-driven initiatives.

Streamline Technology Operations

AI has the potential to help streamline school technology operations by providing faster assistance in the troubleshooting of technical issues, answering common questions, and offering personalized guidance and feedback for technology users. It may also help school technology departments evaluate and select the most appropriate and effective edtech tools for their context by providing insights and data analysis around technology use.

Optimize Business Functions

AI offers immense potential to optimize various business functions within school districts. AI can streamline processes, enhance accuracy, and drive cost savings in areas ranging from facilities management to transportation logistics. AI can transform operations by automating tasks like data entry, audit reporting, course

scheduling, invoice processing, budget tracking, and purchase order generation. By leveraging AI for financial management and procurement, school districts can experience a holistic improvement of their operations, leading to better resource utilization, enhanced transparency, and improved overall efficiency.

Enhance Human Resources

AI technologies can support human resources functions by automating administrative tasks, such as employee onboarding and leave management. AI-powered chatbots have the potential to provide quick and accurate responses to employee inquiries, freeing HR staff to focus on strategic initiatives such as talent development and retention. Additionally, AI tools can help analyze workforce data, identify trends, and inform strategic workforce planning.

Explore Data Analysis and Reporting

AI can revolutionize data analysis and reporting within school districts, enabling educators and administrators to gain deeper insights from large volumes of data. AI-powered analytics tools can process and analyze data quickly, identifying patterns and trends that can inform decision-making and shape student and professional learning practices. By harnessing AI for data analysis and reporting, school districts can make data-informed decisions that lead to improved student outcomes.

Potential Risks

- Automation of certain tasks may lead to rethinking of current staffing models or require reskilling and upskilling of staff to adapt to new roles.

- Integration of AI-powered tools and systems can require robust technical infrastructure, including reliable networks, hardware, and software. Systems currently in place may need examination and overhauling before integrating AI into critical business operations to avoid technical glitches or system failures.

- As schools rely on external vendors or service providers for AI solutions, it is crucial to assess the vendor's reputation, reliability, and long-term viability to avoid potential disruptions or discontinuation of services.

Outreach

Effective outreach and communications are vital when school districts plan to integrate AI to support teaching, learning, and operations. Transparent and proactive communication with stakeholders, including teachers, students, parents, and the wider community, helps build trust, address concerns, and foster support for AI initiatives. The following items can be used to build a strong outreach plan:

Create Effective Communication and Engagement

Clear and transparent communication is crucial in gaining support and understanding from stakeholders including school board members, parents and other community members. District leaders should proactively initiate conversations and invite dialogue, providing accurate and accessible information about the integration of AI in teaching, learning, and business operations. Regular updates through newsletters, board and community meetings, and digital platforms can help disseminate information and answer questions from parents and stakeholders.

Gauge Community Readiness

Before implementing AI initiatives, it is essential to gauge the readiness and acceptance of the community. Conducting surveys, focus groups, or town hall meetings can provide valuable insights into the community's expectations, concerns, and aspirations. This information can guide the planning process, allowing districts to tailor AI integration efforts to meet the specific needs and values of the community.

Build Awareness and Address Concerns and Misconceptions

To ensure that parents and stakeholders have a basic understanding of AI and its benefits in education, districts can provide awareness training in the form of workshops, informational sessions, or panel discussions. These training sessions can cover AI concepts, applications in teaching and learning, and potential implications for business operations. AI implementation may also generate concerns and misconceptions within the school community. It is crucial for district leaders to address these concerns and provide accurate information to alleviate fears and misconceptions. By providing these opportunities, districts can create a platform for open dialogue, allowing parents and stakeholders to voice their concerns and receive information about the potential benefits and ethical considerations of AI integration.

Potential Risks

- As with any school district initiative, community stakeholders will have differing expectations, values, and priorities when it comes to AI integration in schools. Leaders will need to balance diverse perspectives and reconcile conflicting expectations where they arise.

- In the excitement of AI integration, there may be a risk of overpromising the benefits or capabilities of AI technologies. Setting unrealistic expectations among community stakeholders can lead to disappointment or disillusionment if the actual outcomes fall short.

Conclusion

Planning for the integration of AI in school districts is crucial to harness its potential for supporting teaching, learning, and business operations. Throughout this planning guide, we have explored various aspects of AI integration, emphasizing the importance of leadership and vision, policy and ethical considerations, instructional frameworks, assessments, professional development, student use, business operations, and outreach.

By aligning AI efforts with the district's strategic priorities and vision for the future of learning, district leaders can create a roadmap that maximizes the benefits of AI while preserving the distinct human talents of educators and support staff. The integration of AI holds great promise in transforming traditional learning models and fostering personalized instruction for all students, leading to increased inclusion, creativity, critical thinking, and problem-solving skills.

However, addressing potential risks, challenges, and ethical considerations associated with AI implementation is essential. District leaders are encouraged to assess their own systems using the AI Integration Framework for School Districts and identify appropriate next steps for effective integration. This should include the development of comprehensive policies, guidelines, and legal frameworks to ensure the responsible and unbiased use of AI while also prioritizing equity, data privacy, and valid assessments. They must also provide educators with professional development opportunities to enhance their understanding and skills in utilizing AI tools effectively.

The future of AI in education and operations is filled with immense possibilities. By embracing AI technologies and harnessing their power, we can unlock new frontiers of teaching, learning, and operational efficiencies. Let us come together as visionary leaders to plan, implement, and leverage AI in ways that positively impact the lives of our students, educators, and communities.

Appendix A
Policy Considerations

School district leaders and board members should first consider the goals and desired outcomes for any policies and guidelines that may be enacted, including the level at and frequency with which staff members and students are using AI-driven tools. Districts will likely need to implement policies that address or take into consideration the following questions:

- *How will AI integration align with the district's educational goals and values?* Understanding the alignment with the district's vision will ensure that AI serves the best interests of students and the community.

- *How will AI be used in the classroom, and how will it support student learning?* Understanding the specific applications and benefits of AI in the educational context is essential for making informed decisions.

