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AI, Reconciliation, and Settler Teachers' Mediated Morality

Abstract:

This case study addresses the integration of generative AI (GenAI) within educational practices, particularly in the context of reconciliation and decolonization of curriculum in Canadian schools. The case focuses on a teacher using ChatGPT to generate Cree star stories for a grade 4/5 science unit, aiming to fulfil the Truth and Reconciliation Commission's (TRC) educational calls to action. The study explores the ethical implications of using AI to include diverse knowledge traditions, questioning the potential harms and benefits, and highlighting the challenges of ensuring AI aligns with Indigenous epistemologies. Normative ethical theories and the TechnoEthical Framework for Teachers (TEFT) are employed to examine how AI technologies shape and mediate teacher practices and pedagogical responsibilities.

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Introduction

In school jurisdictions across Canada, teachers and educational leaders continue to explore what it means to decolonize pedagogical practice and curriculum. This includes adherence to provincially mandated professional standards, such as in Alberta, where teachers are responsible to "develop and apply foundational knowledge about First Nations, Métis and Inuit" and support "the learning experiences of all students by using resources that accurately reflect and demonstrate the strength First Nations, Métis and Inuit" (Alberta Education, *TQS* 5). Situated in the context of the Truth and Reconciliation Commission's (TRC) (Government of Canada, *TRC*) calls to action, these standards intend to address enduring systemic oppressions from residential schools and the continued marginalization of Indigenous populations. The TRC calls to action include, in part, "building student capacity for intercultural understanding, empathy, and mutual respect" and "mak[ing] age-appropriate curriculum on residential schools, Treaties, and Aboriginal peoples' historical and contemporary contributions to Canada a mandatory education requirement for Kindergarten to Grade Twelve students" (Government of Canada, *Education for Reconciliation* 7).

Case Description

To attend to this professional responsibility, a grade 4/5 teacher in Alberta makes a concerted effort to include stories, resources, and materials from the Plains Cree peoples of Treaty 6 territories in their science lessons on the earth, the moon, the sun and the stars. Here, the learning outcome, "First Nations, Métis and Inuit ways of living are connected to many astrological phenomena, such as the association of seasons to ceremony" (Alberta Education, *Science Curriculum* 56), appears especially relevant. Without an easy connection to Indigenous communities in the area, the teacher turns instead to ChatGPT. They prompt it for help understanding and crafting star stories[1] so they, along with their students, can explore examples of how changing astrological phenomena signal hunting seasons or when to plant and harvest crops (see OpenAI in references for an example teacher prompt). Sharing and discussing a ChatGPT-generated star story with their students, the teacher felt they offered different ways of knowing and relating to the environment for the students. However, when later sharing the lesson plan with a colleague, the teacher is met with skepticism and critique regarding the ethics of using ChatGPT to author Cree Star stories.

Questions

1. What potential harms arise when a teacher turns to generative AI (GenAI) to include "diverse" knowledge traditions in the classroom?

2. What ways of knowing and cultural practices appear to be celebrated in interaction with GenAI agents, and what ways of knowing and practices may be obfuscated?

3. How might teachers become aware of the values and knowledge practices promoted by GenAI agents?

4. How do the presence of GenAI agents and their interjections into the classroom environment make possible or inhibit reconciliation work and the decolonization of pedagogical practice?

[1] Indigenous stories provide a glimpse of the knowledge held by Indigenous peoples prior to contact. Through narratives centered and told about constellations, star stories articulate Indigenous ways of knowing, Indigenous science, values, morals, and history. This case study refers to Cree Star Stories specifically because, situated in Alberta, the Cree peoples were one of many nations who have lived, learned and thrived long before Alberta's public education system was implemented (Buck).

5. How might a teacher respond to GenAI's cultural and political implications, whether these tools are sanctioned in the classroom or not?

Exercises

1. Imagine you are a First Nations, Métis and Inuit (FNMI) lead teacher in a school. The teachers in the case study above have come to you with this issue, looking for guidance about how to best proceed now and in future instances of navigating GenAI and Indigenous knowledges. Write a simple handout on "GenAI and Indigenous Knowledge" to equip teachers with necessary information on using GenAI appropriately, any cautions, and a list of best practices.

2. Consider how your suggested best practices transfer across various school contexts and pedagogical needs. For example, how do the best practices and cautions you offer apply in a high school where students may be prompting ChatGPT themselves? How do they apply in an elementary school or with students under 13? Does the use of ChatGPT for Indigenous knowledge change based on the demographics of the students you teach? Why or why not?

