

INTEGRATING AI IN EDUCATION: TRANSFORMING LEARNING — AN AI USE CASE INITIATIVE FOR CANADIAN EDUCATION

AIME: Advancing Ethical, Inclusive Al Integration in Teacher Education



When Wilfrid Laurier's Faculty of Education began this journey, there was a clear and urgent gap: despite the growing influence of Al in schools, Al literacy was not meaningfully integrated into post-secondary teacher education programs. Existing models of digital technology integration provided fragments, emphasizing technology tools, or isolated ethics discussions, but none offered a holistic, sustainable path forward for the unique needs of future teachers. Faculty recognized that embedding Al into teacher education could not be an afterthought or an isolated initiative. It had to align with broader pedagogical values: Equity and cultural responsiveness Ethical assessment practices and Critical Inquiry and Community-based Learning. Thus, the problem of practice was framed: How can Al literacy be effectively and ethically embedded into post-secondary teacher education to prepare future educators for critical, learner-centered Al integration in diverse classrooms? Rather than simply adding Al to existing methods courses or offering technical workshops, the team sought a deeper transformation: one that would build Al fluency, foster ethical reflection, and empower faculty and teacher candidates to reshape learning in a rapidly evolving educational landscape.





Organization: Faculty of Education, Wilfrid Laurier University

Province: Ontario

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Intent

The intent of this AI Use Case was grounded in a clear commitment to integrate AI literacy into teacher education in ways that aligned with values of ethical practice, cultural responsiveness, critical inquiry, and community partnership.

From the outset, the team understood that AI in education is not simply a technical challenge, it is a pedagogical and ethical challenge. Embedding AI literacy would require not only building knowledge and skills, but fostering dispositions toward critical engagement, ethical reflection, and adaptive learning design.

To support this, the team undertook a multi-pronged strategy:

- **Framework and Model Development:** A new structure, AIME, was created to bridge knowledge building (model) with system-level implementation (framework), intentionally integrating cultural responsiveness, ethical AI practice, and multiliteracies.
- Professional Learning and Faculty Engagement: A series of workshops, feedback sessions, and professional learning opportunities were held to introduce AI concepts, raise critical questions around ethics, privacy, and bias, and encourage faculty to reconsider assessment, curriculum design, and practicum supe

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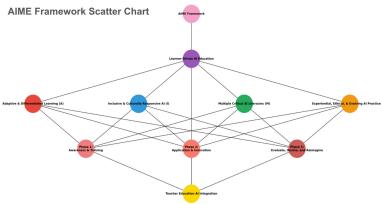
—Drs. Ewart & Mueller, 2025 Wilfrid Laurier University

to reconsider assessment, curriculum design, and practicum supervision through an Al-informed lens.

- **Student-Centered Approaches:** Teacher candidates were engaged through sessions that emphasized learner agency, culturally sustaining design, and ethical considerations in the use of AI tools for teaching, assessment, and feedback.
- **Resource and Tool Development:** The team began developing the AI Sandbox environment, custom GPTs aligned with culturally responsive pedagogy, and a proposed AIME Navigator tool for future faculty and student planning.

Throughout, AI was positioned not as a product to be adopted, but as a learning context to be shaped — one requiring pedagogical expertise, ethical reasoning, and cultural humility.





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Impact

The early implementation of AIME within Laurier's Faculty of Education has already generated significant impacts — not only at the level of courses and assessments, but also within the thinking and professional identities of faculty and teacher candidates.

One of the most profound shifts was in faculty practice and mindset. Through professional learning workshops

Adaptive & Differentiated Learning

Dr. Keri Ewart & Dr. Julie Mueller 2025

Inclusive & Culturally Responsive Al

Learner-Driven Al
Education

Experiential, Ethical, & Evolving Al Practices

Phase 3: Evaluate, Iterate, and Reimagine

Phase 1: Awareness and Professional Learning
 Phase 2: Apply & Innovate

A | M E Framework for Al Integration in Teacher Education

and collaborative design sessions, faculty moved beyond a compliance-focused lens, from seeing AI as a tool to monitor or restrict, toward recognizing it as a medium for ethical, learner-centered innovation. Several faculty members began redesigning assignments and assessments to foreground AI-supported reflection, critical thinking, and culturally responsive practice. One faculty member, for example, is piloting a fully redesigned social studies course that invites students to co-create AI-informed inquiry projects tied to real-world social issues.

At the same time, teacher candidates' engagement with AI evolved from passive exploration to intentional design. Sessions with candidates emphasized the use of AI tools through a culturally sustaining, ethical lens, encouraging students to critically evaluate AI outputs, consider biases in algorithms, and integrate AI into learning designs that honour diverse community voices. Candidates began framing AI not as a shortcut for learning, but as a catalyst for deeper inquiry, collaboration, and personal voice in education.

Perhaps most importantly, the recognition of AIME as both a model and a framework allowed the project to impact faculty and students on multiple, interwoven levels. Faculty members began to see themselves not only as implementers of AI policies, but as learners evolving their own literacies and competencies alongside their students. This collective, reflective learning stance, where both the personal and systemic layers of change are held together, is now becoming embedded in conversations about curriculum planning, practicum supervision, and professional growth.

Finally, the development of early infrastructure, such as the AI Sandbox environment and the first set of custom culturally responsive GPTs, has laid the groundwork for continued innovation and reflection. Faculty and students alike now have spaces where they can safely experiment, reflect, and refine their practice with AI in ways that align with Laurier's commitments to ethical, inclusive, and responsive teacher education.

