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EXPLORING CLOUD TECHNOLOGY ADOPTION IN HIGHER EDUCATION: IMPLICATIONS FOR AI-ENABLED TEACHING AND LEARNING READINESS [ABSTRACT]

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ABSTRACT

Aim/Purpose	This study examines faculty and administrator perceptions and attitudes toward cloud technology adoption in higher education, emphasizing institutional readiness for AI-enabled teaching and learning.
Background	While digital transformation drives institutional innovation, cloud-based systems present opportunities and challenges for instructional practices, pedagogy, and governance. This study explores faculty and administrative perspectives at a large university in California to understand factors shaping AI-ready educational environments.
Methodology	Data were collected through an online survey distributed to faculty and administrative staff. Responses were analyzed using qualitative thematic analysis to identify recurring perceptions, perceived benefits, concerns, and organizational support for cloud adoption.
Contribution	The study offers insights into leadership, governance, and workforce readiness drivers that influence sustainable cloud adoption and establish a foundation for AI-supported teaching and learning innovations in higher education.

The full paper was published as the following and is being presented at this conference:

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Findings	Four major themes emerged: (1) perceived institutional and pedagogical benefits, (2) cost-effectiveness and resource optimization, (3) privacy and data security concerns, and (4) leadership and readiness factors influencing adoption. Findings indicate that cloud technology enhances collaboration, accessibility, and operational efficiency, supporting flexible and innovative learning environments.
Recommendations for Practitioners	Institutions should prioritize strategic leadership, transparent governance, and targeted faculty training to enhance cloud adoption and build institutional readiness for AI-enabled teaching and learning.
Recommendations for Researchers	Future studies should examine cloud readiness across diverse institutions and assess how cloud adoption facilitates subsequent AI-supported educational innovations.
Impact on Society	Improved cloud readiness can expand access to innovative learning tools, increase institutional efficiency, and accelerate equitable and scalable adoption of AI-enabled educational technologies.
Future Research	Future studies should explore longitudinal relationships between cloud adoption maturity, faculty digital skill development, and successful integration of AI-supported teaching and learning environments.
Keywords	cloud technology, higher education, teaching and learning, data governance, AI readiness, qualitative study

AUTHORS

Parna Biswas, PhD, is a Senior IT and Digital Transformation Consultant and Independent Researcher with over 18 years of experience in data engineering, analytics, enterprise systems development, and organizational technology transformation across public and private sector institutions. She has led cross-functional initiatives delivering scalable data architectures, enterprise reporting platforms, and optimized data warehouse solutions that support strategic decision-making and operational efficiency. In addition to her industry leadership, she has academic teaching experience in information technology, contributing to student learning and curriculum engagement in higher education.

She earned her PhD in Information Technology from the University of the Cumberlands, USA. Her research focuses on cloud technology adoption in higher education, institutional digital readiness, technology acceptance models, data governance, AI-enabled educational innovation, learning analytics, and emerging educational technologies that support data-informed institutional transformation.

Pamela Roy is an Academic Professional, Educational Development Specialist, and Independent Researcher with over 25 years of experience in secondary and postsecondary education. She has taught within formal institutional settings and currently works independently, providing academic mentorship and structured learning support across interdisciplinary areas, including quantitative reasoning, language studies, management, and social sciences. Her work emphasizes student performance enhancement, the development of critical thinking, academic writing proficiency, and the use of individualized learning strategies.

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