Applying the Principles of AI Ethics

Using the chart of AI Ethics Principles below (Andes et al.), identify which principles are relevant in this case. Are there additional ethical principles that should be mobilized when considering the use of AI with Indigenous peoples or non-Eurowestern knowledge traditions (e.g., reciprocity, humility, ceremony (Wilson)) in schools? If so, please add these to the table. If any of the principles conflict, which seems to be the weightiest and so the one(s) that should override other principles?

Principle	**Application (If Any)**
Beneficence (Help others)	
Nonmaleficence (Do not harm others)	
Autonomy (Do not do things to another without that person's informed consent)	
Justice (Do not discriminate unfairly; distribute resources fairly)	
Explicability (Ensure the parties involved understand the way the technology being used works)	
Accountability (Assign and accept responsibility)	

Normative Theories

The normative theories often applied when approaching ethical questions about AI (e.g., utilitarianism, deontology, virtue ethics) are derived from Eurowestern philosophical traditions (Vallor). This case study offers an opportunity to recognize that these normative theories may not always be applicable or must at least be assessed based on what ethical relations may be obfuscated by adhering singularly to Eurowestern ethical lineages. As you reflect on this case, research alternative ethical theories responsive to the worldviews and knowledge systems of local Indigenous communities (e.g., relational ethics, Indigenous land ethics, "two-eyed seeing" (Bartlett et al., 331), Ubuntu philosophy). Apply one or more of these alternative ethical approaches to the case study. Does the alternative ethical approach elucidate issues that might be overlooked by Eurowestern normative theories?

Expert Analysis (Read After Doing Your Own Analysis!)

How does the emergence of large language models (LLMs) like ChatGPT – where a significant proportion of their training data is in English and sourced from the internet, and where Western, Educated, Industrialized, Rich, and Democratic (WEIRD) populations are overrepresented – complicate the work of teachers who are endeavouring to foster intercultural respect and diversity of worldviews? Lewis et al. write about the displacement of knowledge throughout the proliferation of AI, highlighting that "particular world views arise from particular territories, and how the push and pull of all the forces at work in that territory determine what is most salient for existing in balance with it" (3). Whereas Indigenous epistemologies understand knowledge as primarily relational, contextual, place-based and situated with/in space, AI seems to be fundamentally incommensurate with non-white ways of knowing (Cave and Dihal). Here, AI and Indigenous epistemologies seem at odds, as the primacy of WEIRD training datasets abstract and generalize knowledge and divorce it from place, valuing "abstraction or generalization" as forms of intellectual engagement (3). How, then, might the deployment of GenAI in educational contexts affect the important work of settler teachers exploring and interrogating their pedagogical practices? Integral to these questions is "the alignment problem" or the challenge of ensuring AI systems act in ways consistent with human values, ethics, and societal norms (Christian). We must seek to interrogate the knowledge reiterated and refabricated by AI agents, as well as the cultural values, protocols, and modes of being-thinking-doing that come to the fore when interacting with these AI agents.

To evaluate the use of GenAI through utilitarian, deontological or virtue ethics would accomplish much of the work being done at the district level regarding which educational technologies are permitted in schools. Technologies are regularly vetted before teacher adoption and even before school use to ensure they comply with local policies and legislation at the provincial, state, and federal levels. Legislation like Alberta's Freedom of Information and Protection of Privacy (FOIP) and Canada's Personal Information Protection and Data Privacy Act (PIPEDA) establish boundaries concerning the gathering, aggregation and dissemination of user data. School districts reference these laws, as well as their internal policies regarding digital citizenship, to determine whether a given technology can harm students or teachers, can be misused in a manner that jeopardizes an individual's rights, or damages the integrity of the work being done within schools.

Regarding the ethics of GenAI use in schools, a great deal of attention has been directed toward academic issues surrounding students misusing GenAI (e.g. plagiarism) and the offloading of professional responsibilities for teachers. Teachers endeavour to guard the integrity of their existing assessment practices even while students have access to a powerful, instantaneous and polished voice. Similarly, as teachers take up GenAI themselves for lesson planning, designing assessments, drafting communications to students and parents, writing report card comments or more, their actions call into question what professional responsibilities can reasonably be offloaded and to what extent technological aids are appropriate to support their duties.

We acknowledge that these important questions must be addressed when drafting guidelines for GenAI use in the classroom. However, they do not go far enough when considering the implications of GenAI as a ubiquitous, hypernudging, political co-actor that mediates the ways its users may think, act and dwell in the world. Recognizing that we extend and amplify our cognitive and mental capacities through GenAI, we also need to consider how these technologies may reshape our modes of being, thinking, and doing. As mediators of how humans act, perceive and interpret their world, technologies are integral to "the ways in which humans do ethics" (Verbeek, 44). How, then, do we get a grip on the moral significance of GenAI, to peer into the depths of its inscrutability, to understand how it mediates not only teacher behaviours but also their ontological positioning within the world and society? When we act, think, and perceive the world through a technological milieu permeated by GenAI, what sorts of human beings are we becoming?

