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Consumer Experience and Loyalty in the Metaverse: A Systematic Review

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Abstrak

Peneitian ini mensintesis delapan artikel melalui tinjauan literatur sistematis (Systematic Literature Review) dan meta-sintesis untuk mengeksplorasi pengalaman konsumen dalam metaverse serta pengaruhnya terhadap loyalitas merek. Enam tema utama berhasil diidentifikasi, yaitu jalur Imersi–Kehadiran–Kekaguman (Awe), Avatar dan Personalisasi, Kognisi Visual dan Pengambilan Keputusan, Kehadiran Sosial dan Identitas Komunitas, Antropomorfisme Merek dan Loyalitas, serta Kebiasaan dan Dinamika Pengalaman. Hasil penelitian menunjukkan bahwa faktor teknologi seperti imersi, avatar, personalisasi, dan desain visual bertindak sebagai rangsangan yang memicu respons kognitif dan emosional, termasuk kehadiran, kekaguman, dan cinta terhadap merek, yang kemudian membentuk keterlibatan, niat pembelian, serta loyalitas konsumen. Studi ini menyoroti interaksi kompleks antara dimensi kognitif, afektif, dan konatif dalam lingkungan imersif, serta menegaskan pentingnya bagi pemasar untuk menciptakan pengalaman yang interaktif, personal, dan berkelanjutan guna mempertahankan keterlibatan konsumen dalam jangka panjang.
Kata kunci: Loyalitas Merek, Pengalaman Konsumen, Metaverse, Teknologi Imersif

Abstract

This study synthesizes eight articles through a systematic literature review and meta-synthesis to explore consumer experiences in the metaverse and their influence on brand loyalty. Six key themes were identified: Immersion–Presence–Awe Pathway, Avatar and Personalization, Visual Cognition and Decision-Making, Social Presence and Community Identity, Brand Anthropomorphism and Loyalty, and Habituation and Experience Dynamics. Findings show that technological factors such as immersion, avatars, personalization, and visual design act as stimuli that trigger cognitive and emotional responses, including presence, awe, and brand love, shaping engagement, purchase intentions, and loyalty. The study highlights the complex interaction of cognitive, affective, and conative dimensions in immersive environments and underscores the importance for marketers to create interactive, personalized, and sustainable experiences that sustain long-term consumer engagement.
Keywords: *Brand Loyalty, Consumer Experience, MetaverseImmersive Technology*

INTRODUCTION

The term *metaverse* was first introduced by Neal Stephenson in his 1992 science fiction novel, *Snow Crash*, as an immersive collective virtual space (Benítez Rojas, 2023; Chapman et al., 2022; Evans et al., 2022; Kayakoku, 2023; McFarlane, 2022; Morganti & Bartolomei, 2024; Smethurst et al., 2023; Szilagyi & Fawcett, 2024). Today, the concept has evolved into a digital ecosystem supported by technologies such as extended reality (XR), blockchain, and artificial intelligence (AI) (Aloqaily et al., 2023; Bowo, 2023; Bowo et al., 2024; Cappannari & Vitillo, 2022; Kamdjou et al., 2024; Qayyum et al., 2024; M. Uddin et al., 2024; Yang et al., 2025; Yitmen et al., 2023; Zawish et al., 2024). The metaverse not only revolutionizes the way we interact digitally but also opens new opportunities for marketing strategies, allowing consumers to experience more immersive and personalized interactions with brands. Through these virtual environments, metaverse marketing offers innovative approaches that can enhance consumers' emotional engagement and strengthen brand loyalty in unprecedented ways. In this context, understanding the immersive consumer journey becomes increasingly important for marketers to design experiences that are both effective and meaningful.

In business practice, leveraging the metaverse as a marketing platform offers substantial potential. The metaverse enables brands to create experiences that are more immersive,

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personalized, and interactive (Bilgihan et al., 2024; Buhalis et al., 2023; Mourtzis et al., 2022; Wongkitrungrueng & Suprawan, 2024), which cannot be replicated by conventional digital media such as websites or traditional social media. Consequently, businesses can reach a global audience more effectively, increase consumer engagement, and build stronger loyalty to their brands. However, this also introduces practical challenges, including the need for advanced technology, the complexity of measuring campaign effectiveness, and the careful management of user data and privacy. For technology developers, a deep understanding of consumers' emotional and cognitive experiences is crucial to designing platforms that are not only technically sophisticated but also enjoyable and user-friendly.

Despite its vast potential, several critical issues need to be addressed. First, there is still limited understanding of how consumers emotionally and cognitively respond to immersive experiences within integrated social media contexts, including the crucial role of avatars and personalization in building brand relationships. Second, interactions in the metaverse present challenges in measuring and managing complex experiences. Therefore, significant research gaps remain to be filled.

Based on the latest literature reviews and current research trends, the research gaps include a deeper understanding of the emotional and cognitive dimensions of consumers, as well as the specific relationship between immersive experiences and brand loyalty formation. Previous studies have tended to focus on technological aspects or general marketing without incorporating multidimensional contexts or diverse methodologies comprehensively, and studies remain limited to certain regions and industries. This research is expected to provide deeper insights into the emotional and cognitive dimensions that influence consumers within immersive metaverse experiences. By identifying key factors, the results of this systematic review will serve as an essential foundation for marketers and technology developers. Practically, they can design more effective strategies to enhance engagement, build stronger relationships with audiences, and ultimately foster brand loyalty in this continuously evolving digital ecosystem.

