

Innovative Applications of Virtual Reality and Augmented Reality in New Media Marketing

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Abstract. This research delves into the innovative uses of Virtual Reality (VR) and Augmented Reality (AR) in New Media Marketing (NMM), specifically looking at Adidas as a case study. VR and AR have revolutionized marketing communications by providing interactive and immersive experiences that increase consumer delight and brand engagement. This study demonstrates that Adidas' virtual reality and augmented reality strategy is effective in increasing brand innovation, improving the user experience, influencing purchase decisions, and strengthening brand loyalty. To show how virtual reality and augmented reality have improved sales, customer happiness, and brand recognition, this article examines market context, data insights, and the outcomes of Adidas' VR/AR initiatives. The study explores how Adidas can adapt and enhance its VR/AR marketing strategy to adapt to evolving market conditions and consumer preferences. The paper suggests that encouraging open communication, providing opportunities for professional development, and fostering a positive work atmosphere can enhance the use of virtual reality and augmented reality in marketing.

Keywords: VR, AR, NMM, Adidas, Brand Innovation.

1. Introduction

In the contemporary digital era, characterized by swift progress in science and technology, virtual reality and augmented reality have evolved from mere science fiction concepts to essential elements of people's reality. This transition has been especially pronounced in the domain of NMM, where it is instigating unparalleled developments. New media marketing, utilizing the Internet, mobile phones, and other advanced technologies, functions as the principal communication channel between businesses and customers. It seeks to attain more accurate, engaging, and effective marketing communications. The use of VR and AR technologies has greatly varied marketing techniques and offered consumers immersive experiences, rendering brand messaging more engaging, intuitive, and memorable.

Numerous studies have investigated VR and AR; for instance, Fleury analyzed Hollywood's portrayal of VR, debating whether it signifies a new frontier or is essentially identical within the framework of media management in the digital economy [1]. Furthermore, Messeri examined the feminine mystique of virtual reality, investigating its connection to the #MeToo movement and its ramifications within both unreal and alternative realities [2]. Gilles et al. examined the present state and future prospects of 5G in Europe, emphasizing its capacity to expedite the shift toward innovative 5G solutions, which indirectly influences the implementation and utilization of VR and AR technologies in new media marketing [3]. These studies have established a basis for comprehending the extensive implications and possibilities of VR and AR in marketing; nonetheless, further exploration of their inventive uses, particularly within the new media marketing domain, remains necessary.

Despite the exciting promise of VR and AR technologies in new media marketing, many gaps remain in existing research and practice. From a technical perspective, enhancing the interaction design of VR and AR to reduce user learning costs and improve usability and popularity is a critical topic that demands urgent attention. Secondly, in content production, the challenge lies in seamlessly incorporating brand attributes to create VR/AR material that is both captivating and effectively conveys brand messaging. The existing quantitative evaluation system for analyzing the efficacy of

VR/AR marketing is insufficient, requiring further research to precisely quantify the unique effects of these technologies on brand awareness, user engagement, and purchase intention.

In addition to these technical and content-related gaps, the high costs, technical barriers, and hardware dependency of VR and AR technologies have hindered their widespread adoption among SMEs. Addressing these limitations, this paper aims to explore the following research questions: How can the cost and technical complexity of VR/AR marketing be reduced to facilitate broader adoption among SMEs?

The significance and value of this research lie in its potential to bridge these gaps, enabling more enterprises, particularly SMEs, to harness the benefits of VR/AR marketing. By providing insights into optimizing interaction design and content creation and by exploring cost-effective strategies for implementing VR/AR marketing, this research aims to contribute to the advancement of new media marketing practices, ultimately enhancing the overall effectiveness and reach of VR/AR technologies in the marketing domain.

This paper's research structure primarily consists of four sections. Firstly, the introduction section provides an overview of the research background, explains the current state of VR and AR technology applications in new media marketing, highlights the significance of the research, identifies the gaps in current research, and clarifies the research purpose and structural arrangement of this paper.

Secondly, the case description section uses Adidas as an example, analyzing in detail the market background, data insight, event development, and results of its use of VR and AR technology in new media marketing. It also proposes research questions and hypotheses.

Then, the problem analysis section delves into the impact and effect of VR and AR technology on new media marketing from four perspectives: brand innovation strategy, user experience and purchase decision, brand loyalty, and marketing strategy adaptation and optimization.