Through the course of the Use Case development, it became clear that AIME could not be confined to a single structural purpose. Originally envisioned as a framework to guide the integration of AI into teacher education, deeper reflection and collaboration revealed that this approach was incomplete without a parallel focus on individual and organizational learning. The team recognized that a model was needed alongside the framework, a model that could define the knowledge, skills, and ethical dispositions necessary for meaningful AI integration. This dual structure positioned AIME to serve two critical roles:

- As a model, AIME supports the development of AI literacies, ethical reasoning, and culturally responsive mindsets at the level of individuals and communities.
- As a framework, AIME guides the practical, phased adoption of AI practices within courses, curriculum, fieldwork, and institutional systems.

This evolving understanding, that implementation cannot succeed without capacity building, and that capacity must be intentionally nurtured through a structured model, became a cornerstone of the Use Case's impact.

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Impact

Professional Learning Insights

Professional learning emerged as a key driver for both individual and collective change during the AIME implementation.

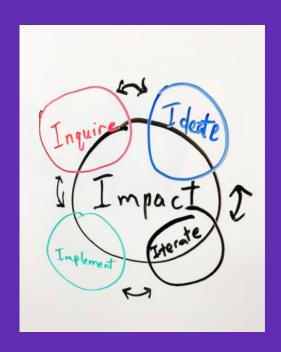
What worked particularly well was the design of workshops and learning sessions that balanced theory with practice. Rather than presenting Al as a set of tools to be mastered, sessions framed Al as a pedagogical context that demanded ethical reasoning, critical literacy, and culturally responsive design. This approach resonated strongly with faculty and teacher candidates, many of whom had previously seen Al through a purely technical or compliance-focused lens.

Faculty especially appreciated the opportunity to engage with case-based discussions, experiential design activities, and opportunities to examine Al tools critically, not only in terms of functionality, but through ethical, cultural, and accessibility perspectives. The use of iterative feedback sessions allowed faculty to surface concerns (such as bias in Al algorithms, privacy challenges, and the tension between personalization and surveillance) and co-create solutions grounded in pedagogical integrity.

Student learning sessions — particularly those that introduced AI through inquiry and design-based learning — also supported meaningful shifts. Candidates moved beyond curiosity to developing critical dispositions toward AI use in classrooms, and many began framing AI not as a threat to professional expertise, but as a tool for amplifying student voice and agency.

However, areas for improvement also emerged:

- Some faculty members expressed a need for more differentiated entry points, depending on their initial comfort with AI and digital literacies. Future professional learning will benefit from offering pathways that meet participants where they are: from introductory explorations of AI ethics to advanced design-based implementation projects.
- The timing of sessions sometimes created challenges. Faculty
 often needed more time between workshops to process concepts,
 experiment in their practice, and reflect before engaging in new
 learning cycles.
- The absence of a centralized digital resource hub (such as the envisioned AIME Navigator) meant that workshop resources and exemplars were somewhat dispersed. The creation of such a hub is now a priority for sustaining momentum and making professional learning more accessible over time.
- Overall, the professional learning approach validated the importance of situated, inquiry-based, and ethically grounded learning experiences when introducing AI into teacher education.



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Going Forward

Building on the successes and insights of the initial AIME implementation, the next phase will focus on deepening both the model and the framework within the Faculty of Education and beyond.

Key actions and goals include:

- Launch and Expand the Al Sandbox: The Al Sandbox environment will be introduced as a space for faculty and students to experiment with Al tools, lesson designs, assessment models, and culturally responsive applications in a supported, inquiry-driven context. Early prototypes have been developed and will be tested with pilot groups in Fall 2025.
- **Pilot AIME-Integrated Courses and Practicum Experiences:** Selected Bachelor of Education courses and practica will explicitly align with the AIME pillars and phases. Faculty and students will be encouraged to document and reflect on their use of AI, applying the model for knowledge development and the framework for structured application.
- **Develop and Launch the AIME Navigator Tool:** The AIME Navigator will serve as a centralized digital resource that allows faculty and students to map activities, track growth across the AIME pillars, access curated AI literacy resources, and plan ethically grounded AI integration into their teaching practice.
- Expand Professional Learning and Micro-credentialing: New professional learning series will be developed, offering tiered opportunities from foundational AI literacy to advanced design and assessment strategies. Micro-credentials focused on Ethical AI Use, Culturally Responsive AI Design, and AI-Supported Formative Assessment are under development.
- Strengthen National and International Dissemination: The team will present AIME outcomes and evolving practices at CSSE, SITE, and other national/international conferences. Knowledge mobilization efforts will extend to academic publications, webinars, and collaborations with other Faculties of Education interested in adopting a similar dual model-framework approach.
- **Continue Building Community Voice and Leadership:** Indigenous community leaders, local school boards, and equity-seeking groups will continue to inform AIME's growth, ensuring the work remains grounded in relational accountability, anti-oppressive practice, and cultural sustainability.

Resources

Framework Analysis Informing AIME Framework

- CATE Cultural Adaptivity & Human-Centered Al
- EASE Ethics, Adoption, Suitability, Explainability
- SECTIONS Media Use in Education
- TPACK Tech-Pedagogy-Content Integration
- SAMR Technology Integration Continuum
- <u>Liberatory Design Thinking Model Equity-Focused</u>
 <u>Participatory Design</u>

Student Impact Interview Use Case - Video

<u>Designing AIME: Ethical AI in Teacher Education - Podcast</u>

Faculty and Student Presentations

- Al in Education Faculty
- Al Revolution in Education for Teacher Candidate
- Al in Education- Workshop 2
- SITE Conference Harmony Al
- AIME Introduction Divisional Council
- AIME Framework Faculty Feedback Session
- Curating Course Resources with Al
- Customizing Your Al
- CSSE National Conference- AIME

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