# Considerations for Using AI Tools in K-12 Schools

BRITISH COLUMBIA | Ministry of Education and Child Care

# Considerations for Using AI Tools in K-12 Schools

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## Introduction

This document is intended to support school boards, district leaders, school leaders, teachers, and support staff in developing local procedures and/or policies for the selection of artificial intelligence (AI) tools for use in British Columbia's K-12 schools. Several factors should be thoughtfully considered to ensure that districts and schools are equipped to incorporate AI tools effectively, safely, and equitably.

## The framework

In collaboration with our partners, the Ministry of Education and Child Care has developed a framework to facilitate thoughtful consideration and decision-making processes for the integration of AI tools in BC's' K-12 schools. The framework includes seven distinct categories:

- Ethical Uses
- Needs and Impacts
- Accessibility and Usability
- Integration and Compatibility
- Data Security and Privacy
- Teaching and Learning
- Inclusive Learning

This document provides detailed considerations for each category, offering valuable insights to support a comprehensive and informed approach to using AI to meet both the business and learning needs of education.
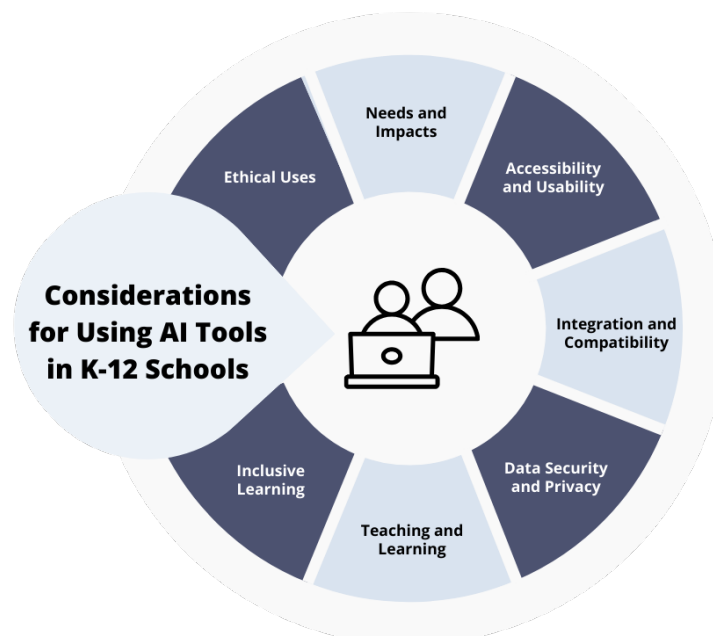
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## Possible uses of AI in K-12 schools

When used appropriately, AI tools can offer versatile applications to enhance various aspects of B.C.'s education system. Streamlining administrative and organizational tasks, AI has the potential to optimize efficiency, enabling everyone working in B.C. schools to prioritize student-centred activities.

Teachers use their professional judgment in determining learning activities, selecting learning resources, and evaluating student learning; at their discretion, AI tools may be used to supplement classroom teaching practices and deepen student learning. Districts and schools an also leverage AI to foster collaboration, communication, and meaningful interactions within the entire school community.

Education is inherently relational, with human connections playing a vital role in the learning process. So, while AI tools can offer valuable support, maintaining continued human interaction is essential for fostering meaningful relationships both between educators and students and among colleagues within the school system. The nuanced understanding, empathy, and encouragement provided by human interactions contribute significantly to an effective learning environment, as well as a healthy workplace. AI tools should be used as a complement to human processes, not a replacement.

## Responsible integration

The integration of AI tools in BC districts, schools, and classrooms is influenced by local needs and priorities, leading to variations across the province. To ensure responsible integration in K-12 districts, schools, and classrooms, careful consideration of ethical implications, potential impact on teacher workload, and the establishment of a transparent evaluation process during the selection, implementation, and decommissioning stages of all AI tools is essential.

The choice of an AI tool should align with local and provincial policies regarding learning resources and other relevant policies and guidelines. Additionally, it is crucial to establish mechanisms for ongoing feedback on the tool's effectiveness from all users and implement a decommissioning process, which includes data retention and erasure.

Clear protocols for data and security breaches should also be considered to ensure a swift and coordinated response to mitigate potential risks and safeguard sensitive information when needed. Procedures will vary among districts and schools based on their individual structures for technology selection, implementation, and support.

Professional learning in districts and schools across the province takes various forms. Before selecting and implementing an AI tool, it is crucial to thoughtfully assess both the opportunities and limitations of professional learning within the school and/or district to ensure the capacity to support teachers and support staff effectively. This includes developing AI literacy in all district employees.

