AI Tool Procurement, Implementation and Evaluation

As educational entities seek to incorporate more artificial intelligence tools as part of their educational supports for students, current technology procurement checklists and procedures will need to be updated. While schools, districts and other educational entities that support K-12 education have had to account for local, state and federal guidelines on the use of student data, AI systems also call us to consider how it will be used ethically by educators and students and cautions for the handling of student data within an AI system. Key factors that need to be considered when procuring an AI tool include:

- Intended use to satisfy educational goals or other productivity needs,
- The compliance of federal, state and local guidelines to maintain the security and privacy of users' data and personally identifiable information.
- Ensuring the AI system has been taught using data sets that reflect the student population to help minimize biased information or outcomes, and
- Developing all users on the ethical use of AI-generated content or decisions.
- Ensure that vendors provide a detailed explanation of their AI tool's development process, including the types of data, sources, and preprocessing methods used. This will help assess the tool's functionality and suitability.

Considering this, the AI in Education Commission's K-12 Instruction subcommittee reviewed several frameworks and recommendations for integrating AI into K-12 education. Workforce EdTech's AI-Integration Framework has a framework that supports the above needs and an easy-to-use tool for examining potential AI solutions. Their framework consists of six categories to consider when determining the best use for an AI product:

- **AI Capabilities and Learning Goals** - Ensures that the technology aligns with educational goals within the learning environment and utilizes the current infrastructure with minimal costs or adjustments.
- **Mitigating Biases** - Ensures that the chosen AI tool minimizes biases, especially considering the unique population of the learning environment.
- **Security, Ethics and Data Use** - Considers the ethical use of an AI tool within the learning environment and how it complies with local, district, state and federal regulations for protecting students' and other users' data.
- **Human Oversight and Overreliance** - Ensures that the AI tool is subject to human oversight throughout its use and prevents overreliance on the technology, thereby maintaining educational integrity.
- **Evidence of Impact** - Considers what value the tool has added to the education system and that there is a continuous monitoring and evaluation process in place.
- **Distribution and Ease of Use** - Ensures that the tool is accessible to all necessary users and minimizes barriers to access or use of the tool.

For more information on their framework, visit Workforce EdTech's AI Framework website. We also examined and used elements from The Institute of Ethical AI's Framework for the Ethical Use of AI in K-12 Education and The Center for Integrative Research in Computing Sciences's Emerging Technology Adoption Framework for PK-12 Education. These frameworks included a process for examining, procuring and evaluating technology for educational uses and incorporating various roles within the process.

SREB's AI in Education Commission's K-12 Instruction Subcommittee recommends that educational entities develop a process for examining, procuring and continuously evaluating any technology for teaching and learning. Furthermore, we recommend that they use a team of key stakeholders to manage the process. The makeup of this team should include IT professionals within the institution, educator representatives who can speak to the educational use and classroom implications, and other key decision-makers. Within the checklist documents, we break down the procurement process into the following four phases:

- **Design Phase** - A local design team meets to determine the goals for this tool, its intended use, and what infrastructure is currently in place to support a new technology.
- **Procurement Phase** - Representatives from the design team meet with potential vendors and compare and contrast how their products will meet the intended goals, fit into the current infrastructure or minimize costs to update the infrastructure and comply with local, state and federal regulations. The design team uses this information to make the best choice for their educational needs.
- **Deployment and Implementation Phase** - Launches the new tool on necessary platforms and develops a professional learning program to teach new users how to use the tool.
- **Monitoring and Evaluation Phase** - Develops a continuous monitoring and evaluation process to assess how the tool is used and meets the intended goals and determines if any tweaks are needed to better use the technology.

A strength of Workforce EdTech's Framework is its list of vendor questions relating to each framework's category, along with questions to support the design team in considering which tool is the best for an established need. It also allowed for the comparison between several tools at once. Using this as a starting point, we developed a series of questions for each phase of the process.

This toolkit includes a master list of questions for each phase aligned with Workforce EdTech's AI integration framework, a question list for the design team to use to guide their process, a question list specific to vendors so they may prepare for interviews or provide necessary information, and a spreadsheet to capture notes and evaluations of the process.

This toolkit is intended for educational entities to examine their current technology procurement practices and consider how they will need to adapt or change their practices to better accommodate the procurement of AI tools.

References

1. AI Integration Framework - WorkForce EdTech. (2024, July 5). Workforce EdTech. https://workforceedtech.org/ai-integration-framework/.
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3. Ruiz, P., Richard, E., Chillmon, C., Shah, Z., Kurth, A., Fekete, A., Glazer, K., Pattenhouse, M., Fusco, J., Fennelly-Atkinson, R., Lin, L., Arriola, S., Lockett, D., Crawford-Meyer, V., Karim, S., Hampton, S., & Beckford, B. (2022). Emerging Technology Adoption Framework: for PK-12 education. https://doi.org/10.51388/20.500.12265/161.

