



Tourists' Responses to Immersive Technology in Community-Based Tourism: A Stimulus–Organism–Response Model

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Abstract: Community-based tourism (CBT) has been recognized as an important approach for promoting sustainable tourism, local participation, and community development. However, the role of immersive technology (IMT) in enhancing CBT experiences remains underexplored, particularly how tourists evaluate technology-driven recommendations and respond behaviorally. This study examines the factors influencing tourists' attitudes and responses to the use of IMT in CBT through the stimulus–organism–response (SOR) model. A cross-sectional survey was conducted in April 2026 with 400 tourists who had experience using IMT within the previous three months. Data were analyzed using partial least squares structural equation modeling (PLS-SEM) with SmartPLS. The results show that recommendation reliability and recommendation accuracy significantly and positively influence tourists' attitudes toward using IMT, with recommendation accuracy having the strongest effect. In contrast, experiential graphic design does not significantly affect attitude. Furthermore, attitude toward using IMT significantly influences tourist satisfaction and intention to use IMT, but it does not significantly affect intention toward the destination. These findings confirm attitude as an internal psychological mechanism linking technology-related stimuli with tourists' behavioral responses. The study contributes to the literature by extending the SOR framework to the IMT-based CBT context. It suggests that IMT development for CBT should prioritize accurate, reliable, and useful information rather than focusing only on visual design or technological novelty.

Keywords: Immersive technology (IMT); community-based tourism; tourist responses; stimulus–organism–response (SOR); behavioral intention

1. Introduction

Tourism is among the fastest-growing global industries and is acknowledged as a significant contributor to local economic growth, job creation, and reduced income inequality [1, 2]. Community-based tourism (CBT) is an important strategy for sustainable tourism development, aiming for fair benefit distribution and the participation of local populations in planning, managing, and using tourism development [3, 4]. CBT differs from traditional tourism by focusing on improving the quality of life, economy, and society of local communities, while also ensuring the sustainable conservation of natural resources and the environment. Furthermore, CBT is associated with sustainable

tourism, responsible tourism, and ecotourism, all of which aim to reduce adverse effects on the culture, communities, and environment of tourist destinations [1, 5]. CBT is considered an alternative tourism model aligned with the Sustainable Development Goals (SDGs) and sustainability principles, especially given that the tourism sector contributes substantially to the global economy, accounting for approximately 10 percent of the world's GDP [2].

Changes in tourists' behavior in the digital era, especially the use of digital communication channels to seek information, plan trips, and share experiences, have forced the tourism industry to adapt continuously. Current tourism growth can no longer rely solely on traditional service models; instead, it depends on service providers who can offer diverse innovations and experiences that respond effectively to tourists' needs [6]. In recent years, the tourism industry has increasingly adopted digital technologies to identify solutions, enhance competitiveness, and create new opportunities in the tourism market [7]. At the same time, digital technologies play an important role in enhancing tourist experiences throughout all stages of the travel journey, including the pre-trip, on-site, and post-trip phases, by creating unique, valuable, and expectation-aligned experiences [6]. Accordingly, social media, smartphone applications, augmented reality and virtual reality (AR/VR), Geographic Information Systems (GIS), and e-commerce platforms are examples of digital technologies that have significantly transformed the contemporary tourism industry [8]. These technologies not only make services more efficient and improve communication with tourists, but also enable local communities to promote destinations, attract tourists, monitor tourist behavior, and support sustainable tourism development in a more tangible way.

Digital technologies are known to contribute significantly to the long-term sustainability of the tourism business. However, studies on their application and effects in this context have not been adequately and systematically documented [9]. Previous studies have mainly focused on specific technologies or contexts such as the adoption of AI-driven smart tourism technologies in the UAE [10], the use of immersive technologies in tourism [11], the relationship between perceived risk and the adoption of virtual reality technologies by tourists and travel companies [12], the use of augmented and virtual reality technologies to promote responsible tourism behavior [13], innovation decisions and reluctance to adopt augmented reality technologies in the tourism industry [14], and the use of augmented reality technologies to support the digital transformation of smart tourism ecosystems [15].

However, research on the use of digital technology in Community-based Tourism (CBT) remains limited. Much of the research on community-based tourism (CBT) focuses on entrepreneurs' personalities, their experiences, their sense of belonging to the community, and the problems CBT entrepreneurs face [16]. They also provide guidelines for managing tourism sites and the business sector to promote sustainable tourism and the strategic use of local resources [17] and discuss the problems and barriers to implementing CBT initiatives [18]. The findings indicate that the existing research on the association between the application of digital technology and the promotion of community-based tourism is limited in scope and in explicitly stating the function of digital technology in promoting CBT sustainability.

This study investigates tourists' attitudes towards digital technology in community-based tourism (CBT), with particular attention to the role of immersive technology (IMT) in improving the tourism experience. IMT encompasses various technologies, such as augmented reality (AR), which allows users to interact with virtual content overlaid on the physical world; virtual reality (VR), which offers an interactive simulated environment that replicates real-world experiences, with non-immersive VR available on standard computer screens or digital media without the need for specialized equipment, while immersive VR requires a headset for a fully immersive experience; and mixed reality (MR), which integrates virtual objects with the real environment to enable seamless interaction between the real and virtual worlds [6, 19-22]. In this study, immersive technology (IMT) is operationalized as an IMT-enabled community-based tourism (CBT) prototype developed to support tourists' exploration and decision-making regarding CBT attractions, community activities, travel routes, and destination information in Prachuap Khiri Khan Province. The prototype integrates immersive visual media, interactive tourism information, and recommendation functions. Therefore, IMT in this study does not refer to tourists' general perceptions of all AR, VR, or MR technologies, but specifically refers to their perceptions of the IMT-enabled CBT prototype examined in this research.

This study used the Stimulus–Organism–Response (SOR) model [23], which connects digital technology stimuli with tourists' internal assessments or impressions. It examines behavioral responses to the incorporation of digital technologies in Community-Based Tourism (CBT). To explore the adoption of IMT in the context of CBT, the following research questions (RQs) were formulated:

RQ1: Which stimulus elements affect tourists' opinions toward the adoption of IMT within the framework of CBT?

RQ2: What are the drivers of tourists' responses to the use of IMT in the context of CBT?

1.1 Theoretical framework

The Stimulus-Organism-Response (SOR) model provides a useful theoretical foundation for understanding individual responses to environmental cues or stimuli, which influence cognitive processes, thoughts, feelings, and internal mental states, resulting in behavioral responses that may be positive or negative [23]. The SOR framework has been widely used in tourism research on visitor behavior and digital technology users. A study on the impact of augmented reality (AR) technology in promoting the digital transformation of smart ecotourism firms identified that AR improves immersive experiences, environmental awareness, cultural knowledge, perceived sustainability ideals, and innovation orientation [2]. The SOR model has also been employed to explore the association between stimuli (perceived marketing strategies and motivations), tourists' internal states (positive emotions and satisfaction), and responses (intention to revisit) in hot air balloon festivals [24]. Furthermore, a study on cognitive and emotional responses, attachment, and intention to visit tourist attractions using virtual reality (VR) technology observed that the association with the VR experience affects the intention to visit attractions through VR, and that cognitive responses are more influential on visitor intention than emotional responses [25].

