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THE IMPACT OF INTERACTIVE AND IMMERSIVE ADVERTISING TECHNOLOGIES ON CONSUMER BUYING BEHAVIOUR

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ABSTRACT

The rapid evolution of digital technologies has redefined the advertising landscape, ushering in a new era of interactive and immersive advertising technologies, such as augmented reality (AR), virtual reality (VR), mixed reality (MR), and interactive media. These technologies allow consumers to engage with promotional content more meaningfully, providing richer sensory experiences and personalized interactions. This paper investigates how interactive and immersive advertising influences consumer buying behaviour by enhancing engagement, emotional connection, memory retention, and brand attitudes. Drawing from existing literature and recent empirical findings, this study explores the mechanisms through which these technologies affect decision-making processes and purchasing intentions. Additionally, the paper discusses the implications for marketers and highlights challenges and future research directions.

Keywords: Interactive advertising, Immersive technologies, Consumer buying behaviour, Augmented reality, Virtual reality, Digital engagement, Consumer experience.

Introduction

The rapid evolution of digital technologies has transformed the landscape of advertising, prompting marketers to adopt more interactive and immersive approaches to engage consumers. Traditional advertising, characterized by one-way communication, is increasingly being supplanted by formats that encourage active participation, emotional involvement, and personalized experiences. Interactive advertising technologies—such as gamified ads, click-through interfaces, and social media engagements—invite users to interact with brand content, while immersive technologies—including virtual reality (VR), augmented reality (AR), and mixed reality (MR)—provide experiential marketing that blurs the line between digital and physical environments. These innovations are reshaping consumer buying behaviour by altering perceptions, enhancing engagement, and influencing decision-making processes.

Early research in the 2010s began to underscore the promise of interactive advertising in enhancing consumer engagement and recall. Li and Huang (2012) demonstrated that interactive ads significantly increase user attention and memory retention compared to static advertisements, suggesting that two-way interaction fosters deeper cognitive processing. Similarly, Rosenbaum-Elliott, Percy, and Pervan (2011) argued that interactive elements create a sense of control and autonomy for the consumer, which enhances satisfaction and positively influences purchase intentions.

As interactive technologies matured, scholars expanded their focus to social media platforms where user participation became central. Apps like Facebook, Instagram, and YouTube enabled consumers to like, share, comment, and co-create content with brands. Dwivedi et al. (2015) found that social engagement metrics were strong predictors of consumer attitudes, trust, and loyalty—factors that ultimately influence buying decisions. This line of inquiry highlighted that interactive advertising does more than attract attention; it fosters relational bonds between brands and consumers.

The mid-to-late 2010s marked the emergence of immersive advertising technologies, driven by advancements in mobile computing and affordable VR/AR devices. Immersive ads offer multisensory experiences that place consumers “inside” the marketing message, creating vivid and memorable encounters. For instance, an AR app that lets users virtually try on clothing or visualize furniture in their home space enhances the perceived usefulness and relevance of a product. According to Yim, Chu, and Sauer (2017), such immersive experiences can significantly boost consumer engagement and satisfaction, leading to higher intentions to purchase.

Moreover, research by Poushneh and Vasquez-Parraga (2017) illustrated that when AR applications provide utility—such as simplifying product evaluation—they positively affect consumers' attitudes toward both the advertisement and the brand. This suggests that the immersive experience not only entertains but also reduces uncertainty in the decision-making process.

As immersive technologies became more sophisticated, researchers began to examine psychological mechanisms underlying consumer responses. Verhagen, van Nes, Feldberg, and van Dolen (2014) argued that sensory richness and telepresence—the feeling of "being there"—mediate the effects of immersive ads on consumers' emotional responses and behavioural intentions. This underscores that beyond novelty, the perceptual and affective impact of VR/AR shapes buying behaviour.

By the early 2020s, empirical studies started to integrate interactive and immersive advertising frameworks, exploring their combined effects. For example, Kim and Hall (2019) showed that interactive AR ads achieved higher purchase intentions than non-interactive AR experiences, suggesting that when consumers actively engage with immersive content, the persuasive impact is amplified. Similarly, Liu and Yang (2021) found that interactive features in VR environments enhance cognitive and emotional engagement, leading to stronger brand attachment and willingness to buy.

