AI in Action: Augmenting Curriculum with GenAI

PROBLEM OF PRACTICE

New Brunswick educators and leaders are excited about the opportunities AI presents for learning and pedagogy. However, the question asked is "How does this connect with my curriculum?" The aim of this project is to develop a toolkit for educators to support teaching and learning advancement with AI by connecting it to curriculum outcomes and goals. In this way, AI's potential will be interlaced rather than layered onto teacher workload. AI will improve, not increase, workload.

Districts across the province face varying levels of comfort and knowledge when it comes to implementing AI. This project addresses the need for a flexible suite of resources that aligns with teachers' entry points, supports them in managing increasing workloads, and helps address learning gaps through pedagogically sound AI utilization.

New Brunswick Nouveau CANADA

District: **New Brunswick Anglophone School Districts**
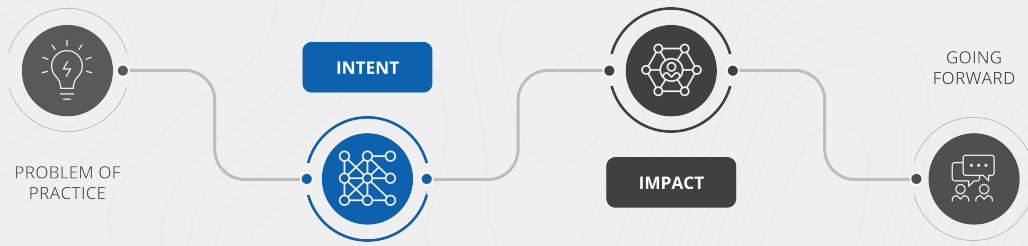
Province: New Brunswick

Date: November 2024

Lead: Sarah Rankin, Learning Specialist - Educational Technology, New Brunswick Department of Education and Early Childhood Development

Intent

Develop a comprehensive AI toolkit that provides a teacher-centered framework, including practical resources and strategies to support the sustainable and ethical adoption of AI in classrooms. A core focus is to align AI Literacy frameworks with New Brunswick Curriculum Tenets, helping educators incorporate AI in a way that is meaningful and relevant to their teaching practice.

Steps for Implementation

- Conduct Teacher Interviews: Interview teachers across different grades and AI familiarity levels to understand their challenges, needs, and current practices when using AI.

- Co-Design with Teachers: Support a cohort of 250 teachers in exploring, co-designing, and developing resources. This will include identifying relevant entry points for AI integration and addressing the diverse needs and comfort levels of educators.

- Develop AI Literacy and Curriculum Alignment Strategies: Create strategies and examples of AI utilization that help educators understand AI literacy concepts.

- Create Lesson Examples: Develop practical lesson examples and AI use cases that illustrate how AI can be effectively integrated into various subjects and grade levels, while promoting AI literacy.

- Pilot and Gather Feedback: Implement the toolkit with select teachers or districts, collect feedback, and refine the toolkit to ensure it meets the educational and ethical standards.

- Refinement: Finalize the toolkit and prepare for a broader rollout across the province, providing professional development and ongoing support for teachers as they incorporate AI literacy into their teaching.

- AI and Human Contribution: AI is used to support both the creation of the toolkit and as a key subject area. There is going to be close work with the cohort of teachers, learning about their experiences and co-developing resources that support AI literacy in the classroom.

> The integration of educational AI in Universal Design for Learning (UDL) instructional design enhances the adaptability, personalization, and accessibility of learning experiences. Using AI in ways aligned with UDL principles supports a more inclusive and effective educational environment for all learners.
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> —*Sarah Rankin, Learning Specialist - Educational Technology, New Brunswick Department of Education and Early Childhood Development*
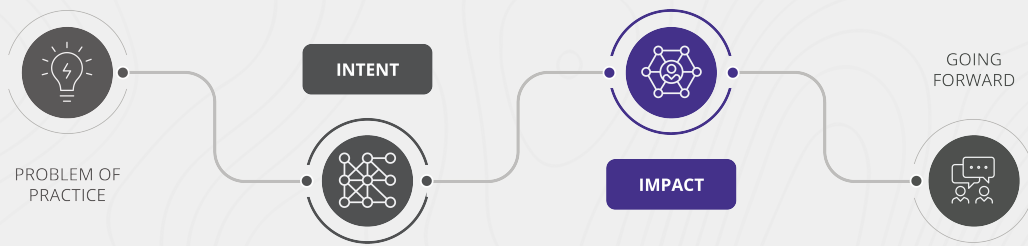
Impact

Educators and AI
Artificial intelligence is recognized as a tool that can support and enhance the work of classroom educators. AI tools should be viewed as complements to human processes. The following are recommendations for educators using artificial intelligence to engage in innovative practices while maintaining the integral role of human connec-tions in the learning process.

Leadership and AI
The successful integration of artificial intelligence into learning environments will depend on guidance from the school and district leadership. Administrators and directors are essential to determining how educators and learners will work with AI, ensuring privacy and security are prioritized, and measuring the impact of integration. These recommendations for leadership are meant to help school and district educational leaders with the adoption and monitoring of AI use in schools.

Learners and AI
Learners are frequently the end users of artificial intelligence. They are exploring its potential to create and converse. They are also increasingly encountering AI-created materials online and from their educators. Due to the variety of learners in our system, these recommendations are designed to foster AI literacy skills for all learners in K-12. The goal is to safely explore AI tools and use them for positive outcomes.

School Communities and AI
Educators, administrators, learners, and learners' families are all members of the school community. The following recommendations apply to all partners in education. Factors such as data privacy and cybersecurity are considerations that have impact beyond the classroom and school. Schools are encouraged to discuss AI tools and their use in classrooms with families to ensure transparent communication.

Professional Learning insights

Universal Design for Learning (UDL) is an integral part of curriculum, instruction, and assessment. UDL encourages providing multiple means of engagement, representation, and expression. Educators should consider how AI can be used to engage students and offer novel means of representation, and the impact AI has on expression.

The integration of AI aligns well with the principles of UDL, as it can enhance the learning experience by providing personalized and adaptive support.

Going Forward

The following is a series of guiding questions designed to encourage educators and administrators to reflect on how they can begin to embed AI into their existing goals, pedagogy, content, and assessments. Incorporating AI into educational practices can open up a world of possibilities for both educators and students. Consider the following guiding questions:

- How can AI enhance personalized learning for students with diverse needs and learning preferences?
- In what ways can AI support analysis of performance data to tailor instruction more effectively?
- How might AI be integrated into existing curricula to foster critical thinking, creativity, and problem-solving skills?
- What ethical considerations should be considered when using AI in educational settings?
- How can AI aid in automating administrative tasks to allow educators more time for direct student engagement and support?
- How might AI be leveraged to provide real-time feedback and assessment for students, promoting continuous learning and growth?
- What professional development opportunities are needed to equip educators with the skills and knowledge to effectively integrate AI into their teaching practices?
- How might we achieve a balance between student-AI interactions and peer-to-peer interactions?
- How might we apply AI to pedagogy in ways that foster collaborative learning and peer-to-peer interactions?
- How might AI tools help educators model complex concepts and processes for students?

To learn more:

Read our report, Recommended Approaches to Generative Artificial Intelligence at:
https://plhub.nbed.ca/wp-content/uploads/sites/10/2024/02/Recommended-Approaches-to-Generative-AI.pdf

Review our guidance on How AI Detectors Work: **https://bit.ly/3OStb6S**

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