This study used the SOR model to examine tourist behavior toward IMT deployment under community-based tourism (CBT). Digital technology stimuli, including the authenticity of suggestions, the accuracy of information, and graphic design, influence tourists' internal states, which in turn influence their attitudes toward using digital technology. These attitudes are then expected to influence behavioral responses such as satisfaction, intention to adopt innovation, and intention to visit the destination within the CBT framework.

1.2 Research model and hypotheses

The tourism experience comprises several activities and interactions that take place during a tourist's journey and can be divided into three main stages: pre-travel, during travel, and post-travel [26]. At each level, tourists perceive, assess, and respond to information, services, and the destination environment differently. Thus, tourism success depends on developing experiences that satisfy tourists' needs at all stages of their journey. Digital technology, particularly virtual reality and immersive technologies, greatly increases the user experience in modern tourism. Previous research has demonstrated that virtual reality impacts user experience in perception, emotion, behavior, senses, and social interaction [27]. Moreover, boosting customer experience is a major priority for the commercial industry. Previous studies have highlighted that many firms see improving customer experience as a priority and that developing experiences that facilitate emotional connection in the purchasing decision path is a significant marketing trend [28]. Thus, much attention has been paid to improving the customer or tourist experience, especially through the use of digital technologies to enhance the journey at all stages (before, during, and after the trip). Digital technology plays an important role in community-based tourism by facilitating information access, tourists' understanding of attractions, experiential value enhancement, and stimulation of tourists' behavior. These factors are the critical basis for the construction of the study model and hypotheses in Figure 1.

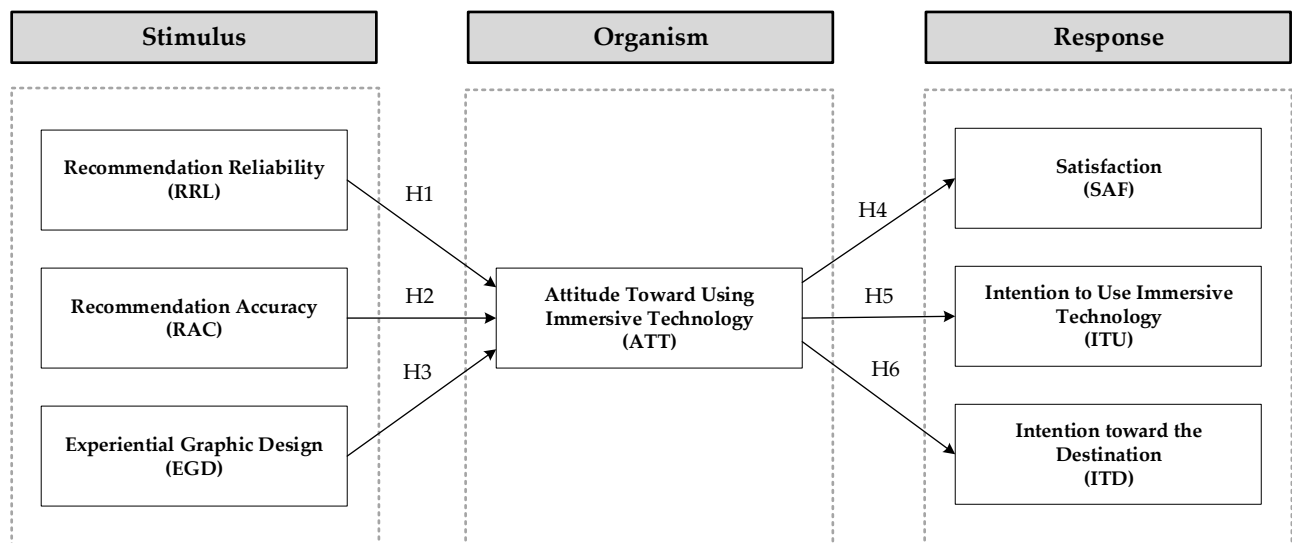


Figure 1. Proposed research model.

In this study, recommendation reliability (RRL) and recommendation accuracy (RAC) are treated as two related but conceptually distinct dimensions of information quality. Drawing on information systems success and information quality perspectives, information quality is not a single attribute but a multidimensional evaluation of whether information is useful, dependable, accurate, relevant, and appropriate for users' decision-making. In the context of the IMT-enabled CBT prototype, RRL refers to tourists' perception that the recommendation process is dependable, consistent, credible, and useful for supporting tourism-related decisions [29]. It reflects whether tourists feel they can rely on the prototype when selecting CBT attractions, routes, or activities.

RAC, in contrast, refers to tourists' perception that the information provided by the prototype is factually correct, precise, and consistent with actual destination conditions. It reflects whether information about attractions, community activities, routes, and services matches reliable external sources, tourists' expectations, and real conditions in the CBT context. Therefore, RRL answers whether tourists can rely on the recommendation, whereas RAC answers whether the information is correct and consistent with reality. Both constructs are needed in the model because tourists may perceive a system as generally dependable and credible while still questioning the correctness of some specific destination details, or they may perceive particular information as accurate without necessarily viewing the overall recommendation process as consistently reliable [30].

The trend of digitalization in society has heightened the challenge of information overload, necessitating the exploration of recommendation systems within digital environments [31]. The credibility of recommendations plays a significant role in users' perceptions and decisions, especially in digital environments with large amounts of information. Kim et al. [32] argue that social recommendations are valuable because they are based on the opinions and experiences of other users, reducing information overload and allowing users to better evaluate the quality of a product or service before making a purchase or use decision. Moreover, social recommendations significantly influence users' behavior, as people tend to prefer information based on others' real experiences rather than information provided only by the provider [33]. In community-based tourism, the reliability of recommendations by digital systems such as chatbots, route-guiding platforms, and geographic information systems increases tourists' confidence in information about attractions, community activities, travel routes, and related services. Credible, accurate, and relevant recommendations enhance tourists' attitudes towards the use of digital technology in community-based tourism. Consequently, this study proposes the following hypothesis:

H1: The credibility of innovative recommendations (RRL) positively influences tourists' attitudes toward the use of IMT (ATT) in community-based tourism.

In addition to the trustworthiness of suggestions, the correctness or precision of these recommendations also plays a key role in user attitudes in digital settings. This is particularly relevant in the context of immersive technologies and recommendation systems that mediate between large volumes of information and users, hence increasing the efficiency of finding, accessing, and consuming information [34, 35]. In interactive digital settings, such as the metaverse or immersive technologies, accurate recommendation systems can bridge the gap between the virtual experience and the user's real-world experience. Unlike the traditional Internet, the metaverse can create a parallel universe and enable real-time interaction that can be integrated with users' real-life experience [36].

According to et al. [37], the accuracy of product recommendation systems boosts functional value, while the system's attractiveness enhances social value and consumer immersion. Immersive technologies and virtual environments provide interactive surroundings and increase the user's involvement and focus on virtual encounters. Recommendation systems in tourism can increase the accuracy, personalization, and quality of experiences in tourism activities, possibly boosting tourism and improving the visitor experience [38]. However, combining recommendation systems with immersive technology in community-based tourism has limitations, particularly in the availability of information on new tourist sites, community activities, and distinct regional settings. Thus, if the system provides accurate, exact, and appropriate recommendations according to tourists' needs, it is likely to create a positive attitude toward using such technology in the context of CBT. Consequently, this study proposed the subsequent hypothesis:

H2: The accuracy of recommendations (RAC) from innovation positively influences tourists' attitudes toward the use of IMT (ATT) in community-based tourism.