AI Solutions Checklist Tool Kit

You can access the questions in this toolkit in three ways:

1. Find the master list of questions with explanations. You can click the link or keep scrolling in this document to find this resource.
2. Find the simple questions grouped into Design Team Questions and Vendor Questions categories that can be printed and handed directly to the design team or potential vendors. You can click these links or keep scrolling in this document to find these resources.
3. Download an Excel spreadsheet version of the questions where you can record notes with the answers.

AI Tool Procurement Questions Master List

These questions have been provided in an accompanying spreadsheet that can be used to capture notes throughout the process. Follow this link to access the spreadsheet.

AI Integration Framework	Design Phase	Procurement Phase	Deployment and Implementation Phase	Monitoring and Evaluation Phase
AI Capabilities and Learning Goals	What are the instructional needs or goals we are looking to satisfy with this AI solution? What strategies will we employ to ensure that AI complements our teaching rather than detracts from or dominates it? What impact do we expect to achieve through the use of AI? How will we measure and assess this impact? What processes could be improved through the use of AI? How do we intend to use AI to improve these processes? How will AI be used so that educators or other practitioners are not undermined or marginalized? Have we considered the benefits and risks of the use of an AI solution compared to non-AI solutions?	**Vendor** Can you demonstrate how your tool's AI capabilities align with specific educational goals and challenges? What kind of model does your AI tool use? (Ex: open source large or small language) What evidence can you provide to show that your AI tool effectively addresses the identified educational needs? How customizable and scalable is your AI solution to meet varying educational objectives, scales of implementation, and learner variability? Do you conduct periodic reviews to verify that the AI resource is effective and performing as intended? How is this shared with the user? **Design Team** How will integrating this AI tool into our current curriculum enhance or transform learning experiences and meet outlined goals? How prepared are we and our organization to support ongoing and optimal use of the technology?	What strategies will we employ to ensure that AI complements our teaching rather than detracts from or dominates it? How prepared are we and our organization to support ongoing and optimal use of the technology? What professional development will teachers need to use and integrate the use of the tool effectively?	**Planning** What data can we collect to analyze whether the AI tool enhanced the curriculum and transformed learning experiences for students? How will we measure and assess the impact this AI tool has had on teaching and learning? **Evaluation** How was the staff prepared to use and integrate this tool? What might we need to do differently to better support its implementation? What steps can we take to achieve improved impacts? Were the changes to processes due to the implementation of AI satisfactory or unsatisfactory? What might need to be changed or done to ensure better outcomes?

AI Integration Framework	Design Phase	Procurement Phase	Deployment and Implementation Phase	Monitoring and Evaluation Phase
		What feedback would we want from our users on how well this tool supports our needs and goals? How does this tool compare with other non-AI tools?		
Mitigating Biases	What is the makeup of our student population? What are the needs of various learners related to the educational goals stated above?	**Vendor** What approaches have you taken in developing your AI to identify and mitigate biases, particularly in training datasets and developing algorithms? Can you provide transparency reports or documentation on the measures taken to address biases in your AI systems? What processes do you have in place for ongoing monitoring and mitigation of biases as your AI tool evolves? **Design Team** What strategies will we need to implement to help mitigate biases with AI-generated content and/or assessments from this tool?	How will we ensure that AI-generated content or assessments are unbiased and representative of our student population? To what extent are we willing to accept biases in the AI tool? What processes will we have in place to inform the vendor about the biases in the AI tool? What steps will we take to educate ourselves and our students about the potential biases in AI systems and their impact? Should an AI system generate an unfavorable outcome for a student or educator, what recourse would a student or educator have for protesting the outcome?	**Planning** How do we plan to implement strategies or tools to identify and mitigate biases within AI-generated content and assessments? **Evaluation** Have there been incidents or complaints of decisions based solely on an AI system? What tools were used to mitigate biases? How well did they work? What lessons or strategies did teachers employ to educate themselves and students on AI bias? Where are they housed? How are they shared with the wider education community?
Security, Ethics and Data Use	Beyond federal and state guidelines, what other safeguards do we need from an AI solution to ensure data protection and privacy for our users? How has our staff been	**Vendor** How does your tool safeguard data protection and privacy? How are users informed and given control over their data, especially concerning opt-out	How will we communicate the importance of data privacy and ethical AI use to our students? What have we done in the past? What might we need to do in the future?	**Planning** How will we incorporate user feedback into the continuous improvement and updating of our AI tools?

