



A Virtual Reality Exploration for Visitors of Tourism Experience

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Abstract

The rapid development of Virtual Reality (VR) technology has become an opportunity to enrich VR tourism content and provide special interest tourism consumption. The challenge for the tourism industry in the future will be to enhance the tourist's experience in VR, which in turn guides people into the realm of tourist destinations and shapes the effectiveness of revisit intentions. In this study, a total of 26 subjects were invited to participate in the VR special interest tourism experience, and the ZMET method was used to empirically analyze how tourists express their inner value from the VR experience. The results of the study show that: Firstly, the presence in the virtual environment can improve tourists' perception of the VR experience; Secondly, the immersive feeling will make tourists have a stronger fondness and preference for special interest tourism; Thirdly, the richness and diversity of VR content will make tourists have a positive attitude change, which will also lead them to be more willing to visit the destination attractions. Therefore, this study provides empirical research to confirm that tourists have significantly different effects on attitude perception and behavioral changes between "Virtual" and "Physical" environments during the VR experience.

Keywords: Virtual reality; ZMET; Tourism marketing; Technology

Introduction

Due to the development of technology and the social economy, VR not only exists in the game community, but also have become a part of experiences in people's daily life [1]. As the popularity of personal devices becomes ubiquitous and affordable to the general consumer, for example, Samsung Gear VR and Oculus Rift. VR is now part of mainstream entertainment consumption. The VR head-mounted display market is estimated to reach 81.2 million units in 2021 [2].

In the context of the increasingly technology-led mainstream, how to combine the development of tourism with VR to become a novel and unique communication medium is an urgent need for innovation and discussion when planning special interest tourism marketing in the current and future. By providing a highly immersive media environment that has never been seen before, it is believed that the

advent of VR can enable marketers to find richer and more consumer-centric travel experience elements beyond traditional media. VR technology is most suitable for application in experience-intensive industries such as gaming, tourism, and fashion [3]; however, even within these specialized fields, how consumers experience VR environments and the existing theories of VR technology practice are still underdeveloped.

In the context of travel experience, previous research has pointed out that the generation of tourist experience value is closely related to their aesthetic process of VR tourism environment [4] Javornik [5] suggest that when people transform from visitors to participants in the VR environment, their superficial appreciation of aesthetic elements will transfer to a deeper level of value creation, especially intrinsic value. And the experience value is the inner core value generated in this sequence of ideas [4]. People can get rid of the monotonous feelings they may face in daily life by participating in the process of immersive activity experience [6]. Based on the above conceptual connotations discussion, experiential value in a tourist VR environment contains several key elements, including visual appeal, entertainment, enjoyment, and escapism [7].

As a consequence, the discussion on the structure and elements of VR tourism can also be analyzed from three perspectives: "psychological level", "social level" and "economic level". Trauer [8] proposed an interaction system of special interest tourism structure and elements, including the overall environment, the tourism demand system, and the tourism supply system, which together constitute the structure and elements of special interest tourism. The whole system includes from the local to the global level, covering areas involving political, economical, ecological, technological, socio-economical, and socio-cultural. The components of the special interest tourism supply system are sightseeing places/destinations, travel and tourism organizations/operators, travel agencies, accommodation industry, transportation, equipment, and infrastructure for special interest tourism. The components of special interest tourism demand include personal financial situation, use of cognitive determinants (perception, awareness, and learning) of basic travel activity equipment, activity determinants (emotions, needs, motivations, attitudes, and images), and personal traits (involvement, perceived risk, and value).

The main purpose of this research is to explore the psychological thoughts and feelings of tourists in virtual reality through the experience of VR special interest tourism, and to establish the mental model. In the empirical research, this research adopts the ZMET (Zaltman Metaphor Elicitation Technique) method [9-12]. Supported by the evaluation method of objective consensus and the relevance of the number of times, according to the qualitative data generated by the participants when interpreting the visual images, through an experiential interpretation method from a first-person perspective to explain the psychological connotations generated or felt by tourists experiencing the VR special interest tourism, which can induce tourists' experience value and behavioral intention in describing the special interest tourism experience.