Experiential Graphic Design (EGD) is an interdisciplinary approach that combines elements from graphic design, architecture, interior design, product design, and digital media arts. Its primary objective is to enhance user experience through visual communication within a designed environment, thereby improving users' understanding, perception, and emotional connection to the physical space or information presented [39, 40]. EGD employs comprehensive, multisensory design principles to address user perception and interaction patterns with the environment [41, 42]. Experiential graphic designers focus on interactions between users and a physical space, taking into account the context and environment that affect the user experience. The design emphasizes not only visual aesthetics but also practicality, clarity, and navigability within the space or system [39]. Experiential graphic design enhances the presentation of information, community activities, travel routes, and local narratives within community tourism, making them more engaging, comprehensible, and conducive to tourist involvement.

Integrating EGD with immersive technologies (IMTs) like AR, VR, or MR facilitates cross-format experiences, enhances user interaction, and promotes real-time responses between tourists and digital content or the destination environment. Consequently, when experiential graphic design is clear, engaging, and pertinent to the community context, it is likely to foster positive attitudes towards the use of IMTs in community-based tourism. Therefore, this study proposes the following hypothesis:

H3: The experiential graphic design (EGD) from innovation positively influences tourists' attitudes toward the use of IMT (ATT) in community-based tourism.

Attitudes are an individual's evaluation, feelings, or propensity to show a given action in a specific environment [43]. In the context of technology adoption, users' attitudes substantially affect their evaluation of the experience, satisfaction, and intentions to continue using the technology [6]. In tourism, where virtual or immersive technologies are used, tourists' attitudes toward these technologies are important for their perceived value of the experience and behavioral responses. Liu and Sutunarak [44] observed that tourists' attitudes and pleasure towards virtual reality affected their behavioral intentions, enhanced the visiting experience, and promoted the sustainable development of museums. Sujood and Pancy [45] found that the virtual interaction influences user attitudes, which in turn affect the reception of virtual reality experiences in tourism destinations. Moreover, previous research has found that tourist adoption of virtual reality is influenced by their attitudes towards the technology, which in turn influences their satisfaction and loyalty [11].

In this study, attitude toward using IMT is conceptualized as tourists' overall evaluative orientation toward the IMT-enabled CBT prototype, including enjoyment, convenience, perceived customization, and entertainment value. It is therefore broader than usability alone. In community-based tourism, tourists' positive attitudes toward immersive technologies such as AR, VR, or MR are associated with more favorable impressions of their tourism experiences. This includes increased enjoyment, understanding of community stories, participation in events, and greater confidence in using technology to support travel. Attitudes toward usage may influence satisfaction, intention to utilize immersive technology, and intention to travel to a destination in community-based tourism. This study, therefore, proposes the following hypothesis:

H4: Attitude toward using IMT (ATT) positively influences tourist satisfaction (SAF) when utilizing IMT in community-based tourism.

H5: Attitude toward using IMT (ATT) positively influences the intention to use IMT (ITU) within community-based tourism.

H6: Attitude toward using IMT (ATT) positively influences tourists' intentions to visit the destination (ITD).

2. Materials and Methods

2.1 Study participants and setting

This study employed a cross-sectional research design and was conducted in April 2026 in Prachuap Khiri Khan Province, Thailand. Participants were selected using purposive sampling based on the study objectives. The inclusion criterion was tourists who had experience using immersive technology within the previous three months, regardless of gender or occupation. The three-month experience criterion was established to reduce recall bias and ensure that respondents could provide evaluations based on relatively recent interactions with IMT. Because this study examined perceptions of recommendation reliability, recommendation accuracy, experiential graphic design, attitude, satisfaction, and behavioral intention, respondents needed to remember specific details of the technology experience. A longer recall period may increase memory distortion, whereas a much shorter period may substantially narrow the eligible population. Therefore, the three-month criterion was used as a practical balance between recency of experience and respondent availability. Since the study aimed to examine tourists' evaluations of recommendation reliability, recommendation accuracy, experiential graphic design, attitudes, and behavioral responses after using IMT, respondents were required to have interacted with the prototype within the previous three months. Online recruitment through Facebook and LINE was used to reach tourists who were digitally active and likely to have encountered or used IMT-based tourism information. Therefore, the sample should be interpreted as representing digitally active tourists with recent IMT experience, rather than the general population of all CBT tourists in Prachuap Khiri Khan Province. The recruitment and data collection procedures were conducted in accordance with ethical principles for human subject research. The study protocol was approved by the Institutional Review Board of Rajamangala University of Technology Rattanakosin, Thailand (RMUTR-IRB, COA No. 018/2026). Participation was voluntary, and all participants were informed of the research objectives, confidentiality measures, and their right to withdraw from the study at any time.

The research technique was composed of two primary stages. Before the main survey, a pilot test was conducted to assess the reliability and validity of the proposed measurement scale and the clarity and feasibility of the questionnaire. Three specialists in immersive technology assessed the questionnaire, and 30 volunteers participated in the pilot test. Second, the full survey was conducted after improving the questionnaire based on pilot-test feedback and expert input. The minimum required sample size was calculated using G*Power software. Based on an effect size of 0.25, a significance level of 0.05, and statistical power of 0.90, the minimum sample size required for this study was 277 participants [46]. To increase the robustness of the analysis and compensate for incomplete or unusable responses, the target sample size was increased by approximately 45%, resulting in a final target of approximately 400 participants. Data were collected using an online questionnaire distributed through online platforms. Before completing the questionnaire, participants were provided with information about the purpose of the study, confidentiality protection, and the contact details of the researcher and research assistants in case they had questions or

concerns. These procedures were intended to reduce response bias and enhance participants' trust in providing accurate information [47]. Participants who voluntarily agreed to participate were required to confirm their informed consent before proceeding to the questionnaire. All collected data were used solely for research purposes and were handled confidentially. After data analysis, the data were securely destroyed in accordance with the approved research ethics protocol.

2.2 Description of the IMT-enabled CBT prototype and study context

To avoid ambiguity, immersive technology (IMT) in this study refers specifically to an IMT-enabled community-based tourism (CBT) prototype developed to support tourists' exploration and decision-making regarding CBT destinations in Prachuap Khiri Khan Province, Thailand. The prototype was designed as a digital tourism-support tool that combined immersive and interactive media with tourism information and recommendation functions. Its content included CBT attraction information, community activities, local tourism routes, destination-based visual media, and contextual information intended to help tourists better understand the identity, activities, and travel opportunities of CBT destinations. Tourists accessed the prototype primarily through personal digital devices, such as smartphones or tablets. Respondents interacted with the prototype by exploring CBT destinations, viewing visual and contextual tourism content, checking recommended attractions or routes, and evaluating whether the information provided was reliable, accurate, visually understandable, and useful for travel decision-making. The research team introduced the prototype to eligible respondents through its online recruitment channels, and respondents were required to have used or interacted with IMT within the previous three months before completing the questionnaire. Accordingly, the term "IMT" in this study does not refer to immersive technology as a broad abstract category. Rather, it refers to the specific IMT-enabled CBT prototype used in the study setting. This operational definition allows the findings to be interpreted in relation to tourists' evaluations of the prototype's recommendation reliability, recommendation accuracy, experiential graphic design, attitude, satisfaction, intention to use IMT, and intention toward the destination.