AI Integration Framework	Design Phase	Procurement Phase	Deployment and Implementation Phase	Monitoring and Evaluation Phase
	developed to ensure that students' data privacy rights are protected when using AI tools? What will we need from an AI tool to ensure students' data protection and privacy?	options? How will our users' data be used within the system? (containerized or as part of a platform, as part of the machine learning, etc.) In cases where the tool leverages user input for training, how do you ensure data anonymity and restrict access to sensitive information? How does your tool adhere to key privacy regulations (such as, FERPA, CIPA, COPPA, HIPAA, GPPII)? Has your tool been vetted by 1EdTech or have an analogous data privacy agreement? What information is shared with users and how frequently, particularly in AI-driven decisions impacting learning pathways and outcomes? What ethical frameworks inform your development? **Design Team** What measures does the AI tool have to ensure that students' data privacy rights are protected when using AI tools? What use of this AI tool could be considered surveillance of learners, and how could these benefit learners - either directly or indirectly? What measures will need to be put in place to ensure that	What feedback would we want from our users about how well this tool supports our needs and goals? What measures will we take to ensure that students' data privacy rights are protected when using AI tools? How will we ensure that students and staff are informed about and have control over their data when using the AI tool? What mechanisms do we have in place to ensure human oversight over AI-generated content and decisions? What steps will we take to ensure that the vendor is compliant with the security requirements? What steps will we take to ensure that the vendor is compliant with the NIST AI risk framework? In contexts where we have chosen or are obligated to assess students on a continuous basis, how have we ensured that there are designated safe spaces in which learners are not assessed?	**Evaluation** What did an analysis of user feedback tell us about the use and effectiveness of the tool? What might need to be updated or abandoned?

AI Integration Framework	Design Phase	Procurement Phase	Deployment and Implementation Phase	Monitoring and Evaluation Phase
		students' data privacy rights are protected when using AI tools?		
Human Oversight and Overreliance	How will we maintain a balance between AI assistance and our own professional judgment in educational decision-making?	**Vendor** What mechanisms do you have in place to ensure human oversight over AI-generated content and decisions? How do you incorporate user feedback into the continuous improvement and updating of your AI tools? How have your tools been designed to minimize addiction among learners or to compel learners to extend their use of a resource beyond a point that is beneficial for their learning? **Design Team** What policy updates or professional development will our users need to minimize overreliance on or addiction to this tool?	How will we maintain a balance between AI assistance and our own professional judgment in educational decision-making?	**Planning** How will we maintain a balance between AI assistance and our own professional judgment in educational decision-making? What processes will we establish to regularly review and assess the quality and appropriateness of AI-generated content? How do we plan to incorporate human insights and feedback into the continuous improvement of the AI tool's performance and output? **Evaluation** How are we doing at maintaining a balance between AI assistance and professional judgment?
Evidence of Impact	What teaching practices will be enhanced by the use of an AI tool? What impacts are we looking to see in our students as a result of AI integration?	**Vendor** Can you provide evidence of the AI solution's effectiveness in improving educational outcomes, such as case studies, data analyses, or reports from pilot programs? Is this evidence publicly accessible? How does the tool's performance and impact compare to educational technology benchmarks or standards, and what advantages does it offer		**Planning** How will we track and measure the impact of the AI tool on student learning outcomes and engagement? What benchmarks will we use to evaluate the success of integrating the AI tool into our educational practices? **Evaluation** How has the AI tool impacted our teaching practices as a result

AI Integration Framework	Design Phase	Procurement Phase	Deployment and Implementation Phase	Monitoring and Evaluation Phase
		over traditional teaching methods? Can you provide at least three references of K-12 education entities using your AI tool? How do you support educators and institutions in implementing and maximizing the impact of your AI tool? **Design Team** What will we need to track to measure the impact of this tool on student learning outcomes and engagement?		of the AI tool? What needs to be adapted or changed with the use of the tool or our teaching practices?
Distribution and Ease of Use	What devices and operating systems do our students and teachers have access to? What systems and processes do we have to distribute the launch of a new AI tool?	**Vendor** How does the AI tool ensure compatibility across various devices, including mobile phones, tablets and computers? How does your AI model work? What makes your system different from other systems? Can the AI tool function effectively across different levels of internet connectivity, including low-bandwidth environments? Is there an offline mode or downloadable content available? What specific digital skills are required for students and staff to effectively use the AI tool? How is the AI solution designed to serve learners with disabilities or special needs? What languages does the tool	How will we ensure that students of all abilities and backgrounds can benefit equally from the AI tool? What resources can be provided to students who don't have personal large-screen devices and reliable internet access? What adult learner factors have we considered and will the tool equip us to address a wide range of strengths and needs? Where in the curriculum, or when during extracurricular time, will students be taught about this? What content will they learn?	**Evaluation** How are students and educators interacting and accessing the tool? What are some areas or concerns that we need to address?