This study aims to systematically examine consumers' emotional and cognitive experiences when using social media integrated with metaverse technologies. Through a comprehensive literature review, it seeks to identify the factors influencing emotional engagement and brand loyalty within the context of immersive and interactive metaverse marketing. Academically, the study addresses a significant gap in metaverse marketing literature, which has often focused on technology or general marketing approaches without considering consumers' emotional and cognitive dimensions. By integrating multidisciplinary approaches and systematic methods, the research provides a holistic understanding of how consumer engagement and cognitive processes develop in complex, interactive metaverse environments, while also highlighting under-researched areas for future studies in digital marketing and communication technologies.

Practically, the findings are expected to guide marketing practitioners, business owners, and technology developers in leveraging the metaverse as an effective marketing platform. Insights into how consumers' emotional and cognitive experiences are shaped in metaverse social media environments will help design strategies that are more personalized, interactive, and loyalty-oriented. Additionally, this understanding can support the development of metaverse technologies that are responsive to consumer needs and preferences, promoting sustainable business growth and innovation in the digital era.

RESEARCH METHOD

This study employed a Systematic Literature Review (SLR) approach to identify, evaluate, and synthesize relevant literature concerning metaverse marketing. The SLR approach was selected for its structured, transparent, and replicable procedures, ensuring that the findings are both valid and in-depth (Amjad et al., 2023; Islam et al., 2025; Lim, 2025; Mohamed Shaffril et al., 2021). The

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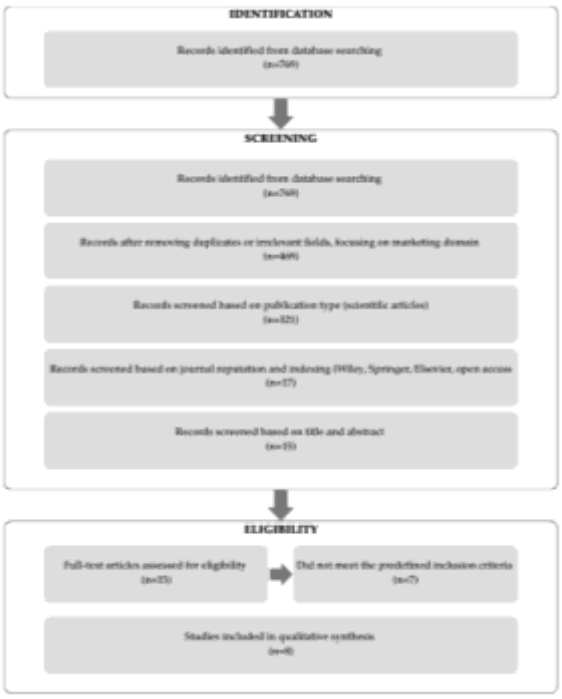
review was guided by the research questions outlined in the introduction, aiming to provide a comprehensive understanding of marketing practices within immersive virtual environments.

Literature searches were conducted systematically across several reputable academic databases, including Scopus, Web of Science, and Dimensions AI. To maintain relevance with current technological developments, the search was limited to publications from 2019 to 2025. The search strategy employed Boolean operators with the following keywords: ("metaverse marketing" OR "immersive marketing") AND ("emotional engagement" OR "brand loyalty" OR "consumer experience") AND ("virtual reality" OR "augmented reality" OR "NFT").

Inclusion criteria encompassed articles that explicitly addressed the relationship between the metaverse, marketing, and consumer experience; employed qualitative or mixed methods; were full-text articles published in reputable journals or international proceedings; and were written in either Indonesian or English. Exclusion criteria included articles focusing solely on technical aspects, those not peer-reviewed, or not relevant to the study's focus. The selection process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines, consisting of three main stages: identification, screening, and eligibility.

From the initial search, 769 articles were retrieved. Screening for marketing relevance reduced the number to 469 articles. Further selection based on the type of scientific publication yielded 321 articles, and screening for reputable journals such as Wiley, Springer, and Elsevier with open access left 17 articles. During the screening stage of titles and abstracts, 15 articles were retained, and a full-text evaluation excluded 7 articles that did not meet the inclusion criteria. Thus, a total of 8 articles were included in the qualitative synthesis. The selection process is visualized in the PRISMA 2020 flow diagram (Figure 1), confirming that the procedure was conducted in a strict, systematic, and transparent manner.

Figure 1. PRISMA flow diagram



To enhance efficiency, this study also utilized the Dimensions AI platform as a literature search and management tool. The integration of reputable databases with AI features helped accelerate and improve the accuracy of the selection process. The selected articles were then

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analyzed using a meta-synthesis approach, which included coding of key findings, identification of central themes, and the development of a narrative synthesis. This approach ensured that the research findings were not only valid and relevant but also capable of identifying research gaps and generating new insights related to metaverse marketing.