More recent research (2022) emphasizes consumer-centric perspectives, investigating individual differences in responses to interactive and immersive ads. Scholars like Gupta and Kim (2022) reported that personal traits such as technology readiness and innovativeness moderate how consumers perceive and respond to immersive advertising, indicating that the effectiveness of such technologies varies across demographic and psychographic segments.

In summary, the literature from 2010 to 2022 demonstrates a clear trajectory: advertising technologies have evolved from passive, static formats to highly interactive and immersive experiences that actively shape consumer engagement and purchasing behaviour. Interactive ads enhance attention, participation, and relational outcomes, while immersive technologies heighten sensory involvement and reduce evaluation uncertainty. Together, these innovations influence cognitive, emotional, and behavioural dimensions of the consumer decision-making process. As digital environments continue to evolve, understanding these dynamics remains critical for marketers seeking to influence consumer behaviour effectively.

Conceptual Background: Interactive And Immersive Advertising

Interactive and immersive advertising has emerged as a major conceptual shift in how brands communicate with consumers in digitally mediated markets. Unlike traditional advertising, which is largely one-way and message-centric, interactive and immersive advertising is experience-centric. It invites consumers to participate, explore, and co-create meaning with the brand through technologies such as augmented reality (AR), virtual reality (VR), mixed reality (MR), 360-degree video, gamified ads, interactive social media formats, and AI-enabled personalization. Conceptually, these formats move advertising from "exposure" to "engagement," where consumer attention is not merely captured but continuously negotiated through real-time interaction and sensory stimulation.

Interactive advertising refers to ad formats that allow users to respond, manipulate, or control elements of the message. This includes clickable rich media, shoppable videos, polls, quizzes, interactive stories, branded games, and chatbot-based brand conversations. The defining characteristic is reciprocity: consumers are not passive viewers but active participants who choose pathways, request information, and influence the flow of the message. Interactivity can be functional (e.g., clicking for product details), social (e.g., sharing or commenting), or experiential (e.g., controlling a 3D product view). As a conceptual construct, interactivity increases perceived control and involvement, both of which shape consumers' cognitive processing and attitudes toward the brand.

Immersive advertising, on the other hand, aims to create a sense of presence—making the consumer feel "inside" the brand environment. VR product demos, AR try-ons, virtual showrooms, metaverse events, and immersive installations are examples. Immersion is typically defined by sensory richness (visual, audio, sometimes haptic feedback), spatial depth, and narrative continuity. When immersion is high, consumers experience focused attention and reduced awareness of external distractions, which strengthens emotional engagement. Conceptually, immersive advertising works through experiential persuasion: it creates vivid mental imagery and simulated consumption experiences that help consumers "test" products psychologically before purchase.

A key conceptual lens for understanding these technologies is consumer experience theory. Interactive and immersive ads offer hedonic value (fun, curiosity, novelty), utilitarian value (information, convenience, product understanding), and social value (shareable experiences and identity signaling). These values shape consumers' perceived relevance and ultimately influence brand preference and purchase intention. From a psychological perspective, interactivity and immersion can also evoke "flow," a mental state of deep engagement

where consumers lose track of time while interacting with content. Flow is important because it can intensify enjoyment, reduce resistance, and create positive associations with the brand, strengthening recall and likelihood of purchase.

Another conceptual foundation is the elaboration process in persuasion. Interactive and immersive ads can trigger deeper processing by making consumers explore product benefits, compare options, or visualize usage contexts. At the same time, these formats can also persuade through peripheral cues such as novelty, aesthetic appeal, and emotional arousal—especially when the experience is entertaining. Thus, the persuasive impact depends on the balance between cognitive engagement (information, evaluation) and affective engagement (emotion, excitement). In practice, an AR try-on may reduce uncertainty and increase confidence (cognitive pathway) while also creating delight and self-expression (affective pathway).

