



Proceedings of the Informing Science + Information Technology Education Conference

An Official Publication
of the Informing Science Institute
InformingScience.org

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July 26 – 31, 2026

EXPLORING THE FUTURE METAVERSE: RESEARCH MODELS FOR USER EXPERIENCE, BUSINESS READINESS, AND NATIONAL COMPETITIVENESS [ABSTRACT]

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ABSTRACT

Aim/Purpose	This paper develops a comprehensive framework for understanding metaverse adoption across three levels: individual users, businesses, and countries.
Background	The metaverse is a complex sociotechnical system, yet current research often views it through isolated micro or macro lenses. There is a need for an integrated model that bridges the gap between user experience, organizational strategy, and national competitiveness.
Methodology	A grounded theory-informed qualitative analysis by grounded theory was employed, analyzing 141 records (58 academic studies and 83 grey literature documents) from Google Scholar and LinkedIn. The data was analyzed using open, axial, and selective coding to identify key adoption factors.
Contribution	The study presents three conceptual models: the User Experience Model (focusing on accessibility, flexibility, and gamification), the Business Readiness Model (emphasizing digital twins and resource allocation), and the National Competitiveness Model (addressing policy and infrastructure).
Findings	Three conceptual models emerged from the literature review to understand the metaverse, highlighting how immersive interconnectedness relies on infrastruc-

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

Asadi, A. R., & Ghasemi, S.. (2026). Exploring the future metaverse: Research models for user experience, business readiness, and national competitiveness. *Issues in Informing Science and Information Technology*, 23, Article 5. Informing Science Institute. <https://doi.org/10.28945/5841>

Abstract published in *Proceedings of InSITE 2026: Informing Science and Information Technology Education Conference*. San Jose, CA. USA. Article 9. Informing Science Institute. <https://doi.org/10.28945/5766>

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	ture. Moreover, these findings highlighted the necessity for multidisciplinary research in IT to craft an innovative and competitive strategy for a future enriched by the metaverse.
Recommendations for Practitioners	The paper presents three practical artifacts: a heuristic evaluation rubric for UX designers, a business-readiness checklist for strategists, and a national competitiveness assessment for policymakers.
Recommendations for Researchers	These conceptual models and research artifacts guide researchers to explore the metaverse as a future paradigm of information technology.
Impact on Society	The findings highlight the dimensions that can contribute to the spatial divide. It identifies sociocultural factors such as virtual citizenship and cultural export, and highlights potential shifts in geopolitical landscapes and national identity, as well as their impact on the economy.
Future Research	Future work involves validating research artifacts with experts through both qualitative and quantitative methods.
Keywords	metaverse, user experience, virtual environments, virtual reality, augmented reality, usability, e-readiness, transformative computing, e-governance

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Amir Reza Asadi is a Graduate Research Assistant at the University of Cincinnati and a PhD candidate in the Information Technology program. With nearly a decade of industry experience, he helped startups use emerging technologies to translate cutting-edge research into applied technological innovations. His main area of interest is human-information interaction for emerging technologies, including AI, and AR/VR. He is interested in design methods for new technologies. Currently, he is researching Social Digital Twin and Agentic AI. He has served as a reviewer for prominent HCI conferences.



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