- *What data will be collected, and how will it be used and protected?* School board members must inquire about the types of data AI systems will collect and ensure adequate data protection measures are in place.

- *How will teachers be involved in AI integration, and what professional development will be provided?* Inquiring about teacher involvement and training opportunities ensures educators are prepared to utilize AI tools effectively.

- *What privacy protocols are in place to protect student and staff data?* Policies concerning privacy measures will help leaders assure the community that data security is a top priority.

- *What ethical guidelines will govern the use of AI?* Inquiring about ethical considerations will demonstrate the board's commitment to responsible AI integration.

- *How will the accuracy, reliability and bias of AI output be assessed?* Unreliable AI systems can lead to incorrect assessments and hinder students' learning progress. Leaders should Implement strategies to minimize bias in AI systems, such as regular audits and evaluations of algorithms, diversifying datasets, and involving diverse perspectives in system design.

- *How will stakeholders remain informed about the design and intended use of AI tools?* Encourage transparency by promoting the disclosure of AI algorithms used in educational systems to address concerns related to bias and fairness.

- *What processes will be in place for stakeholders to demonstrate consent for use of these tools?* Develop guidelines for obtaining informed consent from students and parents when using AI technologies that may collect personal data or make decisions impacting students' educational journeys.

Leaders should also focus on their roles as risk assessors, employing an approach that identifies the risks of any practices that could be foreseen under enacted policies, and attempt to mitigate those risks where possible. As the use of AI in education is also currently raising many ethical and legal

concerns, district leaders should consult with their legal counsel and policy advisers to craft policies and guidelines that ensure AI can be used in a safe and ethical way while providing benefit to the district at-large.

While district and board policies may provide broad direction, there will also likely be a need for additional guidelines at the building, department, and classroom levels based on contextual need. It will be essential for school leaders to support the development of these policies by staying informed of emerging practices and ensuring guidelines are consistent and aligned with the district's broader policies and goals.

Lastly, school leaders will need to continuously update policies while engaging in communication and dialogue with district stakeholders and community members. Sharing draft updates with stakeholders, inviting comment and feedback, and taking into account evaluation data and other factors will ensure that policies stay relevant, aligned, reflective of stakeholder needs and able to mitigate risks.

Appendix B
Recommended Language for Existing AUP

This addendum to the School District's Acceptable Use Policy (AUP) aims to address the responsible and ethical use of Artificial Intelligence (AI) technologies within our educational environment. AI technologies have the potential to enhance teaching, learning, and administrative operations, but it is crucial to establish guidelines that ensure the ethical and responsible use of these tools. This addendum is intended to supplement the existing AUP and provide specific guidance related to AI usage. All users, including students, staff, and administrators, are expected to adhere to these guidelines when utilizing AI technologies within the school district.

- *Policy Statement: Responsible Use of AI:* Users must use AI technologies in a responsible and ethical manner, respecting the rights and privacy of individuals and ensuring compliance with applicable laws and regulations.

- *Data Privacy and Security:* Users must protect the privacy and security of personal and confidential data when using AI tools. It is important to ensure that any data collected or processed by AI technologies are securely stored, transmitted, and used in accordance with relevant data protection laws and district policies.

- *Bias and Fairness:* Users must be aware of the potential biases that can exist within AI technologies and take measures to minimize their impact. When using AI tools for decision-making processes, users must ensure fairness and equity, considering the potential implications for diverse student populations.

- *Transparency and Explainability:* Users must prioritize the transparency and explainability of AI systems, particularly when they have a significant impact on students or staff. Clear explanations should be provided to help users understand how AI technologies operate and the reasoning behind their outcomes.

- *Ethical Considerations:* Users must consider the ethical implications of AI technologies, including issues related to privacy, consent, dignity, and the well-being of individuals. It is important to foster a culture that encourages thoughtful discussions and critical thinking around the ethical dimensions of AI.

- *Educational Purpose:* The use of AI technologies should align with the district's educational goals and objectives. Users should prioritize educational outcomes, personalized learning, and pedagogical effectiveness when integrating AI tools into instructional practices.

- *Professional Development:* Users should receive ongoing professional development opportunities to enhance their understanding of AI technologies and their effective integration into teaching and administrative practices. These opportunities should address topics such as AI ethics, bias mitigation, and effective instructional strategies.

- *Compliance with Existing Policies:* The use of AI technologies must comply with all existing district policies, including but not limited to the AUP, data privacy policies, and student code of conduct.

Users are responsible for familiarizing themselves with these policies and ensuring compliance.

By incorporating this AI addendum into the existing AUP, the school district aims to provide a framework that promotes the responsible and ethical use of AI technologies. This addendum seeks to balance the benefits of AI integration with the safeguarding of student privacy, fairness, and transparency. It is essential for all users to understand and adhere to these guidelines to create a safe, inclusive, and responsible AI-enabled learning environment.

NOTE: The school district should review and customize the sample language to align with their specific policies, legal requirements, and educational context.

Appendix C
Key Action Considerations & Discussion Prompts

Leadership & Vision

Leadership and vision are vital in planning for the integration of AI in school districts. By aligning AI efforts with strategic priorities and leveraging the distinct human talents of educators and support staff, districts can create a vision for the future of learning that is inclusive, personalized, and transformative.

Key Action Considerations for Educators

- *Develop a Clear Vision for AI Integration:* Educators should actively engage in developing a clear vision for AI integration within their school or district. This involves envisioning how AI can support teaching, learning, and business operations in alignment with the district's strategic goals and priorities. Educators should collaborate with administrators, instructional leaders, and stakeholders to identify specific areas where AI can enhance educational outcomes and operational efficiency. Educators can effectively guide the planning and implementation of AI initiatives by developing a shared vision.

- *Foster a Culture of Innovation and Collaboration:* Educators should foster a culture of innovation and collaboration to support AI integration. This involves creating opportunities for educators to explore AI technologies, share best practices, and learn from experimentation. By nurturing a culture that values innovation and collaboration, educators can continuously work toward the successful integration of AI in teaching, learning, and business operations.