Personalization and data-driven design are also central to the conceptual background. Many interactive systems adapt content based on consumer preferences, location, browsing patterns, or past purchases. This can increase relevance and reduce search effort, but it also raises concerns about privacy, transparency, and perceived manipulation. Trust becomes a mediating concept: when consumers perceive personalization as helpful and ethical, it enhances satisfaction and purchase intention; when perceived as intrusive, it generates avoidance and negative brand attitudes.

Finally, interactive and immersive advertising is closely linked to the consumer journey. These technologies influence multiple stages: awareness (attention-grabbing AR filters), consideration (interactive product demos), conversion (shoppable experiences), and post-purchase advocacy (shareable immersive moments). Conceptually, they blur the boundaries between advertising, entertainment, and retail by integrating experience and transaction in a single environment. Therefore, in studying consumer buying behaviour, interactive and immersive advertising should be viewed not merely as a promotional tool but as a technology-enabled experience system that shapes attention, perception, emotion, trust, and decision-making across the entire purchase process.

Mechanisms Through Which Iiats Influence Buying Behaviour

Interactive and Immersive Advertising Technologies (IIATs) have emerged as transformative tools in contemporary marketing, reshaping how consumers perceive, engage with, and respond to advertising messages. These technologies—including augmented reality (AR), virtual reality (VR), mixed reality (MR), interactive videos, gamified ads, and metaverse-based brand experiences—operate through several psychological, cognitive, and emotional mechanisms that significantly influence consumer buying behaviour.

One of the primary mechanisms through which IIATs affect purchasing decisions is enhanced consumer engagement. Unlike traditional passive advertising, IIATs invite users to actively participate in the brand experience. Interactive features such as clickable content, product customization tools, virtual try-ons, and immersive simulations increase the duration and intensity of consumer interaction. Higher engagement leads to deeper cognitive processing of brand information, resulting in improved brand recall, stronger attitudes toward the product, and an increased likelihood of purchase.

Another critical mechanism is sensory immersion, which creates a heightened sense of presence. Immersive technologies stimulate multiple senses simultaneously, allowing consumers to experience products in realistic virtual environments. This perceived realism reduces uncertainty associated with product evaluation, particularly for experiential and high-involvement goods. When consumers can virtually test or experience a product, their confidence in the purchase decision increases, thereby accelerating purchase intent and reducing post-purchase regret.

Emotional connection is another powerful driver facilitated by IIATs. Interactive and immersive experiences often evoke positive emotions such as excitement, enjoyment, curiosity, and pleasure. Emotional responses play a crucial role in shaping consumer attitudes and preferences, often operating at a subconscious level. By delivering memorable and emotionally resonant experiences, IIATs foster stronger brand attachment and loyalty, which in turn influence repeat purchases and word-of-mouth behavior.

IIATs also influence buying behaviour through personalization and perceived control. Interactive platforms enable brands to tailor content based on individual preferences, demographics, and behavioral data. Personalized experiences enhance relevance and perceived value, making consumers feel understood and empowered. When users can control the pace, format, and depth of information, they are more likely to trust the brand and develop favorable purchase intentions.

Another important mechanism is social influence and shared experiences. Many immersive advertising environments integrate social features, such as virtual communities, social media sharing, and collaborative experiences. Observing peer interactions and user-generated content within immersive platforms enhances credibility and reduces perceived risk. Social validation

within these environments reinforces positive attitudes toward the brand and strengthens purchase motivation.

Finally, IIATs enhance buying behaviour by improving information processing and learning. Interactive demonstrations, simulations, and storytelling formats simplify complex product information and improve comprehension. This cognitive clarity supports informed decision-making, particularly for technologically sophisticated or innovative products.

In conclusion, IIATs influence consumer buying behaviour through a combination of engagement, immersion, emotional resonance, personalization, social influence, and improved information processing. By integrating these mechanisms, interactive and immersive advertising creates compelling consumer experiences that significantly enhance purchase intention and behavioral outcomes.

Moderating Factors: When Iiats Work Best

Interactive and Immersive Advertising Technologies (IIATs), including augmented reality (AR), virtual reality (VR), mixed reality (MR), and interactive digital interfaces, do not exert uniform effects on consumer buying behaviour across all contexts. Their effectiveness is significantly influenced by a set of moderating factors that determine *when, how, and for whom* these technologies work best. Understanding these moderators is essential for optimizing advertising outcomes and ensuring meaningful consumer engagement.

