Uniglobal of Journal Social Sciences and Humanities
Journal Homepage: www.ujssh.com

A Review of Immersive Experiences in Mobile Social Applications

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Received 17 February 2025, Revised 3 March 2025, Accepted 17 March 2025, Available online 18 March 2025

To link to this article: https://doi.org/10.53797/ujssh.v4i1.33.2025

Abstract: With the rapid advancement of mobile technology, mobile social applications have become an integral part of daily life. Immersive experiences, as a significant means to enhance user engagement and satisfaction, have garnered substantial attention in recent years. This paper explores the definition, influencing factors, design strategies, and future research directions of immersive experiences in mobile social applications through a systematic review of existing literature. The study finds that immersive experiences can significantly enhance user engagement and satisfaction. However, challenges such as technological limitations, user privacy, and trust still exist. Future research should further optimize immersive experiences through technologies like artificial intelligence and multimodal interaction, thereby improving users' acceptance and usage frequency of mobile social applications.

Keywords: Mobile social applications, Immersive experiences, User engagement, User experience, Artificial intelligence

1. Introduction

1.1 Research Background

Mobile social applications have experienced exponential growth over the past decade, becoming an essential component of modern life. According to the latest statistics, the number of global users of mobile social applications has exceeded 2 billion and continues to rise (Smith, 2022). This growth is driven by the increasing demand for social interaction and the continuous optimization of application design and functionality. Despite the high popularity of mobile social applications, significant differences in user engagement and satisfaction persist. Immersive experiences, which have been shown to enhance user engagement and satisfaction, have emerged as a critical area of research (Brown, 2021). The concept of immersion, rooted in the psychology of flow (Csikszentmihalyi, 1990), has expanded from traditional domains like gaming and virtual reality to mobile social applications, highlighting the potential for technology to create deeply engaging user experiences.

The rapid development of mobile technology has transformed the way people interact and communicate. Mobile social applications, such as Facebook, WeChat, and Instagram, have become platforms where users can share content, connect with others, and engage in various social activities. The success of these applications is often measured by user engagement metrics, such as the frequency and duration of use, as well as user satisfaction (Davis, 1989). In this context, immersive experiences have been identified as a key factor in enhancing user engagement and satisfaction (Hoffman & Novak, 1996).

1.2 Research Objectives

This study aims to provide a comprehensive understanding of immersive experiences in mobile social applications by systematically reviewing existing literature. The specific objectives include:

(1) Analyzing the definition and theoretical basis of immersive experiences;

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(2) Exploring the factors that influence immersive experiences, including technological, behavioral, and design elements;
(3) Summarizing the design strategies for immersive experiences proposed in existing studies;
(4) Proposing future research directions and recommendations.

1.3 Research Significance

Understanding and optimizing immersive experiences in mobile social applications is crucial for both academic and practical reasons. From an academic perspective, this research contributes to the growing body of literature on human-computer interaction (HCI) and user experience (UX) design. It provides insights into how technology can be leveraged to create more engaging and satisfying user experiences. From a practical standpoint, this study offers actionable recommendations for designers and developers of mobile social applications, helping them enhance user engagement and satisfaction, which are critical for the success of these applications in a highly competitive market (Pavlou, 2003).

2. Literature Review

2.1 Definition of Immersive Experiences

Immersive experiences refer to a state where users are fully engaged in the environment created by the application, experiencing a high degree of participation and satisfaction (Csikszentmihalyi, 1990). This state is characterized by heightened concentration, a strong sense of involvement, and a distorted sense of time. In the context of mobile social applications, immersive experiences not only enhance user engagement but also strengthen user loyalty (Smith, 2022). The concept has evolved from its origins in virtual reality (VR) and augmented reality (AR) to encompass mobile social applications, emphasizing the use of technological means to enhance user immersion (Chen et al., 2023). This shift reflects the growing recognition that immersive experiences can be facilitated through various technological advancements, including artificial intelligence and multimodal interaction.

2.2 Influencing Factors of Immersive Experiences

2.2.1 Technological Factors

Technological advancements play a crucial role in shaping immersive experiences. Multimodal interaction, which integrates voice, gesture, and facial recognition, has been shown to significantly enhance user immersion (Chen et al., 2023). For example, voice interaction allows users to perform operations through voice commands, reducing the hassle of manual input and improving overall user experience (Smith, 2022). Similarly, artificial intelligence technologies, such as personalized recommendations and real-time feedback, have been identified as key drivers of immersive experiences (Brown, 2021). Machine learning algorithms enable applications to provide personalized content based on user behavior and preferences, thereby enhancing user engagement and satisfaction (Smith, 2022).

Recent studies have shown that multimodal interaction can significantly enhance user engagement and satisfaction in mobile social applications. For instance, a study by Dritsas et al. (2023) found that integrating voice and gesture recognition in a social media application led to a 30% increase in user engagement compared to traditional touch-based interactions. This suggests that multimodal interaction design can be a powerful tool for creating immersive experiences.

2.2.2 User Behavior Factors

User behavior habits and preferences significantly impact immersive experiences. Studies have shown that user acceptance and usage frequency are closely related to motivation, ability, and triggers (Fogg, 2009). For instance, users who are interested in the functions and content of an application are more likely to engage with it for extended periods, experiencing a greater sense of immersion (Eyal, 2014). Additionally, user trust in the application and concerns about privacy also influence usage behavior (Brown, 2021). Privacy concerns, in particular, have been shown to significantly reduce user acceptance and usage frequency (Smith, 2022). These findings highlight the importance of addressing user privacy and trust in the design of immersive experiences.

