

Research Progress and Implications of Immersive Experience in Tourism Context--Based on English Literature Analysis

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Abstract: Immersive experience is very important to the development of tourism destinations. However, at present, there are few researches on immersive experience in tourism circles. Based on the analysis of 165 English literatures up to December 2023, this paper finds that: (1) In terms of theory, immersive experience research in tourism scenarios is widely used, with immersion theory and S-O-R theory accounting for the most. (2) In terms of research methods, the existing studies mainly use quantitative methods, mainly using immersion maturity scale as a measuring tool to conduct questionnaire survey, qualitative methods mostly use interview method, in addition, some studies use physiological instruments for measurement. (3) In terms of research content, it mainly includes the concept and measurement dimension of immersive experience, the influential factors of immersive experience and the effects of immersive experience. Among them, there are more researches on the influential factors of immersive experience, which mainly involve the physical and psychological perception of tourists, the stimulation of immersive environment created by technology and the interaction with people around them. On this basis, several suggestions are put forward. The existing researches on the influencing factors of immersive experience in tourism scenarios lack the investigation of different cultural backgrounds, and whether it has a negative impact on the effect of immersive experience needs to be further enriched and improved.

1. Introduction

The term "immersion" was first defined by Csikszentmihalyi(1975), which refers to the behavior that an individual deeply participates in and enjoys. As an important perspective to study experience, it has attracted the attention of many scholars. At present, The research field of immersive experience mainly involves games^[1], social media^[2], culture and art^[3]and so on. Research on travel

experience has found that the relationship between immersion and experience is highly correlated^[4]. Scholars in the field of tourism have put forward the emerging proposition that "immersion" is the essence of leisure experience^[5]. However, it is well known that most immersive experience research has focused on physical activity and movement^[6]. Therefore, the link between immersive experience and visitor experience is still understudied, and there is little research on the role of immersive experience in tourism^[6]. For example, Huang et al. (2020) argue that there are insufficient studies to evaluate tourists' immersive experience styles and potential causes of immersion^[6]. Recent literature has highlighted the importance of immersive experiences for understanding visitor motivation and behavior^[8]. Therefore, this study aims to conduct a systematic literature review to understand the latest progress of immersive experience in tourism.

2. Literature review

Scholars' interpretation of immersive experience is mostly based on the FLOW theory proposed by Csikszentmihalyi (1990), which refers to the immersive state of tourists who are highly concentrated in destination activities. Immersive experiences require people to engage in engaging and interesting activities of daily living^[9]. Immersive experience is a subjective state of mind that is considered the best experience for consumers. It has been described as the deepest form of engagement and the process of entering the deepest level of experience.^[10] At present, most scholars adopt the perspective of Csikszentmihalyi(1990) to study different fields of immersion, including leisure activities^[12], outdoor recreational activities^[13], outdoor recreational activities. Adventure recreation, Mountaineering^[14], Community health-related quality of life^[16], Gaming and gambling increase^[17], etc. Over the past few decades, a number of scholars have continued to adopt different theories and approaches to the study of immersive experiences. Previous studies have highlighted that the dimensions of immersion vary in different contexts^[18]. These findings may explain why numerous studies on this topic have led to different meanings and understandings^[19]. Research on the concept of "immersion" and its dimensions plays an important role in improving tourism experience design, promoting tourist participation and producing positive results. Therefore, it is important to review the research on immersive experience in the context of foreign tourism. This paper comprehensively uses qualitative and quantitative methods to review and sort out the theoretical application, research methods and research topics of tourism, with a view to understanding relevant international research progress and further enlightening the research on immersive experience in Chinese tourism context.

3. Data sources

This paper was searched in the core database of Web of Science (WOS) on the subject of flow experience+tourism and immersion experience+tourism as of the end of December 2023. In addition, 165 articles were obtained after the deletion of irrelevant literatures. The main publication time was 2010-2023, as shown in Table 1, mainly from 2019 to 2023. The volume of articles in this period was high, with more than 11 articles published every year. The 165 articles searched were published in various journals. The top 8 journals in terms of publication volume are listed in the table below. Most of the papers were published in *Current Issues in Tourism*, with 9 papers, accounting for 5.45%, and in *Sustainability and Tourism Management Perspectives*, with 8 papers, accounting for 4.84%. *Journal of Travel & Tourism Marketing*, *Asia Pacific Journal of Tourism Research*, *Journal of Destination Marketing&Management*, *Scandinavian Journal of Hospitality and Tourism*, *Journal of Hospitality & Tourism Research* There are 5 articles, accounting for 3.03%(Table 2 below).