- *Advocate for Professional Learning and Support:* Educators should advocate for professional learning and support to ensure they have the knowledge and skills to effectively leverage AI in their instructional practices. This includes seeking professional development opportunities focusing on AI concepts, tools, and pedagogical approaches. Educators should also advocate for ongoing support, such as coaching or mentoring, to navigate the challenges and complexities associated with AI integration. Educators can build their confidence and competence in utilizing AI to enhance teaching and learning experiences by advocating for professional learning and support.

Discussion Prompts for Local Planning

- How can AI effectively support our district's teaching, learning, and operational functions while aligning with our educational goals and values?

- What are the potential benefits, risks, and feasibility considerations associated with implementing AI tools in our educational environment?

- How can we assess the feasibility, impact, and alignment of AI technologies with our district's educational goals and values?

- What strategic priorities, resources, infrastructure, and partnerships are necessary to support the successful integration of AI in teaching, learning, and operations?

- How can we prepare to address possible concerns from various stakeholders about the use of AI in our school district?

Policy, Ethical, & Legal Considerations

Planning for policy, ethical, and legal considerations is essential when integrating AI in school districts. Districts can navigate the ethical dimensions of AI usage by addressing potential risks and challenges, ensuring equitable access, and establishing comprehensive policies and guidelines.

Key Action Considerations for Educators

- *Establish Ethical Guidelines and Policies for AI Use:* Educators should actively participate in establishing ethical guidelines for AI use within their school or district. This involves collaborating with administrators, policymakers, and stakeholders to develop policies and guidelines that ensure responsible and equitable AI practices. Educators should advocate for privacy protection, data security, transparency in algorithmic decision-making, and mitigating bias in AI systems. By actively contributing to the development of ethical guidelines, educators can ensure that AI integration aligns with the values and priorities of the school community.

- *Promote Digital Citizenship and Responsible AI Use:* Educators play a critical role in fostering digital citizenship and promoting responsible AI use among students. They should incorporate AI education into their curriculum to help students understand the ethical implications, benefits, and limitations of AI. Educators should engage students in discussions about privacy, bias, fairness, and the responsible use of AI technologies. By empowering students with the knowledge and skills to navigate the ethical considerations surrounding AI, educators can prepare them to be responsible and informed digital citizens.

- *Stay Informed about Legal and Regulatory Developments:* Educators should stay informed about legal and regulatory developments related to AI in education. They should actively seek information about local, state, and federal policies that impact AI use in schools. Educators should engage in professional development opportunities, attend conferences, and join professional networks to stay abreast of emerging legal and regulatory frameworks. By staying informed, educators can ensure compliance with legal requirements and proactively address any potential challenges or risks associated with AI integration.

Discussion Prompts for Local Planning

- What are the potential risks, challenges, and ethical considerations associated with implementing AI in teaching, learning, and operations?

- How can we ensure equitable access to AI tools, considering all student populations' socioeconomic status and special needs?

- What policies, guidelines, and legal considerations should be in place to address the ethical, legal, and data privacy dimensions of AI usage?

- How can we establish comprehensive policies and ethical guidelines to govern the responsible and unbiased use of AI across diverse student populations?

- How will we monitor and evaluate the impact of AI implementation on equity, access, and student outcomes while fostering a culture of accountability, transparency, and continuous improvement in our district's AI policies and practices?

Instructional Framework

Planning for AI integration within an instructional framework should consider the transformative potential of AI in changing the role of traditional teachers and fostering new learning models. By enhancing productivity and embracing the evolving role of educators, districts can create learning environments that empower students, promote self-directed learning, and foster collaboration and critical thinking.

Key Action Considerations for Educators

- *Consider New Pedagogical Approaches:* Educators should explore the ways in which their pedagogical approach may evolve as a result of integrating AI into teaching and learning. Educators will likely have more time to focus on tasks that require human judgment and creativity, such as developing relationships with students and designing engaging learning experiences individualized to different aptitudes and interests. Pedagogical approaches may also evolve to be more inquiry-based, allowing students to be more actively involved in their own learning by asking questions, conducting research, and collaborating with others to solve problems.

- *Personalize Learning Experiences with AI:* Educators should explore how AI can be used to personalize student learning experiences. They can leverage AI-powered tools and platforms to provide adaptive learning pathways, tailored resources, and personalized feedback. Educators should consider how AI can support differentiated instruction, facilitate individualized learning plans, and address the diverse needs and interests of students. By embracing AI for personalized learning, educators can create engaging and effective learning environments that meet the unique needs of every student.

- *Assess and Evaluate AI Integration:* Educators should actively assess and evaluate the impact of AI integration in the instructional framework. They should collect and analyze student engagement, achievement, and progress data to determine the effectiveness of AI-powered tools and strategies. By regularly monitoring and evaluating the outcomes of AI integration, educators can make informed decisions on refining and improving instructional practices to maximize the benefits for students.

Discussion Prompts for Local Planning

- How can educators effectively integrate AI-powered tools to enhance productivity and instructional practices while maintaining their role as facilitators and mentors?

- What opportunities and support can be provided to educators for exploring the changing role of traditional teachers in AI-driven learning models?

- How can we ensure that AI technologies are being used to enhance rather than replace existing teaching practices?

- How can educators be prepared to adapt to new learning models that leverage AI and foster personalized instruction?

- What strategies can be implemented to balance AI-driven instruction and the human connection and support teachers provide?

Measuring Student Learning & Assessments

Planning for the integration of AI in measuring student learning and assessments can lead to more comprehensive, personalized, and inclusive evaluation practices. By leveraging AI systems, districts can enhance assessment practices, empower students, and support their growth and achievement.

Key Action Considerations for Educators

- *Redesign Assessment Practices:* Educators should redesign assessment practices to align with the capabilities and potential of AI. They should explore innovative assessment methods that leverage AI technologies to holistically evaluate student learning experiences. This includes assessing not only content knowledge but also mastery of skills such as creativity, critical thinking, problem-solving, and the application of knowledge in real-world contexts. By incorporating AI-powered tools and techniques, educators can gather richer data on student performance and gain deeper insights into their strengths and areas for growth.