RESULTS AND DISCUSSION

This section presents the main findings from the meta-synthesis conducted on eight studies related to consumer experiences in the metaverse. The systematic analysis identified six core themes that consistently emerged, forming the foundation for a comprehensive understanding of emotional engagement, cognitive processes, and interactive aspects within the metaverse ecosystem. These six themes are: (1) Immersion–Presence–Peak Emotional Experience (Awe) Pathways; (2) The Role of Avatars and Personalization; (3) Visual Cognitive Processes and Decision-Making; (4) Social Identity and Community Attachment; (5) Brand Anthropomorphism and Loyalty; and (6) Dynamics of Habituation and Transformation of Emotional Experience. The following exposition elaborates on each theme in detail, integrating supporting empirical evidence and discussing the implications of the findings for the development of theory and practice in metaverse marketing.

1. Factors Influencing Consumers' Emotional Engagement

The meta-synthesis analysis of eight articles indicates that immersion serves as the foundational element of consumer experiences in the metaverse. Higher levels of immersion, whether through fully immersive virtual reality technology or screen-based modes, consistently enhance the sensation of presence, which is the feeling of "being there" within the virtual environment (Kim et al., 2025; Rahman et al., 2025; Söderström et al., 2024; Yin et al., 2025). This sense of presence has been shown to trigger intense emotional engagement and peak emotional experiences, often identified as awe (Kim et al., 2025; Söderström et al., 2024).

Several studies confirm that the psychological pathway of immersion to presence to awe functions as a critical mechanism for deepening consumers' emotional engagement. Empirical findings reveal that users experiencing higher levels of immersion and presence report stronger emotional intensity, such as fascination and connectedness with the virtual environment (Kim et al., 2025; Söderström et al., 2024). Even in screen-based contexts, immersion continues to elicit significant emotional effects (Rahman et al., 2025; Yin et al., 2025).

These findings further suggest that presence not only deepens momentary emotional experiences but also strengthens consumers' attachment to brands and platforms (Kautish et al., 2025; Söderström et al., 2024; Yin et al., 2025). Therefore, technology design strategies that emphasize immersion quality, for example through enhancing visual fidelity, interactivity, and sensory elements, play a crucial role in delivering profound and enduring emotional experiences within the metaverse.

2. The Role of Avatars and Personalization

The meta-synthesis of eight articles indicates that avatars and personalization play a central role in shaping consumers' emotional and cognitive engagement in the metaverse. Studies comparing self-avatars and brand-managed avatars consistently find that self-avatars, which are avatars that can be customized and directly controlled by users, are more effective in fostering emotional attachment because they provide a space for self-expression and reinforce identity alignment with the platform (Chaudhuri et al., 2026; Kim et al., 2025). In contrast, brand-managed avatars primarily function as communication and service agents, resulting in relatively lower emotional impact, although they are still capable of enhancing perceptions of interactivity (Chaudhuri et al., 2026; Kim et al., 2025).

Beyond avatars, content personalization and artificial intelligence (AI)-based recommendations also significantly influence consumer experiences. Articles examining

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personalized recommendations indicate that attributes such as relevance, inspiration, and the level of insightfulness of AI recommendations can enhance immersive experiences and technology acceptance, which in turn increase consumers' intention to interact or make purchases (Zhang et al., 2025). This effect is moderated by factors such as privacy perceptions and the quality of the information provided.

Furthermore, the combination of avatars that provide social cues and personalization features has been shown to strengthen trust, increase a sense of ownership, and deepen emotional engagement with the brand. Several studies emphasize that avatars functioning as social agents can foster perceptions of brand anthropomorphism, which subsequently encourages consumers to experience interpersonal connections with the brand (Kautish et al., 2025; Söderström et al., 2024). Therefore, both avatars and personalization are not merely technical features but strategic mechanisms for creating consumer experiences that are more intimate, meaningful, and sustainable in the metaverse.

3. **Visual Cognition and Decision-Making Processes**

The meta-synthesis results indicate that visual aspects of product presentation in the metaverse play a crucial role in shaping consumers' attention, comprehension, and confidence during decision-making. Eye-tracking studies reveal that visual composition, particularly the distinction between background and foreground elements, significantly affects users' fixation patterns. Context-rich backgrounds not only capture initial attention but also extend the duration of focus, which in turn promotes cognitive elaboration on the product (Yin et al., 2025; Zhang et al., 2025).

In addition to influencing attention, vividness and visual augmentation in augmented reality (AR) experiences have been shown to facilitate mental simulation processes. Consumers are better able to imagine how products would be used in real-life situations, thereby enhancing comprehension while reducing perceived risk (Yin et al., 2025; Zhang et al., 2025). Consequently, visual technology in the metaverse not only attracts attention but also helps consumers form clearer mental representations of product value.

Other findings suggest that choice confidence increases when consumers can virtually try products (trialability) or receive relevant information through AI-based personalization. These features reduce cognitive load in decision-making while increasing purchase intentions (Yin et al., 2025; Zhang et al., 2025). However, some studies also highlight ambivalence: overly complex visual designs can enhance elaboration for high-involvement products but may cause cognitive overload for low-involvement products (Zhang et al., 2025).

