International Journal of Economics and Management Sciences
Volume 5, Issue 2 (2026), pp. 166-179
ISSN 2823-9350

Immersive knowledge: how augmented reality shapes consumer understanding

Yasmine LEBBADI
Faculté des lettres et des sciences humaines Ain Chock, Université Hassan II, Casablanca-Maroc

Hala LABIAD (Prof. Dr.)
Faculté des lettres et des sciences humaines Ain Chock, Université Hassan II, Casablanca-Maroc

Correspondance address Abdelmalek Essaadi University, Morocco

Cite this article LEBBADI, Y. al (2026). Immersive knowledge: how augmented reality shapes consumer understanding. International Journal of Economics and Management Sciences, Volume 5, Issue 2 (2026), pp. 166-179.

Submitted: 05/04/2026
Accepted : 27/04/2026

Copyright © IJEMS

International Journal of Economics and Management Sciences
Volume 5, Issue 2 (2026), pp. 166-179
ISSN 2823-9350

Abstract

Augmented Reality (AR) is increasingly recognized as a strategic interface between digital information and physical consumption environments, profoundly transforming how consumers access, process, and internalize marketplace knowledge. While prior research has extensively documented AR's influence on engagement, attitude formation, and purchase intention (Javornik, 2016; Hilkent & al., 2017; Rauschnabel & al., 2022), its role in shaping consumer understanding remains theoretically underexplored. Addressing this gap, the present article introduces the concept of immersive knowledge, defined as the depth, coherence, and experiential integration of consumer understanding generated through AR-enabled interactions. Anchored in experiential marketing theory (Schmitt, 1999), embodied cognition (Barsalou, 2008), and immersive media research (Slater & Sanchez-Vives, 2016), this conceptual paper theorizes how AR reconfigures cognitive learning processes by blending perception, action, and contextualized information. We argue that AR's core affordances interactivity, spatial presence, and augmentation quality (Hilken & al., 2018; Carrozzi & al., 2019) facilitate experiential learning, enhance mental simulation (Taylor & Thompson, 1982), and reduce epistemic uncertainty during consumption decision-making. Furthermore, drawing on construal level theory (Trope & Liberman, 2010), we explain how AR shifts consumers from abstract to concrete representations, fostering more accurate mental models of products and services. The article culminates in a conceptual framework that positions immersive knowledge as a central mediating construct between AR experiences and downstream cognitive and behavioral outcomes. By advancing immersive knowledge as a distinct theoretical lens, this study extends AR research beyond hedonic and behavioral metrics, offering a robust foundation for future empirical inquiry and strategic implications for immersive marketing design.

Keywords : Augmented reality, immersive knowledge, consumer understanding, experiential learning, embodied cognition.

International Journal of Economics and Management Sciences
Volume 5, Issue 2 (2026), pp. 166-179
ISSN 2823-9350

I. INTRODUCTION

The digital transformation of the marketplace has ushered in a new era in which immersive technologies reshape not only how information is presented to consumers, but also how it is understood, integrated, and acted upon. Among these technologies, Augmented Reality (AR) stands out for its unique ability to overlay digital content onto the physical world, thereby blending sensory cues, contextual information, and virtual elements to create enriched consumption environments. Initially popularized in gaming and entertainment, AR has rapidly penetrated domains such as education (Bacca & al., 2014), tourism (Tussyadiah & al., 2018), and retail marketing (Javornik, 2016; Rauschnabel & al., 2022), where its potential to influence consumer perception and behavior has been extensively documented.

Despite a growing body of empirical research demonstrating the positive effects of AR on engagement, attitude, and purchase intention (Hilken & al., 2017; Yim & al., 2017; Rauschnabel, He, & Ro, 2022), the extant literature has largely overlooked a foundational question: How does AR contribute to the way consumers understand products, services, and consumption contexts? Traditional marketing paradigms have conceptualized consumer understanding mainly in terms of information processing and decision-making (Bettman, 1979; Alba & Hutchinson, 1987). However, AR introduces a qualitatively different epistemic experience that intertwines perceptual, contextual, and interactive elements in real time, calling for a theoretical reconceptualization of knowledge acquisition in consumer contexts.

In cognitive science, theories of embodied cognition suggest that perception and understanding are grounded in sensorimotor experiences rather than abstract symbol manipulation alone (Barsalou, 2008). AR's ability to situate digital information within consumers' physical environments aligns with this perspective, potentially facilitating deeper mental simulations and richer mental models of products and services (Slater & Sanchez-Vives, 2016; Schmitt, 1999). Moreover, frameworks such as construal level theory (Trope & Liberman, 2010) and experiential learning theory (Kolb, 1984) imply that concrete, context-rich interactions, precisely those enabled by AR, can reduce cognitive distance and enhance comprehension.