Table 1. The number of documents issued by immersive experience in tourism scenarios

periodical	quantity	Take up a proportion of
Current Issues in Tourism Sustainability	9	5.45
Tourism Management Perspectives	8	4.85
Journal of Travel & Tourism Marketing	8	4.85
Asia Pacific Journal of Tourism Research	5	3.03
Journal of Destination Marketing&Management	5	3.03
Scandinavian Journal of Hospitality and Tourism	5	3.03
Journal of Hospitality & Tourism Research	5	3.03

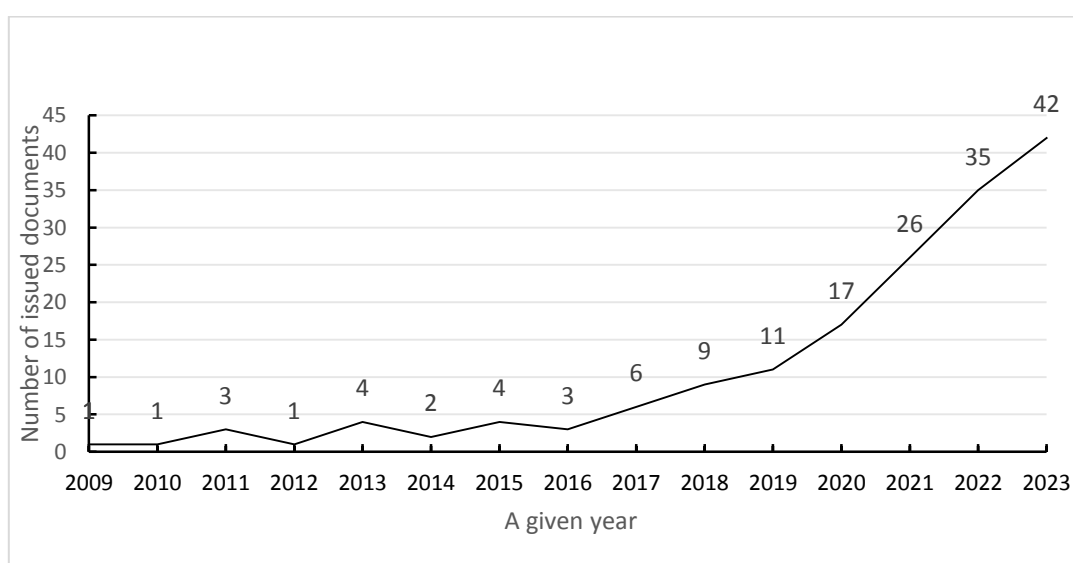


Table 2 Top eight journal sources in terms of publication volume

4. Main contents of research on immersive experience in tourism scenarios

According to literature review and summary, the main contents of research on immersive experience in tourism context are the conceptual dimension of immersive experience, the driving factors of immersive experience, and the effect of immersive experience.

4.1. The concept of immersive experience and its dimensions

4.1.1. The concept of immersive experience

Since the 1960s, travel experience has been the focus of research by tourism scholars. However, tourism scholars have paid little attention to and studied immersive experience^[19]. Some scholars pay attention to the role of immersion in the study of travel experience^[20]. However, only very limited tourism research has focused on immersion as a separate experiential concept. Scholars' interpretation of immersive experience is mostly based on the FLOW theory proposed by Csikszentmihalyi, which means that tourists are immersed in destination activities with a high concentration of body and mind. For example, Tsaur (2013) An immersive experience is usually a positive emotional experience, and visitors feel excited and uplifted by the experience.

Chang^[21](2014) argues that when individuals are familiar with various physical and social factors in the environment, they are more likely to reduce their physical and emotional distance from others, thus becoming more immersed in that experience. Hansen & Mossberg^[10](2013) pointed out that immersive experience is a temporary subjective psychological state, which is considered to be the best experience state for consumers, including the loss of self-awareness and the lack of time awareness. Scholars have not reached a consensus on the definition of immersive experience (see Table 2), but they have reached a consensus on the core connotation: (1) attention is concentrated, and tourists' mental force in immersive experience is completely as if they were in a certain activity; (2) Time distortion, immersed tourists often forget time; (3) Enjoy, tourists in an immersive experience, enjoy the trip. Immersion means "the complete elimination of the distance between the consumer and the situation"^[21]. This mental state occurs when the individual feels close to the focus object and is comfortable in the environment without interference from other unrelated elements.^[10] In other words, when individuals become familiar with various physical and social factors in their environment, they are more likely to reduce their physical and emotional distance from others and thus become more immersed in that experience.^[21]