2.3 Data collection

The questionnaire was constructed based on the stimulus-organism-response (SOR) conceptual paradigm. It is composed of three sections: Section 1: General information about the respondent (gender, age, education) Section 2: Opinions on the use of immersive innovation prototypes: recommendation reliability (RRL), recommendation accuracy (RAC), experiential graphic design (EGD), attitude towards using immersive technology (ATT), satisfaction (SAF), intention to use immersive technology (ITU) and intention towards the destination (ITD). Section 3: Suggestions are graded on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), as shown in Table 1.

Table 1. Measurement items of the questionnaire.

Construct	Items	Survey Item	Source
Recommendation Reliability (RRL)	RRL1	The IMT-enabled CBT prototype provides reliable and actionable advice.	Adapted from Kim et al. [32], Zheng et al. [33]
	RRL2	The IMT-enabled CBT prototype provides recommendations that are consistent with and do not contradict previously received information.	
	RRL3	The information provided by the IMT-enabled CBT prototype helps make better decisions about ecotourism.	
	RRL4	The media presented in the IMT-enabled CBT prototype helps increase the perceived credibility and dependability of the tourism recommendations.	

Table 1. Measurement items of the questionnaire. (continue)

Construct	Items	Survey Item	Source
Recommendation Accuracy (RAC)	RAC1	The information provided by the IMT-enabled CBT prototype is accurate when compared to information from other reliable sources.	Adapted from Wang et al. [37]
	RAC2	The information provided by the IMT-enabled CBT prototype about the tourist attractions was accurate and matched my expectations.	
	RAC3	The information about CBT attractions provided by the IMT-enabled CBT prototype is consistent with the actual characteristics and conditions of the destinations.	
	RAC4	Overall, the information provided by the IMT-enabled CBT prototype about tourist attractions is accurate enough to make decisions without needing to verify it with other sources.	
Experiential Graphic Design (EGD)	EGD1	The overall design and content of the media presented in the IMT-enabled CBT prototype are vibrant and engaging.	Adapted from Petković et al. [39]
	EGD2	The scenes depicted and the media elements presented in the IMT-enabled CBT prototype are consistent with the design.	
	EGD3	The media functionality in the IMT-enabled CBT prototype is appropriately designed and user-friendly.	
	EGD4	The media design style in the IMT-enabled CBT prototype is consistent with the tourism context.	
Attitude Toward Using Immersive Technology (ATT)	ATT1	The content presented in the IMT-enabled CBT prototype is engaging and enhances the enjoyment of tourism.	Adapted from Kwangsawad et al. [14], Davis [43], Sujood and Pancy [45]
	ATT2	The IMT-enabled CBT prototype is convenient and easy to access for tourism purposes.	
	ATT3	The IMT-enabled CBT prototype can be customized for different users.	
	ATT4	The IMT-enabled CBT prototype can provide entertainment and enhance the relaxing experience as expected.	
Satisfaction (SAF)	SAF1	I am satisfied with the IMT-enabled CBT prototype's response to searching for tourist information.	Adapted from Liu and Sutunyarak [44]
	SAF2	The IMT-enabled CBT prototype was efficient enough and helped me obtain services quickly and without hassle.	
	SAF3	I am satisfied with the information and advice received from the IMT-enabled CBT prototype.	
	SAF4	Overall, I am satisfied with my experience using the IMT-enabled CBT prototype.	

Table 1. Measurement items of the questionnaire. (continue)

Construct	Items	Survey Item	Source
Satisfaction (SAF)	SAF1	I am satisfied with the IMT-enabled CBT prototype's response to searching for tourist information.	Adapted from Liu and Sutunyarak [44]
	SAF2	The IMT-enabled CBT prototype was efficient enough and helped me obtain services quickly and without hassle.	
	SAF3	I am satisfied with the information and advice received from the IMT-enabled CBT prototype.	
	SAF4	Overall, I am satisfied with my experience using the IMT-enabled CBT prototype.	
Intention to Use Immersive Technology (ITU)	ITU1	I am willing to use the IMT-enabled CBT prototype again in the future.	Adapted from Kwangsawad, et al. [6]
	ITU2	I am willing to use the IMT-enabled CBT prototype as a tool to support tourism planning.	
	ITU3	I plan to recommend the IMT-enabled CBT prototype to others.	
	ITU4	If I have the opportunity, I will use the IMT-enabled CBT prototype for future travel.	
Intention toward the Destination (ITD)	ITD1	I think the tourist attractions shown in the IMT-enabled CBT prototype are suitable for tourism.	Adapted from Kwangsawad et al. [14]
	ITD2	I intend to participate in more tourism activities at the destinations presented in the IMT-enabled CBT prototype.	
	ITD3	My experience using the IMT-enabled CBT prototype increased my likelihood of future travel.	
	ITD4	My experience using the IMT-enabled CBT prototype made me feel interested in visiting the presented places.	

Note: Items with factor loadings below the recommended threshold were removed from the final measurement model before assessing reliability and validity.

2.4 Data analysis

This study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the relationships among hypothesized variables, utilizing SmartPLS software for data analysis [48]. This is because PLS-SEM has demonstrated effectiveness in predicting factors associated with individual behavior toward technology [6, 14]. It can simultaneously analyze the measurement and structural models, assessing the validity of the research instrument through composite reliability (CR) and average variance extracted (AVE) statistics. PLS-SEM demonstrates considerable flexibility regarding data and sample size [49]. Given these technical advantages, PLS-SEM was an appropriate method aligned with this research's objectives. In addition to assessing path coefficients, t-values, p-values, and collinearity statistics, the explanatory and predictive power of the structural model was evaluated. The coefficient of determination (R^2) and adjusted R^2 were examined for all endogenous constructs, namely attitude toward using immersive technology (ATT), satisfaction (SAF), intention to use immersive technology (ITU), and intention toward the destination (ITD). R^2 was used to assess the extent to which the exogenous constructs explained variance in the endogenous constructs. Predictive relevance was assessed using Q^2 values, where a Q^2 value greater than zero indicates that the model has predictive relevance for the corresponding endogenous construct. In addition, effect size (f^2) was used to evaluate the practical contribution of each exogenous construct to the endogenous constructs. Because all constructs were measured using a single self-report questionnaire collected from the same respondents at one point in time, common method bias (CMB) was assessed before interpreting the structural

model. A full collinearity assessment was performed in PLS-SEM by examining the variance inflation factor (VIF) values of the latent constructs. VIF values below the recommended threshold indicate that common method bias is unlikely to seriously threaten the validity of the results seriously.

3. Results and Discussion

3.1 Descriptive statistics

Table 2. Demographic characteristics of respondents.