- *Leverage Personalized Feedback and Support:* Educators should leverage AI to personalize student feedback and support. AI-powered tools can provide immediate and targeted feedback, allowing students to understand their progress and make necessary adjustments. Educators can also use AI to identify areas where students may need additional support or intervention and provide personalized resources and recommendations. By using AI to personalize feedback and support, educators can better meet students' individual learning needs and promote their continuous growth.

- *Address Equity and Bias:* Educators should address equity and bias in AI-driven assessments. They should critically examine the data and algorithms used in AI assessment tools to ensure fairness, validity, and minimize biases. It is important to consider how AI may perpetuate existing inequities or create new ones. Educators should strive for transparency and inclusivity in the design and implementation of AI-driven assessments and actively involve diverse stakeholders to provide input and perspectives. By addressing equity and bias, educators can ensure that AI-powered assessments promote equitable opportunities for all students.

Discussion Prompts for Local Planning

- How can AI tools be effectively integrated into formative assessments to support learning and provide personalized feedback?

- What opportunities and support can be provided to educators for exploring and experimenting with AI tools in assessment practices?

- How can AI tools assist educators in analyzing assessment data to gain insights for instructional improvement?

- What strategies and considerations should be employed to ensure fairness, validity, and minimize biases when using AI tools for an assessment?

- How are educators and students collaboratively using AI to create comprehensive, adaptive, and authentic assessments that promote higher-order thinking skills, student agency, and holistic learning experiences?

Professional Learning

Prioritizing professional development is crucial. Offering diverse opportunities for educators to learn about AI concepts and practical applications fosters a culture of growth and innovation. Equipping educators with the knowledge of AI ethics enables them to teach students responsible AI use. By utilizing AI for personalized professional development, educators can continuously enhance their practice and stay current with emerging AI technologies.

Key Action Considerations for Educators

- *Promote Teamwork and Communities of Practice:* By engaging in collaborative discussions and sharing resources, educators can learn from one another in their exploration of innovative ways to leverage AI for teaching, learning, and business operations. This can be achieved through professional learning communities, online forums, conferences, and workshops. Such collaboration should also promote the exchange of diverse perspectives and opinions.

- *Integrate AI Ethics into Professional Development:* Educators should prioritize the integration of AI ethics into their professional development programs. As AI becomes more prevalent in educational settings, educators must be equipped with the knowledge and skills to teach students about responsible AI use, ethical considerations, and potential societal impacts. Professional development should include opportunities to explore ethical frameworks, discuss AI-related dilemmas, and develop strategies to engage students in critical discussions about AI ethics. Educators can ensure that students become responsible and informed AI users by integrating AI ethics into professional development.

- *Engage in Action Research and Experimentation:* Educators should engage in action research and experimentation to explore the possibilities of AI in their teaching practice. They should embrace a mindset of curiosity, innovation, and willingness to try new approaches. This can involve

experimenting with AI-powered tools, exploring new instructional strategies, and collecting data to evaluate the impact of AI on student learning outcomes. By engaging in action research, educators can contribute to the growing body of knowledge about AI integration in education and refine their instructional practices to optimize the benefits of AI for their students.

Discussion Prompts for Local Planning

- How can professional development opportunities be tailored to educators' needs to enhance their understanding and skills in utilizing AI tools?

- What strategies can be employed to encourage educators to seek independent training on AI-related topics?

- How can awareness among educators about the potential benefits and ethical considerations of AI in teaching and learning be raised?

- How can collaboration and knowledge sharing be facilitated among educators to promote the effective integration of AI tools in their practice?

- What resources and supports can be provided to assist educators in incorporating AI tools into their instructional approaches and addressing challenges they may face?

Student Use

Planning for student use of AI is essential for empowering learners in an AI-driven world. By introducing students to AI concepts, promoting accessibility, establishing guidelines for ethical AI use, and assessing students' understanding of responsible practice, school districts can ensure that students are prepared to navigate the complexities of AI technologies.

Key Action Considerations for Educators

- *Introduce AI Concepts and Applications:* Educators should introduce students to basic AI concepts and applications to build their understanding of this emerging technology. This can include providing age-appropriate resources, effective AI prompt writing activities, interactive activities, and discussions that explore the potential and limitations of AI. By fostering AI literacy among students, educators can empower them to become informed users and critical thinkers in an AI-driven world.

- *Promote Ethical AI Use:* Educators should establish guidelines and promote ethical AI use among students. This includes discussing responsible practices, privacy considerations, and the potential biases and limitations of AI algorithms. Educators should encourage students to question and evaluate AI-generated content, engage in respectful online behavior, and be mindful of the ethical implications of AI usage. By promoting ethical AI use, educators can help students become responsible digital citizens and navigate the ethical challenges associated with AI technologies.

- *Provide Resources to Understand Risks and Limitations:* Educators should provide students

with resources and tools to understand the risks and limitations of AI. This can involve curating reliable sources, online platforms, and interactive simulations that allow students to explore the ethical, social, and economic implications of AI. By equipping students with knowledge and critical thinking skills, educators can empower them to make informed decisions about AI use and navigate potential challenges.

Discussion Prompts for Local Planning

- How can students be introduced to AI concepts and applications in an engaging and accessible manner?

- What opportunities can be created for students to explore the ethical considerations of AI and engage in discussions on responsible AI use?

- How can educators collaborate with students to develop responsible and ethical AI use guidelines?

- What resources can be provided to help students understand the risks and limitations of AI technologies?

- How can students' initial engagement with AI be assessed, and constructive feedback be provided considering their limited understanding of responsible practice?

Business & Technology Operations

School districts can improve operational effectiveness and strategically allocate resources by optimizing financial management, streamlining procurement processes, enhancing human resources, and leveraging AI for data analysis and reporting.