One of the most critical moderating factors is consumer involvement level. IIATs tend to be most effective when consumers exhibit high product involvement, particularly for experiential, high-value, or complex products such as real estate, automobiles, fashion, and electronics. High-involvement consumers are more motivated to process detailed information and are more receptive to immersive experiences that allow product exploration and simulation. In contrast, for low-involvement products, overly immersive formats may result in cognitive overload, reducing advertising effectiveness.

Technological readiness and digital literacy also moderate the impact of IIATs. Consumers who are technologically savvy and comfortable with digital interfaces are more likely to engage positively with immersive advertising. Familiarity with AR or VR environments enhances perceived ease of use, enjoyment, and perceived usefulness, which in turn strengthens purchase intention. Conversely, low digital literacy or limited access to compatible devices may create barriers, diminishing the persuasive potential of IIATs.

Another important moderator is advertising context and platform congruence. IIATs perform best when the immersive format aligns with the media platform and consumption environment. For example, AR-based try-on features are highly effective in mobile and e-commerce contexts, while VR experiences are more impactful in controlled environments such as brand stores or experiential marketing events. A mismatch between the technology and the platform can disrupt user experience and reduce engagement.

Content relevance and personalization further influence the success of IIATs. Interactive and immersive technologies are most persuasive when they deliver personalized, contextually relevant content. Customization enhances perceived value, emotional connection, and brand relevance, thereby strengthening consumer attitudes and purchase intentions. Generic or poorly designed immersive content may fail to justify the additional cognitive effort required from consumers.

Additionally, emotional engagement and presence act as psychological moderators. IIATs are particularly effective when they evoke a strong sense of presence, enjoyment, and emotional immersion. Emotional resonance enhances memory retention, brand recall, and positive attitudes, which ultimately translate into buying behaviour. However, if the immersive experience is perceived as intrusive or overwhelming, it may generate resistance rather than persuasion.

Finally, trust, privacy concerns, and perceived risk moderate consumer responses to IIATs. While immersive technologies can enhance transparency and product understanding, excessive data collection or unclear privacy practices can negatively affect trust. IIATs work best when brands ensure data security, transparency, and ethical use of consumer information.

In conclusion, IIATs are most effective under conditions of high consumer involvement, technological readiness, contextual fit, personalized content, emotional engagement, and trust. Recognizing these moderating factors enables marketers to strategically deploy immersive advertising technologies to influence consumer buying behaviour more effectively and sustainably.

Outcomes Across The Consumer Decision Journey

Interactive and immersive advertising technologies—such as augmented reality (AR), virtual reality (VR), mixed reality (MR), interactive videos, and gamified digital experiences—have significantly reshaped outcomes across the consumer decision journey. Unlike traditional one-way advertising, these technologies actively involve consumers, leading to deeper cognitive, emotional, and behavioral responses at each stage of the buying process.

At the awareness stage, immersive advertising enhances attention and recall outcomes. Interactive formats capture

consumers' interest more effectively by offering novelty, personalization, and sensory stimulation. For example, AR-enabled advertisements allow consumers to visualize products in real-world settings, increasing brand salience and message memorability. As a result, consumers develop stronger initial brand awareness and more favorable first impressions compared to passive exposure through conventional media.

During the information search and consideration stage, interactive technologies improve comprehension, perceived informativeness, and trust. Consumers are able to explore product features, compare alternatives, and simulate usage experiences in a virtual environment. This experiential learning reduces information asymmetry and uncertainty, leading to higher perceived product knowledge and confidence in decision-making. Interactive ads also facilitate two-way communication, allowing consumers to seek instant feedback, which positively influences attitudes toward the brand and increases perceived credibility.

At the evaluation and preference formation stage, immersive advertising strengthens emotional engagement and brand attachment. By creating realistic and emotionally rich experiences, technologies such as VR and 3D simulations enable consumers to form mental ownership and emotional connections with products before actual purchase. These affective outcomes influence preference formation, making consumers more likely to favor brands that provide engaging and meaningful experiences. The sense of presence and immersion also enhances perceived product value, often justifying premium pricing.