4.1.2. ImmersionExperiential dimension Research

Csikszentmihalyi(1990) measured immersive experience and proposed a measurement model of immersive experience, which included multiple dimensions such as focus on tasks, sense of control, loss of self-consciousness and time transition. Although Csikszentmihalyi(1990) proposed nine dimensions of immersive experience, researchers have developed different measurement dimensions in different travel scenarios. For example, Cheng et al. (2021) evaluated immersive experiences from four dimensions, namely control, attention, curiosity, and intrinsic interest^[22]. In contrast to these multidimensional perspectives, some scholars have adopted a one-dimensional approach in conceptualizing and measuring immersive experiences. For example, Li and Browne(2006) separate curiosity and time as dimensions of immersive experience. Although the dimensions used to measure immersive experiences differ in the literature, researchers agree that visitors become completely focused and lose their sense of self during an immersive experience.^[24]And it feels like time goes faster^[26].

4.2. Research on the influencing factors of immersive experience

Tourist experience refers to tourists' direct experience in the tourist destination. Tourists will be affected by many factors in the process of tourist experience. For example, Ryan (1997) found that the influencing factors of tourist experience can be divided into three categories. The preceding factors, interference variables, behaviors and outcomes^[27]. Walls et al. (2011) built a theoretical framework of four factors influencing travel experience, namely perceived physical experience factor, interpersonal interaction factor, individual characteristics and situational factor^[28]. Based on previous studies and literature analysis, this paper finds that the factors affecting immersive experience can be summarized as tourists' own factors and environmental factors.

4.2.1. Tourists' own factors

The importance of visitors themselves as drivers of immersion has been highlighted previously, particularly with regard to immersion. Immersion is a state that occurs when people participate in engaging activities, that is, immersion is not only related to technical media such as games and virtual reality, but also occurs in some non-technical media activities^[30]. It can be seen that immersive experience is influenced by individual subjective factors, both physical and

psychological. Individual physical influences are mostly concentrated on the senses. For example, Lu(2022), through the investigation of music tourism destinations, found that tourists mainly trigger immersive experience through three soundscape perception dimensions: preference, comfort and richness^[31]. Zhang(2019) et al. 's research on cultural tourism destinations found that tourists can achieve immersive experience by perceiving the authenticity of destinations and actively participating in activities^[32]. Psychologically, the individual achieves a state of immersion mainly by stimulating tourists' emotions. Recent research in the context of VR further suggests that arousal has a considerable impact on travelers' immersive experiences^[34]. In theme restaurants, theme parks and theaters, they provide places and Spaces for tourists to escape from their daily lives and environments, triggering immersive experiences by elevating the mood of tourists to pursue changes and novel experiences^[33].

4.2.2. Environmental factors

Immersion is considered to be a psychological state generated by people's contact with a specific environment and dependent on the specific characteristics of the environment, which plays an important role in consumer behavior and will stimulate consumers to immerse themselves in a specific atmosphere for a long time^[34]. Srikong and Wannapiroon(2020) report that through the use of immersive technologies, high attention engagement can help students achieve better outcomes, i.e. high-quality learning and educational experiences^[34]. In turn, immersive technologies create an atmosphere and scene in which one can enter the sight, sound, and smell of the surroundings, resulting in a more immersive experience^[35]. In practice, service providers are striving to create and provide immersive environments and atmospheres that enhance entertainment, aesthetics, education, and escapism for consumers^[36]. Immersion is influenced not only by the physical environment, but also by social factors. For example, Hansen and Mossberg(2017) argue that tour guides can contribute to tourist immersion by acting as storytellers and social mediators^[37]. Chen (2023) finds that the integration and interaction between actors and participants in digital exhibitions can generate self-created entertainment and educational experiences in exhibitions and provide personalized immersive experiences for participants^[38].

4.3. The effect of immersive experience

Scholars have focused on the satisfaction, consumption behavior, and emotional impact of immersive experiences.

