Designing Brand Experiences in the Metaverse: A Systematic Review of Effects on Real-World Purchase Intention

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Abstract. *This systematic literature review synthesized eleven studies on brand experiences in the metaverse, analyzing their impact on perception of brand value, consumer loyalty, and purchase intention, both in virtual and physical environments. The research investigates how interaction and personalization of virtual experiences influence the relationships of consumers with brands and how these experiences translate into tangible behaviors in the real world. We explore the literature beyond traditional marketing and highlight future opportunities for exploration by technology designers and developers.*

1. Introduction

The most widely accepted definition describes the metaverse as an immersive virtual environment, parallel to reality, in which people can experience life events through avatars [Stephenson 1992]. As an interactive medium, the metaverse expands the possibilities for creating impactful brand experiences. Despite this broad media visibility, in 2023 there was a reduction in investments compared to previous years. Even so, in that same period, 600 million active users were registered in metaverse applications [Metaversed 2023], and it is estimated that the global online gaming market within this environment will exceed US$ 168.4 billion by 2030 [Statista 2023].

In this context, this study aims to investigate how virtual experiences, mediated by technology that expands interaction possibilities like virtual reality (VR), influence purchase intentions in the real world, emphasizing the role of design in creating immersive experiences. Although some studies have already suggested this influence, there is a lack of literature reviews that consolidate the existing findings. This research gap is highlighted by authors such as [Giang Barrera and Shah 2023], [Mishra and Dharmavaram 2023] and [Park and Lim 2023], who indicate the need for a more comprehensive understanding of the effects of these experiences on purchase intentions.

2. Background

2.1. Metaverse

More than a technological advancement, the metaverse proposes a new way of relating to the digital world. According to [Mystakidis 2022], the metaverse is a collaborative and continuous space, accessed by technologies such as augmented reality (AR) or VR, but sustained mainly by social presence—the feeling of being with others in the same environment. This is enabled by avatars, symbolic extensions of users that allow them to express themselves and interact according to their preferences, facilitating the construction of bonds between users [Davis et al. 2009].

What differentiates the metaverse from other digital environments is precisely the sense of immersion, being present in the space, not merely observing it. This has gained relevance with the metaverse's growth, driven by advances in digital technologies and the demand for immersive experiences. [Hollensen et al. 2023] note that virtual worlds enable experiential communication, combining presence, participation, and narrative. Consequently, brands have increasingly approached this technology strategically to build deeper connections with consumers [Park and Lim 2023].

2.2. Brand Experience in Virtual Environments

Brand experience refers to the internal reactions of a consumer to visual, sensory, affective, and behavioral stimuli associated with a brand [Brakus et al. 2009]. These are organized into four dimensions: sensory (sight, hearing, touch), emotional (feelings aroused), intellectual (stimulation of reasoning), and behavioral (practical reactions). Their integration is essential for constructing the symbolic value attributed to the brand.

In digital environments, these factors still matter but are now facilitated by technologies such as VR that expand interaction possibilities. [Morgan-Thomas and Veloutsou 2013] argue that online experiences go beyond usability, involving affective and relational components that influence brand trust and reputation. Thus, technology does not replace symbolic bonds. Instead, it enables deeper involvement through personalization, belonging, and co-authorship.

2.3. Purchase Intention and Online Consumer Behavior

Purchase intention is the subjective predisposition to perform a future action, generally related to acquiring a product or service. This tendency is shaped not only by rational evaluation but also by subjective aspects such as social identity and emotion. [Sparks and Shepherd 1992] highlight that user identification with values, lifestyles, or social groups reinforces this predisposition, even when contextual barriers exist. [Venkatesh 2000] adds that familiarity, absence of frustration, and positive emotions during system navigation strengthen perceived control, encouraging engagement.

In digital environments, intention emerges from the interplay between symbolic experience and consumer identity [Shen et al. 2021]. In these contexts, a brand is not only evaluated, but experienced, which requires more complex analytical approaches, capable of considering the emotional, relational, and symbolic dimensions that shape consumer behavior.

