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Utilizing virtual reality as a marketing strategy for Bali tourism destinations: An innovative approach towards sustainable tourism

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ABSTRACT

This study aims to analyze the use of Virtual Reality (VR) as an innovative marketing strategy to support sustainable tourism in Bali with an emphasis on environmental conservation. Using a hermeneutic qualitative approach, data was collected from 20 participants consisting of tourists, industry players, government representatives, and local communities (five individuals each) selected based on their experience and direct involvement in the digital tourism ecosystem. The research findings indicate that VR can create immersive experiences that deepen cultural understanding while mitigating physical pressures on vulnerable destinations, such as coral reefs, through virtual simulations. Based on coded participant responses, the use of this technology increases environmental appreciation and increases booking conversion effectiveness for businesses. However, its implementation remains hampered by high development costs, low digital literacy, and the risk of cultural distortion. This study concludes the importance of multi-sector collaboration and a participatory approach involving local communities in producing authentic VR content. The implication is that it is necessary to develop cultural-environmental content guidelines, digital literacy training, and incentives for MSMEs to adopt this sustainable technology.

Keywords: virtual reality, sustainable tourism, nature conservation, environmentally friendly, tourism marketing

INTRODUCTION

Tourism is a vital sector for Bali's economy and cultural identity, but it now faces significant challenges due to the COVID-19 pandemic and the pressures of overtourism, which threaten environmental sustainability (Subawa et al., 2023). To address the degradation of the destination's carrying capacity, technological innovation is a strategic solution for transforming Balinese tourism into a more adaptive, competitive, and sustainable model. One technology considered to have the potential to revitalize tourism is *Virtual Reality* (VR). VR allows users to experience immersive and interactive environmental simulations without having to be physically present (Godovykh et al., 2022). In the context of tourism, VR can be used to promote destinations, enhance pre-visit experiences, and even mitigate the negative impacts of excessive physical visits (Lee & Kim, 2021; Su et al., 2023). Several studies have shown that the use of VR can increase traveler intention and satisfaction through engaging and educational visual experiences (Godovykh et al., 2022; Lee & Kim, 2021). However, the application of VR in Balinese tourism is still limited and often partial, such as virtual tours offered by hotels or travel agents without deep integration with cultural values and sustainability (Saputra et al., 2023).

Bali boasts a unique cultural, historical, and natural richness, which can be creatively packaged through VR content to create authentic and meaningful experiences. For example, VR can be used to simulate traditional ceremonies, explore cultural heritage sites, or even experience ecological activities like coral reef diving without disrupting the ecosystem. However, key challenges include a lack of technological understanding among stakeholders, limited resources, and the absence of an adequate collaborative framework between the government, industry, and local communities (Saputra et al., 2024).

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This research stems from the urgency of integrating VR technology into marketing strategies and tourism experiences in Bali with an innovative and sustainable approach. Previous studies on VR in tourism tend to focus on natural or developed urban destinations (e.g., Tokyo, New York), while specific cultural contexts such as Bali remain underexplored (Sara et al., 2020). Furthermore, most studies emphasize technical or commercial aspects, without considering the dimensions of sustainability and local community participation (Law et al., 2016; Subawa et al., 2023). Therefore, this research offers novelty by combining a hermeneutic approach to understanding the meaning behind VR implementation, as well as designing a collaborative model involving multiple stakeholders in the development of authentic and sustainable VR content.

Theoretically, this study contributes to the expansion of digital marketing literature through the integration of cultural tourism contexts. This research offers conceptual novelty by positioning Virtual Reality not merely as a visual promotional tool, but as a preventive conservation instrument capable of balancing economic exploitation with environmental preservation. Through a hermeneutic approach, this study redefines the meaning of "virtual presence" as a form of in-depth cultural appreciation without a physical trace, while also providing a new conceptual framework for a multi-stakeholder collaboration model that places local wisdom as a key pillar of sustainable technology development.

The objectives of this study are to: (1) identify the potential of VR in creating immersive and interactive tourism experiences in Bali; (2) analyze the effectiveness of VR integration in destination marketing strategies; (3) assess the contribution of VR in supporting sustainable tourism; and (4) formulate a collaboration model between government, industry, and local communities for the development of relevant and quality VR content. Using a hermeneutic qualitative approach, this study will collect data through in-depth interviews, observations, and document analysis involving tourists, industry players, government, and local communities. The results of this study provide policy recommendations that can be adopted by stakeholders. In the long term, this research is expected to strengthen Bali's position as an innovative, sustainable, and responsive tourism destination to global change. Other referencing styles and footnote citation systems are not allowed.