4.3.1. Influence of tourist behavior

Immersive experience is a positive emotional attitude^[39]. A large number of studies have shown that emotions can affect consumers' behavioral intentions^[40]. Specifically, if visitors enjoy the travel experience, they are more willing to participate again. Therefore, the enjoyment experienced by visitors will motivate them to exhibit more positive behaviors. For example, Zhang et al. (2021) found that immersive experience in live art performances has a direct positive impact on tourists' recommendation and re-visit intention^[41]. The same influence mechanism has been shown to apply to nature-based tourist attractions^[5]. In addition, in their research on art evaluation activities, Tang et al. (2021) found that art appreciation is an enjoyable and pleasurable process that produces a state of immersion. The enjoyment of art-induced immersive experience has a direct positive impact on tourists' behavioral intentions^[42].

4.3.2. Influence of satisfaction

Destination Through new technological innovation such as VR and AR, by enhancing the authenticity of the destination, consumers' satisfaction with the destination can be improved^[43]. Tussyadiah et al. (2018) investigated the user experience during VR roaming at a travel destination and discussed how VR changes consumer attitudes towards that destination. Their empirical findings suggest that well-designed VR technology allows visitors to interact with a destination, thereby increasing their satisfaction^{[44][45]}. Guttentag et al. (2010) show that technological innovation has a great impact on the tourism industry, creating a more immersive experience for consumers and improving their overall satisfaction^[46]. Ayazlar et al. (2018) found that in the study on paragliding activities, tourists' life satisfaction is influenced by immersive experience^[47]. Cater(2020) Through the investigation of diving tourists in Turkey, it is found that tourists' immersive experience in diving activities will lead to tourists' satisfaction^[49].

4.3.3. Tourists' emotional impact

Tourists achieve emotional immersion through sensory interaction with the destination, and immersion can have a significant impact on consumer satisfaction through the emotion and interaction in the experience^[50]. Immersive technology creates a deep impression on the cognition and emotion of tourism by stimulating consumers' cognition and emotion, and improves the satisfaction of tourists^{[51][52]}. At the same time, Suh and Prophet (2018) et al believe that immersive experience abstracts tourists' multiple senses from the destination environment and promotes tourists' positive emotions^[53].

4.3.4. Research conclusions

By combing the literature on immersive experience at home and abroad, this paper reveals the dynamic and evolving nature of immersive experience in tourism research. The results show that quantitative methods dominate research in this field, and that immersive experience is studied mainly as a process variable, ignoring the role of different components. In terms of research objects, the research on immersive experience in the context of tourism can be divided into two categories. The first type of research focuses on specific adventure tourism activities, such as paragliding, rafting, skiing, hiking and cycling, and the second type of research is on destinations where technology is the main attraction, such as virtual tourism. In terms of the study on the influencing factors of immersive experience, researchers have found through qualitative and quantitative methods that tourists' own factors, such as tourist characteristics, tourists' senses and tourists' emotions, will produce immersive experience. In the study on external factors, it is found that digital technology is used to create immersive physical scenes. Providing adequate facilities and equipment for tourists during their trip is conducive to an immersive experience for tourists, and it is also conducive to an immersive experience for tourists in the destination through interaction with other tourists and local people. In the study of the effect, the main research is tourists' satisfaction, tourists' behavior and the positive and negative influence on emotion caused by the immersion experience. The results of this study provide some practical significance for tourism and leisure practitioners.

4.3.5. Research inspiration

Immersive experience in tourism scenarios originated in foreign countries, but there are few researches in China at present. Due to the differences in cultural backgrounds at home and abroad,

cultural differences should be taken into account when studying tourists' immersive experience in the future, and it is necessary to explore cross-cultural research. At the same time, regarding the measurement of immersive experience, the current research mainly relies on mature scales. How to measure it in different tourist destination scenarios and how to measure it through instruments are still the direction of future research.

The effect of tourists' immersive experience is mainly related to satisfaction, happiness, loyalty and other positive effects. There are also studies showing that immersive experiences can have negative consequences. For example, in other fields, the negative effects of too much immersion have been discussed. For example, if the individual's challenges are too high, or if the individual is addicted to gaming, it may create a separation between them and their environment, leading to negative emotions in their life^[54]. Therefore, in the future, it can be considered that immersive experience may be related to negative emotions in tourism scenarios.

The research on the drivers of tourist immersion experience, whether the factors affecting tourist immersion are different in different types of destinations and whether different motivations of tourists will have different impacts on immersive experience, is a future direction to explore. For example, Mills and Fullagar(2008) studied different motivation sources^[55] and found that individuals with different motivations are more likely to be stimulated by the environment and how to increase their happiness. Therefore, in the tourism scenario, tourists with motivation can be more motivated. Whether this will have an impact on immersive experiences is still worth exploring.

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