IMMERSIVE TECHNOLOGY ADOPTION IN CULTURAL CONSUMPTION

THE ROLE OF CONTENT AND DIGITAL STORYTELLING

(work in progress)

Presenters:
Dr. Mónica Edwards Schachter (VIU)
Dr. Chuan Li (UVEG)
Dr. Joaquín Díaz Boils (UVEG)

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Source: https://democracia.studio/la-ruta-immersive-exhibition

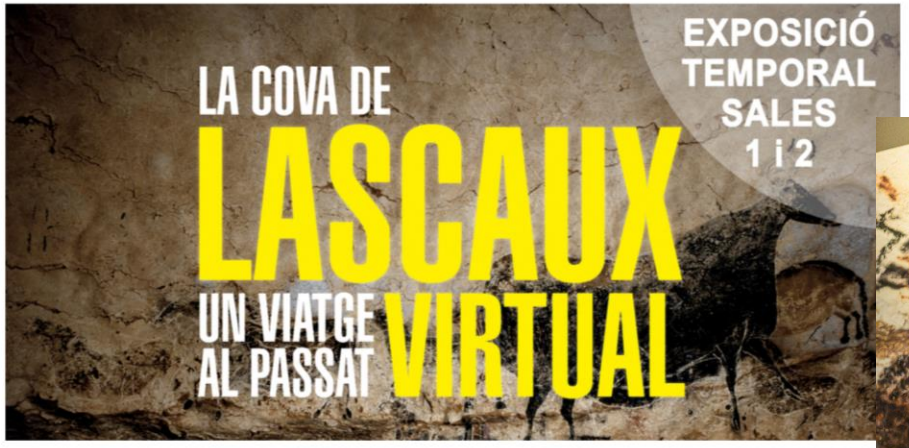
La Ruta

Immersive exhibition about the movement that revolutionized music in Europe during the 80s and 90s

A journey into the Valencia city's subversive cultural scene

The use of chromatic aberrations and gradient maps, combined with Bakalao display Font, creates a look and feel that connects with the essence of a cultural identity that redefine an entire generation.

A narrative that seeks to approach the graphic universes left by the La nave collective



Lascaux Caves Virtual Tour
https://www.youtube.com/watch?v=B0oI2K--We0

A DIVERSITY OF IMMERSIVE EXPERIENCES

https://www.youtube.com/watch?v=RVL4HW-hsPo

1. CONTEXT

- Immersive technologies significantly transform the arts and cultural sectors (Massi et al., 2020; Li et al., 2023)

  Immersive technology is an umbrella concept encompassing virtual reality (VR), augmented reality (AR), mixed reality (MR), extended reality (XR), etc. These digital systems mediate the interaction between users and virtual or digital environments to enhance the sense of presence and engagement, often through interactive and real-time feedback (Agrawal et al., 2020; Milgram & Kishino, 1994)

  An immersive exhibition is a curated experiential environment that uses spatial design and digital or multisensory technologies to envelop visitors, enabling active engagement and a sense of presence within a narrative or interpretive space (Li & Huang, 2023)

- The development of immersive exhibitions is increasingly considered an innovative endeavor to the challenges of digital transformation in museums

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1. CONTEXT

Current criticims

- New technologies do not necessarily guarantee superior experiential outcomes
- Visitor value and experience are shaped by broader factors beyond technological design
- Staged experience diminish perceived value when becoming standardized and commodified
- Current research on immersive technologies in museums and cultural heritage often prioritizes technical features and usability, while under-theorizing the role of creative content and digital storytelling, narrative design, and content curation in shaping user experience
- Existing models such as Technology Acceptance Model (TAM) and UTAUT treat content as implicit within system-related perceptions
- This study explicitly addresses creative content and digital storytelling in users' immersive experiences

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2. RESEARCH QUESTION

Key question

What affects immersive exhibition to gain audience acceptance?