AI Integration Framework	Design Phase	Procurement Phase	Deployment and Implementation Phase	Monitoring and Evaluation Phase
		support and can the provider offer insights into which languages it works best with? Is the on-screen text written in plain language for users developing literacy? **Design Team** How well does this tool ensure that our student population can benefit equally from the AI tool? What resources will need to be provided to students who do not have personal large-screen devices and reliable internet access? What new skills and processes will adults need to best utilize this tool?		

Design Team Questions

Design Phase

- What are the instructional needs or goals we are looking to satisfy from this AI solution?
- What strategies will we employ to ensure that AI complements our teaching rather than detracts from or dominates it?
- What impact do we expect to achieve through the use of AI?
- How will we measure and assess this impact?
- What processes could be improved through the use of AI?
- How do we intend to use AI to improve these processes?
- How will AI be used so that educators or other practitioners are not undermined or marginalized?
- Have we considered the benefits and risks of the use of an AI solution compared to non-AI solutions?
- What is the makeup of our student population?
- What are the needs of various learners related to the educational goals stated above?
- Beyond federal and state guidelines, what other safeguards do we need from an AI solution to ensure data protection and privacy for our users?
- How has our staff been developed to ensure that students' data privacy rights are protected when using AI tools?
- What will we need from an AI tool to ensure students' data protection and privacy?
- How will we maintain a balance between AI assistance and our own professional judgment in educational decision-making?
- What teaching practices will be enhanced by the use of an AI tool?
- What impacts are we looking to see in our students as a result of AI integration?
- What devices and operating systems do our students and teachers have access to?
- What systems and processes do we have to distribute the launch of a new tool?

Procurement Phase

- How will integrating this AI tool into our current curriculum enhance or transform learning experiences and meet outlined goals?
- How prepared are we and our organization to support ongoing and optimal use of the technology?
- What feedback would we want from our users on how well this tool supports our needs and goals?
- How does this tool compare with other non-AI tools?
- What strategies will we need to implement to help mitigate biases with AI-generated content and/or assessments from this tool?
- What measures does the AI tool have to ensure that students' data privacy rights are protected when using AI tools?

- What use of this AI tool could be considered surveillance of learners, and how could these benefit learners - either directly or indirectly?
- What measures will need to be put in place to ensure that students' data privacy rights are protected when using AI tools?
- What policy updates or professional development will our users need to minimize overreliance on or addiction to this tool?
- What will we need to track to measure the impact of this tool on student learning outcomes and engagement?
- How well does this tool ensure that our student population can benefit equally from the AI tool?
- What resources will need to be provided to students who do not have personal large-screen devices and reliable internet access?
- What new skills and processes will adults need to best utilize this tool?

Deployment and Implementation Phase

- What strategies will we employ to ensure that AI complements our teaching rather than detracts from or dominates it?
- How prepared are we and our organization to support ongoing and optimal use of the technology?
- What professional development will teachers need to use and integrate the use of the tool effectively?
- How will we ensure that AI-generated content or assessments are unbiased and representative of our student population?
- To what extent are we willing to accept biases in the AI tool?
- What processes will we have in place to inform the vendor about the biases in the AI tool?
- What steps will we take to educate ourselves and our students about the potential biases in AI systems and their impact?
- Should an AI system generate an unfavorable outcome for a student or educator, what recourse would a student or educator have for protesting the outcome?
- How will we communicate the importance of data privacy and ethical AI use to our students? What have we done in the past? What might we need to do in the future?
- What feedback would we want from our users about how well this tool supports our needs and goals?
- What measures will we take to ensure that students' data privacy rights are protected when using AI tools?
- How will we ensure that students and staff are informed about and have control over their data when using the AI tool?
- What mechanisms do we have in place to ensure human oversight over AI-generated content and decisions?
- In contexts where we have chosen or are obligated to assess students on a continuous basis, how have we ensured that there are designated safe spaces in which learners are not assessed?

- How will we maintain a balance between AI assistance and our own professional judgment in educational decision-making?
- How will we ensure that students of all abilities and backgrounds can benefit equally from the AI tool?
- What resources can be provided to students who do not have personal large-screen devices and reliable internet access?
- What adult learner factors have we considered and will the tool equip us to address a wide range of strengths and needs?
- Where in the curriculum, or when during extracurricular time, will students be taught about this? What content will they learn?