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Moreover, fostering a human-centric approach is imperative, emphasizing that AI should enhance rather than replace key elements of teaching and learning. Cultural sensitivity, along with awareness of diverse perspectives, including Indigenous ways of knowing, should guide the integration to promote an inclusive and respectful educational environment.

## Privacy Legislation and Privacy Impact Assessments

Section 69 (5) of the Freedom of Information and Protection of Privacy Act (FOIPPA) requires a public school district to conduct a Privacy Impact Assessment (PIA) when a project involves personal information, and if it does, to state how it will protect the information it collects or uses. A PIA is a step-by-step review process to make sure the school district protects the personal information it collects or uses for business and/or educational purposes. As such, when procuring a new AI tool for use in B.C. schools, a PIA will likely need to be done.

Focused Education Resources supports members to use today's new tools and programs in ways that will protect privacy and personal information while creating a safe and vibrant educational environment. The Privacy and Technology section of the organization's website offers valuable resources, such as PIA templates, Privacy Management Program guides, learning tools, and informative resources.

For independent schools, the Personal Information Protection Act (PIPA) places limits on the collection, use, and disclosure of personal information. Independent schools are encouraged to have privacy policies in place. More information on PIPA can be found on the government website.

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## Tailored guidance for your role

While all sections of this document are important, different audiences may find specific sections more relevant. However, collaborative decision-making is important when selecting and implementing AI tools. School boards, district leaders, school leaders, teachers, and support staff must engage in collaborative efforts, fostering open communication to discern potential implications. A collaborative approach will ensure a thorough consideration of the issues of adopting AI tools in educational settings.

### School boards

School boards may find the following sections of this document particularly relevant to their roles:

- Ethical Uses
- Needs and Impacts
- Accessibility and Usability
- Integration and Compatibility
- Data Security and Privacy

### School district leaders

District leaders may find the following sections particularly relevant to their roles:

- Ethical Uses
- Needs and Impacts
- Accessibility and Usability
- Integration and Compatibility
- Data Security and Privacy
- Teaching and Learning
- Inclusive Learning

### School leaders

School leaders may find the following sections particularly relevant to their roles:

- Ethical Uses
- Needs and Impacts
- Teaching and Learning
- Inclusive Learning

### Teachers

Teachers may find the following sections particularly relevant to their roles:

- Ethical Uses
- Teaching and Learning
- Inclusive Learning

# Considerations for Using AI Tools in K-12 Schools

## Considerations

### Ethical Uses

What should the role of AI in education look like in the future?

- **Clear process:** Establish a transparent and well-defined process for evaluating and selecting AI tools, ensuring clear communication across all levels of the workforce.
- **Responsible AI integration:** Integrate AI-related topics into learning experiences in the classroom to help students understand the technology, its capabilities, and its ethical implications.
- **Critical thinking:** Facilitate critical thinking and ethical discussions regarding AI in the classroom, encouraging students to explore the broader societal implications and ethical considerations associated with AI technologies.
- **Transparent communication with parents:** Keep parents and caregivers informed about the use of AI in the classroom, its purpose, and how it may benefit their children's education, and encourage them to be involved in discussions about AI's role in K-12 education.
- **Ethical AI integration in education:** Encourage the selection of AI tools and content that align with established educational ethics, ensuring they uphold and promote pedagogical practices that prioritize the best interests of the students.
- **Bias mitigation and inclusivity:** Confirm that the AI tools you intend to use have been human-reviewed for potential bias; review each tool's training data, tendency toward hallucination, jailbreak susceptibility, and K-12 design considerations to avoid discrimination and promote inclusivity.
- **Continuous learning and improvement:** Continue to learn about the impacts and use of AI in K-12 classrooms to continuously improve the technology's effectiveness and ethical use.
- **Openness to feedback and adaptation:** Foster an open environment for feedback from students, teachers, school leaders, education partners, support staff, parents, and caregivers. Openness is vital for adapting AI implementations based on evolving ethical standards and educational needs, ensuring a dynamic and responsive integration of AI in educational settings.
- **Consent:** Ensure that AI tools are used in a way that requires proper informed consent. For example, informed consent should be provided if an AI tool is being used to automatically make transcriptions.
- **Humans in the loop:** Preserve the human-centric aspect of learning experiences through diligent human oversight and by keeping human experience at the core of AI tool adoption.
- **Cultural considerations:** Recognize and address cultural diversity and sensitivities in the adoption of AI tools in education, ensuring that technology aligns with various cultural perspectives and values in your local community, thereby ensuring an inclusive learning environment.