Basic hypothesis

Technology and creativity related to content development work together to generate immersive experience, which leads to higher level of visitor satisfaction and desire to use

Research objective

Exploring the way in which technological affordance and creative content affect visitor acceptance of immersive technology in exhibition setting, through the mediating role of endogenous factors related to users´ perception, attitude and value

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3. LITERATURE REVIEW

Technological and creative sources of immersive experience

A system-focused paradigm (technological source)

- Immersion as a objective, measurable property of a system, configurable through technical parameters
- The sense of immersion is realized through by artificial stimuli and physical isolation
- The quality of system determines the quality of immersion

A psychological-focused paradigm (creative source)

- Immersion is often framed as a subjective experience related to indiviudal´s mental state
- Mental state is internally driven intellectural and imaginative engagement
- Psychological immersion is shaped mainly by creative content

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Type of determinant (psychological mechanism/construct)	TAM (Davis, 1989)	UTAUT1 (Venkatesh et al., 2003)	UTAUT2 (Venkatesh et al., 2012)
Cognitive beliefs (instrumental	Core focus: perceived usefulness and ease of use drive intention	Core focus: performance and effort expectancy (expanded from TAM)	Still central, but relatively less dominant compared to added dimensions
Social influence (normative influence)	Limited (added in TAM2)	Explicit and significant: Social influence as a key determinant	Present but weaker in many consumer contexts
Control beliefs (perceived behavioral control)	Indirect (ease of use partially reflects control)	Explicit: Facilitating conditions (resources, support)	Maintained, but more oriented to everyday usage contexts
Motivation- Extrinsic (performance/utilitarian motivation)	Strong: Focus on utility and performance outcomes	Strong: Similar emphasis on performance-related outcomes	Still relevant, but balanced with other motivations
Motivation - Intrinsic (hedonic motivation)	Absent	Absent	Explicitly introduced (enjoyment, pleasure)
Value evaluation - economic (cost-benefit evaluation)	Absent	Absent	Introduced: Price value (cost–benefit evaluation)
Behavioral regulation (intention vs habit)	Intention-driven (rational decision-making)	Intention-driven (influenced by social and control factors)	Hybrid: Intention + habit (automatic behavior)
Behavioral Complexity (contextual & affective complexity)	Low (parsimonious, individual cognition)	Moderate (adds social and contextual factors)	Higher (adds emotion, habit, and consumer evaluation)

creative content is implicit/missing

3. LITERATURE REVIEW

Technological affordances and creative content in immersive exhibition

- Two primary mechanisms underpin immersive exhibition experiences: technological affordances, and content-driven approaches such as digital storytelling
    - Technological affordances translate the capabilities of digital systems into actionable possibilities for visitors, shaping an easy and intuitive way in which they can perceive, navigate, and interact with exhibition content and environments (Jeong & Park, 2013)
    - Digital storytelling leverages interactive, multimodal, and other spatial narratives to convey cultural heritage and foster emotional, cognitive, and experiential engagement

- Creativity shapes, defines and enrich exhibitions, while technology determines the way they are presented, communicated, and experienced
- The relation between technology and creativity is complex, intertwined, and complementary; they work together to create a immersive experience