Nevertheless, the literature lacks a unified conceptual lens that captures these dynamics and distinguishes AR's contribution to understanding from its effects on engagement or behavior. To fill this theoretical gap, the present article introduces the construct of immersive knowledge, defined as the depth and coherence of understanding generated through AR-mediated experiences. By integrating insights from marketing, cognitive psychology, and media studies, we propose a conceptual framework that explains how AR's core affordances interactivity, spatial presence, and augmentation quality shape consumer knowledge structures and influence downstream cognitive and behavioral outcomes. Despite these advances, existing research remains limited in explaining the underlying mechanisms through which augmented reality transforms consumer understanding. In particular, prior studies have largely focused on behavioral and attitudinal outcomes, while overlooking how AR reshapes knowledge construction processes in immersive and interactive contexts.

Accordingly, this paper addresses the following research question: how does augmented reality shape consumer understanding beyond its established effects on engagement and behavioral responses? More specifically, it seeks to explain how AR-enabled interactions transform the processes through which consumers construct, integrate, and apply marketplace knowledge.

This introduction sets the stage for a systematic exploration of the theoretical foundations of immersive knowledge and its implications for marketing scholarship and practice. In the sections that follow, we first examine the cognitive and experiential mechanisms underlying AR enhanced understanding, and then articulate the dimensions, antecedents, and outcomes of immersive knowledge.

II. THEORETICAL FOUNDATIONS OF IMMERSIVE KNOWLEDGE

Augmented Reality (AR) does not merely enhance the visual presentation of products and services; it fundamentally alters the cognitive and experiential processes through which consumers acquire knowledge. From a theoretical standpoint, AR bridges traditional information processing models with experiential and embodied perspectives, creating an integrated environment where perception, action, and context converge. Drawing on embodied cognition theory (Barsalou, 2008), AR experiences are posited to transform abstract concepts into sensorimotor simulations, enabling consumers to "experience" products before physical acquisition. Simultaneously, experiential marketing theory (Schmitt, 1999) suggests that multisensory engagement enhances emotional and cognitive processing, thereby increasing the depth and coherence of understanding. Furthermore, AR's ability to provide interactivity, spatial presence, and real-time contextualization (Hilken & al., 2017; Javornik, 2016) positions it as a tool not only for engagement but also for knowledge construction. By synthesizing insights from cognitive psychology, media studies, and marketing theory, this section establishes the theoretical foundation necessary to conceptualize immersive knowledge as a distinct and measurable construct, setting the stage for an exploration of its dimensions, antecedents, and outcomes.

2.1. Cognitive and experiential mechanisms in AR

Augmented Reality (AR) represents a paradigm shift in consumer cognition by merging virtual content with the physical environment, thereby enabling experiences that are simultaneously perceptual, interactive, and contextually grounded. Unlike traditional media, which primarily deliver information in a passive manner, AR promotes active cognitive engagement, allowing consumers to explore, manipulate, and internalize information in ways that closely mirror real-world interactions (Javornik, 2016; Hilken & al., 2017). From a theoretical standpoint, AR can be positioned at the intersection of cognitive psychology, experiential marketing, and embodied cognition, offering a unique lens through which to understand how knowledge is constructed in consumer contexts.

One of the key cognitive mechanisms underlying AR is mental simulation, a process whereby individuals generate internal representations of objects and scenarios to predict outcomes and guide decision-making (Barsalou, 2008; Slater & Sanchez-Vives, 2016). Through AR, consumers can simulate product use such as virtually placing furniture in their homes or trying on apparel enabling them to integrate abstract product attributes into sensorimotor schemas. This embodiment facilitates deeper encoding of information and more durable memory traces compared to traditional text- or image-based content (Liu, Huang, & Duan, 2020).

AR also enhances situated cognition, which posits that knowledge is constructed within the context in which it is applied (Brown, Collins, & Duguid, 1989). By embedding digital information within realistic settings, AR allows consumers to process knowledge in ways that are consistent with its intended use, bridging the gap between conceptual understanding and

practical application. This situated interaction promotes contextualized learning, reducing cognitive distance and enabling more accurate mental models of products and services (Kolb, 1984; Tussyadiah, Wang, & Jia, 2018).