Special Interest Tourism Experience

Special interest tourism experience has been widely regarded as a tourism opportunity to attract domestic and foreign tourists to visit. In the current business model of the experience economy, special interest tourism is the leader and helm of this model. Under the circumstance

that special interest tourism is facing severe challenges, operators gradually focus on improving the experience of tourists to increase their willingness to revisit [13,14]. Driven by the trend of service co-creation [15,16], from the literature on service experience, we can see that it is easier to successfully gain insight into the experience of tourists by considering the perspectives of tourists and managers at the same time [17]. From the perspective of tourists, experience value is the key to reflect the success or failure of the whole special interest tourism, and also an experience based on some kind of transaction or co-creation between the service provider and the visitor, the content contains the interactive relationship of directly or through a distance to enjoy an item or a service [18].

In addition, in the classification of the special interest tourism scope, the empirical research of Sheng, Sheng and Chen [19] divided the scope of VR special interest tourism into four types, including 1. Leisure and entertainment type: Composed of special interest tourism in pursuit of leisure and entertainment; 2. Natural ecology type: Composed of natural ecological visits and exploration of related special interest tourism. 3. Physical adventure type: Composed of special interest tourism of physical activity or adventure activities. 4. Historical and artistic type: Composed of special interest tourism that participates in historical monuments, cultural relic tours, and cultural and artistic activities and performances. For the structure and elements covered by special interest tourism images, to meet the “multiple roles” and “modern people's rationality” in life, people hope that the tour they participate in is of high quality and can escape from real life [20]. These tourism consumption patterns also reflect the diversity of tourists' leisure patterns and interests, thereby creating new values, such as increasing the importance of outdoor activities, awareness of ecological issues, and promotion of education, the aesthetic ability of self and society, and improvement.

This study believes that VR special interest tourism is a system that brings so-called “experience” to tourists and generates personal experience value through the interaction and influence of tourism demands and tourism supply. Therefore, the entire VR special interest tourism interaction system is to illustrate the product of special interest tourism, which is generated through the interaction of media for personal value. As a result, only by discussing tourists' experience of VR special interest tourism to understand their inner's value demand, and through the development of multiple values to reach a profound impact on the development of the special interest tourism market.

Finally, from the perspective of management, the experience management of special interest tourism mainly relies on stimulating

tourists' attention, interest, and participation to provide resource inputs, which are the core products in the tourism process and related embedded external resources [21]. The main direction of special interest tourism management includes the concepts of “exhibition” and “arrangement” [22]. Sand and Gross [22] believe that the essence of “exhibition” is a strong and powerful dominant force behind the special interest tourism experience. On the other hand, “arrangement” sees the special interest tourism experience as a kind of reaction to the conflict between society and the natural environment, because individuals are constrained by social norms or natural fields, and they are eager to escape from their feelings.

Thus, in addition to the exhibitions and arrangements of various special interest tourisms, visitor responses can be stimulated through social and natural environments. From the above two perspectives, special interest tourism stimulates people's attention through eye-catching exhibitions and arrangements, which lead to successfully attract tourists to participate, and then co-create experience value. Given this management requirement, the design and application of VR technology to exhibition and arrangement in special interest tourism environments are of paramount importance.

Research Methodology

This study adopted the ZMET model to collect data on consumers' VR communication experience. The ZMET model has been widely used in consumer behavior research, by knowing the consumer experience and interpretation of their thoughts to understand how the concept of experience and consumer cognition interact with each other.

Interview method and participants

This research mainly investigates consumers' feelings about the virtual special interest tourism experience. Virtual special interest tourism has become a novel way of marketing and communication in the tourism field. Consumers can experience the itinerary of different special interest tourism by using VR devices. Tourist attractions can also provide VR technology to market and disseminate the characteristic attractions of the special interest tourism area, and the two are interdependent. This study invites 26 participants who are interested in special interest tourism. Most of them have experience in using VR devices and can effectively express their feelings and opinions after experiencing VR special interest tourism itineraries. The brief information of the participants is shown in Table 1.