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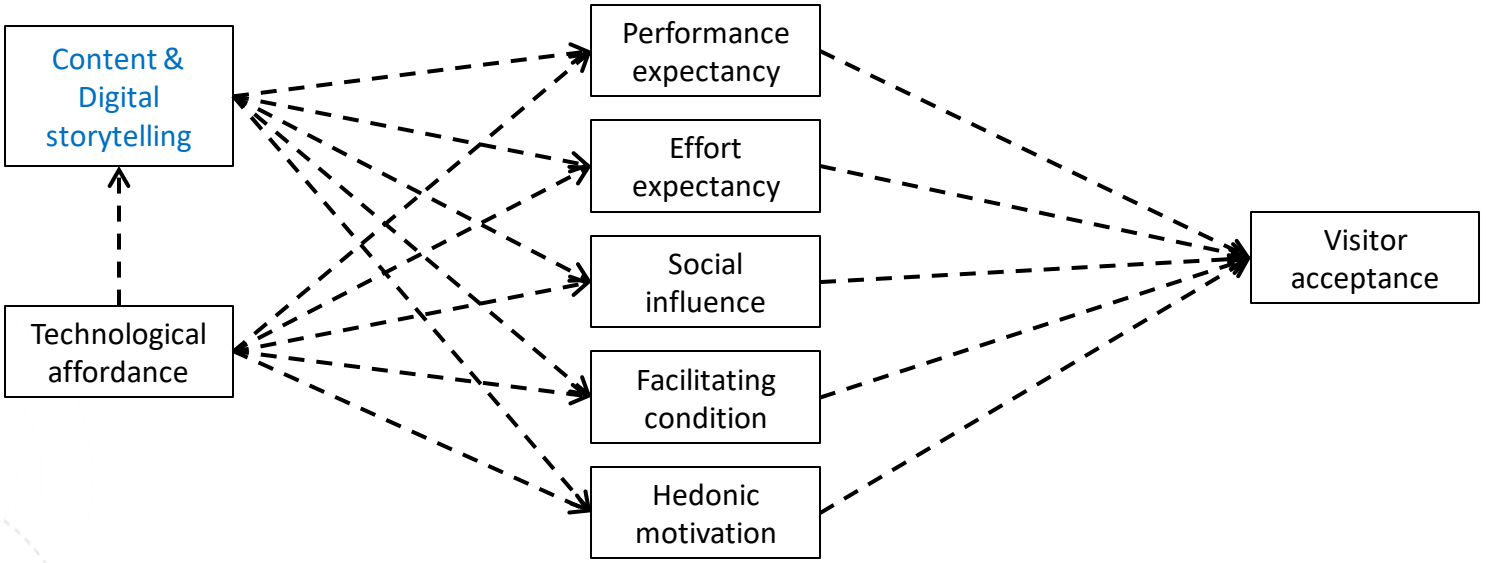
3. PROPOSED MODEL

- A technology adoption model is a theoretical framework designed to explain and predict how and why users accept or refuse new technologies at both organizational and individual levels (Marangunić & Granić, 2015; Taherdoost, 2018)
- The study considers some elements of the UTAUT 2 model



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4. METHODOLOGY

Structured questionnaire

Exhibition: La Ruta: Modernidad, Cultura y Descontrol

Place: Bomba Gens

Duration: Nov. 2025 – Jan. 2026

Data collected: 127 valid responses

Statistical approach: Partial Least Squares Structural Equation Modeling (PLS-SEM)

Software: SmartPLS (v. 4.1.1.1)

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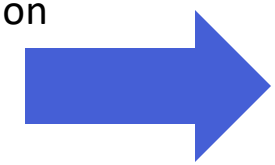
4. METHODOLOGY

General information: gender, age, education level, level of prior experience with immersive technologies.(Very experienced / Experienced / Intermediate / Low experience / No experience)

Respondents were asked to indicate their agreement and disagreement with several statements using a five-point Likert-type scale ranging from 1 = “strongly disagree” to 5 = “strongly agree”

Four questions covering each of the following factors:
Performance Expectancy
Effort expectancy
Social influence
Facilitating conditions
Hedonic motivation
System quality
Content quality
Use intention



This study extends the UTAUT2 model (Venkatesh et al., 2012) by incorporating two additional constructs: **system quality** and **content quality**, capturing the experiential and narrative of immersive technologies in cultural contexts