Furthermore, AR influences attention and information processing. Its combination of interactivity, spatial augmentation, and immersive feedback captures selective attention, facilitates the organization of information, and encourages deeper elaboration (Hilken & al., 2017; Yim, Chu, & Sauer, 2017). By guiding focus to relevant product features and creating a dynamic information environment, AR supports schema refinement and reduces uncertainty during decision-making (Rauschnabel, He, & Ro, 2022).

Beyond cognition, AR engages experiential and affective mechanisms that reinforce learning and comprehension. Drawing on experiential marketing theory (Schmitt, 1999), AR experiences leverage multisensory cues to evoke emotional responses, which in turn enhance engagement, motivation, and knowledge retention. Positive affective states during AR interactions can amplify attention and cognitive elaboration, enabling consumers to integrate new information into coherent mental frameworks (Hassenzahl, Diefenbach, & Göritz, 2013). For example, a consumer interacting with an AR-enabled makeup app experiences immediate visual feedback, emotional satisfaction, and a sense of control, which together facilitate embodied understanding of the product's attributes and suitability.

AR also promotes interactive learning loops, consistent with Kolb's experiential learning cycle (1984). Consumers engage in iterative cycles of exploration, reflection, and refinement, testing hypothetical product scenarios and observing outcomes in real time. This process not only strengthens knowledge acquisition but also supports metacognitive awareness, allowing consumers to evaluate the reliability of their judgments and adjust strategies accordingly (Liu & al., 2020; Rauschnabel & al., 2022).

Finally, the immersive nature of AR fosters coherence in mental models by integrating perceptual, contextual, and affective dimensions into a unified understanding of products and services (Barsalou, 2008; Slater & Sanchez-Vives, 2016). This integrated comprehension, which we conceptualize as immersive knowledge, goes beyond surface-level engagement or behavioral intention, reflecting a durable and transferable form of consumer understanding that can guide future decisions and interactions.

2.2. AR affordances and consumer perception

Augmented Reality (AR) operates as a multidimensional tool that extends beyond traditional media by providing dynamic, context-rich experiences that shape both perception and understanding. Its unique affordances interactivity, spatial presence, vividness, and augmentation quality serve as the primary levers through which AR influences consumer cognition and knowledge acquisition (Hilken & al., 2018; Javornik, 2016). Understanding these affordances is critical for conceptualizing how AR generates immersive knowledge, integrating cognitive, experiential, and affective dimensions.

Interactivity is the hallmark of AR experiences, allowing consumers to manipulate, explore, and test virtual objects within real-world contexts. This interactive engagement facilitates active learning, enabling consumers to construct mental models of products or services by observing cause-and-effect relationships in real time (Rauschnabel, He, & Ro, 2022). For instance, an AR furniture app that allows users to move, rotate, and scale a virtual sofa provides not only

aesthetic evaluation but also functional understanding, such as spatial fit and usability. Empirical studies have shown that high interactivity in AR positively correlates with increased perceived competence, knowledge acquisition, and decision confidence (Yim, Chu, & Sauer, 2017; Poushneh & Vasquez-Parraga, 2017).

Spatial presence, defined as the sense of "being there" within an augmented environment, enhances situational awareness and contextual comprehension. When consumers perceive virtual elements as seamlessly integrated with their physical surroundings, cognitive processing becomes grounded in context, leading to more accurate mental simulations and predictive judgments (Slater & Sanchez-Vives, 2016; Steuer, 1992). This situational embedding aligns with situated cognition theory (Brown, Collins, & Duguid, 1989) and enables consumers to process knowledge in a manner consistent with real-world application.

Vividness, or the richness of sensory stimuli, enhances consumer perception by increasing the realism and clarity of virtual content (Hilken & al., 2017; Yim & al., 2017). Augmentation quality, the degree to which virtual elements are coherent, contextually aligned, and seamlessly integrated further reinforces cognitive assimilation, facilitating the creation of durable knowledge structures (Javornik, 2016; Rauschnabel et al., 2022). High-quality augmentations allow consumers to mentally rehearse product use, anticipate outcomes, and evaluate alternatives, reducing uncertainty and enhancing decision-making efficacy.

Collectively, these AR affordances demonstrate that consumer perception is not merely a passive process but an interactive, immersive, and contextually grounded phenomenon. By engaging cognitive, perceptual, and affective systems simultaneously, AR fosters deeper comprehension and richer experiential understanding, which constitutes the theoretical foundation for the construct of immersive knowledge.