No	Age/Gender	Background	VR experience
A015	21/Male	University business student, travel agency internship	3-4 year
A016	22/Female	University business student, travel agency internship	2-3 year
A017	22/Female	University business student, tourism hotel internship	2-3 year
A018	23/Male	University business student, internship in a digital technology company	3-4 year
A019	29/Male	Web planning engineer, Digital Technology Co.	4-5 year

A020	33/Male	Data engineer, Digital Technology Co.	5-6 year
A021	43/Female	Strategy manager, multimedia communication company	6-7 year
A022	26/Male	Product planning specialist, Culture Business Co.	3-4 year
A023	28/Male	Game planning specialist, Network Co.	4-5 year
A024	30/Male	Internet marketing specialist, Media Advertising Ltd.	4-5 year
A025	36/Female	Teachers of occupational science in senior secondary schools	5-6 year
A026	40/Male	Teacher, Faculty of Management	6-7 year

Table 1: Background information of the participants (continue).

Participants showed a strong interest in VR special interest tourism experiences and agreed to participate in the academic survey of this study by replying to this study's email invitation. The test and interview time are about 30 minute to 60 minutes each time (about 46 minutes on average). After the interview, this research will first confirm and integrate the data. The next level of data collection will only proceed when all relevant researchers agree that the interviewed data are correct.

The procedure of the interview included an introduction to the background of this study, followed by experiencing a six-minute VR special interest tourism. After guaranteeing anonymity and obtaining the participant's recording permission, we asked the participant to introduce themselves and describe their relevant experience of using VR technology; these questions are used as a buffer topic to formally bring participants into the interview topic. The researchers then switched the topic to the immersive experience they had just participated in the VR special interest tourism, explaining how they

felt after the experience (e.g. "How do you feel about the VR special interest tourism?", "What are the pros and cons of VR special interest tourism?"). Once the participant does not have many ideas about the question, we will try to use stimulating questions [23] to lead the topic to the content that this study wants to investigate and understand. (For example, "Please tell me more about this.", "Can you tell me what you thought when this happened or could happen?", "How interesting or serious is the problem?"). Once the participants did not mention any further ideas, we will close the interview and appreciate them for their participation.

Data investigation process

During the process, we asked participants to express their thoughts and feelings about the VR experience based on the pictures presented, and they could also tell a story to express their inner thoughts. Additionally, the methods and themes of the operation process of each stage of ZMET are shown in Table 2.

Stage operations	Contents
Pre-assignment	VR special interest tourism video selection, Wikimedia image search, respondent list confirmation, setting interview dates, email invitations
Interview process	Background introduction of this study, six-minute VR special interest tourism experience, 30-60 minute interview, data confirmation and integration
Confirmation construct	a. Mind maps: Categorization, construct extraction, storytelling, and building personal mind maps. b. Images: Most representative pictures, lost images, sensory images c. Summary image: Personal summary image
Data code	Identify critical constructs, develop construct analysis, and coding of data
Building a Consensus Map	The analyzed data can be used to build a VR special interest tourism mental map (consensus map)
Relevance assessment	Number of consensus mentions of VR special interest tourism constructs and relevance values between constructs
Image analysis and discussion	Summarize the results of the study of the starting construct, linking construct and end construct, and describe the deeper meaning of the end construct of the VR special interest tourism

Table 2: The operational procedure of each stage of ZMET in this study.

This study also asked participants to try to expand the interpretation of the connotation of the pictures they chose and to explain what other people and things might appear in the pictures, or whether there are some missing items and missing parts in the pictures. The above interviews have been fully recorded and organized into the transcript. This study refers to the literature of Wu, Lo and Zhu [24] for the interview outline design, the steps and the content of the interview were conducted according to the outline prepared in advance, as shown

in Table 3. Furthermore, the data collected will be coded and reorganized before further extraction and abstraction of the interview content. To gain a better understanding of new topics, we adopted the interpretive framework proposed by Thompson [25] to capture consumer stories in interviews to reflect participants' psychological meanings of particular objects or events. (For example, what is the psychological feeling after the VR special interest tourism experience?)