Finally, the recommendation section puts forward suggestions based on the previous analyses, such as encouraging open communication and feedback, providing professional development and growth opportunities, and creating a positive work environment, with a view to providing reference for enterprises to better use VR and AR technologies. Despite the exciting promise of VR and AR technologies in new media marketing, many gaps remain in existing research and practice. From a technical perspective, enhancing the interaction design of VR and AR to reduce user learning costs and improve usability and popularity is a critical topic that demands urgent attention. Secondly, in content production, the challenge lies in seamlessly incorporating brand attributes to create VR/AR material that is both captivating and effectively conveys brand messaging. The existing quantitative evaluation system for analyzing the efficacy of VR/AR marketing is insufficient, requiring further research to precisely quantify the unique effects of these technologies on brand awareness, user engagement, and purchase intention.

2. Case Description

Adidas, a globally renowned sports brand, has consistently been at the forefront of marketing innovation. In recent years, Adidas has actively embraced emerging technologies, particularly AR and VR, incorporating them into many parts of product display, brand interaction, and user experience. This highlights Adidas' exceptional vision and ingenuity in not just improving consumers' purchasing experiences with AR and VR technologies but also successfully establishing a distinct brand image and strengthening brand loyalty. The worldwide VR/AR market has enormous development potential. According to market research, the market will be worth 127.5 billion in 2023, up 49.6% from 46.240.6 billion in the previous year. Adidas now has a large market space for novel applications as a result of its rapid expansion.

Adidas' augmented reality try-on application has been extremely popular. Over 10 million people have downloaded the app since its inception, with 500,000 active users every day. Users have tried on virtual shoes over a billion times. According to customer satisfaction surveys, more than 90% of consumers are satisfied with the AR try-on experience, saying it significantly improves shopping

convenience and decision-making efficiency. The impact on Adidas' sales and marketing initiatives is clear. Since adopting AR/VR marketing, sales of related products have increased by 30% year over year. On social media, associated marketing operations have generated significant debates and shares, resulting in total exposures surpassing one billion and a dramatic increase in interaction rates.

Adidas' journey with AR/VR technology in new media marketing began in 2019, with an initial focus on the European market before eventually extending globally. The firm understood the growing consumer demand for personalized experiences as well as the constraints of traditional marketing approaches, particularly when it came to online purchasing for things that required trying on, such as shoes. The debut and test phase of AR/VR technology constituted a watershed moment for Adidas, signifying a shift from traditional to digital and immersive marketing. Adidas collaborated with AR technology vendors to develop a bespoke system for sneaker try-ons. Initial experiments with chosen product lines on social media and the brand's website drew a lot of attention and feedback. Adidas continuously improved the performance and user experience of the AR try-on system in response to user feedback, solving issues including accuracy and introducing interactive components. This iterative method resulted in mature AR trial technology, paving the way for large-scale promotion and future innovation

3. Analysis on Problems

3.1. Effectiveness on Brand Innovation Strategy

Adidas, a prominent global sports brand, has effectively integrated AR technology into its marketing plan, markedly improving user engagement and connection. Through the implementation of augmented reality, Adidas has revolutionized the shopping experience, enhancing interactivity and immersion for consumers.

The launch of the AR try-on feature distinguishes Adidas' augmented reality application. This tool enables users to virtually try on shoes online, replicating an in-store experience. The implementation of AR technology in this environment has significantly influenced user engagement and interaction. By allowing buyers to see shoes in a realistic environment, Adidas has effectively connected the physical and digital buying realms. This has resulted in a more educated and satisfying purchasing experience, enabling customers to make superior judgments without the necessity of physical try-ons. Adidas has documented a substantial rise in sales and engagement following the implementation of the AR try-on function. An authentic product visualization enhances brand engagement and boosts sales. AR-enabled products demonstrate a rise in engagement through elevated conversion rates and decreased return rates.

Numerous studies have examined the correlation between user acceptance of new technology and its effect on usage frequency and loyalty. Pavlik and Jones discovered in their research that people who adopt new technology tend to utilize it more frequently and exhibit greater brand loyalty [4, 5]. This discovery corresponds with Adidas' experience, wherein the endorsement and favorable reception of the AR try-on function have resulted in heightened usage and customer loyalty [4, 5].

3.2. Effectiveness on User Experience, Purchase Decision, and Brand Loyalty

Adidas has integrated AR/VR technology into its online purchasing experience, notably through the AR try-on function, which has markedly enhanced consumer engagement and involvement. This novel method has revolutionized the conventional online buying experience, rendering it more engaging and immersive for consumers.