III. CONCEPTUALIZING AND OPERATIONALIZING IMMERSIVE KNOWLEDGE

Augmented Reality (AR) not only transforms how consumers perceive products and services, but also shapes the very nature of knowledge they acquire through these interactions. This article conceptualizes immersive knowledge as a multidimensional construct, integrating cognitive, experiential, and affective elements that emerge from engaging with AR environments. Unlike traditional consumer knowledge, which often emphasizes factual recall or heuristic cues (Alba & Hutchinson, 1987; Bettman, 1979), immersive knowledge reflects a deeper, situated understanding, grounded in perceptual and interactive experiences (Barsalou, 2008; Kolb, 1984). It captures how consumers mentally simulate product use, contextualize information within real-world settings, and integrate emotional responses into their comprehension (Schmitt, 1999; Hassenzahl, Diefenbach, & Göritz, 2013). By establishing this conceptual foundation, the following sections explore the dimensions, antecedents, and outcomes of immersive knowledge, providing a rigorous framework for understanding how AR mediates consumer understanding in complex and interactive contexts.

3.1. Dimensions and antecedents of immersive knowledge

The emergence of immersive knowledge in augmented reality (AR) contexts represents a significant advancement in understanding how consumers acquire, integrate, and apply information in interactive and experiential environments. Unlike traditional consumer knowledge, which primarily emphasizes factual recall or heuristic processing (Alba &

Hutchinson, 1987; Bettman, 1979), immersive knowledge reflects a multidimensional construct that combines cognitive, experiential, and affective elements, capturing the depth, contextual grounding, and emotional resonance of understanding facilitated by AR. Cognitive depth is particularly critical, as it reflects the extent to which consumers develop a detailed and accurate mental representation of products or services. Through AR-mediated interactions, consumers are able to manipulate virtual objects, simulate scenarios, and observe consequences in a manner that mirrors real-world use, thereby enhancing memory encoding, conceptual understanding, and procedural knowledge (Barsalou, 2008; Liu, Huang, & Duan, 2020). This process aligns with theories of embodied cognition, which suggest that active engagement with virtual objects supports richer mental representations than passive observation, ultimately allowing consumers to anticipate outcomes and make informed decisions (Slater & Sanchez-Vives, 2016).

Experiential integration constitutes another core dimension of immersive knowledge. AR environments provide multisensory and interactive experiences that encourage iterative learning, reflection, and adaptation, consistent with Kolb's (1984) experiential learning framework and Schmitt's (1999) principles of experiential marketing. By actively engaging with products in contextually relevant environments, consumers construct situated knowledge, bridging the gap between abstract information and practical application (Brown, Collins, & Duguid, 1989). This dimension is further reinforced through features such as spatial presence, where the perception of being "inside" an AR environment enhances situational awareness and promotes deeper cognitive assimilation (Steuer, 1992; Slater & Sanchez-Vives, 2016). Experiential integration ensures that knowledge is not only retained but can also be applied to novel contexts, supporting problem-solving, preference formation, and decision-making.

Affective coherence represents a third critical dimension, emphasizing the role of emotional and motivational states in shaping understanding. Research indicates that positive affect and engagement enhance attention, elaboration, and memory retention, which in turn strengthen the durability and applicability of knowledge (Hassenzahl, Diefenbach, & Göritz, 2013; Yim, Chu, & Sauer, 2017). In AR-mediated experiences, affective responses are elicited through realistic visualization, immersive storytelling, and playful manipulation, creating a sense of enjoyment, control, and personal relevance. The integration of affective elements with cognitive and experiential processing produces a holistic understanding that goes beyond superficial recognition or product awareness, fostering the development of actionable and transferable knowledge.

The antecedents of immersive knowledge are equally multifaceted, encompassing both technological affordances and user characteristics. Key AR features such as interactivity, spatial presence, vividness, and augmentation quality directly influence the degree to which consumers engage cognitively, experientially, and emotionally with the content (Hilken & al., 2017; Javornik, 2016; Rauschnabel, He, & Ro, 2022). Interactivity enables active manipulation, testing, and exploration, which supports the formation of detailed mental models and facilitates problem-solving (Poushneh & Vasquez-Parraga, 2017). Spatial presence fosters situational cognition, anchoring knowledge in real-world contexts and improving the transferability of insights to practical applications (Slater & Sanchez-Vives, 2016; Steuer, 1992). Vividness and sensory richness enhance perceptual realism and mental simulation, allowing consumers to

evaluate alternatives, anticipate outcomes, and refine their understanding (Hilken & al., 2017; Yim & al., 2017). Additionally, user-specific factors, such as prior knowledge, intrinsic motivation, and technological self-efficacy, moderate the effectiveness of these affordances, influencing the depth, integration, and coherence of immersive knowledge (Alba & Hutchinson, 1987; Bettman, 1979).