Step 1	Description
Question 1-1	A brief description of this picture.
Question 1-2	Why did I choose this picture?
Question 1-3	How do you think this picture relates to VR special interest tourism?
Question 1-4	What do you think about this picture?
Question 1-5	Is the feeling you described in the previous question important? Why?
Step 2	Missing images
Question 2-1	Is there a picture that represents your feelings about VR special interest tourism but you could not find?
Question 2-2	If yes, please describe the content of this picture.
Question 2-3	How does this picture express your thoughts and feelings about VR special interest tourism? Why?
Step 3	Sorting task
Question 3-1	From these pictures, please sort and name them according to your own ideas.
Question 3-2	Please explain why they are categorized and named in this way, and what feelings and ideas they represent for VR special interest tourism?
Question 3-3	Are these feelings important to you? Why?
Step 4	Construct elicitation
Question 4-1	From the categorized images, please find one that is the least similar to the others and explain why?
Question 4-2	From the categorized pictures, please find the two that feel mostly similar to each other and explain why?
Question 4-3	What physical benefits do these concepts or feelings bring to you (direct benefits or practical value) or psychological satisfaction (benefits from mood, image, social relationships, etc.)
Question 4-4	Repeating the above questions until the respondents could not give any new ideas.
Step 5	Sensory images
Question 5-1	What type of sensory stimulation (visual, auditory, olfactory, gustatory, tactile) or emotional connection do you find most relevant to VR special interest tourism? the least relevant? Why?
Step 6	The mental map
Question 6-1	Please check all the constructs and double check if the construct is representative of their meaning or if there are any missing constructs that were not mentioned?
Step 7	The Summary Image

Question 7-1	From the collected pictures, please choose the one that best represents your thoughts for a VR special interest tourism.
Question 7-2	Please provide a brief description of the overall summary and what role VR special interest tourism will play in your journey itinerary.

Table 3: Steps and issues for the interview.

Although the above content can provide a general description of what individuals form after participating in the experience, Thompson [25] believes that in a given consumption environment, content analysis and discussion can be more extensive. This study can gain an intimate understanding of consumers' experience of VR special interest tourism with ZMET's method, in particular, how their minds react and interpret the interaction effects between social and cultural scope and virtual technology ontology that the individual experiences in the virtual environment. Ultimately, the analysis of this study goes into a deeper interpretation, which in turn confirms the central topic of this research, and establishes a provisional content category and conceptual connection. This contributes to this study to have a focused topic induction and direct interpretation of the consumption meaning of VR special interest tourism.

Results and Discussion

Dimension extraction of VR special interest tourism

This study asked participants to tell stories about how each picture of their choice represented their feelings and thoughts about VR special interest tourism. Afterward, by organizing the transcript to conduct the dimension extraction to find out the important factors that affect the VR special interest tourism experience. Table 4 shows the content extracted in the VR special interest tourism dimension from 26 participants.

Constructs	Semantic contents
Exclusivity	Private space, solitude, keeping a little privacy, independence, having one's own space
Show	Pursuit, longing, yearning
Angel privilege	Special, unique, out of the traditional style, different from the past, extraordinary
Status	The sense of honor, the reinforcement of mutual influence, the promotion of prestige, the prestige among people
Young and old	Affinity, warmth between people and people, people-friendly, humane, approaching, enthusiasm
Ethnicity	Promote friendship, a sense of connection, equal treatment, and ethnic behavior
healthy	Drinking more water, exercising, hiking, refreshing the air
Nature	Liberty, freedom, return to nature, improve health, bring good mood
Body, mind and spirit	Slow pace, slow down the pace of life, relaxed, leisurely, unrestrained, no feeling of pressure
Conqueror	A glimpse, no cover, increased dependence, obsession with the other side, domination of the world
Imagination	Living a lively, vivid, interesting, diverse and varied life, not boring and dull
Liberation	Comfortable, relaxed, unrestrained, no feeling of pressure
Confusion	A feeling of fog, a desire to belonging, anxiety, and loneliness
Contradiction	The struggle, the conflict, the dream, the puzzling resistance
Loneliness	Fear and anxiety, being sad, feeling miserable, a hopeless world
Ghosts	The ghostly work, customs and taboos, the eerie and cool atmosphere, the spirits
Hallucination	Hazy beauty, reality distortion, unbelievable, Alice in Wonderland

Table 4: The semantic content of VR special interest tourism construct extraction.

Through the extraction and analysis of the above-mentioned consensus map data dimensions, this study proposes three thematic

aspects of VR special interest tourism: the freedom of virtual reality, the escape of virtual reality, and the anxiety of virtual reality. Under

each theme, the connotation presented by the participants' interviews and the visual images is excerpted and organized in this study. These three themes are further explained as follows.