Overall, this evidence confirms that visual cognition in the metaverse serves as a primary gateway to consumer decision-making processes. By managing visual design, vividness, and product presentation context, marketers can not only direct consumers' attention but also shape stronger confidence and preferences toward products.

4. **Social Presence and Community Identity**

The meta-synthesis of eight articles confirms that social presence and social identity are key factors in deepening emotional engagement and strengthening consumers' purchase intentions in the metaverse. Social presence, defined as the feeling of interacting directly with others in a virtual environment, has been shown to encourage users to feel more connected and accepted within digital communities (Kautish et al., 2025; Vernuccio et al., 2025; Yin et al., 2025). The presence of friends or community members in metaverse experiences further reinforces a sense of togetherness, enhances trust, and fosters emotional attachment to the platform.

Furthermore, social identity formed through interactions within virtual communities serves as a mechanism bridging social presence with consumer behavior. Studies examining this pathway indicate that when consumers identify with a metaverse community, they tend to develop site

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attachment and affective loyalty toward the platform, which ultimately influences their intention to purchase both virtual and physical products (Kautish et al., 2025; Yin et al., 2025). Additional findings show that this effect is strengthened by moderating factors such as stickiness, defined as the tendency to return to the platform, and the type of products offered. In certain contexts, the direct presence of friends increases purchase intention, indicating that social aspects not only create emotional bonds but also drive concrete economic decisions (Vernuccio et al., 2025; Yin et al., 2025).

Therefore, social presence and social identity are not merely aspects of social interaction in the metaverse but also serve strategic roles as drivers of emotional engagement and as key catalysts for consumers' purchase intentions. Marketers who can facilitate strong communities and provide authentic social experiences will be more effective in building long-term loyalty.

5. **Brand Anthropomorphism and Loyalty**

The meta-synthesis of eight articles shows that telepresence and the social presence of brand avatars are primary triggers for the formation of brand anthropomorphism perceptions in the metaverse. Telepresence, defined as the feeling of being physically present during virtual interactions, makes it easier for consumers to perceive the brand as a living entity with human-like characteristics (Kautish et al., 2025; Söderström et al., 2024). Meanwhile, brand avatars designed with social cues, such as facial expressions, body movements, or communication styles, further reinforce the impression that the brand "acts" like a human (Kautish et al., 2025; Söderström et al., 2024).

Studies examining this pathway indicate that brand anthropomorphism functions as a cognitive-affective mechanism bridging immersive experiences with brand loyalty. When consumers perceive a brand as human-like, they are more likely to develop brand love, which is a deep emotional attachment to the brand. This, in turn, enhances loyalty, willingness to forgive brand mistakes (brand forgiveness), and repurchase intentions (Kautish et al., 2025; Söderström et al., 2024).

These findings underscore that avatars are not merely extensions of a brand's visual identity but strategic instruments for building emotional and interpersonal relationships with consumers. By delivering strong telepresence and avatars capable of social interaction, brands can cultivate anthropomorphic experiences that lead to long-term attachment. This highlights the critical role of avatar technology in transforming consumer–brand interactions from merely transactional to relational and affective.

6. **Habituation and the Dynamics of Experience**

The meta-synthesis results indicate that consumers' emotional experiences in the metaverse are dynamic and influenced by both novelty and usage habits. Studies comparing new users with more experienced users show that the novelty effect during initial interactions often triggers stronger emotional responses, such as awe or fascination with visual vividness and augmented features (Yin et al., 2025; Zhang et al., 2025). These experiences create significant initial impacts on emotional engagement and positive perceptions of the brand or platform.

However, as exposure and usage frequency increase, the determinants of emotional engagement tend to shift. For habituated users, visual vividness and novelty no longer serve as the primary sources of fascination. Instead, factors such as enjoyment, augmentation quality, and personal relevance become more dominant in sustaining emotional engagement (Yin et al., 2025; Zhang et al., 2025). This indicates that consumers' emotional experiences transform from initial novelty-based excitement to a more stable attachment oriented toward sustained value.

These findings underscore the importance for marketers to design metaverse strategies that are adaptive to the dynamics of consumer experience. Technologies relying solely on novelty risk losing appeal over time, whereas approaches emphasizing sustainability, including relevant

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content, personalization, and enhanced augmentation quality, are more capable of maintaining long-term emotional engagement. Therefore, habituation should not be viewed as a threat but as a signal for the need for continuous innovation in creating meaningful and immersive metaverse experiences.

The findings described across the six themes above are supported by empirical evidence from the eight reviewed articles. To provide a more detailed and transparent overview of the synthesis process, Table 1 presents a systematic summary of each relevant article, including objectives, methodology, and key findings that contributed to the main themes. Furthermore, Table 2 provides a detailed codebook containing operational definitions for each code, illustrating the basis of this meta-synthesis analysis. As a visual summary of all these findings, Figure 2 displays the integrated conceptual model generated from the synthesis of all data.

