CASS College of Alberta School Superintendents

LEARNING GUIDE

Artificial Intelligence: Implications for Policy and Practice

In collaboration with Intellimedia & DOCEO AI and presentations by Werklund School of Education, University of Calgary, Calgary Catholic Schools, Foothills School Division, Westwind School Division , Amii and University of Alberta

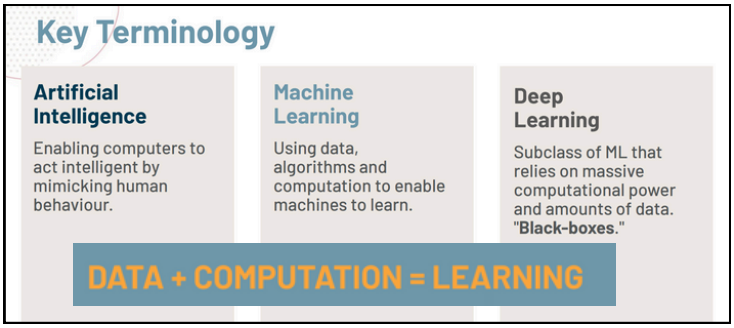
The intent of a CASS Learning Guide is to apply research, deepen understanding and enhance professional practice within the Alberta context. With a focus on optimum learning for all students, a Learning Guide provides an opportunity to grow system leader knowledge, resulting in quality school leadership and quality teaching throughout Alberta.

Summary

Artificial intelligence (AI) is being described as the most significant technological innovation since the Internet. There is little doubt education will be changed by and through AI, but how it is changed will be determined by how educational leaders, policymakers and teachers respond.
CASS collaborated with Ahmad Jawad from DOCEO AI and Intellimedia to plan a learning opportunity that shared researchers and practitioners' journey into making ethical use of machine based tools to support optimum student learning. A summary of key takeaways, based on learning from and with presenters and colleagues, inspired system education leaders to champion a positive, discerning approach to AI, emphasizing its potential to enhance education while fostering constructive dialogue among stakeholders. Leaders should encourage utilization of AI for streamlining administrative processes while considering ethical issues and providing professional learning to support educators in navigating AI's possibilities. Leaders must model continuous learning and engage with experts to inform strategic planning, and address concerns such as bias mitigation and equity. By shifting the focus from fear to curiosity, experimentation and critical inquiry, system leaders can guide the education community towards innovative, ethical AI integration, ensuring it serves the best interests of students and their futures.
A summary of the presenters messages:

Sarah Elaine Eaton, PhD keynote challenged us to keep our focus on students, their learning, and their future. She inspired and informed us as she shared her research in AI and academic integrity, the latest developments in neurotechnology and some practical advice on how to lead during this dynamic time in education. Slides available here.

Jillian Kowalchuk, M.Ed. Alberta Machine Intelligence (Amii) K-12 Education Advisor provided an overview of the Enhancing Teachers' AI literacy pilot program. Her presentation included clear definitions and examples of AI, ML (machine learning), and deep learning along with ethical considerations. Jillian then described the Learning Kits designed to enhance AI literacy. (More information and supporting resources here https://linkd.in/ggyCmeYS) Slides available here, including key terminology image.



Dr. Kirk Linton, from Calgary Catholic School District, shared how they are working with students, teachers, and parents to create guidelines and policies to support the use of generative AI in alignment with their board priorities and system values. He shared how they have been challenged to reconsider plagiarism and cheating and offered a new definition of academic integrity informed by Sarah Elaine Eaton, PhD work. While generative AI is creating a dynamic context in education, Kirk stressed relationships remain key to all that we do as educators. Slides available here.

Acknowledgements
This guide was developed by CASS, and Intellimedia drawing on content presented by speakers and delegates at the March 2024 pre conference. Professional thanks to the presenters, delegates and collaborators that made this learning opportunity possible.

This guide is provided in support of improved system education leadership capacity and under the following Creative Commons license.

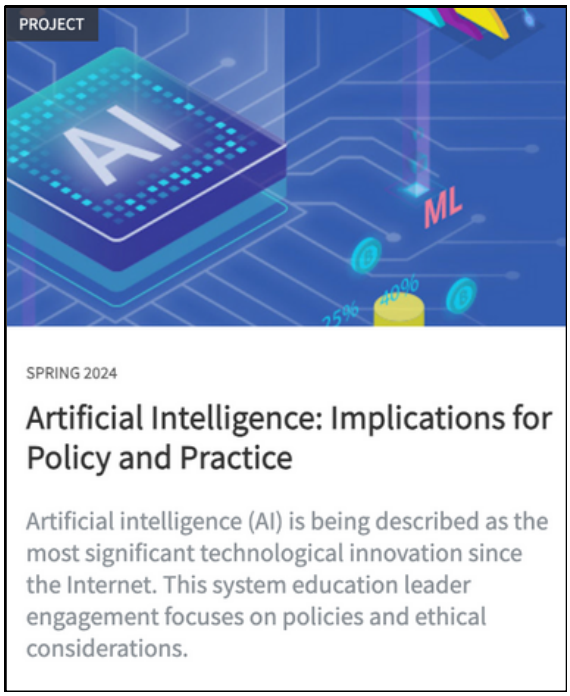
The presentation by Dr. Chris Fuzessy, from Foothills School Division and Rebecca Bultsma, from Westwind School Division highlighted the human aspects of leadership in relation to AI use in K-12 education. They challenged delegates at the CASS preconference to lean into leadership activities requiring awareness, compassion and wisdom and use AI to realize efficiencies. Perhaps AI will create a renewed sense of wonder and appreciation for all the nuances and complexities of the human experience? Slides available here, including leadership practices image.