The freedom of virtual reality

This study found that VR reality is a unique attribute, and VR can present a unique consumption experience, allowing participants to feel the unconstrained and freedom in the virtual environment. Participant A004 (female, 38 years old) said, "I feel like I am a tour guide for VR special interest tourism, and also feel like a tourist. When visiting a theme park, it takes a long time to queue to experience the special amusement facilities. VR is a rare experience. I think this is an exclusive group activity specially prepared for me, a show tailored for me, just like getting the privilege of an angel."

In general, participating in special interest tourism can emphasize the hierarchical relationship of tourist products in the consumption field, thereby presenting the exclusivity and status privileges of the participants [26]. VR special interest tourism not only shows the free characteristics of consumers but also allows all consumers who wear virtual devices to feel the atmosphere of the scene within the scope of virtual space. This study discovered that this process of liberalization can present consumers' personalized ideas about VR special interest tourism. On the one hand, VR special interest tourism experiences enhance the importance of the participants themselves (e.g. gaining status). As pointed out by participant A004, being a tour guide for a VR special interest tourism experience made her feel as if she had an "angel's privilege". Because this situation provides her with an experience that cannot be fully satisfied in the real world.

Other participants had similar responses. For example, participant A013 (male, 48 years old) mentioned "feeling like a celebrity, gaining a higher status and becoming the talk of the town". Such a conclusion is consistent with Denegri-Knott and Molesworth [27], that VR virtual reality can realize consumers' dreams, and consumers can temporarily switch from real-life roles to a brand new theme character (such as becoming a VIP).

On the other hand, this study also found that the same concept of liberalization brought another feeling among participants; that is, consumers felt more "equal" in the scenario of VR, because everyone can equally enjoy the seemingly infinite unique consumption as in the real world. Participant A011 (female, 28 years old) mentioned that "watching the world of virtual reality can make people feel that all beings are equal, like the balance between the scales. When I participate in the VR special interest tourism, I saw a lot of men and women, young and old, and I don't know where they come from, but now I know how to have a social status in cultural activities, and through the opportunity to participate in cultural activities to meet more people, so I think VR can make people more equal to each other regardless of race, religion, and gender."

In the description of participant A011, an obvious concept is highlighted: that is, the VR special interest tourism experience makes "people equal, like the balance between the scales". Because whether you are a celebrity or a graduate student, you are all communicating with each other through VR, everyone is the same participant in the virtual world, experiencing the scene content of the special interest tourism together.

Escape of virtual reality

A second related theme found in this research is VR as a concept of escape from reality. Escape from realism refers to meeting consumers' daily needs or reducing the burden of living from their daily expenses [28]. Previous research has found that consumers' stress to escape from real life is one of the important motivations for them to join the virtual world [29]. This study discovered that similar to the aforementioned results of VR freedom, VR can serve as a personalized thought that people react to by escaping from real life. However, this kind of emancipation from real life is a completely different concept in form and substance, because it is more a means for consumers to escape from their daily lives, rather than a way for the social class system to pursue equality.

As participant A009 (female, 36 years old) explained, "With VR, I am free to go anywhere without having to move my body, and it feels like I can experience everything (Figure 1a). Since my life is very busy and my time is limited, when I need to have a healthy body, want to be close to nature, or want to travel, watching VR special interest tourism will be very effective in relieving the stress in my life."



Figure 1a: Secluded, calm, peaceful, tranquil, quiet, experience nature, longing for countryside, return to original.

Participant A005 (male, 40 years old) also said, "I thought I was doing time travel, just like the picture I chose, imagining that I could go back to the past and into the future at any time (Figure 1b). I entered a virtual special interest tourism world, it seems that this world and space can heal my body and mind, and in fact, I have a wish to go to this place."



Figure 1b: Pursuit, longing, yearning, like to stay there, to check it out, body, mind and spirit, to give it a try, liberation.