# Considerations for Using AI Tools in K-12 Schools

## Needs and Impacts

What information is needed to select and effectively integrate new AI tools?

- **Strategic tool selection:** Choose vetted AI tools to meet a specific administrative, organizational, or educational need, ensuring a targeted and impactful integration.
- **Policy, procedure, and guideline alignment:** Ensure that the process for selecting AI tools adheres to any local and provincial policies regarding learning resources and other existing relevant policies, procedures, and guidelines.
- **Source analysis:** Determine whether the tool is designed for K-12 education, what specific educational tasks it was made to perform, and whether the goals of the organization that created the tool align with desired education outcomes.
- **Efficiency assessment:** Assess how much time an AI tool can save in administrative tasks and whether the time saved justifies implementation. It is also a good idea to determine whether the workflow with an AI tool is better for students and district employees overall than the previous process.
- **Cost-benefit analysis:** Evaluate the cost of an AI tool in relation to the benefits it provides, factoring in its potential impact on efficiency and effectiveness, as well as comparing it with the current cost of the process, ensuring a sensible investment.
- **Adaptive implementation:** Monitor the use of AI tools and promptly stop using them if they fail to meet the specific needs of the school, district, or classroom. An adaptive approach ensures that resources are allocated to tools that align with the evolving requirements of the educational environment.
- **Transparent data practices:** Include transparency in data practices as part of user accessibility. Users should be informed about how their data is used, stored, and protected by an AI tool, fostering both trust and compliance with privacy expectations.
- **User feedback mechanism:** Implement a user feedback mechanism with an AI tool. Actively seek input from students, educators, and support team members to continuously assess the tool's accessibility and inclusivity, fostering a user-centric approach to improvement.
- **Workload assessment:** Evaluate potential impacts on teachers' and staff workloads before selecting a specific AI tool for implementation.
- **Safeguarding process:** Develop a comprehensive process to protect district employees in the event of unforeseen issues, including errors made by AI tools, inappropriate content in AI tool outputs, or malicious use of AI tools with potential impacts on staff or students. This process should ensure swift and effective responses, minimize disruptions, and prioritize the well-being of all individuals involved.

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## Accessibility and Usability

Are AI tools equitably accessible to all?

- **Differences between students:** Thoughtfully consider how various individual, social, and environmental differences can influence a student's ability to meaningful access and benefit from AI tools. Factors can include socioeconomic differences, disabilities and diverse abilities, physical and mental health challenges, and barriers associated with colonization.
- **Equality versus equity:** Ensure that strategies are established to bridge any gaps in access between students. For example, additional supports and services may be required to reduce barriers for certain students, enabling equitable access so they can benefit from AI tools.
- **Usability:** Ensure that AI tool are accessible and usable by all users (students, teachers, and other school and district staff). All tools should comply with accessibility standards and consider factors such as auditory and visual differences, physical and mobility differences, diverse languages and backgrounds, and other inclusivity factors.
- **Socioeconomic considerations:** Prioritize strategies to address socioeconomic barriers to AI tool access as a way to address equity gaps. Students from households with differing socioeconomic backgrounds may have limited access to and familiarity with technology at home, and therefore may require additional services or accommodations to build their capacity to access AI tools in an equitable way. Consider doing a socioeconomic impact assessment to identify and evaluate potential impacts of AI technologies on students and communities.
- **Supportive documentation and training:** Ensure that clear and regularly updated documentation, tutorials, or training resources are available to support effective use of AI tools by all users.
- **Community involvement:** Encourage community involvement in the AI integration process. Engage with parents, caregivers, and local communities to gather insights into specific needs and considerations, fostering a collaborative effort in promoting inclusive educational practices.
- **Intuitive interface design:** Look for AI tools with intuitive interfaces to reduce learning and training curves and minimize barriers to use. If a tool is complex and requires extensive coaching to use, it will likely not be effective.
- **AI in classroom culture:** Consider how digital literacy and AI use can be incorporated into day-to-day classroom culture. By incorporating these learnings into the broader classroom culture, all students can build the knowledge, confidence, and familiarity they need to use AI tools effectively.
- **AI Literacy:** Implement approaches to enhance AI literacy among all district employees, ensuring they have the necessary knowledge and skills to effectively integrate AI tools.
- **Holistic accessibility training:** Provide holistic accessibility training not only for teachers but for the entire educational community. Equip all stakeholders with the knowledge and skills to create an environment where AI tools are seamlessly integrated and used to support diverse learning needs.
- **Accessible customer support:** Choose AI tools that have prompt and accessible customer support services that all users can easily access. Avoid tools that require a single point of contact for customer service inquiries (e.g., a school or district staff member), which will impede the provision of effective, real-time support for users.
- **Ethical AI maintenance support:** Offer ongoing technical support and resources to assist teachers, school staff, and district leaders in implementing, maintaining, and decommissioning AI tools in a safe and ethical way. This support will ensure that safety and ethical considerations remain paramount throughout the entire lifecycle of AI tools.