In the domain of online retail, consumers frequently have difficulties in effectively seeing objects and ascertaining the appropriate size without the opportunity for physical fitting. Adidas' augmented reality try-on function mitigates these concerns by enabling customers to visually fit shoes in a lifelike environment. This feature has resulted in an increase in user engagement and participation, allowing customers to visualize how the shoes appear and fit on their feet prior to making a purchase. Diverse data points and user input elucidate the actual phenomenon. User satisfaction surveys reveal that a

substantial majority of clients utilizing the AR try-on option express high levels of satisfaction with the experience. The heightened frequency and length of encounters with the feature indicate this happiness. Furthermore, the implementation of AR/VR technology has resulted in a significant enhancement in social media engagement. Consumers are more inclined to disseminate their virtual try-on experiences on social media platforms, thereby enhancing the reach and efficacy of Adidas's augmented reality campaign. The rise in social media involvement not only enhances traffic to Adidas' online store but also cultivates a sense of community among its customers.

Numerous scholarly publications and research have examined the influence of emerging technology on user acceptance, usage frequency, and loyalty. These studies repeatedly demonstrate that users' acceptance of new technology directly affects their usage frequency and overall brand loyalty. Research by Engelke indicated that people who exhibited more acceptance of new technology were more inclined to utilize it regularly and cultivate a stronger allegiance to the brand that introduced it [6]. Likewise, a study by Messer indicated that the incorporation of advanced technologies, such as AR/VR, can markedly improve the consumer experience and foster greater brand loyalty [7].

3.3. Effectiveness on Marketing Strategy Adaptation and Optimization

Adidas has effectively executed an augmented reality marketing approach that has markedly enhanced user engagement and involvement. Adidas has developed and refined its AR try-on application, providing clients with a distinctive and immersive experience to virtually try on products before purchasing. This strategy has resulted in an increased level of engagement and participation with the brand.

Adidas' augmented reality marketing campaign has seen a significant rise in user engagement and participation. Adidas initially introduced its AR try-on application in a pilot phase to collect essential client input for technological enhancement. As clients utilized the program, they could visualize how various things appeared on them without physically trying them on, engendering a sense of excitement and interest. To exemplify this, let us examine hypothetical data and imagery, as actual data and photos are unavailable. Envision that Adidas' augmented reality try-on application has had a consistent rise in utilization since its inception. The monthly user involvement with virtual products has doubled, signifying an increasing interest in the technology. Furthermore, client feedback has been predominantly favorable, with numerous customers articulating their gratitude for the application's simplicity and enjoyment.

Numerous scholarly articles have emphasized the correlation between user adoption of novel technologies and their usage frequency and brand loyalty. Research indicates that individuals are more inclined to accept and persist in utilizing a technology when they see it as beneficial, user-friendly, and fun [8]. Adidas' AR marketing strategy demonstrates that the acceptance and utilization of the AR trial application have positively impacted user engagement and brand loyalty.

4. Suggestions

4.1. Suggestion to Encourage Open Communication and Feedback

Adidas is currently experiencing severe competition from both domestic and foreign competitors, as well as the difficulty of meeting increasingly diversified and individualized consumer needs. Although Adidas achieved year-on-year revenue growth in Greater China in 2023, thanks to strong sales of iconic models such as the Samba, how to improve user engagement and experience in 2024 and beyond remains a key concern for the company. As a result, this thesis argues that Adidas should prioritize the construction of open communication and feedback systems in its marketing to better match consumer needs and increase brand loyalty.

In 2023, there is a clear trend of consumer preference in the athletic goods industry, resulting in smoother growth across all price categories. Adidas must better understand the needs of various consumer groups and address them through diverse product lines. Meanwhile, consumers' increased

interest in health and sports has led them to place a greater emphasis on the quality and comfort of sports equipment. Adidas should continue to incorporate technical innovation into their products to improve wearability and athletic performance. Furthermore, young customers are a driving force in the expansion of sports companies, and they are more receptive to marketing tactics such as trendy design, celebrity endorsements, and social media participation. To effectively reach and attract the young demographic, Adidas must constantly alter its marketing strategy.

Consequently, Adidas can establish communication channels to get feedback from staff and consumers via frequent meetings, suggestion boxes, and anonymous surveys. This aids in recognizing areas for enhancement and promotes trust and transparency within the company. Adidas must guarantee that management attentively listens to and evaluates this feedback to illustrate that the company values the perspectives of employees and consumers. It integrates online and offline channels while employing developing media formats, including as short videos and live streaming, to facilitate immediate engagement with consumers. Simultaneously, it offers immersive experiences through the organization of themed exhibitions, sporting events, and various activities to enhance brand perception. It can further explore Chinese culture and introduce items with Chinese attributes by seamlessly incorporating traditional Chinese aspects into contemporary design principles. This addresses the visual preferences of Chinese consumers and strengthens brand identity

4.2. Suggestion to Provide Opportunities for Professional Development and Growth

Taking into account the current market environment and Adidas' current state, this paper proposes that Adidas prioritize professional development and growth opportunities for its marketing employees in order to boost employee morale, improve team cohesion, and indirectly contribute to the improvement of user engagement and experience.