The excerpts from the interviews above, all point out that VR special interest tourism is inherently enjoyable and can help them escape the irritability of their day-to-day work. This study further

found that VR has another characteristic that can expand and stimulate the imagination of consumers through the medium of technology [27-30], and this imagination plays an integral role in the construction of escape from the pressure of real life. As participant A009 emphasized, VR special interest tourism allows her to “visit anywhere without moving her body” and “experience everything”, which is a unique feature of the VR special interest tourism experience. Likewise, when participant A005 (male, 40 years old) discussed his experience of escaping from the reality, he noted that he felt like a “conqueror” in VR (Figure 1c): “I can control everything at will in the VR world, I can project my visual direction at will, only see what I want to see, and don't care about what I don't need. I can stay on top of visual changes at any time and feel like a conqueror.



Figure 1C: A sense of accomplishment, honor and glory, confidence, power and trust, conqueror.

On the other hand, participant A003 (female, 32 years old) mentioned that VR is reminiscent of teleported images, and pointed out that “When I put on the VR device, I felt like I was teleported to another special interest tourism space, I think this is a very intriguing technology. (Figure 1d)” In addition to liberalization, VR special interest tourism experiences can also liberate consumers from their daily lives by arousing their imaginations and providing themed scenarios. Through this special experience, VR can expand different virtual environments [31] and realize the fantasy dream of consumers [27-30]. As a consequence, VR can be said to be a specific means and tool for consumers who want to escape the stress of real life.



Figure 1d: Imagination, amazing, special, unique, different horizons, differs from the past, distinctive, different expectations.

Anxiety of virtual reality

In contrast to the themes of liberalization and escape from reality, this study takes the realistic anxiety of virtual reality as the final topic

of discussion, thereby raising the idea of “anti-authoritarianism”, that is, “consciousness of compliance” that can be generated via cyberspace [32]. In VR special interest tourism, this study found that the meaning of travel for consumers is no longer freedom and escape from the reality, but a feeling of anxiety, loneliness, and even fear.

Participant A007 (female, 33 years old) mentioned that “the reason for choosing this picture is that I think VR will make people feel complicated and confusing. I want to present some meaningless elements that represent my inner anxiety (Figure 2a). Although VR is a new technology that can bring convenience to life like the Internet and mobile phones, we still have to recognize the fact that, like other technology products, VR technology may also bring some negative effects to our society. All I want to say is that I get so conflicted and concerned when I'm watching VR special interest tourism content.”



Figure 2a: Depression, illusions, stress, and anger, disgust at things around you, bad mood, disappointment, discouragement, anxiety, and life is miserable.

Participant A001 (male, 27 years old) said, “I felt very lonely (Figure 2b), and my response to the VR special interest tourism experience started with fear and then turned to loneliness, and finally I realized that I couldn't have any interaction with people or things in the virtual world. It makes me feel very lonely.” Participant A013 (male, 48 years old) replied, “Although I was happy at first when I experienced immersion into the virtual space, in the end, I thought there was a sense of alienation and anxiety in the virtual world, which made me feel like a ghost (Figure 2c), it doesn't exist in the real world, just like the movie “Detention”.”



Figure 2b: Shame, fear, worry, contradiction, anxiety, grieving, sadness, and feeling like crying.



Figure 2c: Old and crude, obsolete, dead, black, spooky, haunted, ghosts.

This study scrutinizes these consumer explanations and discovers that the anxiety caused by VR special interest tourism experiences is often generated in the context of “anti-authoritarian” cultures, such as the movie “Detention” mentioned by participant A013. Furthermore, this study found that since VR special interest tourism experiences have a critical point between the virtual world and the real world, these “anti-authoritarian” discourses become the way consumers want to express themselves so that they can also feel that authenticity has an ambiguous feature.

This means that VR special interest tourism experiences make participants feel very close to the real world in substance (e.g. liveliness), but other aspects are lacking, such as interpersonal social interactions. Also, as both participant A001 and participant A007 noted that compared to the real world, the lack of actual social interaction with people and objects in the VR world made them feel very lonely. By the same token, participant A008 (male, 38 years old) also mentioned, “Initially I was excited when I watched the VR special interest tourism, but as time passed, I felt isolated. It makes me feel that although I exist in the virtual world, everyone just bypasses me, ignoring my existence. The VR special interest tourism experience deeply made me feel abandoned standing in the crowd, which made me feel lonely. (Figure 2d)” In sum, the illusory situation created by virtual reality can make participants anxious about how to become an anti-authoritarian force in cyberspace, a force that takes away the freedom of consumers and replaces it with an illusion.