# Considerations for Using AI Tools in K-12 Schools

## Integration and Compatibility

Will the selected AI tools integrate with the technological infrastructure in place now and into the future?

- **Seamless integration:** Choose tools that will seamlessly integrate with your school's existing technology infrastructure and learning management systems. This will ensure a smooth incorporation of AI technology into the established educational framework.
- **Device compatibility:** Verify that an AI tool works well across a variety of devices, including computers, tablets, and smartphones.
- **Maintenance and update considerations:** Consider ease of maintenance and frequency of required updates, to ensure that the needs of users (students, teachers, support staff, school leaders, and district staff) are met and that a tool remains effective and up to date throughout its use.
- **Scalability planning:** Introduce the concept of scalability planning within the integration process. Choose AI tools that not only meet current needs but also possess the flexibility to scale with a district's and/or school's growth, ensuring a future-proof and sustainable technology integration.
- **Interoperability standards:** Highlight the importance of adherence to interoperability standards (the ability of different systems, devices, applications, or products to connect and communicate in a coordinated way). Select tools that align with established standards, fostering compatibility with a wider range of educational technologies, to promote a cohesive technological ecosystem within a school.

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## Data Security and Privacy

How will selected AI tools selected access, store, or possibly disclose private student and educator information?

- **Policy familiarity:** Familiarize yourself with local and provincial privacy and security policies and regulations. This foundational step will ensure a comprehensive understanding of the regulatory landscape governing data security and privacy within the educational context.
- **Robust data security protocols:** Ensure that a selected AI tool follows robust data security protocols and adheres to privacy regulations to safeguard sensitive district employee and student information.
- **Student education on responsible use:** Ensure that students receive comprehensive education on the use of an AI tool, the potential consequences of its misuse, and the need to use the technology safely (e.g., if it's web-based, internet safety might be one such consideration).
- **Audit and compliance monitoring:** Introduce the concept of ongoing audit and compliance monitoring. Select AI tools that not only initially comply with data security and privacy standards but also offer mechanisms for continuous monitoring and adaptation, ensuring sustained adherence to evolving regulations.
- **Data ownership clarity:** Address the concept of data ownership and clarify it within the context of AI tool usage. Ensure that districts and/or schools maintain control and ownership of the data generated or processed by AI tools, fostering transparency and accountability in data handling practices.
- **Security and data breaches:** Develop clear and standardized procedures to be followed in the event of a data or security breach related to an AI tool, ensuring a swift and coordinated response to mitigate potential risks and safeguard sensitive information.

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## Teaching and Learning

How can AI tools improve, enhance, or deepen student learning?

- **Human-centric learning:** Maintain a focus on human relationships and keep human experiences central in the classroom, even with the integration of AI tools.
- **Permission documentation:** Before integrating AI applications into the classroom, ensure that teachers confirm that all students have submitted signed network access forms or locally developed permission documents, ensuring adherence to district and/or school policies and data privacy regulations. All students should be able to engage in the learning experiences available in their classrooms. In cases where students are unable to use an AI tool, an alternative teaching method should be chosen.
- **Curriculum alignment:** Align AI tools with Learning standards and instructional methods to enhance the learning experience.
- **Versatility across learning areas:** Consider whether an AI tool can be used across various learning areas, grade levels, and classroom settings to optimize its utility and make purchasing worthwhile for an entire school community.
- **Inclusivity of learning styles:** Choose AI tools that accommodate diverse learning styles and individual needs.
- **Interactive and collaborative features:** Prioritize tools that encourage student engagement through interactive and collaborative features, enhancing participation and creating dynamic learning environments.
- **Collaborative learning analytics:** Introduce the concept of collaborative learning analytics within the context of AI tools. Seek tools that leverage analytics to provide insights into collaborative learning patterns, enabling educators to refine instructional strategies based on real-time data.
- **Feedback for student growth:** Choose AI tools that provide meaningful feedback to aid student self-assessment and growth. Effective feedback mechanisms contribute to a more interactive and personalized learning process.
- **Evidence-based effectiveness:** Seek AI tools with a proven track record of effectiveness backed by research or case studies demonstrating that they deepen learning for students.
- **Expectation communication:** Ensure that teachers clearly communicate expectations to students regarding independent use of AI tools, letting them know when and how they should be using AI in the classroom or on related work at home, and when they should not be using AI tools.
- **Cost-benefit and long-term sustainability:** Evaluate an AI tool's cost in relation to its benefits, considering not only short-term advantages but also long-term sustainability. Compare the tool against other teaching and learning tools, strategies, and approaches to make informed decisions about its integration.
- **Adaptive personalization:** Consider an AI tool's capacity for adaptive personalization. Look for features that allow the tool to adapt and tailor its interactions to individual student progress, optimizing the learning experience for diverse needs and pacing.
- **Support for educators in integrating AI:** Highlight the importance of integrating professional learning opportunities for educators into the adoption of AI tools. Ensuring that teachers receive training on the effective use of these tools enhances their ability to leverage AI for improved teaching and learning outcomes.