Key Action Considerations for Educators

- *Identify Areas for Optimization:* Administrators should identify areas within the district's business operations that can benefit from AI integration. This may include financial management, procurement, facilities management, data analysis and reporting, transportation and logistics, and customer service. By identifying areas for optimization, educators can streamline processes, improve efficiency, and allocate resources more effectively.

- *Explore AI Solutions and Tools:* Administrators should research and explore AI solutions and tools that can support the district's business operations. This may involve leveraging AI-powered software, automation tools, data analytics platforms, or machine learning algorithms. By keeping abreast of technological advancements, educators can identify AI solutions that align with the district's needs and goals, ultimately enhancing business operations' efficiency and effectiveness.

- *Plan for Implementation and Training:* Educators should develop a comprehensive plan for implementing AI solutions to support teaching, learning, and business operations. This plan should include considerations for infrastructure requirements, data management, staff training, and ongoing support. By proactively planning for implementation and training, educators can ensure a

smooth transition and maximize the benefits of AI integration in business operations.

- *Ensure Technology Ecosystem Can Support AI:* Administrators should take steps to review the technology ecosystem needed to support A-I integration district-wide. If needed, they should make updates to the networking infrastructure, devices, software, and data security measures needed to support AI integration for educational purposes as well as for business operations.

Discussion Prompts for Local Planning

- How can AI be effectively used to streamline and automate basic financial processes in the district's business operations?

- What considerations should be considered when exploring the automation of routine administrative tasks using AI, including benefits and challenges?

- How can the district cultivate a culture of innovation and openness to AI adoption among staff involved in business operations?

- How can the district assess and evaluate the initial implementation of AI in business operations to identify areas for improvement and further exploration?

- Is the district's technology ecosystem capable of supporting a districtwide integration of AI to support teaching, learning and operations?

Outreach

By engaging in open and transparent communication, addressing concerns and misconceptions, providing awareness training, and fostering a collaborative environment, school districts can build trust, gain support, and ensure that AI initiatives align with the needs and aspirations of the community.

Key Action Considerations for Educators

- *Communicate with Parents and Stakeholders:* Educators should prioritize effective communication with parents and stakeholders regarding the integration of AI in teaching, learning, and business operations. This includes sharing information about the benefits, goals, and ethical considerations of AI, as well as addressing any concerns or misconceptions. Regular communication channels such as newsletters, parent meetings, and community forums can be utilized to ensure transparency and engagement.

- *Gauge Community Readiness and Address Concerns:* Educators should actively gauge the community's readiness for AI integration and address any concerns or resistance that may arise. This can be done through surveys, focus groups, or town hall meetings to gather feedback and insights. By understanding the community's perspectives, educators can tailor their outreach efforts and develop strategies to alleviate concerns, provide accurate information, and build trust.

- *__Provide Awareness Training:__* Educators should provide training and awareness sessions to ensure that parents, students, and staff have a basic understanding of AI concepts and applications. This can involve workshops, webinars, or informational resources that explain AI technologies, their benefits, and their limitations. By increasing awareness, educators can foster a more informed and supportive community that embraces AI integration.

Discussion Prompts for Local Planning

- How can we initiate effective communication with parents and community stakeholders to inform them about the district's use of AI in education and operations?

- What key messages should be conveyed to address concerns and misconceptions about AI's impact on education and school operations?

- How can we gather feedback from parents and community stakeholders to understand their perspectives and readiness for AI implementation?

- What resources and materials can be developed to give parents and community stakeholders a basic understanding of AI, its benefits in education, and the ways in which it's being used in the district?

- How can we create inclusive opportunities for parents and community stakeholders to engage in conversations, ask questions, and provide input on AI initiatives?

Appendix D
Portrait of AI Integration

Similar to a Portrait of a Graduate, schools and districts may find this a useful starting point to envision what successful understanding and integration of Artificial Intelligence could look like when thoughtfully integrated into your teaching, learning, and operational systems.

Leadership and Vision

- The district leadership has a clear vision for integrating AI technologies that align with its overall strategic goals and educational objectives.

- The district leadership understands the potential benefits and challenges of AI implementation in education.

- There is a dedicated team or individual responsible for overseeing AI initiatives within the district.

- The district has communicated its vision for AI integration to all stakeholders, including educators, administrators, parents, and students.

- The district leadership actively seeks opportunities to stay informed about AI advancements and their implications for education.

Policy, Ethical, & Legal Considerations

- The district has established clear policies and guidelines for the ethical use of AI technologies in schools.

- Educators and staff members are knowledgeable about their responsibilities regarding student data privacy and protection in the context of AI implementation.

- The district ensures compliance with relevant legal and regulatory frameworks governing AI use in education.

- There is ongoing monitoring and evaluation of AI technologies to address and mitigate potential biases, ethical concerns, and legal risks.

- The district has robust data governance practices in place to ensure the responsible and secure use of AI-generated data.

Instructional Framework

- The district has an instructional framework that incorporates AI technologies to support teaching and learning in ways that promote student-centered learning, critical thinking, and problem-solving skills.

- Educators are provided with training and resources to effectively integrate AI tools into their instructional practices.

- AI technologies are used as a supportive tool to enhance instruction rather than a replacement for human interaction.

- The instructional framework incorporates AI technologies to connect classroom learning with real-world applications and future career opportunities.

- Interdisciplinary connections and collaborative learning opportunities are encouraged through the integration of AI technologies to promote teamwork and peer-to-peer interaction.

Measuring Student Learning and Assessments

- The district uses AI technologies to gather and analyze data on student performance and progress.

- AI tools and algorithms are used to provide personalized feedback and recommendations to students.

- The district employs a variety of assessment methods, including AI-generated assessments, to capture student learning outcomes.

- Educators are trained in interpreting and using AI-generated data to inform instruction and interventions.

- The district ensures that assessments and data collection through AI technologies align with established standards and ethical considerations and do not perpetuate biases and inequities.

Professional Learning

- Educators receive ongoing professional development opportunities to enhance their knowledge and skills in AI technologies.

- The district provides support and resources for educators to experiment, explore and integrate AI tools into their instructional practices.