2.4. The Role of Design in Creating Immersive Experiences

[Engelmann et al. 2019] demonstrated that the immersive potential of VR stores, compared to conventional e-commerce platforms, derives from how these environments are designed—particularly in their visual, sensory, and interactive dimensions—which directly influence value perception and purchase intention. This effect relies not only on technology but also on spatial organization and visual coherence.

As immersive technologies become more accessible, even small businesses can strategically adopt them. [Amuso et al. 2021] highlights that effectiveness depends on cultural personalization and user-centered approaches. More than visual layout, design arranges symbolic and emotional elements, influencing attention, emotion, and value attribution. In the metaverse, this shaping role becomes central to transforming environments into meaningful experiences.

Studies such as those by [Soni and Sharma 2023] and [Lee et al. 2024] confirm that coherent, navigable, and symbolically aligned platforms promote trust and consumer engagement. Yet, most research focuses on outcomes like loyalty or satisfaction, neglecting how these are shaped by design itself [Hollensen et al. 2023, Mishra and Dharmavaram 2023].

3. Methods

This study employed a systematic review (SR) methodology, following the guidelines of [Kitchenham and Charters 2007]—recognized for their rigor and reproducibility in qualitative synthesis [Brereton et al. 2007]—and the protocol by [Felizardo et al. 2017].

The formulation of the research questions (RQs) is a key component of an SR planning phase. In this study, the RQs were developed to contribute to the main discussion: *"How do brand experiences in the metaverse influence real-world purchasing decisions?"*. Accordingly, the RQs outlined were as follows: RQ1 – "What are the main effects of brand experiences in the metaverse and how do they impact consumer engagement?"; RQ2 – "How do the effects generated by brand experiences in the metaverse influence purchase intention in the physical world?"; and RQ3 – "What is the role of design in creating immersive environments in the metaverse and how can these spaces influence real-world purchasing decisions?".

To identify relevant studies, the search was conducted across Scopus, Web of Science, IEEE Xplore, and ScienceDirect using the string: *metaverse AND ("brand experience" OR "brand loyalty" OR "brand trust" OR "brand image" OR "brand equity")*. Inclusion criteria required studies to be accessible through the selected sources; written in English, Portuguese, or Spanish; and explore purchase decisions and outcomes of brand experiences within the metaverse. Conversely, exclusion criteria were also adopted: non-primary studies, duplicate publications, studies whose full text was inaccessible in the utilized databases, or those without available abstracts were excluded.

The database search yielded 143 records, processed through the *StArt* software [Fabbri et al. 2016] with 13 duplicates being removed. A two-stage selection process followed: (1) *screening* of 130 studies based on titles, keywords, and abstracts, excluding 119 unrelated records; (2) *eligibility* assessment through full-text analysis, after which 8 studies remained. Subsequently, a supplementary *snowballing* (backward and forward

citation analysis) [Wohlin 2014, Badampudi et al. 2015] added 3 more studies, totaling 11 studies for qualitative synthesis.

4. Results

4.1. RQ1 – What are the main effects of brand experiences in the metaverse and how do they impact consumer engagement?

Based on a qualitative synthesis of the selected articles ($N = 11$), six primary themes were identified: pleasure [Patil et al. 2022], symbolic identification [Sung et al. 2023], emotional engagement [Lee et al. 2024], immersion [Soni and Sharma 2023], perceived value [Arya et al. 2024], and brand loyalty [Sung et al. 2023, Kalyvaki et al. 2023]. These effects emerge from the integration of interactivity, immersive environments, storytelling, gamification, personalization, and emotional connections with avatars or digital products—elements that enhance long-term user engagement and expand the strategic potential of brands in the metaverse.

[Patil et al. 2022], using the Stimulus-Organism-Response framework, show that pleasure perceived during immersive retail experiences is a key factor for initial engagement. This entertainment element transforms brand interactions into memorable moments, strengthening emotional bonds. [Sung et al. 2023] reinforce this by demonstrating that alignment between a user's ideal self-image and the products acquired in virtual environments promotes symbolic identification and increases willingness to interact with brands. [Lee et al. 2024] add that immersive and social experiences also contribute to brand affiliation and community building. Complementing these strategies, gamification is widely applied to enhance immersion [Bousba and Arya 2022], while [Soni and Sharma 2023] show that these immersive qualities deepen brand image and consumer engagement.