Importantly, immersive knowledge is not merely a summation of these dimensions; it emerges from the synergistic interaction between cognitive processing, experiential engagement, and affective alignment. The interplay between AR's affordances and individual characteristics creates a dynamic learning environment where understanding is actively constructed, continuously refined, and emotionally reinforced. This conceptualization highlights how AR transforms consumer engagement from passive information reception into an active, situated, and emotionally enriched knowledge acquisition process, providing both theoretical and practical insights for marketing, education, and product design. By articulating the dimensions and antecedents of immersive knowledge, this framework establishes a foundation for investigating how AR-mediated experiences can generate robust, transferable, and actionable consumer understanding, setting the stage for subsequent exploration of outcomes and applications.

3.2. Outcomes and managerial implications

The knowledge acquired through immersive interactions in augmented reality (AR) does not remain isolated at the level of comprehension; it produces a range of meaningful outcomes that influence consumer behavior, decision-making, and attitudes toward products and brands. Immersive knowledge facilitates enhanced decision quality, as consumers who engage with interactive and contextually rich AR experiences develop mental models that allow them to anticipate product performance, assess alternatives, and evaluate trade-offs more accurately than through traditional information sources (Barsalou, 2008; Liu, Huang, & Duan, 2020). By simulating real-world use and integrating multisensory cues, AR enables a predictive understanding of product functionality, usability, and situational fit, thereby reducing uncertainty and increasing confidence in purchase decisions (Rauschnabel, He, & Ro, 2022; Poushneh & Vasquez-Parraga, 2017).

Beyond immediate decision-making, immersive knowledge strengthens cognitive retention and transfer, allowing consumers to recall and apply information in new contexts. Research on experiential learning and situated cognition suggests that knowledge acquired through interaction and embodiment is more durable and more readily generalizable than knowledge acquired passively (Kolb, 1984; Brown, Collins, & Duguid, 1989). For example, a consumer using an AR app to visualize and test the configuration of a home appliance not only remembers product specifications more accurately but can also adapt that understanding to related products, usage scenarios, or problem-solving situations. This transferability demonstrates that immersive knowledge serves as a foundation for long-term learning and consumer competence, extending the value of AR experiences beyond the immediate interaction.

Immersive knowledge also has significant affective and attitudinal outcomes. Positive emotional engagement during AR interactions enhances satisfaction, enjoyment, and perceived usefulness, which in turn strengthens brand evaluations and loyalty (Hassenzahl, Diefenbach, & Göritz, 2013; Yim, Chu, & Sauer, 2017). When consumers experience coherence between

International Journal of Economics and Management Sciences
Volume 5, Issue 2 (2026), pp. 166-179
ISSN 2823-9350

cognitive understanding, contextual interaction, and affective engagement, they are more likely to form favorable attitudes toward the product or service, recommend it to others, and repeat interactions with the brand. This affective alignment suggests that immersive knowledge operates at the intersection of cognition and emotion, producing outcomes that are both functional and relational.

In addition, immersive knowledge fosters behavioral intentions and engagement. The rich mental representations formed through AR encourage exploratory behavior, experimentation, and co-creation, as consumers become more confident and proactive in interacting with products or services (Javornik, 2016; Hilken & al., 2017). These behaviors not only enhance the immediate consumer experience but also provide opportunities for marketers to capture feedback, refine offerings, and deepen consumer-brand relationships. By linking knowledge acquisition with observable behaviors, immersive knowledge highlights the practical implications of AR, demonstrating its role in shaping both perception and action.

Finally, immersive knowledge contributes to perceived self-efficacy and empowerment. Consumers who acquire deep, contextually grounded understanding through AR are more capable of making independent choices, solving problems, and navigating complex product environments (Alba & Hutchinson, 1987; Bettman, 1979). This sense of competence reinforces engagement, satisfaction, and loyalty, while also promoting continued exploration and learning.

In sum, the outcomes of immersive knowledge encompass cognitive accuracy, experiential transferability, affective alignment, behavioral activation, and perceived empowerment, underscoring its central role in translating AR affordances into meaningful consumer experiences.

Building on the discussion of immersive knowledge dimensions, antecedents, and outcomes, the conceptual model presented in Figure 1 synthesizes these relationships into a coherent framework. It illustrates how AR affordances, moderated by user characteristics, facilitate the development of immersive knowledge, which in turn generates cognitive, affective, and behavioral outcomes. This model provides a structured lens for understanding the mechanisms through which augmented reality shapes consumer comprehension and engagement, serving as a foundation for future empirical testing and theoretical refinement.