- Professional development includes training on ethical considerations and responsible use of AI in education, including how to teach AI ethics to students.

- Educators have opportunities to collaborate and share best practices related to AI integration.

- The district supports educators in conducting action research or innovative projects related to AI in the classroom.

Student Use

- Students have access to AI technologies and resources to support their learning and exploration.

- Students are taught about the responsible and ethical use of AI technologies.

- The district promotes opportunities for students to develop AI-related skills, such as coding, data analysis, and algorithmic thinking.

- AI technologies are used to provide personalized learning experiences tailored to individual student needs.

- Students are encouraged to actively engage with AI technologies, fostering creativity, critical thinking, and problem-solving skills.

Business & Technology Operations

- The district explores the use of AI technologies to streamline business functions and improve operational efficiencies.

- AI tools are utilized to analyze and make data-driven decisions regarding resource allocation and budgeting.

- The district has systems in place to ensure the security and privacy of sensitive administrative data when using AI technologies.

- The district uses AI technologies to identify and mitigate risks in various operational areas, such as safety, maintenance, and transportation.

- AI tools help optimize resource utilization, such as energy consumption, scheduling, and facility management.

Outreach

- The district is transparent when communicating with stakeholders about the purpose, benefits, and risks associated with AI integration.

- There is ongoing communication with parents and guardians regarding the use of AI technologies in their children's education.

- The district actively engages with the local community to promote understanding and acceptance of AI in education.

- Clear communication channels are established to address concerns and questions related to AI implementation.

- The district provides resources and awareness sessions to educate parents about AI technologies, empowering them to make informed decisions.

Appendix E
AI Risk Assessment for School Districts

The objective of this assessment is to identify and evaluate potential risks associated with implementing an AI strategy to support teaching, learning, and business operations in schools. By proactively assessing risks, schools can develop mitigation strategies and ensure a smooth and secure integration of AI technologies.

Data Privacy and Security

- Are robust data protection measures in place to safeguard sensitive student and staff data?

- Is regular security auditing conducted to identify and address vulnerabilities?

- Are clear policies and procedures established for data handling and consent?

Ethical Considerations and Bias

- Is thorough testing and evaluation of AI algorithms conducted to identify and mitigate biases?

- Are ethical guidelines established to promote fairness, transparency, and accountability in AI usage?

- Is there a process in place to regularly monitor and update AI systems for emerging biases?

Impact on Workforce

- Are comprehensive training and professional development opportunities provided to help staff acquire new skills and adapt to AI integration?

- Is there a plan to foster a culture of lifelong learning and support staff in embracing AI as a complementary tool rather than a replacement for their work?

Equity and Access

- Is there a plan to ensure equitable access to AI resources and tools for all students, regardless of their socioeconomic background?

- Are strategies in place to close access gaps and provide necessary resources (e.g., internet connectivity, devices) to underserved communities?

Reliability and Accountability

- Are clear guidelines established for the appropriate use of AI, emphasizing human judgment and oversight?

- Is there a process to regularly evaluate AI system performance, validate results, and address inaccuracies or concerns raised by users?

- Are channels provided for feedback and reporting of system errors or concerns?

NOTE: It is important to review and assess these questions and others regularly, updating responses as needed to ensure the successful integration of AI while minimizing potential risks and challenges.

Appendix F
AI Integration Common Pitfalls

Leadership & Vision

- *Overlooking Equity and Access:* Avoid exacerbating existing disparities in access to technology and resources. Ensure that AI initiatives prioritize equity and inclusion, providing equal opportunities for all students, regardless of their background or abilities.

- *Ignoring Educators' Perspectives:* Do not overlook educators' valuable insights and expertise when planning for AI integration. Involve teachers and administrators in decision-making processes and provide them with the necessary support and resources to effectively incorporate AI technologies into their practice.

- *Underestimating the Importance of Data Governance:* Neglecting robust data governance practices can lead to data breaches, privacy violations, and misuse of student information. Implement clear policies and protocols for data collection, storage, usage, and protection to safeguard student privacy and maintain data security.

- *Forgetting Long-Term Sustainability:* Avoid adopting AI technologies without considering long-term sustainability and scalability. Assess the financial, technical, and human resources required for AI integration and ensure a plan is in place to support ongoing maintenance, training, and upgrades.

Policy, Ethical, & Legal Considerations

- *Overlooking Data Privacy and Security:* Neglecting data privacy and security can lead to breaches and violations of student privacy. Avoid collecting more data than necessary and ensure secure storage and handling of student information. Regularly review and update security protocols to align with evolving best practices.

- *Relying Solely on AI Algorithms:* Avoid over-reliance on AI algorithms without considering human judgment and expertise. While AI can provide valuable insights, it should be used as a tool to support decision-making rather than a substitute for human involvement and critical thinking.

- *Ignoring Bias and Discrimination:* Be vigilant about potential biases and discriminatory outcomes that may arise from AI algorithms. Regularly evaluate and audit AI systems to identify and address biases. Implement strategies, such as diverse training data and algorithmic fairness assessments, to mitigate bias and ensure fairness.

- *Disregarding Legal and Ethical Implications:* Avoid implementing AI technologies without considering the legal and ethical implications they may pose. Stay informed about emerging legal issues related to AI in education and proactively address them in your policies and practices.

- *Neglecting Ongoing Evaluation and Monitoring:* Don't assume the work is done once policies are in place. Regularly evaluate the effectiveness and impact of AI policies and practices and be open to making adjustments as needed. Monitor AI systems for any unintended consequences and ensure ongoing compliance with legal and ethical standards.

Instructional Framework

- *Overemphasizing Testing and Grades:* Avoid solely using AI technologies for high-stakes testing or grading purposes. Balance the use of AI-generated assessments with other forms of authentic and performance-based assessments that capture a holistic view of student learning.

- *Neglecting Teacher Professional Judgment:* Do not rely solely on AI-generated recommendations or insights without considering educators' expertise and professional judgment. Encourage teachers to interpret and adapt AI-generated data and insights to meet the unique needs of their students.