Table 1. Synthesis Table: Key Findings from 8 Articles

Author(s)	Objective	Methodology	Relevance to This Study
(Rahman et al., 2025)	To develop and validate a measurement scale for Metaverse Customer Experience (MVCX), encompassing 10 key platform attributes.	Mixed-methods design in 5 phases: 1. Systematic Literature Review (SLR) 2. Qualitative study (laddering) 3. Scale item development 4. Scale validation via EFA & CCA 5. Nomological validity testing via PLS-SEM and NCA	- Identified 10 key MVCX attributes: Personalization, Commerciality, Trialability, Privacy, Interoperability, Creativity, Communality, Immersion, Efficiency, Aesthetics. - Personalization, Trialability, and Commerciality are the most critical attributes. - MVCX significantly predicts customer satisfaction, continuous usage intention, and share of time. - All attributes are "necessary" for high-quality customer experience. - Immersion and Aesthetics were explicitly measured and validated as core constructs.
(Kautish et al., 2025)	To investigate how awe-inspired experiences form in the metaverse, focusing on the roles of avatars, immersion, and presence.	Multi-study experimental design (3 between-subject studies): - Study 1: Metaverse vs. traditional online shopping. - Study 2: Presence vs. absence of avatar. - Study 3: Self-avatar vs. brand-avatar.	- Metaverse retailing significantly enhances awe experiences compared to traditional online shopping. - Effects are serially mediated by Immersion → Presence. - Avatar presence increases awe, mediated by Perceived Interactivity. - Self-avatars produce stronger awe experiences than brand-avatars. - Highlights central roles of immersion, presence, interactivity, and personalization (via self-avatar) in peak emotional engagement.
(Vernuccio et al., 2025)	To examine how telepresence and Brand Avatar Social	Quantitative: Survey of 349 Gen-Z users in Italy interacting	- Telepresence and BASP significantly enhance Brand Anthropomorphism.

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Author(s)	Objective	Methodology	Relevance to This Study
	Presence (BASP) in VR-based metaverse affect Brand Anthropomorphism (BA) and subsequent Brand Love.	with H&M brand experiences in Roblox (VR-based). Data analyzed using Structural Equation Modeling (SEM) and moderation tests.	- Brand Anthropomorphism significantly increases Brand Love. - Attitude toward VR moderates BASP → BA (positive attitude weakens the effect). - Supports pathway: Platform Attributes (Telepresence, BASP) → Emotional/Cognitive Outcome (BA) → Behavioral Outcome (Brand Love). - Confirms that brand avatars can trigger anthropomorphism, forming deeper emotional connections.
(Kim et al., 2025)	To study digital community consumption decisions, emphasizing the relationship between users' social identity in the metaverse and virtual product purchase intention, mediated by site attachment and user engagement, and moderated by public self-consciousness.	Online survey of 319 female metaverse users in South Korea. Data analyzed using CFA and PROCESS macro-Models 6 & 59.	- Social identity directly affects purchase intention. - User engagement mediates the relationship, while site attachment alone does not. - Social identity affects purchase intention via serial mediation: site attachment → user engagement. - Public self-consciousness moderates effects: socially aware users are more influenced by social identity. - Emphasizes the importance of user engagement over mere site attachment in driving purchase intention.
(Zhang et al., 2025)	To explore pathways influencing consumer purchase intention in metaverse shopping, particularly on automotive platforms.	SEM on data from 348 respondents in China planning to purchase cars in the metaverse.	- Perceived social presence of others positively affects purchase intention, mediated by metaverse identification. - Consumer stickiness (time spent) and presence of friends' moderate social presence → metaverse identification. - Product type (eco-friendly vs. non-eco-friendly) moderates metaverse identification → purchase intention. - Highlights the importance of social factors (friends, community) and product characteristics in shaping purchase intention in the metaverse.
(Söderström et al., 2024)	To understand how AR affects consumer behavioral responses,	Survey study using PLS-SEM on 394 IKEA Place app	- For first-time users, vividness and product informativeness are key drivers of purchase intention.

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Author(s)	Objective	Methodology	Relevance to This Study
	especially purchase intention, considering habituation (repeated use).	users in the U.S. Comparative analysis between first-time and habitual users.	- For habitual users, augmentation and personalized recommendations become more important. - Demonstrates that AR technology effects shift over time: from novelty/information focus to function/personalization focus.
(Chaudhuri et al., 2026)	To examine how product image background context composition influences image appeal, product perception, and willingness to pay, emphasizing differences between high- and low-involvement products.	Mixed experiment integrating eye-tracking (initial fixation, fixation duration) with survey on 122 consumers.	- Contextual background increases image appeal and product perception. - Stronger effects for high-involvement products (e.g., furniture) vs. low-involvement products (e.g., accessories). - Fixation duration positively correlates with willingness to pay, indicating deeper visual engagement increases valuation. - Rapid initial fixation negatively correlates with willingness to pay, showing shallow attention is less effective.
(Yin et al., 2025)	To investigate the impact of AI-personalized recommendations on consumers' click intention in Chinese e-commerce.	Three sequential studies: 1. In-depth interviews (Grounded Theory) with 30 consumers. 2. Scale development and validation (n=347). 3. Model testing using SOR (n=1097).	- Three AI functional experiences: relevance, inspiration, and insightfulness significantly enhance immersive experience and technology acceptance. - Immersive experience mediates the relationship between functional experience and click intention. - Privacy breaches weaken positive effects of immersive experience and technology acceptance on click intention. - High-quality information strengthens the positive effects of technology acceptance on click intention.

