Peer Beyond Graduate Research Journal

Peer Beyond Graduate Research Conference | Volume 2, Issue 1| Pages 48-49

Leading Sustainable AI Governance: A Framework for Institutional Resilience and Equitable AI Adoption in Canadian Higher Education

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Abstract: This qualitative multi-case study investigates how Canadian universities build institutional capacity for sustainable and ethical artificial intelligence (AI) governance in teaching, learning, and student support. Despite rapid AI integration, significant gaps persist in governance structures and leadership practices. Grounded in organizational learning theory and distributed leadership frameworks, this research examines how academic leaders conceptualize AI's strategic role, design governance structures fostering institutional resilience, and develop professional learning for responsible AI use.

Problem and Context

Higher education institutions face unprecedented challenges in governing artificial intelligence adoption. In Canada, policy fragmentation is evident, with universities often delegating AI-related decisions to individual instructors without comprehensive institutional frameworks (Marcel & Kang, 2024). A recent survey revealed that 56% of Canadian postsecondary personnel remain unsure whether their institutions have implemented broad AI policies, exposing a critical gap between formal policy development and campus-wide understanding (Jiang et al., 2025). This governance crisis demands systematic investigation of how institutions can build sustainable, adaptive capacity for ethical AI integration.

Research Gap and Theoretical Framework

Recent comprehensive reviews reveal significant gaps in ethical, methodological, and contextual considerations in AI higher education research, alongside limited attention to governance structures and institutional leadership (Bond et al., 2024). While studies of U.S. universities demonstrate that effective AI governance requires multi-unit coordination and role-specific guidance (Wu et al., 2024), Canadian institutions face unique challenges requiring contextually responsive frameworks.

This study integrates two theoretical perspectives. First, organizational learning theory, particularly Crossan et al.'s (1999) 4I Framework (intuiting, interpreting, integrating, institutionalizing), provides a lens for understanding how universities develop shared knowledge and adaptive capacity for emerging technology governance. Second, distributed leadership frameworks (Spillane, 2006) illuminate how AI governance responsibilities are shared across institutional levels and how collaborative leadership practices enable context-responsive, sustainable decision-making.

Research Questions and Methodology

This study investigates four interconnected questions: (1) How do academic leaders conceptualize AI's strategic role in building institutional resilience while advancing equitable teaching and learning? (2) What governance structures ensure ethical, equitable, and sustainable AI implementation? (3) How do universities design professional learning that builds educator capacity for responsible AI use? (4) What institutional factors enable or constrain resilient AI governance frameworks?

This qualitative multi-case study examines three to five Canadian universities representing diverse institutional types. Data collection includes document analysis of institutional AI policies, semi-structured interviews with senior administrators and faculty leaders, and focus groups with educators implementing AI. Data analysis employs thematic analysis (Braun & Clarke, 2006) with cross-case comparison to identify patterns shaping resilient AI governance.

Expected Contributions

This research will develop a comprehensive framework for institutional resilience in AI governance, centering Canadian contexts. It advances theoretical understanding of organizational learning and distributed leadership in emerging technology governance while generating evidence-based recommendations for policy development and professional learning. The study will equip Canadian universities with actionable strategies to navigate digital transformation while strengthening innovation, protecting integrity, and advancing digital inclusion.

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