To explore these questions, we employ Adams and Groten's TechnoEthical Framework for Teachers (TEFT). Adams and Groten show how technology is not only a tool to be used for good or for ill. It is also a powerful sociomaterial actor shaping human perceptions and actions and co-constituting who human beings are. Thus, it is insufficient to address GenAI solely through regulating the human use of this technology; such an (instrumental technoethical) approach fails to recognize how GenAI, fashioned within a political economy of what knowledge is and what it means to know, is always doing the work of shaping and reforming our actions, ways of knowing, and modes of being in the world.

But before delving into the technoethical implications of GenAI, let's consider a much simpler technology for a moment – a student's desk and chair whose scripts and mediated modes of being are more easily inferred through its material positionality and the relationship our bodies hold with it. Chairs can be understood as inert, value-neutral tools, as is often the case with other educational technologies.[2] This instrumental view of technoethics is primarily concerned with the rights of individuals and how technology might be misused to harm another. In this instance, we can say that students have a right to the required resources they need to learn. It would be unethical for most students to be given a desk upon which to write and lay their things but to refuse to give a desk to others. Similarly, it would be a disservice to give a student a desk that does not support their body sufficiently, for example, a desk that is too small or broken. This would create an inequality in terms of access to education. Teachers work throughout the day in minuscule actions to ensure that the desks are being used properly to protect students' right to education by creating rules such as, "do not graffiti the desks, no carving your names in them, keep your desktops clear, do not throw desks at one another." These reminders are so simple, yet they reflect the proper conduct surrounding the desk to ensure the classroom space is one wherein all students can learn.

What sort of humans are we when we act, think, and interact with each other in a classroom environment conditioned by the desk? What sort of humans are we becoming? Here, we begin to attend to how the desk is a political artifact, created within a society and brought into mattering within the political values articulated by that society. Desks invite a student to: sit in the seat, lay classroom materials on its surface, use it to support writing in a notebook or keyboarding on a laptop, etc. Desks arranged in rows invite children to: become students and behave as individual learners facing the front of the classroom. Desks invite a particular set of

[2] In *Research is Ceremony* (2018), Wilson turns to the chair as a means of elucidating how Indigenous ontologies and epistemologies emphasizes the "relationship one has with the truth" (p.73). He notes, "In the Cree language, the literal translation into English for a chair would be *'the thing you sit on'*, and the literal translation for pen would be *'something you write with"* (2018, emphasis in original). These examples highlight the relationality between subjects and objects in Cree onto-epistemologies, which resonates strongly with sociomaterial and existential technoethical frameworks we present in this analysis.

behaviours that are deemed appropriate for the learner as the 'not-yet-but-becoming-citizen,' and together with the comprehensive ecology of technologies necessitated for being a 'student' – pencils, paper, textbooks, binder, desk, classroom, walls, clock – and their peers and teacher, a particular power structure is articulated wherein the teacher's power is amplified as the knower, and the child's power is demoted to the learner.

Within this media (technological) ecology, what ways of knowing are amplified? What ways of understanding relationality and positionality within the world are amplified by the desk or by the rows of desks in a classroom? Here, it is helpful to consider what worldviews are being reinscribed by the technologies, and, consequently, what worldviews are being obsolesced by what the technology requires of humans as we adopt them into our ways of being. The desk invites the body to sit and write, to watch and listen, thereby confining students and conscribing them to a political structure that values writing, receiving and conceptualizing as primary objectives of learning. What would learning look like if there were no desks or associated papers, pencils, walls, or artificial lighting? What sort of humans would we be becoming if our learning was not preconditioned by the affordances and delimitations of our technological milieu, mediating what counts as knowledge and ethical action?

The desk is metonymic for Eurowestern knowledge. It separates knowledge from place, giving primacy to the abstraction and conceptualization of facts as represented, disseminated, held, and owned. The desk cleaves learning from relationality. For a teacher to adopt a pedagogical practice of place – of immersing students in their environment and specific contexts as a means of achieving curricular objectives and growth – they must be willing to break the political economy of the desk, the pencil, the paper, and the associated ethics of what sort of humans we are meant to become when we use them. Within the context of decolonization and calls such as Canada's Truth and Reconciliation Commission's recommendations, a new ethical imperative is now placed upon teachers to interrogate their classroom technologies and ask: How is this technology serving or hindering my attempts to support "the learning experiences of all students by using resources that accurately reflect and demonstrate the strength First Nations, Métis and Inuit" (Alberta Education, *TQS* 5).