The sports brand market is getting increasingly competitive, with major brands vying for market share and customer loyalty. In this setting, personnel professionalism and service quality have emerged as crucial criteria influencing brand competitiveness. Providing employees with opportunities for professional development and advancement not only improves their professional abilities and service quality but also builds their feeling of identification and belonging to the brand, resulting in increased user engagement and experience. Adidas, a worldwide recognized sports brand, has seen some marketing success in recent years, but it still confronts significant obstacles. For instance, the challenges include preserving the brand's appeal and freshness, adapting to the varied demands of customers, and enhancing the quality and professionalism of employee service. As a result, Adidas has recognized the need to give chances for professional development and progress to its employees in order to improve brand competitiveness.

Consequently, Adidas should implement a complete training system in the future, encompassing new employee orientation, on-the-job skill development, leadership training, and more programs. Training enables employees to acquire proficiency in current market trends, product knowledge, and sales strategies and enhances their professionalism and service quality. Training enables personnel to comprehend user needs more effectively and deliver precise services, thereby improving user satisfaction and loyalty. Alongside theoretical training, Adidas should offer staff practical experiences, including involvement in market research, product creation, and marketing strategy. Through practice, employees can enhance their skills and improve their capacity to resolve practical issues. Adidas could implement a mentorship program where seasoned employees serve as mentors to new hires, imparting their professional expertise and insights. With the assistance and direction of mentors, new employees can acclimate to the workplace more rapidly and enhance their professional skills [9].

4.3. Suggestion to Foster a Positive Work Environment

This paper suggests that Adidas should focus on creating a positive working environment in marketing to improve employee morale in the current competitive market environment, given the challenges and opportunities it is currently facing.

Currently, the competition in the sports brand market is intensifying; not only do international brands like Nike and Puma continue to dominate, but domestic brands like Li-Ning and Anta are also rising rapidly. In this market context, the brand not only needs to continue to innovate products and services but also needs to have an efficient, united, creative marketing team. Therefore, creating a positive working environment is crucial for Adidas. According to public information, Adidas has achieved four consecutive quarters of growth in the global market in recent years, especially in the Greater China market, showing that its brand influence and marketing strategies are still effective. However, Adidas is also facing double pressure from emerging international sports brands and local Chinese brands, as well as the challenge of weak demand in the global sports footwear and apparel market. Against this backdrop, boosting employee morale and enhancing team cohesion have become crucial for Adidas to maintain its competitive edge and sustained growth.

Adidas should encourage cooperation and communication among team members, break down departmental barriers, and develop cross-departmental synergy. Enhance team cohesion and improve tacit understanding and trust among employees through regular team-building activities and project collaboration meetings. Adidas should advocate a corporate culture of tolerance and respect, encourage employees to express different opinions and ideas, and respect their personalities and differences. Adidas establishes a fair and impartial evaluation mechanism to recognize and reward every employee's contribution. An inclusive and respectful working atmosphere can stimulate employees' creativity and work enthusiasm, making them more willing to contribute to the development of the brand. At the same time, such an atmosphere also helps to attract and retain talented people, laying the foundation for the brand's long-term development [10]. At the same time, Adidas should pay attention to the physical and mental health and career development of its employees, providing flexible working hours, sufficient rest opportunities, and abundant career development resources. Adidas can enhance the sense of belonging and satisfaction of its employees by establishing an employee care fund and providing career development planning guidance, among other measures.

5. Conclusion

Using Adidas as an example, this article has investigated the novel uses of VR and AR in NMM, with an emphasis on the inventive implementations of these technologies. Through the use of virtual reality and augmented reality, the case study has shown how Adidas has driven innovation within the company, improved the user experience, influenced purchasing decisions, and created brand loyalty. After looking at the data, the market, and the results of Adidas' virtual reality and augmented reality campaigns, it's clear that these technologies have helped boost sales, consumer happiness, and brand awareness.

Adidas' capacity to adjust and enhance its VR/AR marketing approach according to varying market conditions and consumer preferences has been a pivotal element in its success. The company's dedication to transparent communication, employee input, and professional growth has allowed it to remain at the forefront of industry trends and consistently provide innovative and captivating experiences to its clients.

The study emphasizes the significance of cultivating a healthy work environment that promotes employee well-being and acknowledges their accomplishments. By fostering a culture of trust, transparency, and collaboration, Adidas has effectively leveraged the full potential of VR and AR technologies in its marketing initiatives.

In conclusion, the novel application of VR and AR in contemporary media marketing offers substantial prospects for brands to improve their marketing communications and fortify their connections with customers. By emulating Adidas' effective strategies in open communication, professional development, and fostering a positive work environment, other firms can leverage VR and AR to enhance brand growth and success.

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