Table 2. Codebook: Analysis of Consumer Experience in Metaverse & E-commerce

Code	Definition	Indicators	Source
Immersion Presence	Psychological sensation of "being there" in a virtual environment, arising from deep engagement with digital stimuli.	- "Immersion encompasses lower-level attributes such as avatar-based interactions, atmospheric feelings, and sensory feedback, capturing the extent to which users feel immersed in the metaverse environment." - "Telepresence refers to the user's perception of 'being present' in a virtual environment... Presence,	(Kautish et al., 2025; Rahman et al., 2025; Vernuccio et al., 2025)

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Code	Definition	Indicators	Source
		often described as the sensation of 'being there', deepens as immersion intensifies." - "Perceived telepresence in a branded context can make a digital connection... more intimate, fostering feelings of brand love."	
Awe Emotion	Transcendent emotional experience characterized by feelings of awe, self-diminishment, and the cognitive need for accommodation.	- Measured with a multidimensional scale: connectedness, vastness, self-diminishment, need for accommodation, physical sensation, time perception. - Study 1: M_metaverse = 6.39 vs M_traditional = 5.71, t(88) = 5.057, p<.001. - "Awe-inspired experience... can challenge or extend consumers' existing knowledge."	(Kautish et al., 2025)
Perceived Interactivity	Users' perception of their ability to control the virtual environment and receive real-time feedback.	- Composed of three dimensions: Control, Playfulness, Synchronicity (Ahn et al., 2024). - Study 2: Avatar presence → increased perceived interactivity (M=6.24 vs 5.87, t(70) = 4.775, p<.001). - Perceived interactivity mediates the relationship between avatar presence and awe (β=0.109, p<.001). (SLR 2)	(Kautish et al., 2025)
Avatar Self	Digital representation fully customized and controlled by the user, creating a sense of ownership and identity.	- Study 3: Self-avatar → higher awe (M=4.19) vs brand-avatar (M = 3.75), t(106) = 3.326, p<.001. - "Self-avatars may feel more authentic or personal, increasing the sense of identity linkage and social presence."	(Kautish et al., 2025)
Avatar Brand	Digital entity managed by a brand (often AI-driven) serving as an assistant or brand representative.	- "Brand avatars... can act as persuasive agents, purchasing assistants, and conversational partners." - Study 2: Brand-avatar presence increased awe (M=4.41 vs 4.28, t(70) = 2.327, p<.023) through enhanced perceived interactivity.	(Kautish et al., 2025; Vernuccio et al., 2025)
Visual Context	Aesthetic quality, visual design, and sensory completeness (audio, visual, haptic) of the virtual environment.	- "Aesthetics refers to the extent to which a metaverse platform is perceived to be sensorially pleasing." - Eye-tracking: "Contextual backgrounds... significantly influence visual engagement, image appeal, and willingness to pay, with effects	(Chaudhuri et al., 2026; Rahman et al., 2025)

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Code	Definition	Indicators	Source
		varying by product category (high vs. low involvement)."	
AI Personalization	System capability to tailor content, recommendations, or experiences based on user preferences and behavior.	- "Personalization allows users to customize their avatars, environments, and interactions, creating a more meaningful... experience." - "AI-personalized recommendations... relevance, inspiration, and insightful experiences... significantly promote consumers' clicking intention." - "Personalization" is the highest-weighted attribute (0.29) in the MVCX scale.	(Rahman et al., 2025; Yin et al., 2025)
Choice Confidence	Key cognitive outcome prior to purchase decision.	- "Trialability can reduce perceived risk by enabling users to explore and evaluate brand offerings, leading to more confident and informed decision-making." - "Product informativeness positively affects choice confidence... Augmentation positively affects choice confidence."	(Rahman et al., 2025; Söderström et al., 2024)
Social Presence	Sense of social presence from brand avatars or other users, creating community and connectedness.	- "Brand avatar social presence (BASP) involves the perceived presence of brand agents." - "Metaverse users' social identity... influences their purchase intention, as mediated by their metaverse identification." - "Communality captures the extent to which users feel part of a community."	(Rahman et al., 2025; Vernuccio et al., 2025; Zhang et al., 2025)
Brand Anthropomorphism	Cognitive process in which consumers attribute human-like characteristics (e.g., thoughts, emotions, intentions) to a brand.	- "Brand anthropomorphism embraces perceptions of a brand as a human being." - Telepresence → BA (β=.22, p<.05); BASP → BA (β=.53, p<.01). - BA → Brand Love (β=.44, p<.01).	(Vernuccio et al., 2025)
Habituation	Changes in users' emotional and cognitive responses to immersive technology over repeated use.	- "For habitual users, the determinant of emotional response shifts from vividness to enjoyment or functional augmentation." - "The effect of novelty... can diminish over time as users become habituated."	(Kautish et al., 2025; Söderström et al., 2024)