From the seemingly mundane artifact of the desk, we now return to GenAI to realize the ethical stakes of such a presence within classrooms, particularly for marginalized voices. Whereas it is relatively easy to understand the sociomateriality and mediatory capacity of a desk, GenAI works in far more complex and subtle ways. We embody the desk, incorporating it into our musculoskeletal habits to become students. We similarly embody GenAI, though the points of connection reside within the digital/neural/psychological/relational dimensions of our being, rather than a tangible concrete extension. Further, whereas the essence of a desk seems easier to apprehend, to conceptualize how we relate to it and hold it in our understanding, GenAI is elusive by its very design. As a technology intended to 'think' on its own; its black box hides the algorithmic processes of its own becoming, resisting supervision and delimiting our abilities to "interview" (Adams and Thompson 17) its scripts or glimpse the processes of its knowing. Put simply, we do not know why it knows what it knows or why it suggests what it does beyond the limitations of our own presumptions based on the data we offer it.

What sorts of teachers and students are we becoming in the midst of classroom ecologies conditioned by GenAI? Can GenAI to be a site of meaningful decolonization, given the neo-colonial patterns of educational technologies (Adam) and the seemingly unavoidable 'whiteness' of artificial intelligence spaces (Cave and Dihal)? GenAI, as currently given in large-scale language models, skews towards a particular conceptualization of knowledge divorced from place and from knowledge protocols of how we come to know. Further, it is iterative of the data it relies upon for its learning, orienting its processes towards the quantifiable, empirical datasets that 'count' – understood as data that is already overrepresented within our educational and digital spaces. GenAI-generated knowledge is computational and probabilistic, rather than relational and contextual. And given that humans and technology "co-constitute each other from the very start" (Introna, par. 5), this computational knowledge-learner arrangement becomes an echo chamber of feedback, resounding and amplifying the hegemonic primacy of Eurowestern knowledge structures.

The possibility of an ethical AI in the classroom seems entirely contingent on the teacher's, students', and families' abilities to understand GenAI, as well as other technologies. To establish guidelines of use, particularly amidst vulnerable ways of being, there seems to be only one sufficient dictum for teachers: to use technology mindfully. There may be a place for GenAI to contribute to the "refusal of Indigenous absence and erasure through active presencing of multiplicity of knowledges" (Vizenor, 1). Such a move would require a GenAI to

be conceptualized differently, in a rearrangement of power arrangements and in direct interrogation of the AI's role in reinscribing white, Eurowestern, hegemonic ideals of data-that-counts. This interrogative process must be continuous and iterative however (Bryant and Knight). Teachers who seek to use GenAI must be cognizant of their ongoing responsibility to critically inquire how and why they use this technology, whether the technology is adequately rooted in place to provide authoritative, local resources and how the presence of GenAI in the room changes the protocols and ethics of how one comes to learn.

In the case study, we are immediately concerned with not only the truths of the Star stories generated by ChatGPT, but also the role GenAI plays as an extractive, mediating and sometimes divisive interlocutor between the public schools and Indigenous peoples. Perhaps the teacher's choice to turn to ChatGPT might be expressed as convenience. But we note how this pedagogical gesture not only denies the presence of Indigenous knowledges – it settles for perfunctory, token, or even superficial connections to Indigenous knowledges. It is inclusive only in so far as Indigenous knowledges can be represented and accessed through the same processes as dominant forms of knowing. Yet, if the intent of this curricular outcome and of the TRC's recommendations concerning education and Indigenous knowledges is to create worthwhile opportunities for students to connect to alternative ways of knowing, the convenience and narrow scope of what counts as knowledge does a disservice to any outcome that would necessitate the use of GenAI in this way. It is up to the teacher to use technologies mindfully and to be attentive to the imminent origins, structures and delimitations of what counts as knowledge when they or their students take up GenAI in their learning.

GenAI, as a relational species within our technological and pedagogical milieu is impermanent in its adaptability, voracious in how it devours the world into categories of meaning and being, and clandestine in how it exhales these categories in return to influence our modes of being. Yet we are all already intertwined and interdependent with it. Provided as teachers, we can retain an attuned relationship with the subtle shifts in ways of knowing and acting that GenAI suggests, we can consequently retain a sense of moral agency in our pedagogy, in our support and amplification of diverse ways of knowing, and in our students' mediated learning experiences.

Reflection

Did you touch on everything this expert analysis identifies in your own analysis of the case? Did you think of anything that could be added to the analysis? How might your reading of ethical theories change after understanding TEFT as a technology-foregrounded means of doing ethics in education? How might TEFT be mobilized alongside local Indigenous knowledges and AI ethics?

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