4.2. RQ2 – How do the effects generated by brand experiences in the metaverse influence purchase intention in the physical world?

Among the most relevant outcomes, brand loyalty stands out. Rather than fostering isolated interactions, companies aim to create lasting, affective bonds through virtual environments where users incorporate brand values into their identity [Sung et al. 2023, Kalyvaki et al. 2023]. When symbolic consistency and perceived value are sustained over time, loyalty becomes more evident [Bousba and Arya 2022, Soni and Sharma 2023], going beyond repeated purchases to include advocacy and identity alignment. Virtual simulations reduce perceived risk, increase familiarity, and reinforce these connections—key behavioral factors for concrete purchase decisions.

[Sung et al. 2023] note that this symbolic alignment not only affects virtual behavior but extends into real-world purchasing intention. Moreover, [Lee et al. 2024] point out that repeated exposure to immersive environments, such as non-fungible token (NFT) platforms, can generate consumption routines driven by convenience rather than emotional engagement, showing that not all behavior is symbolically anchored.

4.3. RQ3 – What is the role of design in creating immersive environments in the metaverse and how can these spaces influence real-world purchasing decisions?

Beyond these behavioral insights, design emerges as a structuring force. It goes beyond aesthetics to define the architecture of interaction, navigation flow, visual coherence, and

presence. [Soni and Sharma 2023] and [Lee et al. 2023] argue that well-designed platforms—especially NFT marketplaces—promote clarity, symbolic alignment, and trust, all of which are essential for consumer engagement. The designer thus plays a central role in organizing functional and symbolic elements that foster identity, belonging, and perceived value.

Despite this centrality, most studies focus more on outcomes—such as satisfaction or loyalty—than on the design processes that shape them [Hollensen et al. 2023, Mishra and Dharmavaram 2023]. This gap limits both theory and practice because design should be recognized as a strategic mediator between user expectations, brand values, and immersive dynamics—an essential element to transform symbolic interaction into real-world behavior. [Engelmann et al. 2019] and [Jang 2023] confirm that visual coherence and narrative consistency significantly influence consumer behavior and satisfaction.

5. Discussion

The literature reveals a field still in consolidation, where brand experiences in the metaverse are often treated in a fragmented way. Studies tend to isolate variables such as presence, interactivity, immersion, or emotion [Park and Lim 2023, Jang 2023], without exploring how these elements integrate to shape consumer behavior. This limitation restricts the understanding of how immersive experiences can translate into purchase intentions in the physical world. Recognizing the designer as the one responsible for structuring the environment, defining navigation flows, and organizing symbolic and sensory stimuli is crucial for advancing this discussion. Despite this, most of the reviewed studies prioritize analyzing outcomes—such as satisfaction or loyalty—without examining the design processes that produce them [Hollensen et al. 2023, Giang Barrera and Shah 2023, Mishra and Dharmavaram 2023].

Design emerges not as an aesthetic complement but as a symbolic and strategic mediator. [Sung et al. 2023] emphasize that designing experiences in the metaverse "requires a highly strategic approach, focused on usability, visual identity, and symbolism," highlighting that "designers are responsible for constructing the environments where these relationships take place." Yet, the lack of this perspective in much of the literature hinders the development of robust methodologies for immersive brand experiences that drive engagement and influence consumption. Future research should integrate design frameworks with consumer behavior theories to better explain how purchase intention is shaped. Only by recognizing design as a central structuring force will the field be able to evolve and offer more consistent theoretical and practical contributions.

6. Conclusion

The findings of this review indicate that the conversion of immersive brand experiences into purchase intention is not exclusively derived from technological interaction. Design emerges as a potential structuring factor, yet it is treated in a fragmented manner and insufficiently explored in the examined literature. The metaverse should be understood as a symbolic environment where identity, desire, and consumption intersect, and where design operates as a central structuring force. Although this SR followed a rigorous protocol, its scope was limited to specific databases and sectors, which may affect the generalizability of its findings. Further research is needed to examine how design decisions mediate the formation of symbolic value and consumer behavior in immersive contexts.

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