Characteristics	Number (N = 400)	Percentage
Gender		
Male	240	60.00
Female	160	40.00
Age		
Less than 20 years old	3	0.75
20–25 years	204	51.00
26–30 years	69	17.25
31–35 years	104	26.00
36–40 years	0	0.00
41–45 years	12	3.00
46–50 years	5	1.25
51 years and above	3	0.75
Education level		
Below high school	6	1.50
High school	55	13.75
Diploma	143	35.75
Bachelor's degree	186	46.50
Master's degree	4	1.00
Ph.D. degree	6	1.50

Table 2 presents the demographic characteristics of the 400 respondents. Most respondents were male (240, 60.00%), while 160 were female (40.00%). Regarding age, the largest group was 20–25 years (204 respondents, 51.00%), followed by 31–35 years (104 respondents, 26.00%) and 26–30 years (69 respondents, 17.25%). In terms of education level, most respondents held a bachelor's degree (186 respondents, 46.50%), followed by a diploma or associate degree (143 respondents, 35.75%) and high school education (55 respondents, 13.75%). The demographic profile indicates that the sample was concentrated among younger, digitally active tourists, particularly those aged 20–25 years and those with diploma or bachelor's degree qualifications. This profile is consistent with the online recruitment approach and the requirement that respondents had recent experience using IMT. However, it also suggests interpreting the findings with caution, as the sample may overrepresent tourists who are more familiar with digital technologies and more willing to participate in online surveys. Therefore, the results should be generalized only to digitally active tourists with recent IMT experience, rather than to all CBT tourists.

3.2 Structural equation modeling analysis

3.2.1 Assessment of the measurement model

Table 3. Measures of internal consistency reliability and convergent validity.

Construct	Items	Loading (> 0.70)	Cronbach's α (> 0.70)	Composite reliability (> 0.70)	AVE(> 0.50)	VIF (<5.0)
Recommendation Reliability (RRL)	RRL1	0.846	0.814	0.815	0.729	1.745
	RRL2	0.863				1.806
	RRL3	0.851				1.827
Recommendation Accuracy (RAC)	RAC1	0.859	0.835	0.869	0.747	1.667
	RAC3	0.818				2.406
	RAC4	0.913				3.061
Experiential Graphic Design (EGD)	EGD2	0.859	0.854	0.891	0.774	2.074
	EGD3	0.939				3.003
	EGD4	0.837				2.069
Attitude Toward Using Immersive Technology (ATT)	ATT1	0.935	0.790	0.855	0.706	2.488
	ATT2	0.797				1.739
	ATT4	0.780				1.683
Satisfaction (SAF)	SAF1	0.896	0.866	0.911	0.786	2.517
	SAF2	0.913				2.208
	SAF3	0.849				2.127
Intention to Use Immersive Technology (ITU)	ITU1	0.824	0.891	0.944	0.755	2.516
	ITU2	0.786				2.429
	ITU3	0.923				4.434
	ITU4	0.933				4.175
Intention toward the Destination (ITD)	ITD1	0.805	0.795	0.811	0.703	1.345
	ITD2	0.848				2.583
	ITD4	0.862				2.908

Table 3 presents the assessment results of internal consistency reliability and convergent validity of the measurement model, based on the criteria suggested by Hair Jr, et al. [50]. The factor loadings of all retained measurement items ranged from 0.780 to 0.939, exceeding the recommended threshold of 0.70. This indicates that each indicator adequately represents its corresponding latent construct. Furthermore, Cronbach's alpha values ranged from 0.790 to 0.891, and composite reliability (CR) values ranged from 0.811 to 0.944; all were above the required threshold of 0.70. These results suggest that the measurement items achieved an adequate level of internal consistency. Regarding convergent validity, the average variance extracted (AVE) values ranged from 0.703 to 0.786, exceeding the recommended threshold of 0.50. This indicates that the measurement model achieved adequate convergent validity, as the indicators explained a sufficient proportion of variance in their respective latent constructs. Furthermore, the variance inflation factor (VIF) values of all indicators ranged from 1.345 to 4.434, which were below the threshold of 5.00. This suggests no serious multicollinearity among the indicators. Overall, the results support the reliability and convergent validity of the measurement model, indicating that it was appropriate for subsequent structural model analysis.

Table 4. Fornell–Larcker criterion analysis.

Construct	ATT	EGD	ITD	ITU	RAC	RRL	SAF
ATT	0.840						
EGD	0.327	0.880					
ITD	0.090	-0.082	0.839				
ITU	0.332	0.083	0.150	0.869			
RAC	0.639	0.405	-0.108	0.137	0.864		
RRL	0.535	0.357	-0.086	0.209	0.433	0.854	
SAF	0.421	0.180	0.117	0.359	0.409	0.259	0.886

As shown in Table 4, the Fornell and Larcker [51] criterion was used to assess discriminant validity among the constructs. The results indicate that the square roots of the AVE values for each construct, presented on the diagonal of the correlation matrix, were greater than the corresponding inter-construct correlations in both the rows and columns. This finding confirms that each construct had adequate discriminant validity. Therefore, the measurement model was considered appropriate for subsequent structural equation model analysis.

Table 5. Heterotrait-Monotrait (HTMT).

Construct	ATT	EGD	ITD	ITU	RAC	RRL	SAF
ATT							
EGD	0.379						
ITD	0.101	0.101					
ITU	0.370	0.088	0.160				
RAC	0.738	0.451	0.119	0.141			
RRL	0.649	0.423	0.109	0.237	0.503		
SAF	0.483	0.206	0.131	0.376	0.444	0.300	

As shown in Table 5, the heterotrait–monotrait ratio (HTMT) was used to assess discriminant validity further further. The results show that all HTMT values were below the recommended threshold of 0.90 [52]. This indicates that all constructs demonstrated adequate discriminant validity, confirming that the measurement model had satisfactory construct validity and was suitable for subsequent structural model analysis. Because recommendation reliability and recommendation accuracy are conceptually related dimensions of information quality, additional attention was given to their discriminant validity. The Fornell–Larcker correlation between RRL and RAC and the HTMT value were both below the recommended thresholds. These results indicate that, although the two constructs are related, respondents could distinguish between the perceived dependability of the recommendation process and the perceived factual correctness of the information provided by the prototype. In addition, the VIF values did not indicate serious multicollinearity, supporting the decision to retain RRL and RAC as separate predictors in the structural model.

3.2.2 Assessment of the structural model

The structural model assessment examined the hypothesized relationships among the constructs. A bootstrapping procedure with 5,000 subsamples was performed to assess the significance and robustness of the structural paths. The evaluation considered path coefficients, t-values, p-values, and full collinearity VIF values. The t-value thresholds were greater than 1.96 for the 5% significance level, greater than 2.58 for the 1% significance level, and greater than 3.29 for the 0.1% significance level. In addition, full collinearity VIF values were examined as a post hoc diagnostic for potential common method bias. As shown in Table 6, all VIF values ranged from 1.000 to 1.350, which were below the recommended threshold. These results suggest that multicollinearity and common method bias were unlikely to be serious concerns in the structural model. The results of hypothesis testing are presented in Figure 2 and Table 6. Recommendation reliability had a positive and significant effect on attitude toward using immersive technology (H1: $\beta = 0.315$, $t = 7.773$, $p < 0.001$), supporting H1. Recommendation accuracy also had a positive and significant effect on attitude toward using immersive technology (H2: $\beta = 0.498$, $t = 12.743$, $p < 0.001$), supporting H2. Among the three stimulus variables, recommendation accuracy was the strongest predictor of attitude, followed by recommendation reliability.

These results indicate that tourists' favorable attitudes toward using the IMT-enabled CBT prototype were mainly shaped by the perceived accuracy and reliability of the information and recommendations provided by the system. In contrast, experiential graphic design did not significantly influence attitude toward using immersive technology (H3: $\beta = 0.013$, $t = 0.349$, $p = 0.728$). Therefore, H3 was not supported. This finding suggests that, in this study, the visual and design-related features of the IMT-enabled CBT prototype did not provide a significant direct contribution to tourists' attitudes after recommendation reliability and recommendation accuracy were considered simultaneously.