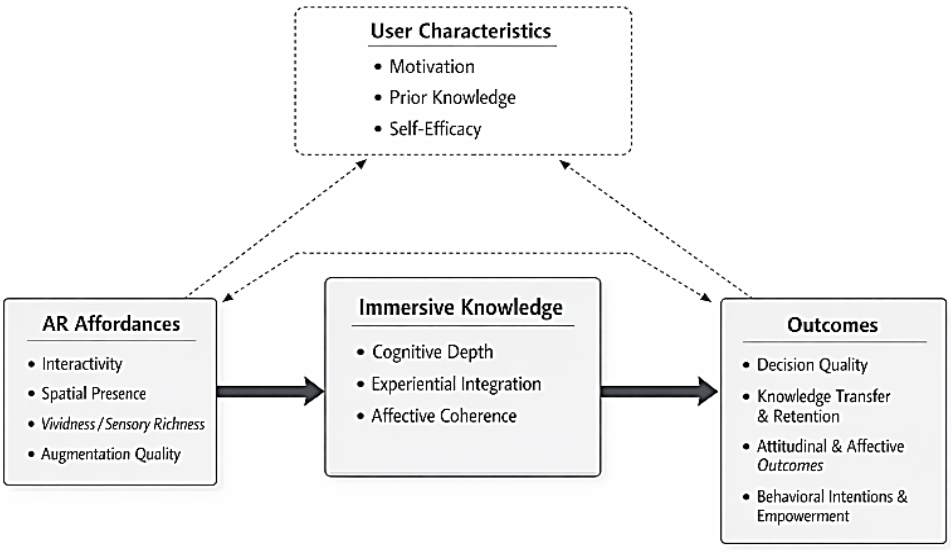


Figure 1: *Conceptual Model of Immersive Knowledge in Augmented Reality*

International Journal of Economics and Management Sciences
Volume 5, Issue 2 (2026), pp. 166-179
ISSN 2823-9350

IV. DISCUSSION

The findings and conceptual development presented in this article highlight the transformative role of augmented reality (AR) in shaping consumer knowledge and understanding. By articulating the dimensions and antecedents of immersive knowledge, as well as its cognitive, affective, and behavioral outcomes, this study offers a comprehensive framework that integrates technology-driven affordances with experiential and emotional engagement. The conceptual model underscores how AR does not merely enhance consumer attention or engagement in a superficial sense, but actively facilitates deep, situated, and actionable understanding (Barsalou, 2008; Kolb, 1984; Schmitt, 1999).

These findings extend prior research on augmented reality by demonstrating that its impact goes beyond enhancing engagement and behavioral responses to fundamentally reshaping knowledge construction processes. In this regard, our framework complements existing studies by highlighting the cognitive and experiential mechanisms underlying consumer understanding. It also reinforces earlier insights suggesting that immersive technologies actively structure how individuals interpret and internalize information in marketplace contexts.

From a theoretical perspective, this research contributes to multiple strands of marketing and consumer behavior literature. First, it extends traditional consumer knowledge frameworks (Alba & Hutchinson, 1987; Bettman, 1979) by incorporating experiential and affective dimensions, demonstrating that knowledge acquisition in AR contexts is multimodal and integrative, rather than solely cognitive. Second, the model operationalizes immersive knowledge as a central construct linking AR affordances to tangible outcomes, providing a structured lens to examine how technology-mediated experiences influence comprehension, decision-making, and behavior. This bridges gaps in the literature where prior studies have either focused narrowly on AR adoption or on isolated marketing outcomes, without accounting for the underlying knowledge processes (Liu, Huang, & Duan, 2020; Rauschnabel, He, & Ro, 2022).

The discussion of antecedents highlights the critical role of AR features such as interactivity, spatial presence, vividness, and sensory richness in driving immersive knowledge. These technological affordances function synergistically with user characteristics including prior knowledge, motivation, and self-efficacy to shape the depth and integration of understanding (Poushneh & Vasquez-Parraga, 2017; Hilken & al., 2017). By explicitly positioning immersive knowledge as a mediating construct, the model clarifies the mechanisms through which AR affects consumer behavior, emphasizing that outcomes such as decision quality, knowledge retention, attitudinal alignment, and empowerment are contingent upon the interaction between technology and user engagement.

