

Immersive technology adoption in cultural consumption: Integrating technological and psychological perspectives

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Abstract

Emerging technologies are fundamentally transforming cultural heritage landscapes by accelerating the digital transition of art and cultural organizations throughout the world (Massi et al., 2020). While the rapid diffusion of immersive technologies including VR, AR and XR has fostered the development of novel cultural products and experience-centric business models in the cultural and creative sectors (Bacete et al., 2024), scholarly inquiry on this transformation remains fragmented and imbalanced (Colamatteo et al., 2024), with great concentration on technology-enabled creativity and production processes from the supply side dynamics meanwhile insufficient attention being paid to technology adoption of cultural consumers and their experiential engagement from the demand side.

This proposal is focused on immersive exhibitions, which are one of the most plausible cultural product innovations by cultural organizations in their digital transition processes. Different from traditional arts exhibitions prioritizing authenticity, aesthetic contemplation and object-centered appreciation, novel immersive exhibitions emphasize the visitor's experience, interactive engagement, multisensory stimulation, and emotional involvement (Tcha-Tokey et al., 2018; Li et al., 2023). This fundamental shift calls for a renewed understanding of the determinants influencing the acceptance of digital exhibition formats and technologically mediated cultural

experiences, which differ significantly from those associated with traditional exhibition models.

To address this gap, this study aims to identify the key determinants of influencing immersive technology adoption by consumers in the art and cultural sectors. Drawing on both technological and psychological perspectives in the existing literature (Bacete et al., 2023), this study places particular emphasis on examining the respective effectiveness of technical system quality (from technological perspective) and creative content (from psychological perspective) in shaping immersive technology acceptance. Specifically, technical system quality refers to attributes such as functionality, interactivity, usability and system reliability (Petter et al., 2008; Jeyaraj, 2020), whereas creative content quality encompasses aesthetic design, narrative richness, and emotional engagement (Yang, 2023; Li et al., 2024). This analytical framework is further integrated into the technology adoption model (i.e. UTAUT model) to systematically identify the effects and influencing pathways through which technical and psychological factors influence users' acceptance and adoption of immersive exhibitions (Li et al., 2025).

The empirical analysis is conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM), based on data collected through an ongoing structured questionnaire survey administered across several cultural centers in the city of Valencia since December 2025. The expected results are to identify and validate a set of technical, psychological and social determinants that influence immersive technology adoption in the field of cultural consumption and experience. These results will generate significant scholar and managerial implications.

This research is supported by the Grant CIGE/2024/143, Generalitat Valenciana (2025-2027)

References

Bacete, G., Ghirardi, S., Li, C., Glauser, C., & Schmid, L. (2024). Bridging technological and cultural realms: A holistic framework for analysing user perspective in immersive experiences. En D. Spallazzo & M. Ceconello (Ed.), *Designing Immersion in Art and Culture—Insights from the Artcast4D project* (1st edition). Franco Angeli.

Bacete, G., Li, C., Díaz Solano, P., & Álvarez Teresa, F. (2023). A proposal for an integrated framework for immersive technologies. En J. L. Hervas-Oliver, R. Boix-Domènech, S. Estelles-Miguel, C. Boronat-Moll, & F. Álvarez Teresa (Ed.), *Proceedings of 6th International Conference on Rethinking Clusters 2023* (p. 58-68).

Colamatteo, A., Sansone, M., Pagnanelli, M. A., & Bruni, R. (2024). The role of immersive technologies in cultural contexts: Future challenges from the literature. *Italian Journal of Marketing*, 2024(1), 113-142. <https://doi.org/10.1007/s43039-024-00089-4>

Jeyaraj, A. (2020). DeLone & McLean models of information system success: Critical meta-review and research directions. *International Journal of Information Management*, 54, 102139.

Li, J.; Wider, W.; Ochiai, Y, & Fauzi, M. A. (2023), A bibliometric analysis of immersive technology in museum exhibitions: exploring user experience. *Front. Virtual Real.* 4, 240562. doi: 10.3389/frvir.2023.1240562

Li, N., Li, L., Chen, X., & Wong, I. A. (2024). Digital destination storytelling: Narrative persuasion effects induced by story satisfaction in a VR context. *Journal of Hospitality and Tourism Management*, 58, 184-196.

Li, Y., Ma, X., & Yao, J. (2025, May). Modeling Behavioral Intention in Digital Exhibitions: An Integration of UTAUT and Flow Theory. In *Proceedings of the 2025 International Conference on Digital Economy and Intelligent Computing* (pp. 141-146).

Massi, M., Vecco, M., & Lin, Y. (2020). Digital Transformation in the Cultural and Creative Industries. En M. Massi, M. Vecco, & Y. Lin (Ed.), *Digital Transformation in the Cultural and Creative Industries* (p. 1-9). Routledge.

Petter, S., DeLone, W., & McLean, E. (2008). Measuring information systems success: models, dimensions, measures, and interrelationships. *European Journal of Information Systems*, 17(3), 236-263.

Tcha-Tokey, K., Christmann, O., Loup-Escande, E., Loup, G., & Richir, S. (2018). *Towards a model of user experience in immersive virtual environments*. *Advances in Human-Computer Interaction*, Article 7827286. <https://doi.org/10.1155/2018/7827286>

Yang, S. (2023). Storytelling and user experience in the cultural metaverse. *Heliyon*, 9(4), e14759.