Regarding the response variables, attitude toward using immersive technology had a positive and significant effect on satisfaction (H4: $\beta = 0.421$, $t = 10.311$, $p < 0.001$), supporting H4. Attitude also had a positive and significant effect on intention to use immersive technology (H5: $\beta = 0.332$, $t = 7.166$, $p < 0.001$), supporting H5. However, attitude did not significantly influence intention toward the destination (H6: $\beta = 0.090$, $t = 1.661$, $p = 0.097$). Therefore, H6 was not supported. This result indicates that although a positive attitude toward using IMT enhanced tourists' satisfaction and intention to continue using IMT, it was not sufficient on its own to increase tourists' destination intention significantly. Destination intention may depend on additional factors beyond technology-related attitudes, such as travel cost, accessibility, available time, destination attractiveness, personal motivation, and service readiness. Overall, the structural model results supported four hypotheses, namely H1, H2, H4, and H5, while H3 and H6 were not supported. These findings suggest that the SOR model partially explained tourists' responses to the IMT-enabled CBT prototype. The stimulus components related to information quality, particularly recommendation accuracy and recommendation reliability, significantly influenced tourists' attitudes, and attitude subsequently influenced satisfaction and intention to use IMT. However, future studies should further investigate experiential graphic design and destination intention theoretically and empirically.

Table 6. Hypotheses testing.

Hypotheses	Paths	Coefficient (β)	T-Value	P-Value	Full collinearity VIF	Results
H1	Recommendation Reliability (RRL) $\rightarrow$ Attitude Toward Using Immersive Technology (ATT)	0.315	7.773	0.000***	1.293	Supported
H2	Recommendation Accuracy (RAC) $\rightarrow$ Attitude Toward Using Immersive Technology (ATT)	0.498	12.743	0.000***	1.350	Supported
H3	Experiential Graphic Design (EGD) $\rightarrow$ Attitude Toward Using Immersive Technology (ATT)	0.013	0.349	0.728	1.257	Not supported
H4	Attitude Toward Using Immersive Technology (ATT) $\rightarrow$ Satisfaction (SAF)	0.421	10.311	0.000***	1.000	Supported
H5	Attitude Toward Using Immersive Technology (ATT) $\rightarrow$ Intention to Use Immersive Technology (ITU)	0.332	7.166	0.000***	1.000	Supported
H6	Attitude Toward Using Immersive Technology (ATT) $\rightarrow$ Intention toward the Destination (ITD)	0.090	1.661	0.097	1.000	Not supported

Note: *** $p < 0.001$.

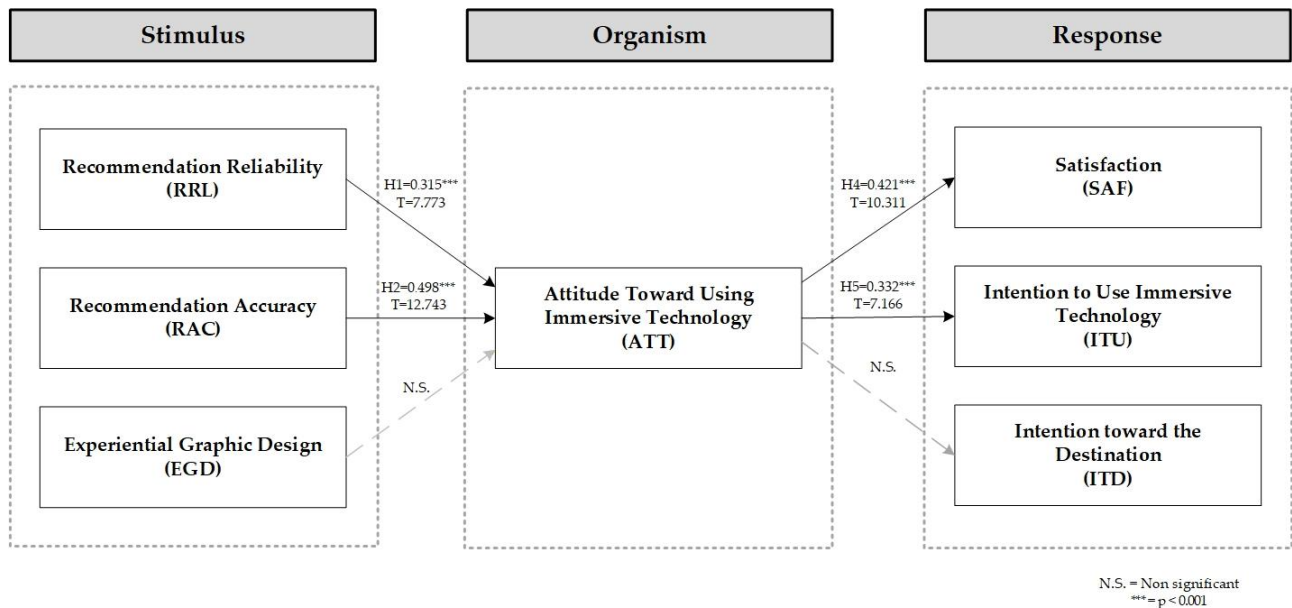


Figure 2. Structural model testing.

The model fit results were evaluated using the Standardized Root Mean Square Residual (SRMR) and the Normed Fit Index (NFI). The SRMR value of the saturated model was 0.066, below the recommended threshold of 0.08, indicating an acceptable fit. The estimated model had an SRMR of 0.086 and an NFI of 0.752. Because global model fit indices in PLS-SEM should be interpreted cautiously and are not the sole basis for model evaluation, this study assessed model adequacy primarily based on measurement reliability, convergent validity, discriminant validity, collinearity assessment, explanatory power, predictive relevance, and effect size.

Table 7. Coefficient of determination and predictive relevance of endogenous constructs.

Construct	R-Squared	Adjusted R-Squared	Predictive relevance (Q^2)
Attitude Toward Using Immersive Technology (ATT)	0.491	0.487	0.481
Intention toward the Destination (ITD)	0.008	0.006	-0.023
Intention to Use Immersive Technology (ITU)	0.110	0.108	0.031
Satisfaction (SAF)	0.177	0.175	0.152

The results in Table 7 indicate that the model explained 49.1% of the variance in attitude toward using immersive technology (ATT), suggesting moderate explanatory power. The model explained 17.7% of the variance in satisfaction (SAF) and 11.0% of the variance in intention to use immersive technology (ITU), indicating relatively weak explanatory power for these response constructs. However, the model explained only 0.8% of the variance in intention toward the destination (ITD), suggesting very limited explanatory power for this construct. Regarding predictive relevance, the Q^2 values for ATT, SAF, and ITU were greater than zero, indicating predictive relevance, whereas the Q^2 value for ITD was negative, suggesting that the model did not demonstrate predictive relevance for intention toward the destination.

Table 8. Effect size (f^2) assessment.