Practically, this framework offers actionable insights for marketers, educators, and designers of AR experiences. Companies can leverage AR to create more informative, engaging, and contextually relevant experiences, enhancing both cognitive and affective engagement while fostering trust and loyalty. For example, immersive demonstrations of product functionality or interactive simulations of service experiences can reduce uncertainty, improve post-purchase satisfaction, and encourage repeat interactions (Javornik, 2016; Yim, Chu, & Sauer, 2017). Similarly, educators and trainers can utilize AR to facilitate experiential learning, ensuring that

knowledge is not only retained but also transferable to novel situations (Tussyadiah, Wang, & Jia, 2018).

Despite its conceptual contributions, the study also acknowledges limitations that point to future research directions. While the model synthesizes extensive theoretical and empirical insights, it remains conceptual and has not yet been empirically validated. Future studies could operationalize the dimensions of immersive knowledge and test the proposed relationships using experimental or field-based methods. Moreover, potential moderators such as cultural differences, task complexity, and AR interface design features could further refine the understanding of when and for whom immersive knowledge is most effectively generated.

In sum, the discussion emphasizes that AR's value lies not merely in technological novelty, but in its ability to transform consumer understanding, bridging perception, cognition, and emotion in a coherent framework. By integrating the antecedents, dimensions, and outcomes of immersive knowledge, this article advances both theoretical and practical knowledge, providing a robust foundation for future empirical testing and strategic application in marketing, education, and experience design.

V. CONCLUSION

This study conceptualizes immersive knowledge as a central mechanism through which augmented reality (AR) shapes consumer understanding, integrating cognitive, experiential, and affective dimensions. By delineating the antecedents, dimensions, and outcomes of immersive knowledge, the research offers a coherent framework that captures the transformative potential of AR in consumer experiences. The proposed model demonstrates that AR affordances such as interactivity, spatial presence, vividness, and augmentation quality facilitate knowledge acquisition, which subsequently generates enhanced decision-making, knowledge retention, affective engagement, behavioral intentions, and consumer empowerment. User characteristics, including prior knowledge, motivation, and self-efficacy, further moderate these relationships, emphasizing the importance of individual differences in shaping the effectiveness of AR-mediated experiences.

From a theoretical standpoint, this work extends the literature on consumer knowledge by moving beyond traditional cognitive models and incorporating experiential and emotional dimensions (Alba & Hutchinson, 1987; Barsalou, 2008; Bettman, 1979). It also bridges a critical gap in AR research, providing a structured framework for understanding how immersive interactions translate into tangible outcomes, thereby offering a foundation for future empirical validation and refinement. By highlighting the mediating role of immersive knowledge, the study clarifies the mechanisms through which technology-driven experiences influence comprehension, attitudes, and behavior, advancing both marketing and consumer behavior theory.

Practically, the framework provides actionable guidance for marketers, educators, and designers of interactive experiences. Organizations can leverage AR to create more engaging, informative, and contextually relevant experiences that enhance consumer understanding, reduce uncertainty, and promote brand trust and loyalty. Educational institutions and training programs can similarly utilize AR to facilitate experiential learning, ensuring that knowledge is both retained and transferable across contexts (Kolb, 1984; Schmitt, 1999; Tussyadiah, Wang, & Jia, 2018). By aligning technological affordances with user characteristics and desired

outcomes, practitioners can optimize AR applications for maximum cognitive, affective, and behavioral impact.

Despite these contributions, the study acknowledges its conceptual nature as a limitation. Future research should empirically test the proposed relationships, operationalize immersive knowledge, and examine potential moderators such as cultural context, product complexity, and AR interface design. Longitudinal studies could also explore the durability and transferability of knowledge acquired through AR, providing further insight into its role in consumer learning and behavior.

In conclusion, immersive knowledge represents a powerful mechanism through which AR transforms consumer experiences, integrating perception, cognition, and emotion into a coherent understanding. By systematically linking AR affordances, knowledge dimensions, and outcomes, this research provides both a theoretical foundation and practical roadmap for leveraging augmented reality to enhance consumer comprehension, engagement, and decision-making. The proposed conceptual model serves as a blueprint for future research and application, highlighting the centrality of immersive knowledge in the evolving landscape of technology-mediated consumer experiences.

This research is not without limitations. As a conceptual study, it does not rely on primary empirical data, which limits the ability to validate the proposed framework in real-world settings. In addition, the analysis does not fully account for the diversity of augmented reality applications and user contexts. Future research should therefore empirically test the proposed relationships, explore different types of AR environments, and examine how contextual and cultural factors may influence the formation of immersive knowledge.