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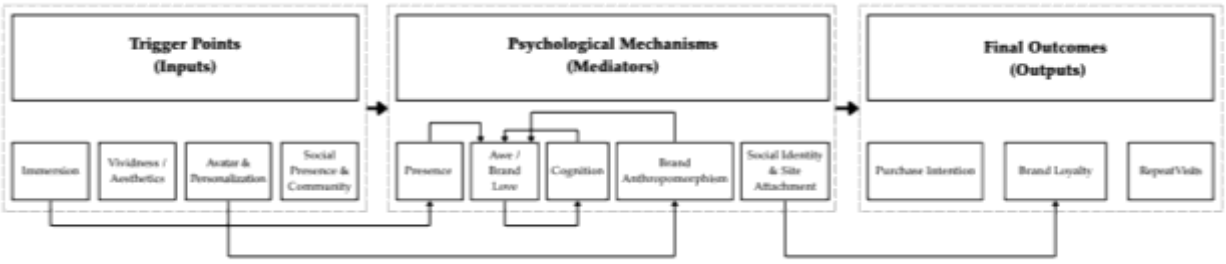
Figure 2. Conceptual Model



This conceptual model maps the complex pathways of consumer experience in the metaverse, spanning from Trigger Factors to Final Outcomes. Trigger factors encompass technological and social elements that initiate initial interactions, such as Immersion and Vividness/Aesthetics, which generate deep and realistic experiences, as well as Avatar & Personalization and Social Presence & Community, which foster self-identity and interpersonal connections. These factors interact and guide consumers toward the stage of internal psychological mechanisms.

At the psychological mechanisms stage, external stimuli are translated into complex internal responses. Presence, as the sensation of "being there," acts as a primary mediator linking immersion to Awe/Brand Love. Brand Anthropomorphism, emerging from avatar personalization, reinforces Brand Love, while Cognition and Awe/Brand Love influence each other bidirectionally: enhanced understanding can strengthen emotions, and intense emotions affect information processing. Social Identity and Site Attachment, developed through community interactions, further strengthen consumer attachment to the platform.

The final outcomes of this process include consumer behaviors, where Brand Love and Social Identity drive Brand Loyalty and Repeat Visits, while strong cognition and social attachment increase Purchase Intention. Thus, this model systematically explains how technological and social factors in the metaverse, through interrelated psychological mechanisms, strategically shape consumer behavior.

DISCUSSION

The results section has identified six main themes: Immersion–Presence–Awe Pathway, Avatar and Personalization, Visual Cognition and Decision Processes, Social Presence and Community Identity, Brand Anthropomorphism and Loyalty, and Habituation and the Dynamics of Experience. These findings directly address the research objective of understanding the factors that influence consumers' emotional engagement, the cognitive processes involved, and the mechanisms through which immersive experiences in the metaverse can contribute to brand loyalty. By integrating evidence from eight articles, this study not only reaffirms key concepts in digital marketing literature but also offers a novel conceptual framework illustrating how technological, social, and emotional elements interact in complex ways to shape consumer behavior.

1. Integration with the S-O-R Framework

The findings from this meta-synthesis align closely with the Stimulus–Organism–Response (S-O-R) framework, in which technological elements in the metaverse function as stimuli that trigger consumers' internal reactions and ultimately result in observable behavior (Bouallègue et al., 2025; Cho et al., 2024; Erensoy et al., 2024; Jafar et al., 2025; Kı ymalı oğlu et al., 2024; Muhammad Sohail Jafar et al., 2024; Pragha et al., 2025; Rather et al., 2025; Shao et al., 2025). Factors such as immersion, visual vividness, personalization, and the presence of avatars can

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be positioned as stimuli that enrich the virtual marketing environment. Consumers' reactions to these stimuli are manifested in the organism dimension, encompassing internal psychological experiences including cognition (attention, comprehension, and choice confidence) and affect (presence, awe, brand love). Finally, consumer responses are reflected in behavior, including purchase intentions, platform attachment, and brand loyalty.

A key insight from this meta-synthesis is that the S-O-R framework is not only applicable in traditional contexts (Kumar Mishra et al., 2022; Rana et al., 2023; S. M. F. Uddin et al., 2025)but is further expanded within the metaverse. Presence and awe emerge as critical mediators within the stimulus–organism pathway, while visual context and interactivity establish a more complex stimulus mechanism compared to conventional marketing media. Consequently, these findings enrich our understanding of the S-O-R model by demonstrating that, in the metaverse context, transformative emotional dimensions play a central role in linking marketing technology to consumer behavior.

2. **Integration with the Cognitive–Affective–Conative Model**

The findings of this meta-synthesis support and simultaneously extend the Cognitive–Affective–Conative (CAC) model by demonstrating how consumer experiences in the metaverse (Fan et al., 2025; N. S. Ibrahim et al., 2025; Pooja et al., 2024; Samira Bafadhal et al., 2025; Sharma et al., 2024; Vafaei-Zadeh et al., 2025; Wang et al., 2024) progress through interconnected cognitive, affective, and conative stages. At the cognitive stage, visual aspects such as vividness, foreground–background composition, trialability features, and AI-based recommendations influence consumer attention, comprehension, and choice confidence. The transition to the affective stage becomes evident when these cognitive stimuli evoke emotional engagement in the form of presence, awe, and brand love, thereby deepening consumers' relationships with the platform and the brand. Finally, at the conative stage, the emotions formed translate into observable behaviors, such as purchase intentions, repeat visits, community engagement, and brand loyalty.