Hypotheses	f-square	Signification
ATT → ITD	0.008	No effect size
ATT → ITU	0.124	Small effect size
ATT → SAF	0.215	Medium effect size
EGD → ATT	0.000	No effect size
RAC → ATT	0.361	Large effect size
RRL → ATT	0.150	Medium effect size

As shown in Table 8, recommendation accuracy had a large effect size on attitude toward using immersive technology ($f^2 = 0.361$), indicating that it was the most practically influential predictor of attitude in the model. Recommendation reliability showed a medium effect size ($f^2 = 0.150$), while experiential graphic design showed no effect size ($f^2 = 0.000$). For the response constructs, attitude toward using immersive technology had a medium effect size on satisfaction ($f^2 = 0.215$), a small effect size on intention to use immersive technology ($f^2 = 0.124$), and no effect size on intention toward the destination ($f^2 = 0.008$).

3.3 Theoretical implications

This study contributes to the theoretical understanding of tourists' responses to immersive technology (IMT) in community-based tourism (CBT) by applying the Stimulus–Organism–Response (SOR) framework. The findings show that technology-related stimuli, particularly recommendation reliability and recommendation accuracy, influence tourists' internal evaluations of IMT, which subsequently shape satisfaction and intention to use IMT. Thus, the SOR framework provides a useful structure for explaining how tourists respond to IMT-enabled CBT experiences. This study enhances our comprehension of the stimulus component within the SOR framework by emphasizing Recommendation Reliability (RRL) and Recommendation Accuracy (RAC) as significant technological stimuli in the context of IMT and CBT. The findings indicate that recommendation reliability positively affects tourist attitudes toward using IMT. This aligns with Kim et al. [32], which indicates that social recommendations can mitigate information overload. It enables users to assess the quality of products, services, or experiences before making decisions. In the realm of Community-Based Tourism (CBT), dependable recommendations from the immersive technology (IMT) system enhance tourists' confidence in information regarding attractions, community activities, travel routes, and associated services.

Moreover, the results suggested that recommendation accuracy was one of the main determinants of tourists' attitudes toward using IMT. This aligns with previous research on recommendation systems, which indicates that correct and appropriate recommendations can enhance user experience by providing more relevant, helpful, and personalized information [11]. The accuracy of suggestions is especially relevant in community-based tourism since travelers generally rely on digital information to evaluate new sites, local activities, and community tourism experiences. Thus, the present research shows that tourists' positive sentiments toward IMT are due not only to the novelty of the technology but also to the quality, accuracy, and utility of the information it provides. The non-significant effect of experiential graphic design (EGD) on attitude toward using IMT requires further theoretical consideration. Although the bivariate correlation between EGD and ATT was positive, the structural path from EGD to ATT was near zero when recommendation reliability and recommendation accuracy were included simultaneously in the model. This suggests that EGD may be associated with tourists' attitudes at a general perceptual level, but it did not provide additional explanatory power beyond the perceived reliability and accuracy of the information provided by the IMT-enabled CBT prototype.

One possible explanation is that tourists in this context evaluated the prototype primarily as a decision-support tool for obtaining reliable and accurate CBT information, rather than as a purely visual or entertainment-oriented immersive medium. Therefore, graphic design may function as a supportive or enabling condition, while information quality plays a more central role in shaping attitudes. Another possible explanation concerns how EGD was operationalized. The retained EGD indicators mainly captured design consistency, user-friendliness, and contextual fit, rather than purely aesthetic or immersive qualities such as visual realism, spatial presence, sensory vividness, or visual attractiveness. Therefore, the non-significant result should not be interpreted as evidence that graphic design is unimportant for IMT. Rather, it indicates that the specific EGD dimension measured in this study did not have a unique direct effect on attitude after accounting for recommendation reliability and recommendation accuracy. Secondly, this study confirms attitude toward using IMT as the organism component, or the internal psychological state, in the SOR framework. Attitude represents tourists' evaluation, feelings, and readiness to use technology and is an important component in technology acceptance studies [49]. The findings indicate that attitude toward using IMT positively influenced satisfaction and intention to use IMT. This is consistent with previous studies

showing that favorable attitudes toward immersive technology can enhance tourists' experiences, satisfaction, and behavioral intention [11, 44, 45].

However, attitude toward using IMT did not significantly influence intention toward the destination. This finding suggests that a favorable evaluation of the IMT-enabled CBT prototype may increase tourists' satisfaction with the technology and their willingness to reuse it, but it may not be sufficient to stimulate destination intention directly. In the CBT context, intention toward a destination may depend on broader travel-related factors, such as destination attractiveness, travel cost, accessibility, available time, service readiness, perceived safety, and tourists' personal motivations. Therefore, the response component of the SOR framework in this study is more strongly reflected in technology-related responses than in destination-related intention. In summary, this study contributes to the SOR framework in the context of IMT and CBT by showing that the credibility and correctness of innovative recommendations serve as technological stimuli that substantially affect tourists' views. Attitudes are an internal process linking views of technology to behavioral responses. The study proposes that research into the acceptability of IMT in tourism should focus on the quality, accuracy, and reliability of the information offered by the technology, in addition to its novelty or attractiveness.

3.4 Practical implications

This study offers practical recommendations for community-based tourism operators, attraction managers, technology developers, and government agencies aiming to implement IMT to improve tourism experiences within the context of CBT, as summarized in Table 9 and illustrated in Figure 3. First, because recommendation accuracy significantly influences tourists' attitudes, technology developers and CBT managers should prioritize accurate information. Attractions, community activities, travel routes, opening hours, costs, safety guidelines, and local best practices must be verified from reliable sources and updated regularly. Second, enhancing the credibility of innovative recommendations is essential to increase tourists' trust in IMT-based tourism services. Community-based tourism platforms must transparently present the information sources and justify the recommendations for routes, activities, or attractions to align with tourists' preferences, including travel time, activity type, accessibility, and suitability for the target demographic. Additionally, local communities, operators, and relevant agencies should be afforded opportunities to engage in the verification and certification of information. This participation is essential to ensure that recommendations accurately represent the area's conditions and foster confidence among tourists. Third, while experiential graphic design did not significantly affect tourists' attitudes in this study, this does not mean visual design lacks importance in practice. This study indicates that graphic design must enhance information clarity and usability. The development of immersive technology (IMT) for Community-Based Tourism (CBT) should prioritize intuitive navigation, clear symbols, easily readable maps, illustrations that reflect community identity, and visual elements that enhance tourists' understanding of the community's stories, activities, routes, and customs, rather than focusing solely on aesthetics.

Fourth, because attitudes toward using IMT positively affect satisfaction and intention to use IMT, entrepreneurs and communities should develop technology experiences that are accessible, fun, and useful to tourists' needs. Examples include viewing community stories at tourism destinations with augmented reality, experiencing a community before a trip through virtual reality, or planning travel routes using interactive maps and Story Maps. Applying these technologies will help tourists better understand the town's identity, interact with local culture and resources, and improve overall satisfaction with the vacation experience. Fifthly, although attitude toward using IMT did not significantly influence intention toward the destination in this study, IMT can still serve as a supportive communication and information tool for CBT destinations. Destination managers should recognize that positive attitudes toward technology alone may not be sufficient to transform tourists' interest into destination intention. Therefore, IMT should be integrated with practical travel support, including booking channels, community contacts, travel information, maps, transportation routes, activity details, costs, and service availability. Connecting immersive experiences with real travel readiness may help strengthen the link between technology engagement and actual destination interest. Government agencies and organizations involved in tourist development must continuously strengthen the community's ability to manage digital resources. Training communities to update tourist information, create

narrative content, validate system recommendations, and use digital technologies. Tourist feedback after the deployment of IMT will ensure it is used as a promotional tool for tourist sites, as well as a tool for enhancing the experience, supporting decision-making, and promoting sustainable development in community-based tourism.