LITERATURE REVIEW

The Role of Virtual Reality in Global Tourism

Virtual Reality (VR) has emerged as a transformative technology in the global tourism industry. Unlike traditional promotional media, VR offers an immersive experience that allows potential travelers to virtually "visit" a destination before actually traveling (Pestek & Sarvan, 2020). McLean and Barhorst (2022) shows that the use of VR in hotel bookings significantly increases user satisfaction and reduces uncertainty. Meanwhile, Talwar et al. (2022) confirms that VR can serve as an effective marketing tool to restore tourist interest post-pandemic, particularly through authentic and interactive simulations of experiences.

VR serves not only as a promotional tool but also as a means to enrich the tourist experience. In the context of heritage tourism, Research by Atzeni et al. (2022) found that VR can enhance the perceived authenticity of cultural attractions, both objectively and existentially. This aligns with findings Zeng et al. (2022) that suggest VR users tend to have stronger emotional attachments to simulated destinations. Furthermore, VR applications in second-chance tourism — such as visiting damaged or difficult-to-reach destinations— have been shown to provide educational and conservative value (Bec et al., 2021).

VR and Sustainable Tourism

The integration of VR into destination marketing strategies has been widely adopted by developed tourism destinations. Lim et al. (2024) has identified that VR can increase visit intention through presence and emotional engagement mechanisms. However, its effectiveness is highly dependent on content quality, interactivity, and cultural relevance (Calisto & Sarkar, 2024). Case studies in Japan and Singapore show that collaboration between the government and the private sector in developing VR content has a positive impact on destination image and visitation numbers (Othman et al., 2022).

One of VR's greatest potentials is its ability to support sustainable tourism. By providing alternative virtual experiences, VR can reduce physical pressure on destinations vulnerable to overtourism (Talwar et al., 2023). Caciora et al. (2021) on wooden churches in Romania demonstrates that VR can be used to preserve cultural heritage while mitigating the negative impacts of physical visits. Furthermore, VR also allows tourists to experience natural attractions without disrupting ecosystems, such as coral reefs or protected forests (Su et al., 2023).

VR in Cultural and Local Contexts

Despite its promise, the application of VR in tourism still faces several challenges. First, technical limitations such as high development costs and the need for adequate hardware (Polishchuk et al., 2023). Second, low digital literacy among some tourism stakeholders, especially in developing destinations (Adeola & Evans, 2019). Third, the lack of content that integrates local values and culture, often results in VR content feeling generic and inauthentic (Inam et al., 2020). Several recent studies have begun to highlight the importance of contextualizing VR according to local values. For example, research in Thailand by showed that integrating cultural elements into VR content increased user engagement (Chernbumroong et al., 2024). In Bali, despite its rich cultural potential, VR utilization is still limited to the hospitality sector and has not yet explored deeper cultural aspects. A study by Putra et al. (2024) emphasized the need for a participatory approach that involves local communities in VR content development to make it more relevant and sustainable.

Various theoretical frameworks have been proposed to understand VR adoption in tourism. The Technology Acceptance Model (TAM) is often used to predict user acceptance of VR. Meanwhile, a multi-stakeholder collaborative model—involving government, industry, academia, and the community—is considered key to the

success of sustainable VR implementation (Lo & Cheng, 2020). Research in Portugal and Spain suggests that the success of VR in tourism relies heavily on the synergy between government policy, private innovation, and community support (Merkx & Nawijn, 2021).

Research Gaps and Implications for Bali

While research on VR in tourism has grown, there is a gap in the literature in the context of cultural destinations like Bali, which face the challenge of overtourism (Subawa et al., 2023). Furthermore, research using a hermeneutic approach to explore local perspectives is still limited (Khan & Gupta, 2023). To fill this gap, Bali has the opportunity to utilize VR as both a marketing instrument and a tool for cultural preservation. To be effective, VR content development must be integrative and participatory, involving artists and local communities to maintain authenticity. Through stakeholder training and ongoing collaboration, VR can be an innovative solution to mitigate the impacts of mass tourism while maintaining the resilience of Bali's tourism industry in the future.