A key contribution of these findings is the confirmation that, in the metaverse context, the cognition–affection–conation pathway is not only linear but also interactive. Strong emotional experiences, such as awe, can enhance subsequent cognitive processing, while improved product understanding through augmented reality can generate more intense emotional engagement. Consequently, this study extends the CAC model by illustrating the reciprocal dynamics between cognitive and affective dimensions in shaping consumer behavior within immersive virtual environments.

3. **Integration of Brand Relationship Theory, Social Presence, and Intrinsic Motivation**

The findings of this meta-synthesis provide critical insights into how consumer relationships with brands in the metaverse are formed through complementary psychological mechanisms. First, the roles of avatars and telepresence enhance our understanding of brand anthropomorphism, which refers to consumers' tendency to perceive brands as entities possessing human-like qualities. When brand avatars are designed with convincing social cues, consumers are more likely to experience brand love and develop long-term affective bonds. This indicates that strategies for building loyalty in the digital era no longer rely solely on product differentiation but also on the ability to create interactions that resemble interpersonal relationships (B. Ibrahim & Aljarah, 2023; Jai et al., 2022; Wilk et al., 2021), where the brand is treated as a "friend" or a trusted partner.

Second, the social dimensions identified in the themes of social presence and social identity explain why consumers are motivated to engage in the metaverse. Unlike conventional social media, which generally emphasize one-way communication or open networking, the metaverse offers a more immersive and participatory sense of togetherness. Feeling "present with" others in a virtual space strengthens self-identification with the community, fosters site attachment,

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and ultimately drives economic behaviors such as purchase intentions. In other words, the metaverse transforms brand interactions from mere information exchange into deep social experiences (Pragha et al., 2025; Rahman et al., 2025; Wongkitrungrueng & Suprawan, 2024), where community identity and relationships serve as primary drivers of consumer engagement. Third, peak experiences such as awe, combined with relevant personalization, help explain consumers' intrinsic motivation to remain engaged. However, findings regarding habituation indicate that engagement cannot be sustained solely through visual novelty. Experienced consumers require additional factors, such as enjoyment, personal relevance, and augmentation quality, to maintain their emotional involvement. The theoretical implications of these findings align with Self-Determination Theory, which emphasizes the importance of fulfilling psychological needs for autonomy, competence, and social relatedness (Samira Bafadhal et al., 2025). Accordingly, marketers in the metaverse must design experiences that not only evoke momentary awe but also sustain long-term engagement through continuous innovation, personalized interactions, and authentic communities.

CONCLUSION

This study synthesized eight articles using a systematic literature review and meta-synthesis approach and successfully identified six main themes that explain how consumer experiences in the metaverse are formed and how they influence brand loyalty. The findings indicate that technological factors such as immersion, avatars, personalization, and visual design act as stimuli that trigger cognitive and emotional responses, including presence, awe, and brand love, which ultimately lead to consumer behaviors such as engagement, purchase intentions, and loyalty.

The primary contribution of this study is the theoretical extension of understanding digital consumer behavior by demonstrating that immersive experiences in the metaverse involve mechanisms more complex than conventional media, including the role of new mediators such as presence and peak emotional experiences. Practically, these results emphasize that marketers need to design metaverse strategies focused on interactivity, personalization, and sustainable experiences to maintain consumer engagement beyond mere novelty effects.

Nonetheless, this study also highlights several areas that remain open for exploration. First, most studies still focus on experimental or short-term simulation contexts, indicating that longitudinal research is necessary to understand how consumers' emotional and cognitive engagement evolves over time. Second, ethical dimensions such as data privacy, psychological implications of deep immersion, and potential addiction have not been extensively examined. Third, the majority of articles concentrate on retail or product marketing contexts, leaving research opportunities to explore how metaverse experiences can shape consumer behavior in other sectors, such as education, tourism, or public services. Finally, cross-cultural and cross-demographic studies are greatly needed to determine whether consumer engagement patterns found in the literature are universally applicable or influenced by local contextual factors.

SUGGESTION

Based on the findings, future research is recommended to expand the scope of analysis using longitudinal approaches to better understand the dynamic evolution of consumers' emotional and cognitive experiences over time. Moreover, cross-cultural and cross-demographic studies are needed to determine whether patterns of consumer engagement in the metaverse are universal or influenced by local contexts. Comparative studies across different sectors—such as education, tourism, and public services—could also provide a more comprehensive understanding of how immersive experience-based marketing strategies can be effectively implemented in various industries.

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Furthermore, marketers and technology developers are encouraged to design metaverse strategies that balance interactivity, ethical considerations of data privacy, and the sustainability of user experiences. The design of avatars and personalization features should not only emphasize visual appeal but also focus on fostering authentic emotional connections between consumers and brands. In this way, the metaverse can serve not merely as an innovative promotional medium but as a holistic digital ecosystem that supports meaningful consumer engagement and long-term brand loyalty.

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