Table 9. Summary of practical implications based on the study findings.

Study finding	Practical meaning	Implementation guidelines	Key stakeholders
H2: Recommendation accuracy had the strongest effect on tourists' attitudes toward using IMT	Tourists place greater importance on accurate and useful information for travel decision-making than on technological novelty alone.	Regularly verify and update information on attractions, community activities, routes, operating hours, costs, and local guidelines.	Technology developers, local communities, destination managers, government agencies
H1: Recommendation reliability positively influences tourists' attitudes toward using IMT	Innovation-based recommendations can create positive attitudes when tourists perceive the information as credible and consistent with the actual local context.	Clearly present information sources, explain the rationale behind recommendations, and involve local communities or relevant agencies in content verification before publication.	Local communities, tourism operators, platform developers
H3: Experiential graphic design did not significantly influence attitude	Visual attractiveness alone may not be sufficient to create positive attitudes toward IMT if the information lacks accuracy and reliability.	Design graphics to emphasize clarity, ease of use, readability, direct communication, and local identity rather than focusing only on aesthetics.	Media designers, IMT developers, local communities
H4: Attitude toward using IMT positively influenced tourist satisfaction	Tourists with positive attitudes toward IMT are more likely to be satisfied with the user experience and the information received.	Design IMT experiences that are accessible, enjoyable, useful, and capable of helping tourists better understand community stories.	Technology developers, CBT operators
H5: Attitude toward using IMT positively influenced intention to use IMT	Positive experiences can encourage tourists to reuse IMT or recommend it to others.	Develop AR, VR, MR, Story Maps, or interactive media that are easy to use, engaging, and useful for tourism planning.	Platform developers, tourism promotion agencies
H6: Attitude toward using IMT did not significantly influence intention toward the destination	A positive attitude toward IMT alone may not be sufficient to increase tourists' destination intention. Destination intention may require additional practical and motivational factors.	Connect IMT with real travel information, such as maps, community contact channels, booking systems, activity details, prices, transportation, accessibility, and service readiness.	Destination managers, local communities, government agencies
System-level implication from the findings	IMT adoption in CBT should be developed as a digital ecosystem that enables communities to manage tourism information independently.	Provide community training on digital content creation, information updating, recommendation validation, and post-use tourist feedback evaluation.	Government agencies, educational institutions, local communities

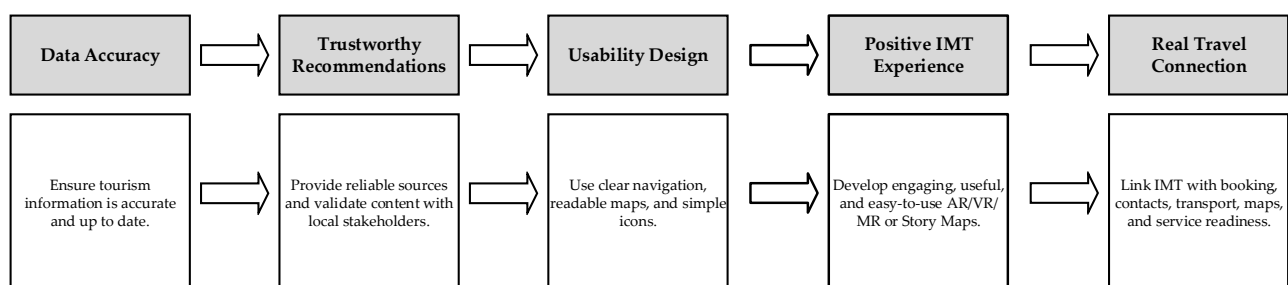


Figure 3. Practical implication framework for applying IMT in community-based tourism (CBT).

3.5 Limitations and future research

The present study has some limitations that should be considered: it uses a cross-sectional study design, collecting data from a single sampling period. It can explain the links between variables to some extent, but it cannot effectively depict long-term changes in tourists' attitudes, satisfaction, or behavioral intentions. Secondly, the study's sample is limited to tourists who have used immersive technology in the past three months in Prachuap Khiri Khan Province, Thailand. Thus, the findings may not fully apply to community-based tourism in other places with different cultural characteristics, tourism resources, technology resources, and tourist behavior. Thirdly, this study evaluates the trustworthiness and accuracy of suggestions and experience graphic design as the main triggers of the SOR paradigm. Tourists' responses toward immersive technology may depend on variables such as trust in technology, perceived benefits, perceived ease of use, enjoyment, immersive experience, community involvement, travel goals, and limits in time, cost, or travel. Fourth, a limitation of this study is that it investigates only tourists' behavioral intentions and therefore cannot determine whether these intentions will translate into future use of the technology or an actual trip to the place. Another important limitation concerns the sampling procedure. Participants were recruited using purposive sampling through online platforms, including Facebook and LINE, and were required to have used IMT within the previous three months. This approach was suitable for reaching respondents with relevant IMT experience; however, it may have introduced selection bias. Tourists reachable through online platforms who voluntarily participate in an online survey may differ from non-participants in digital literacy, technology familiarity, age, education level, and attitudes toward digital tools. The sample's demographic profile, concentrated among younger and relatively well-educated respondents, further suggests that the findings may overrepresent digitally active tourists and should not be generalized to all CBT tourists. Future research should employ more diverse recruitment strategies, such as on-site intercept surveys, offline data collection, stratified sampling by age and gender, and comparisons between IMT users and non-users, to improve representativeness and external validity.

Further research should extend the scope of study to community-based tourism destinations in other regions to assess the differences in community contexts, types of tourism activities, and levels of technological readiness. Future studies could consider longitudinal designs to investigate changes over time in tourists' views, satisfaction, and behaviors after encountering immersive technology. Future studies may also take a mixed-methods approach, integrating quantitative data with qualitative insights gathered through interviews with tourists, tourism operators, and community residents. Such an approach would provide greater insights into the reasons for technological acceptance and rejection. Finally, future studies should include other variables such as perceived value, trust in technology, data privacy, immersive experience, and real travel behavior to construct a more complete model explaining the role of immersive technology in the growth of community-based tourism.

4. Conclusions

This study aimed to explain the factors influencing tourists' attitudes and responses toward the use of immersive technology (IMT) in the context of community-based tourism (CBT) by applying the stimulus–organism–response (SOR) framework. The findings revealed that recommendation reliability and recommendation accuracy provided by the innovation were key stimuli that positively influenced tourists' attitudes toward using IMT, with recommendation accuracy showing the strongest effect. In contrast, experiential graphic design did not significantly influence attitude. These findings indicate that tourists place greater importance on accurate, reliable, and decision-supportive information than on the visual attractiveness of media alone. In addition, attitude toward using IMT positively influenced tourist satisfaction and intention to use IMT, confirming attitude as an internal mechanism linking technology-related stimuli with technology-related behavioral responses. However, attitude toward using IMT did not significantly influence intention toward the destination, suggesting that destination intention may depend on additional travel-related factors beyond tourists' evaluations of the IMT-enabled CBT prototype.

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