METHOD

Hermeneutic analysis is applied through the hermeneutic spiral, a process of repeated readings that moves dialectically between parts of the data and the whole text to encode hidden meanings. In developing themes, researchers integrate pre-understanding with critical reflection to ensure that the final interpretation reflects a blend of participant perspectives and the broader cultural context. This research uses a qualitative approach with a hermeneutic method, chosen to understand the meaning and interpretation behind the implementation of Virtual Reality (VR) in the context of Balinese tourism. This approach allows researchers to explore the experiences, perceptions, and values inherent in stakeholders, including tourists, industry players, government, and local communities. The research procedure is divided into three main stages:

1) **Initial Preparation:** This stage involves an in-depth literature review to identify research gaps and develop data collection instruments. The main instrument used is a semi-structured interview guide designed to explore perceptions, challenges, and opportunities related to the use of VR. In addition, an observation form was prepared to record the use of VR in the field.
2) **Data Collection:** Data were collected through in-depth interviews with participants divided into four groups: tourists, tourism industry players, government representatives, and local communities. Interviews were conducted face-to-face at tourist locations with a duration of 30–60 minutes per session. In addition to interviews, participant observation was also conducted on the use of VR technology in several tourist destinations and analysis of existing VR content documents, such as those developed by the Ministry of Tourism and Creative Economy or local startups.
3) **Data Analysis:** Interview data were transcribed verbatim and analyzed using ATLAS.ti software to identify themes and patterns through thematic coding. Data triangulation was conducted by comparing the results of interviews, observations, and documents to validate the findings and increase the reliability of the research results (Lemon & Hayes, 2020).

Hermeneutic analysis is implemented concretely through the hermeneutic circle, where the researcher engages in a dialectical dialogue between initial pre-understandings and textual data to understand the relationship between small parts (participant statements) and the overall cultural context. This process involves repeated readings and critical reflection to identify how the researcher's personal biases or assumptions interact with the text, aiming to achieve a "fusion of horizons" between the worlds of the researcher and the participants. To minimize excessive subjectivity, the researcher applies reflexivity (documenting self-positions in a research diary), conducts researcher triangulation (discussions between coders for consensus of meaning), and provides thick descriptions to ensure that interpretations remain firmly grounded in the empirical data and specific contexts in the field. The principle of hermeneutics guides the analysis by positioning the researcher as a key instrument in a continuous dialogue between text and context through the hermeneutic spiral cycle. Rather than simply relying on mechanical categorization in ATLAS.ti, the analysis is conducted by considering the researcher's preconceptions and the influence of cultural traditions, where each emerging code is reinterpreted to discover the essential meaning behind the participants' experiences. This process ensures that the themes developed are not simply word frequencies, but rather the result of a fusion of horizons between the participants' textual world and the researcher's critical understanding of the reality of tourism in Bali.

This study used a purposive sampling approach to select participants who had knowledge, experience, or strategic roles related to the use of Virtual Reality (VR) in the context of Balinese tourism (Aspers & Corte, 2019). The participant selection procedure began with the initial identification of key stakeholder groups based on a literature review and consultation with the Bali Provincial Tourism Office. Potential participants were then contacted through relevant institutions such as hotels, travel agents, cultural communities, and government agencies to explain the research objectives and invite them to participate. A snowball sampling technique was also applied, whereby participants who had already participated were asked to recommend other candidates who met the criteria, thus expanding the reach and depth of the data (Haven & Van Grootel, 2019). Each potential participant then confirmed their willingness through an informed consent process that guaranteed confidentiality, rights, and transparency regarding the research objectives. The coding process was conducted systematically through an open coding stage to identify initial categories from the interview transcripts, followed by axial coding to connect these categories into central themes relevant to hermeneutical principles. This analysis involved two coders to ensure objectivity and depth of data interpretation.

The participant selection criteria were designed to encompass four main groups with specific characteristics. Tourists (5 individuals) were selected based on being at least 18 years old, having visited Bali in the last 3 years, and having experience or interest in VR technology. Tourism industry

Table 1. Main themes and frequency of appearance

Theme	Frequency	Example Quotes
Immersive Experience	28 times appearance	*"I can see the details of the carvings on the statue clearly through VR"* (P5)
Marketing Potential	22 times appearance	*"VR increases tourists' interest in booking tour packages"* (P9)
Sustainability Benefits	19 times appearance	*"VR reduces physical crowds at heritage sites"* (P16)
Implementation Challenges	25 times appearance	*"Special training is needed to operate the VR device"* (P12)
Stakeholder Collaboration	15 times appearance	*"The government must facilitate dialogue between developers and the community"* (P15)

players (5 individuals) had to have at least 3 years of work experience in a related sector (hotel, travel agent, or content developer) and be directly involved in the use or promotion of digital technology. Government representatives (5 individuals) were from the Tourism Office or related agencies, with roles in tourism planning or policy, and an understanding of technology and sustainability. Local community members (5 individuals) were residents who had lived in Bali for at least 10 years, were involved in cultural or economic activities related to tourism, and understood the impact of tourism on the environment and culture.