- *Underestimating the Importance of Ethical AI Use:* Avoid using AI technologies without considering the ethical implications. Teach students about the ethical considerations and potential biases in AI algorithms, fostering their understanding of responsible AI use.

- *Limiting AI Integration to STEM Subjects:* Avoid confining AI integration to STEM subjects only. Explore opportunities to incorporate AI technologies across various disciplines, including humanities, social sciences, and the arts, to provide a well-rounded educational experience.

- *Forgetting to Continuously Evaluate and Reflect:* Do not assume that AI integration alone guarantees improved learning outcomes. Regularly evaluate the impact of AI integration on student learning, engagement, and achievement. Reflect on the effectiveness of the instructional framework and make adjustments as needed.

Assessments

- *Relying Solely on AI for Assessments:* Avoid overreliance on AI tools for assessments and neglecting other forms of assessment, such as teacher observations, project-based assessments, and portfolios. AI should complement existing assessment practices, not replace them entirely.

- *Neglecting Equity and Accessibility:* Ensure that AI-powered assessments do not exacerbate existing inequities. Consider access to technology, cultural biases, and fairness in evaluating diverse student populations. Address any potential barriers that may arise from the integration of AI in assessments.

- *Ignoring Student Agency and Engagement:* AI should not diminish student agency or disengage students from the assessment process. Maintain a balance between AI-driven automation and opportunities for student voice, choice, and active participation in assessments.

- *Disregarding Data Privacy and Security:* Prioritize the protection of student data and ensure compliance with relevant privacy laws and regulations. Use secure AI tools and platforms that safeguard sensitive information and adhere to data protection guidelines.

- *Overlooking Educator Professional Growth:* Support educators in developing their AI literacy and expertise. Provide ongoing professional development opportunities to ensure educators are equipped with the knowledge and skills needed to effectively integrate AI in assessments and interpret AI-generated insights.

Professional Learning

- *Overwhelming Educators:* Avoid overwhelming educators with an excessive amount of AI-related information or expecting immediate mastery of AI concepts. Pace professional development opportunities to ensure educators can absorb and apply new knowledge effectively.

- *Neglecting Ongoing Support:* Professional development should be accompanied by ongoing support and coaching. Provide follow-up sessions, mentoring, or access to AI experts who can assist educators in implementing AI tools and resources effectively.

- *Focusing Solely on Technical Skills:* While technical skills are important, don't overlook the broader pedagogical aspects of AI integration. Professional development should emphasize how AI can enhance teaching and learning, foster critical thinking, and support the development of future-ready skills in students.

- *Ignoring Educator Input:* Involve educators in the planning and design of professional development opportunities. Seek their input on topics of interest, areas where they require support, and their suggestions for effective AI integration strategies. This collaborative approach increases engagement and ensures professional development meets educators' needs.

- *Limiting Professional Development to AI Tools Only:* Professional development should encompass a holistic understanding of AI integration. It should include discussions on ethical considerations, implications for student learning, and broader implications of AI in education. Encourage educators to critically evaluate AI tools and resources to make informed decisions that align with their instructional goals.

Student Use

- *Relying Solely on AI Tools:* Avoid overreliance on AI tools and systems as a replacement for human interaction and instruction. Ensure that AI is used as a supportive tool to augment learning experiences, rather than replacing the role of educators and interpersonal engagement.

- *Neglecting Privacy and Security:* Prioritize student privacy and data security when integrating AI tools and systems. Implement measures to protect students' personal information and ensure compliance with data protection regulations. Regularly review and update security protocols to safeguard student data.

- *Overwhelming Students with Complexity:* Avoid introducing AI tools and systems that are overly complex or difficult for students to navigate. Consider students' age, cognitive abilities, and prior experience when selecting and implementing AI technologies.

- *Overlooking Diverse Learning Needs:* Ensure that AI tools and systems cater to the diverse learning needs of students. Consider different learning styles, abilities, and preferences when integrating AI technologies, ensuring that they support personalized and differentiated instruction.

- *Neglecting Training and Support:* Provide adequate training and support to both educators and students in using AI tools and systems effectively. Offer professional development opportunities

for educators to enhance their understanding and proficiency in integrating AI. Ensure students receive guidance and instruction on how to use AI tools appropriately.

Business & Technology Operations

- *Overlooking Data Privacy and Security:* Avoid neglecting data privacy and security considerations when implementing AI in business operations. Take proactive measures to protect sensitive student and staff information, ensuring compliance with relevant data protection regulations and industry best practices.

- *Relying Solely on AI for Decision-Making:* Avoid blindly relying on AI-generated insights and recommendations for critical decision-making. Remember that AI is a tool and should be used in conjunction with human judgment and expertise. Maintain a balance between AI-driven insights and the valuable perspectives of school administrators and staff.

- *Underestimating Change Management:* Avoid underestimating the impact of AI integration on staff and organizational culture. Implement change management strategies to address any concerns or resistance to change, ensuring that staff members feel supported and empowered throughout the transition.

- *Overlooking Accessibility and Equity:* Ensure that AI solutions implemented in business operations promote accessibility and equity for all students and staff. Consider the needs of diverse populations, including those with disabilities or limited access to technology, and ensure that AI integration does not inadvertently widen existing equity gaps.

- *Losing Sight of the Core Mission:* While AI can significantly enhance business operations, don't lose sight of the core mission of delivering quality education. Ensure that the integration of AI aligns with and supports the overall educational objectives and priorities of the school.

Outreach

- *Using jargon:* Avoid using technical jargon and complex terminology that may confuse or alienate stakeholders. Instead, use plain language to explain AI concepts.

- *Overselling AI capabilities:* Be cautious not to make unrealistic claims about what AI can achieve or overstate its impact on education. Provide realistic expectations.

- *Neglecting privacy and security:* Do not overlook the importance of addressing privacy concerns related to AI implementation. Clearly communicate data security measures and protocols.

- *Ignoring feedback:* Do not dismiss or ignore feedback from stakeholders. Actively listen to concerns, suggestions, and questions, and provide thoughtful responses.