Figure 2d: Desolate, overwhelmed, confusion, lonely, replaced guilt, loneliness.

Conclusion

Previous studies have explored the psychological experience brought by VR technology, but this study provides another perspective, focusing on the impact of VR special interest tourism on the scope and value of experience. In support of this, this study

contributes new insights into the cognitive behaviors of consumers when they experience VR special interest tourism.

Conclusions and Implications

One of the important theoretical contributions of this study is to use the ZMET method to discover the cognitive feelings of consumers after experiencing VR special interest tourism. In recent years, due to the rapid development of VR platforms and equipment, the content of VR tourism has attracted a lot of attention which can provide tourists with the opportunity to experience local special interest tourism and leave a deep impression. As previous literature studies have found and proposed, the tourism experience created by VR will have a significant impact on the future development of the tourism industry [33]. This is also the challenge that VR tourism must face in the future, that is, how to explore the impact of VR on tourists' inner emotions when providing alternative tourism experiences, and the positive effectiveness of shaping tourists' attitudes towards destination tourism. In addition, tourism authorities must also be confronted with the evaluation of projects when investing in various VR strategies in order to use VR tourism technology to facilitate tourists' travel decisions.

To overcome these challenges, this study conducts an empirical study on how tourists express their inner value from the VR experience; Attributing tourists' feelings through the sense of presence they experience in VR also helps to understand the difference between the “presence” experience of virtual tourism and actual tourism. The findings of the study show that the presence of the VR travel experience has a positive effect on tourists' attitudes towards the destination. In other words, a greater sense of presence in a VR experience can also trigger a strong interest and emotion in destination travel. Therefore, this study provides an effective theoretical basis for the practical application of VR technology, through the stimulation of the VR tourism experience to understand tourists' reactions while presenting another incentive for destination tourism operators. That is to say, investing in tourism through VR technology is beneficial to its business performance.

In conclusion, the results of this study can provide empirical validation for special interest tourism marketers, travel agencies, and other travel suppliers that VR technology can assist as an effective travel marketing tool. With the convenient acquisition of personalized VR devices and the acceptance and use of tourists, the feasibility of investing in VR technology for tourism marketing strategies has been greatly improved. However, as various tourist destinations begin to embrace VR technology, it is more important to develop an all-around VR experience that allows visitors to deeply feel its presence and comprehensive value to ensure that tourists' experience of VR is not only a pleasure to use, but can also transform it into tourists' attention and trust in tourist destinations or special interest tourism. And the key to this is still the result that this study aims to highlight, that is, VR content that allows tourists to truly experience the immersive tourist destination and enhances the feeling in the virtual environment, and separates sensory stimulation from the actual physical environment. This allows tourists to truly liberate themselves and freely participate in various special interest tourism.

Limitations and Future Research

Regarding the research limitation, this research summarizes three thematic contents of VR special interest tourism, which may not be

complete. The main purpose of this research is to put forward the following arguments: that is to provide an important entry point for the ontology features of VR special interest tourism and scope of special interest tourism so that people can more comprehensively understand the cognitive behaviors of consumers after experiencing VR special interest tourism. Future research can further explore whether there are other topics in VR special interest tourism and whether they will change over time, change between different special interest tourism, and further interact with each other. In addition, this study also found that consumers may have individual differences in their definitions of VR special interest tourism. Therefore, future research could explore whether people's familiarity with VR expertise and personal experience with other emerging technologies influence their judgment and interpretation of VR special interest tourism. Furthermore, using "the personal involvement inventory" proposed by Zaichkowsky [34] can get closer to understanding the target subjects' concern and attention to VR special interest tourism, which also means that the subjects have rich and diverse interests. Future research can incorporate measures of the personal involvement inventory to screen out high-involvement users who are more concerned about VR special interest tourism and search for information. Finally, this study explores the use of VR in the specific context of special interest tourism; as a result, in different consumption environments, by comparing the influence of special interest tourism scope and ontology feature, whether there will be differences due to different industries will be a research topic worthy of further exploration in the future.

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