Delegates were engaged in dialogue about **"How can system education leaders ensure policies provide an ethical frame for potential uses in ways that support inclusion, equity, decolonization and optimum learning?"** Summary of the delegate responses, generated by ChatGPT, reviewed and adapted by CASS:

System education leaders should ensure policies and guidelines align with core values such as inclusion, equity, and decolonization. Existing policies provide the first reference point for the consideration of uses and implications of AI. System leaders should promote transparency, acknowledge biases and identify and address ethical issues as the AI landscape evolves. Encouraging dialogue at all levels, from board meetings to staff PD sessions, helps reduce fears and builds knowledge and experience. Engaging diverse stakeholders, including parents and students, to ensure multiple voices is crucial in policy creation. Leaders must prioritize ongoing education on AI and its ethical use, recognizing its potential to enhance learning and realize efficiencies while addressing concerns of fairness and equity. Additionally, they should allow for experimentation and collaboration, while acknowledging both pitfalls and benefits transparently.

Delegates also discussed; **"What risks, barriers and biases must system education leaders mitigate? What are the ethical considerations related to AI in teaching and learning?"** Summary of the delegate responses, generated by ChatGPT, reviewed and adapted by CASS:
System education leaders must mitigate various risks, barriers, and biases to ensure ethical AI integration. Risks such as cognitive atrophy, privacy concerns, and societal biases impacting data input and output, must be considered and addressed within policy, guidelines, and professional learning. Barriers such as fear of change, lack of training, concerns about AI replacing human roles and the societal biases present in AI require ongoing dialogue based on research, effective practice and policy.
Additionally, leaders must address issues of access, inclusivity, and data security, while promoting a balance between AI usage and the preservation of essential skills and professional responsibilities. Ultimately, leaders need to foster a culture of informed, ethical AI usage, centered on student well-being and equitable learning opportunities.



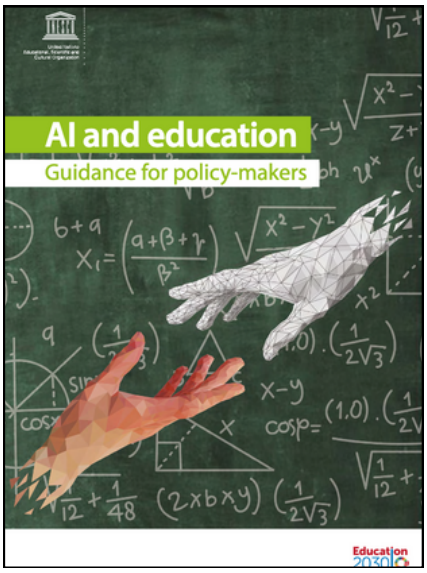
CASS Prospective is a members engagement tool where system education leaders share their practice and research on topics. This tool includes facilitated questions, and members responses, presented at learning opportunities.

Acknowledgements
This guide was developed by CASS, and Intellimedia drawing on content presented by speakers and delegates at the March 2024 pre conference. Professional thanks to the presenters, delegates and collaborators that made this learning opportunity possible.

This guide is provided in support of improved system education leadership capacity and under the following Creative Commons license.

Artificial Intelligence (AI) has the potential to address some of the biggest challenges in education today, innovate teaching and learning practices(…). However, these rapid technological developments inevitably bring multiple risks and challenges, which have so far outpaced policy debates and regulatory frameworks. System education leaders and policy-makers will need to be able to best leverage the opportunities and address the risks, presented by the growing connection between AI and education.

Adapted from AI and Education: Guidance for Policy Makers, Short Summary
UNESCO 2021
https://unesdoc.unesco.org/ark:/48223/pf0000376709



Research to Practice

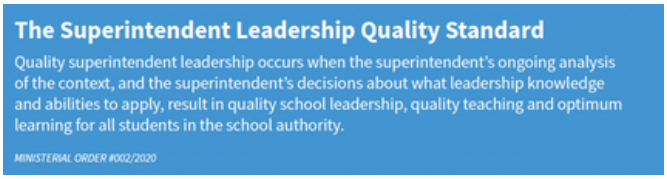
Questions for reflection and dialogue within your local context:

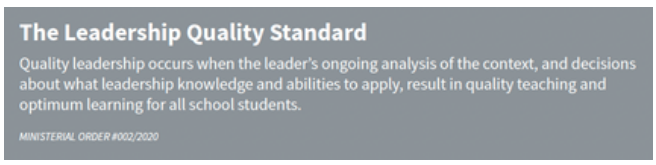
1. How can artificial intelligence be leveraged to build effective relationships and advance practice and enhance and extend access to learning for all students?
2. How can system education leaders ensure policies provide an ethical frame for potential uses in ways that support inclusion, equity, decolonization and optimum learning?
3. What risks, barriers and biases must system education leaders mitigate? What are the ethical considerations related to AI in teaching and learning?
4. How can system education leaders use AI to inform decision-making, realize efficiencies and improve operations? (e.g., business administration, strategic/education planning)



Additional Supports for System Education Leader Capacity

- Conference delegates captured dialogue on CASS prospective project. Link for member's access.
- Link to conference presentations, including AI pre-conference slide deck. Annual Learning Conference Resources 2024.
- Intellimedia and DOCEO AI Preconference website: Education Analytics site with additional AI resources added.





Acknowledgements
This guide was developed by CASS, and Intellimedia drawing on content presented by speakers and delegates at the March 2024 pre conference. Professional thanks to the presenters, delegates and collaborators that made this learning opportunity possible.

This guide is provided in support of improved system education leadership capacity and under the following Creative Commons license.