- *Excluding marginalized communities:* Ensure that outreach efforts are inclusive and reach all members of the community, including those who may be historically marginalized or less tech-savvy.

- *Underestimating the learning curve:* Recognize that teachers and other stakeholders may require time and support to understand AI technology and adapt their practices accordingly. Provide ongoing support and training.

- *Focusing solely on technology:* Remember that AI is a tool, not a solution in itself. Emphasize the importance of pedagogy and human interaction alongside AI integration.

- *Rushing the implementation:* Take the necessary time for planning, piloting, and evaluating AI initiatives before scaling them up. Rushing implementation may lead to unforeseen challenges and resistance from stakeholders.

Appendix G
Glossary of Terms

This glossary serves as a foundation for educators and school board members to understand and plan for the integration of AI technologies to support teaching, learning and operations.

Algorithms: A set of step-by-step instructions or rules followed by a computer to perform specific tasks or solve problems. In AI, algorithms are essential for processing data, making predictions, and carrying out various machine learning tasks.

AI Integration: The process of incorporating artificial intelligence technologies into various aspects of the educational system to enhance teaching, learning, administrative tasks, and overall student experience.

API (Application Programming Interface): A set of rules and protocols that allows different software applications to communicate and interact with each other. AI tools and resources often provide APIs for developers to integrate AI functionalities into their own applications.

Artificial General Intelligence (AGI): Refers to AI systems that possess the ability to understand, learn, and apply knowledge across a wide range of tasks, similar to human intelligence. AGI aims to exhibit human-like cognitive abilities.

AI (Artificial Intelligence): A branch of computer science that involves the development of intelligent systems that can perform tasks that typically require human intelligence. AI enables machines to learn from experience, adapt to new data, and make decisions based on patterns and algorithms.

AI Ethics: The study and implementation of ethical principles in the design, development, and deployment of AI technologies. AI ethics in education ensures fairness, transparency, and privacy in AI-based educational solutions.

Artificial Neural Network (ANN): A computational model inspired by the structure and function of the human brain. ANN is a fundamental building block of deep learning and is used for tasks that require pattern recognition and learning from complex data.

Autonomous: Pertaining to AI systems or machines that can perform tasks and make decisions without human intervention. Autonomous systems often use sensors, AI algorithms, and decision-making capabilities to operate independently.

Chatbots: AI-powered conversational agents designed to interact with users through natural language. Chatbots can be integrated into educational platforms to provide instant support, answer queries, and engage students in interactive learning experiences.

ChatGPT: An OpenAI language model that generates human-like responses to natural language input, engaging in interactive conversations with users.

Cloud Computing: The delivery of computing services over the internet, including storage, processing power, and AI tools. Cloud-based AI services allow schools to access powerful AI resources without

the need for extensive local hardware.

Cognitive Computing: An AI approach that seeks to simulate human thought processes and decision-making. Cognitive computing systems utilize AI technologies like machine learning, NLP, and computer vision to understand and interact with humans in a more natural way.

Computer Vision (CV): An area of AI that focuses on enabling computers to interpret and understand visual information from the world. CV is applied in tasks such as image recognition, object detection, and facial recognition.

Data Analytics: The process of examining large sets of data to derive insights and make data-driven decisions. In education, AI-powered data analytics can help identify learning trends, predict student performance, and optimize teaching strategies.

Deep Learning: A specialized form of machine learning that involves training artificial neural networks with multiple layers to process and learn from vast amounts of data. Deep learning has revolutionized various AI applications, such as image and speech recognition.

Generative AI: Generative AI encompasses algorithms and models designed to produce new content, be it text, images, or video, by learning from vast amounts of existing data.

Invisible AI: Artificial intelligence systems and processes that operate in the background, without requiring direct human interaction, often seamlessly integrating into everyday applications and platforms to enhance functionality and user experience. Examples would be predictive text suggestions, personalized content recommendations, and automated safety features on automobiles.

Large Language Models: AI models that process and understand natural language at a vast scale. These models, like OpenAI's GPT-3.5 or Google's Bard, are trained on massive datasets and can generate human-like text, answer questions, and perform various language-related tasks.

Learning Management System (LMS): A software application that facilitates the administration, delivery, and tracking of educational courses and content. AI integration within an LMS can enhance content recommendation, automated grading, and student progress tracking.

Machine Learning (ML): A subset of AI that focuses on enabling machines to learn from data and improve their performance without being explicitly programmed for every task. ML algorithms allow AI systems to recognize patterns, make predictions, and adapt based on new information.

Natural Language Generation (NLG): A subset of NLP that involves generating human-like language from structured data. NLG systems can automatically produce coherent and contextually appropriate written or spoken content.

Natural Language Processing (NLP): A subfield of AI that deals with the interaction between computers and human language. NLP enables machines to understand, interpret, and generate human language, facilitating tasks like speech recognition, language translation, and sentiment analysis.

Predictive Analytics: The use of AI and statistical techniques to analyze historical data and make predictions about future outcomes or trends. In education, predictive analytics can help identify

at-risk students, forecast performance, and recommend personalized interventions.

Prompt: A method to use natural language to interface with AI applications.

Strong AI: Also known as Artificial General Intelligence (AGI), Strong AI refers to AI systems with human-level intelligence, including self-awareness and consciousness. Strong AI is theoretical and not yet achieved.

Virtual Assistants: AI-based applications that assist users in various tasks and activities. In education, virtual assistants can help with scheduling, reminders, accessing educational resources, and answering general queries.

Visible AI: AI-based applications where users interact directly with the systems. Examples of this would be interfacing directly with chatbots where users are inputting prompts and getting a direct response from the AI application.

Voice Recognition: An AI-powered technology that enables computers and devices to understand and interpret spoken language. Voice recognition is commonly used in virtual assistants, interactive voice response systems, and language learning applications.

Weak AI: Refers to AI systems that are designed for specific narrow tasks and lack general intelligence. Weak AI is prevalent in applications like voice assistants, chatbots, and recommendation systems.