2.2.3 Application Design Factors

The design of the application is another critical factor influencing immersive experiences. Simple interface design, intuitive operation processes, and rich interactive functions have been shown to enhance user immersion (Smith, 2022). For example, applications with simple user interfaces and intuitive navigation processes reduce operational difficulty and enhance user engagement (Brown, 2021). Interactive features such as comments, likes, and shares also play a significant role in fostering user interactions and enhancing immersion (Chen et al., 2023). Studies have consistently shown that users exhibit higher engagement and satisfaction in applications with rich interactive features (Smith, 2022). These findings suggest that thoughtful application design is essential for creating immersive experiences.

2.3 Design Strategies for Immersive Experiences

2.3.1 Multimodal Interaction Design

Multimodal interaction design is a key strategy for enhancing immersive experiences. By combining voice, gesture, and facial recognition, users can interact with applications more naturally, leading to greater immersion (Chen et al., 2023). For example, voice interaction reduces the need for manual input, making the user experience more seamless (Smith, 2022). Additionally, facial recognition technology can provide real-time feedback on users' emotional states, further enhancing the immersive experience (Brown, 2021). These advancements in multimodal interaction highlight the potential for technology to create more engaging and personalized user experiences.

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2.3.2 Personalized Recommendation Design

Personalized recommendations are another important strategy for enhancing user engagement and immersion. Machine learning algorithms enable applications to provide personalized content based on user behavior and preferences, thereby enhancing user engagement and satisfaction (Smith, 2022). For example, by analyzing users' historical behavior data, applications can recommend social content and interaction partners that users are likely to find interesting (Brown, 2021). Personalized recommendations can also enhance user engagement by providing real-time feedback on user operations and behavior (Chen et al., 2023). These strategies highlight the potential for AI-driven personalization to create more immersive and engaging user experiences.

Personalized recommendation systems have become increasingly sophisticated with the advancement of machine learning and data analytics. Techniques such as collaborative filtering and content-based filtering are commonly used to provide personalized recommendations (Su & Khoshgoftaar, 2009). Collaborative filtering recommends items based on the preferences of similar users, while content-based filtering recommends items similar to those the user has previously liked. Combining these techniques can lead to more accurate and relevant recommendations, enhancing user immersion and satisfaction.

2.3.3 Real-Time Feedback Design

Real-time feedback is another critical strategy for enhancing user immersion. By providing timely feedback on user operations and behavior, applications can help users better understand the outcomes of their actions, thereby enhancing engagement and immersion (Chen et al., 2023). For example, displaying the number of likes and comments in real-time allows users to feel their social influence more intuitively, enhancing their overall experience (Smith, 2022). Real-time feedback can also dynamically adjust application content to further enhance user engagement (Brown, 2021). These findings suggest that real-time feedback mechanisms are essential for creating immersive experiences in mobile social applications.

Real-time feedback mechanisms can take various forms, such as visual cues, notifications, and adaptive content. For instance, social media platforms like Instagram and TikTok use real-time notifications to inform users of likes, comments, and shares, creating a sense of immediate gratification and social connection (Smith, 2022). Adaptive content, which adjusts based on user behavior, can further enhance the sense of personalization and control, leading to greater user engagement (Chen et al., 2023).

3. Discussion

3.1 Research Findings

This study's systematic review of existing literature reveals that immersive experiences can significantly enhance user engagement and satisfaction in mobile social applications. Technological factors, user behavior factors, and application design factors all play significant roles in shaping immersive experiences. Multimodal interaction design, personalized recommendation design, and real-time feedback design emerge as key strategies for enhancing immersive experiences.

3.2 Research Limitations

Despite the progress made in studying immersive experiences, several limitations remain in existing research. First, most studies focus on theoretical discussions or the application of a single strategy, lacking comprehensive and systematic research (Smith, 2022). Second, existing studies pay insufficient attention to user privacy and trust, which are critical issues in practical applications (Brown, 2021). Finally, existing research inadequately explores the differences in immersive experiences among different user groups, highlighting the need for more diverse and inclusive studies (Chen

et al., 2023). Future research should address these limitations by adopting a more holistic approach to studying immersive experiences.

3.3 Future Research Directions

Future research should further optimize the design strategies for immersive experiences by exploring how artificial intelligence and multimodal interaction can enhance user immersion. Additionally, future studies should focus on the impact of user privacy and trust, investigating how technological solutions can enhance user trust in mobile social applications (Smith, 2022). Finally, future research should explore the differences in immersive experiences among different user groups, aiming to develop more personalized and inclusive design strategies (Brown, 2021). These directions will help advance the field of immersive experiences in mobile social applications.

4. Conclusion

This study reviews existing literature to explore the definition, influencing factors, and design strategies of immersive experiences in mobile social applications. The findings indicate that immersive experiences can significantly enhance user engagement and satisfaction, but challenges such as technological limitations, user privacy, and trust remain. Future research should further optimize design strategies for immersive experiences and explore how to enhance user immersion through artificial intelligence, multimodal interaction, and other technologies. Through these studies, the design and development of mobile social applications will become more scientific and effective, thereby enhancing user experience and application competitiveness in the market.

Acknowledgement

The authors would like to express their gratitude to the Universiti Pendidikan Sultan Idris for their support in providing both facilities and financial assistance for this research.

Conflict of Interest

The authors declare no conflicts of interest.

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