Monitoring and Evaluation Phase

- Planning for data collection and evaluation
    - What data can we collect to analyze whether the AI tool enhanced the curriculum and transformed learning experiences for students?
    - How will we measure and assess the impact this AI tool has had on teaching and learning?
    - How do we plan to implement strategies or tools to identify and mitigate biases within AI-generated content and assessments?
    - How will we incorporate user feedback into the continuous improvement and updating of our AI tools?
    - How will we maintain a balance between AI assistance and our own professional judgment in educational decision-making?
    - What processes will we establish to regularly review and assess the quality and appropriateness of AI-generated content?
    - How do we plan to incorporate human insights and feedback into the continuous improvement of the AI tool's performance and output?
    - How will we track and measure the impact of the AI tool on student learning outcomes and engagement?
    - What benchmarks will we use to evaluate the success of integrating the AI tool into our educational practices?

- Evaluation of collected data and insights
    - How was the staff prepared to use and integrate this tool? What might we need to do differently to better support its implementation?
    - What steps can we take to achieve improved impacts?
    - Were the changes to processes due to the implementation of AI satisfactory or unsatisfactory? What might need to be changed or done to ensure better outcomes?
    - Have there been incidents or complaints of decisions based solely on an AI system?
    - What tools were used to mitigate biases? How well did they work?

- What lessons or strategies did teachers employ to educate themselves and students on AI bias? Where are they housed? How are they shared with the wider education community?
- What did an analysis of user feedback tell us about the use and effectiveness of the tool?
- What might need to be updated or abandoned?
- How are we doing at maintaining a balance between AI assistance and professional judgment?
- How has the AI tool impacted our teaching practices as a result of the AI tool? What needs to be adapted or changed with the use of the tool or our teaching practices?
- How are students and educators interacting and accessing the tool? What are some areas or concerns that we need to address?

Vendor Questions

- Can you demonstrate how your tool's AI capabilities align with specific educational goals and challenges?
- What kind of model does your AI tool Use? (Ex: open source large or small language)
- What evidence can you provide to show that your AI tool effectively addresses the identified educational needs?
- How customizable and scalable is your AI solution to meet varying educational objectives, scales of implementation, and learner variability?
- Do you conduct periodic reviews to verify that the AI resource is effective and performing as intended? How is this shared with the user?
- What approaches have you taken in developing your AI to identify and mitigate biases, particularly in training datasets and developing algorithms?
- Can you provide transparency reports or documentation on the measures taken to address biases in your AI systems?
- What processes do you have in place for ongoing monitoring and mitigation of biases as your AI tool evolves?
- How does your tool safeguard data protection and privacy?
- How are users informed and given control over their data, especially concerning opt-out options?
- How will our users' data be used within the system? (containerized or as part of a platform, as part of the machine learning, etc)
- In cases where the tool leverages user input for training, how do you ensure data anonymity and restrict access to sensitive information?
- How does your tool adhere to key privacy regulations (such as, FERPA, CIPA, COPPA, HIPAA, GPPII)?
- Has your tool been vetted by 1EdTech or have an analogous data privacy agreement?
- What information is shared with users and how frequently, particularly in AI-driven decisions impacting learning pathways and outcomes?
- What ethical frameworks inform your development?
- What mechanisms do you have in place to ensure human oversight over AI-generated content and decisions?
- How do you incorporate user feedback into the continuous improvement and updating of your AI tools?
- How have your tools been designed to minimize addiction among learners or to compel learners to extend their use of a resource beyond a point that is beneficial for their learning?
- Can you provide evidence of the AI solution's effectiveness in improving educational outcomes, such as case studies, data analyses or reports from pilot programs? Is this evidence publicly accessible?
- How does the tool's performance and impact compare to educational technology benchmarks or standards, and what advantages does it offer over traditional teaching methods?

- Can you provide at least three references of K-12 education entities using your AI tool?
- How do you support educators and institutions in implementing and maximizing the impact of your AI tool?
- How does the AI tool ensure compatibility across various devices, including mobile phones, tablets and computers?
- How does your AI model work? What makes your system different from other systems?
- Can the AI tool function effectively across different levels of internet connectivity, including low-bandwidth environments? Is there an offline mode or downloadable content available?
- What specific digital skills are required for students and staff to effectively use the AI tool?
- How is the AI solution designed to serve learners with disabilities or special needs?
- What languages does the tool support and can the provider offer insights into which languages it works best with? Is the on-screen text written in plain language for users developing literacy?