ACKNOWLEDGMENT

The authors would like to acknowledge the use of OpenAI's ChatGPT (GPT-5) as a tool to assist in drafting and refining the conceptual framework and textual structure of this manuscript. All intellectual contributions, conceptual development, and scholarly judgments remain solely those of the authors.

Bibliography

Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of Consumer Research, 13*(4), 411–454. https://doi.org/10.1086/209080

Bacca, J., Baldiris, S., Fabregat, R., Graf, S., & Kinshuk. (2014). Augmented reality trends in education: A systematic review of research and applications. *Educational Technology & Society, 17*(4), 133–149.

Barsalou, L. W. (2008). Grounded cognition. *Annual Review of Psychology, 59*, 617–645. https://doi.org/10.1146/annurev.psych.59.103006.093639

Bettman, J. R. (1979). *An information processing theory of consumer choice.* Reading, MA: Addison-Wesley.

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18*(1), 32–42. https://doi.org/10.3102/0013189X018001032

Hassenzahl, M., Diefenbach, S., & Göritz, A. (2013). Needs, affect, and interactive products – Facets of user experience. *Interacting with Computers, 25*(5), 289–297. https://doi.org/10.1093/iwc/iwt049

Hilken, T., de Ruyter, K., Chylinski, M., Mahr, D., & Keeling, D. I. (2017). Augmenting the eye of the beholder: Exploring the strategic potential of augmented reality to enhance online service experiences. *Journal of the Academy of Marketing Science, 45*(6), 884–905. https://doi.org/10.1007/s11747-017-0541-x

Hilken, T., Ruyter, K. de, Chylinski, M., Mahr, D., & Keeling, D. I. (2018). Augmented reality–enabled customer experiences: A conceptual framework and research agenda. *Journal of the Academy of Marketing Science, 46*(6), 1153–1174. https://doi.org/10.1007/s11747-018-0606-7

Javornik, A. (2016). 'It's an illusion, but it looks real!' Consumer affective, cognitive and behavioural responses to augmented reality applications. *Journal of Marketing Management, 32*(9–10), 987–1011. https://doi.org/10.1080/0267257X.2016.1174726

Kolb, D. A. (1984). Experiential learning: Experience as the source of learning and development. Englewood Cliffs, NJ: Prentice Hall.

Liu, Y., Huang, T., & Duan, Y. (2020). The impact of augmented reality on consumers' product knowledge: A cognitive-affective model. *Journal of Business Research, 118*, 282–293. https://doi.org/10.1016/j.jbusres.2020.06.045

Poushneh, A., & Vasquez-Parraga, A. Z. (2017). Discernible impact of augmented reality on retail customer's experience, satisfaction and willingness to buy. *Journal of Retailing and Consumer Services, 34*, 229–234. https://doi.org/10.1016/j.jretconser.2016.10.005

Rauschnabel, P. A., Felix, R., & Hinsch, C. (2022). Augmented reality marketing: How mobile AR apps can improve brands through inspiration. *Journal of Business Research, 142*, 237–252. https://doi.org/10.1016/j.jbusres.2021.12.019

Schmitt, B. (1999). Experiential marketing. *Journal of Marketing Management, 15*(1–3), 53–67. https://doi.org/10.1362/026725799784870496

Slater, M., & Sanchez-Vives, M. V. (2016). Enhancing our lives with immersive virtual reality. *Frontiers in Robotics and AI, 3*, 74. https://doi.org/10.3389/frobt.2016.00074

Steuer, J. (1992). Defining virtual reality: Dimensions determining telepresence. *Journal of Communication, 42*(4), 73–93. https://doi.org/10.1111/j.1460-2466.1992.tb00812.x

Taylor, S. E., & Thompson, S. C. (1982). Stalking the elusive "vividness" effect. *Psychological Bulletin, 92*(1), 155–181. https://doi.org/10.1037/0033-2909.92.1.155

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review, 117*(2), 440–463. https://doi.org/10.1037/a0018963

Tussyadiah, I. P., Wang, D., & Jia, C. H. (2018). Exploring the persuasive power of augmented reality experiences in tourism. *Tourism Management, 66*, 140–153. https://doi.org/10.1016/j.tourman.2017.11.017

Yim, M. Y.-C., Chu, S.-C., & Sauer, P. L. (2017). Is augmented reality technology an effective tool for e-commerce? An interactivity and vividness perspective. *Journal of Interactive Marketing, 39*, 89–103. https://doi.org/10.1016/j.intmar.2017.07.002