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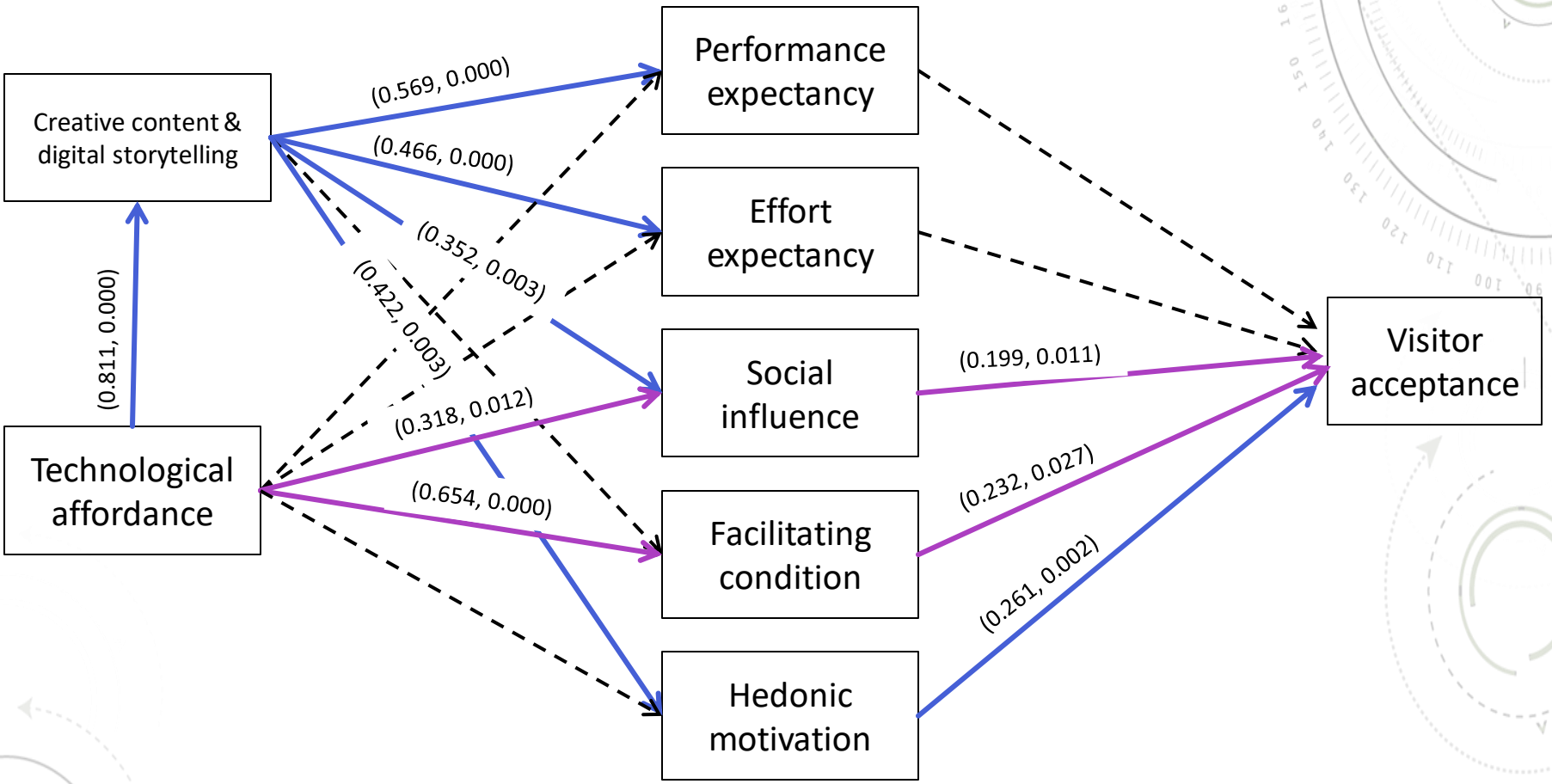
5. PRELIMINARY RESULTS



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5. (VERY) PRELIMINARY RESULTS

The findings suggest the existence of three distinct pathways shaping visitor acceptance:

Technological pathway, primarily driven by facilitating conditions and social influence, highlighting the importance of infrastructure readiness and peer or institutional endorsement in shaping acceptance

Creative pathway, associated with creative content and digital storytelling. It exerts a cross-cutting influence across multiple user perceptions, including performance expectancy, effort expectancy, and intrinsic motivation, indicating its role in shaping the overall experience rather than a single dimension

Hybrid or mixed pathway, emerges where technological and experiential dimensions converge, particularly through hedonic motivation. This reflects the role of enjoyment as a bridge between functional usability and immersive, creative engagement

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6. FUTURE PROSPECTS

Complete the empirical phase by finalizing the analysis, testing hypotheses, and consolidating results and conclusions

The next step involves closing and integrating the findings into a coherent explanatory model of visitor acceptance

A promising research avenue is the study of the growing convergence of physical and digital environments. The “phygital” concept (Kotler et al., 2021) highlights the need to explore seamless hybrid experiences and their impact on engagement and value creation in museum exhibitions and beyond

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METAVERSE
Many
thanks!