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- **Continuous improvement feedback loop:** Establish a continuous improvement feedback loop to facilitate ongoing enhancements and refinements, maximizing an AI tool's educational value. Encourage educators and students to provide feedback on the AI tool's effectiveness, usability, and impact on learning outcomes.
- **Authentic classroom assessment practices:** Emphasize that AI serves as a supportive tool rather than a replacement for classroom processes. When incorporating AI into any aspect of classroom assessment, prioritize teacher oversight and active involvement to ensure the authenticity of assessments, alignment with the learning standards, and provision of valuable, human-centric insights into student learning experiences.
- **Indigenous perspectives and ways of knowing:** Ensure thoughtful consideration of Indigenous perspectives and ways of knowing in the integration of AI tools. Confirm that a tool aligns with and respects the rich cultural diversity and traditional knowledge systems present in B.C.
- **Student choice:** Recognize the importance of student choice, fostering an inclusive and respectful learning environment that values diverse perspectives. Avoid mandating the use of tools that may raise ethical concerns for students, or their parents and caregivers.

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## Inclusive Learning

How can AI tools be used to foster supportive learning environments for students with disabilities and diverse needs?

- **AI tools for inclusive learning:** Consider how AI can enable innovative approaches to fostering inclusive learning and creating classroom environments that embrace and value diversity. Determine how AI tools might be able to address individual and environmental barriers to education, such as physical or sensory challenges, communication challenges, and social belonging and connection.
- **Individualized goal alignment:** Consider how an AI tool can be used to support a student in achieving the educational goals outlined in their Individual Education Plan (IEP). This might involve using an AI tool to support personalized learning or provide specialized supports to empower students to reach their goals.
- **Appropriate consultation:** Before integrating AI-related support for a student with an IEP, engage in thorough consultation with the student's team. This may include conversations with parents and caregivers through the IEP meeting process, collaboration with the school-based team, engagement with professionals from district or provincial resource programs, consultation with school or youth and family counsellors, and coordination with case workers, inclusive education teachers, and any other external support service providers that may be involved.
- **Accessible design features:** Ensure that an AI tool is designed with accessibility features that address specific student needs, such as screen-reader compatibility, speech-to-text, adjustable font sizes, visual enhancements, and alternative formats for content.
- **Adaptive content consideration:** AI tools can be used to adapt content and learning experiences to support individual learning styles, preferences, and needs. Prioritize tools that offer multiple modes of content delivery, including visual, auditory, and interactive components, to accommodate differences in learning. Content should be regularly reviewed to ensure appropriateness and relevance to student needs and learning goals.
- **Assistive technology compatibility:** Ensure that AI tools are compatible with assistive technology tools by conducting thorough testing on a student's various devices. Additionally, establish effective communication with parents, caregivers, or support team members to ensure seamless integration with the student's assistive technology ecosystem.
- **Universal design principles:** Advocate for the integration of universal design principles in AI tool development. Prioritize tools that inherently consider accessibility from the initial design stages, ensuring that inclusivity is not merely an add-on but an integral aspect of their architecture.
- **Multilingual support:** Ensure that AI tools accommodate diverse language backgrounds and provide language options that cater to the linguistic diversity of the student population, recognizing the importance of multilingual support in the context of inclusion. Ensure that each AI tool selected for use has multilingual customer service support.