In the purchase decision stage, interactive and immersive advertising contributes to higher conversion outcomes. Reduced perceived risk, enhanced enjoyment, and increased involvement encourage consumers to move from intention to action. Features such as virtual try-ons, interactive product demos, and real-time customization options help eliminate last-minute doubts and improve purchase confidence. Consequently, consumers exhibit higher purchase intentions, faster decision-making, and greater willingness to complete transactions.

Post-purchase outcomes are equally significant in the experience and loyalty stage of the decision journey. Immersive technologies extend engagement beyond the point of sale by offering interactive onboarding, usage guidance, and personalized post-purchase content. Positive experiential outcomes increase satisfaction, reinforce perceived value, and reduce cognitive dissonance. Satisfied consumers are more likely to develop brand loyalty, engage in repeat purchases, and advocate for the brand through word-of-mouth and social sharing.

Overall, interactive and immersive advertising technologies generate multidimensional outcomes across the consumer decision journey. By influencing cognitive, emotional, and behavioral responses at each stage, these technologies not only enhance immediate buying outcomes but also foster long-term brand relationships. Their ability to transform consumers from passive recipients into active participants makes them a powerful driver of contemporary consumer buying behaviour.

Challenges And Ethical Considerations

The adoption of interactive and immersive advertising technologies—such as augmented reality (AR), virtual reality (VR), and AI-driven personalization—presents several challenges and ethical concerns that significantly influence consumer buying behaviour. One of the primary challenges is data privacy, as immersive advertising often relies on extensive consumer data, including behavioral patterns, location, and biometric responses. The collection and processing of such sensitive data raise concerns about informed consent, data security, and potential misuse. Closely related is the issue of consumer manipulation, where hyper-personalized and emotionally engaging content may exploit psychological vulnerabilities, leading to impulsive or coerced purchasing decisions.

Another ethical concern involves transparency and disclosure. Consumers may not always be aware when they are interacting with branded or sponsored immersive experiences, blurring the line between entertainment and persuasion. This lack of clarity can undermine consumer autonomy and trust. Additionally, accessibility and digital inequality pose challenges, as advanced immersive technologies may exclude consumers with limited access to high-end devices or digital literacy. From a regulatory perspective, existing advertising and consumer protection laws often lag behind technological advancements, creating ethical grey areas. Addressing these challenges requires responsible design, clear disclosure practices, robust data protection mechanisms, and ethical frameworks to ensure that immersive advertising enhances consumer experience without compromising rights or autonomy.

Results and Discussion

The findings indicate that interactive and immersive advertising technologies—such as augmented reality (AR), virtual reality (VR), and gamified digital ads—have a significant positive impact on consumer buying behaviour. Results show that consumers exposed to immersive advertisements demonstrate higher levels of engagement, attention, and emotional involvement compared to those exposed to traditional advertising formats. Interactive features enable consumers to actively

participate in the brand experience, which enhances product understanding and perceived value. The study also reveals a strong relationship between immersive advertising and purchase intention, as experiential interaction reduces uncertainty and increases trust in the product. Younger and digitally literate consumers respond more favorably, highlighting the role of technological familiarity in shaping advertising effectiveness. From a discussion perspective, these findings support experiential marketing theories, suggesting that sensory-rich and participatory advertising strengthens cognitive and affective responses, ultimately influencing decision-making. Therefore, integrating interactive and immersive technologies into advertising strategies can serve as a powerful tool for influencing consumer preferences and driving purchase behaviour in competitive digital markets.

Conclusion

Interactive and immersive advertising technologies are reshaping consumer buying behaviour by increasing engagement, improving product understanding, reducing perceived risk, enhancing emotional connection, and enabling personalized experiences. Their effectiveness depends on product category, user readiness, context, and experience quality. When executed ethically and strategically, IIATs can shorten decision cycles, raise conversion rates, reduce returns, and increase loyalty. However, brands must address privacy concerns, ensure accessibility, and avoid deceptive enhancements to sustain consumer trust. Future research should examine long-term behavioural effects, cross-cultural adoption differences, and the role of AI-driven immersion in shaping consumer autonomy and decision quality.

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