Interviews were conducted between June and August 2025 to capture the dynamics of the transforming tourism industry post-pandemic. The research focused on the strategic areas of South Bali (Kuta and Nusa Dua) as the center of the tourism industry, and Ubud (Gianyar) as a representative center for cultural and nature-based tourism. Ethical considerations underpin this process, ensuring confidentiality of participants' identities in reports and publications, using informed consent that explains participants' rights and responsibilities, and the freedom to withdraw without penalty during the study. This approach ensures a comprehensive and relevant representation of perspectives to answer the research questions in depth and holistically (Hayashi Jr et al., 2019). This research has obtained formal ethics approval from the Research Ethics Committee which ensures that all data collection procedures have met the standards of participant protection and data confidentiality according to applicable regulations.

RESULTS AND DISCUSSION

Qualitative data analysis was conducted with the help of ATLAS.ti software, which served as a technical instrument to systematically organize, catalog, and map the relationships between statements from 20 participants. Based on the coding process, a total of 47 codes were identified that were consistently grouped into 5 main themes as detailed in **Table 1**:

1) Immersive Experience (12 quotes),
2) Marketing Strategy (9 quotes),
3) Sustainability (10 quotes),
4) Implementation Challenges (11 quotes), and
5) Stakeholder Collaboration (5 quotes).

The consistency between the number of codes and the frequency of quotes was verified through the Code-Primary-Document Table feature in ATLAS.ti, which allows researchers to transparently view the distribution of narratives across stakeholder groups and ensure that each theme is supported by a strong database before further hermeneutic interpretation is conducted. ATLAS.ti revealed a strong relationship between:

VR → Immersive Experience → Emotional Connection → Revisit Intention

VR → Cultural Preservation → Sustainable Tourism → Local Empowerment

VR → High Cost → Limited Adoption → Need for Collaboration

Immersive Experience and Emotional Engagement

This study successfully analyzed the perceptions, opportunities, and challenges of implementing Virtual Reality (VR) in the context of Balinese tourism through a hermeneutic qualitative approach. Data were collected from 20 participants divided into four main stakeholder groups: tourists, tourism industry players, government representatives, and local communities. The results revealed four main themes that reflect the complexity of integrating VR as an innovation tool for tourism experiences, destination marketing, and sustainability. Eighteen of the 20 participants stated that VR can create immersive and meaningful tourism experiences. An Australian tourist (P1) stated:

> "Through VR, I was able to explore Tanah Lot Temple in stunning detail. I not only saw the visuals but also heard the sounds of the waves and the religious rituals. This made my physical visit even more meaningful because I understood the cultural context."

This quote confirms the theory of presence and emotional engagement in VR literature (Skard et al., 2021). The multi-sensory (visual and auditory) experience offered by VR successfully creates a deep sense of presence, which is not only visually stunning but also educational. This aligns with Zeng et al (2022) that finds that VR can build emotional connections and understanding of cultural context, thus enriching and enhancing physical visits, rather than replacing them. VR functions as a pre-learning that enhances tourists' appreciation. Similarly, a domestic tourist added:

> "VR gave me an accurate preview of what I could explore in Bali, especially for hard-to-reach sites like Mount Batur."

This statement highlights VR's practical role as an expectation management and accessibility tool. VR can overcome physical limitations by allowing tourists to "visit" destinations that require significant physical effort or have limited access (Bec et al., 2021). This reinforces VR's value in *second*-chance tourism and expands the market to potential travelers with physical or time constraints. However, five participants expressed concern that virtual experiences might

reduce the desire to make physical visits. One industry participant (P6) explained:

> "If VR is too perfect, tourists might feel the need to visit in person. We need to find a balance so that VR actually sparks curiosity."

This research data shows that for the Balinese context, VR is specifically designed as an "introductory" strategy through the presentation of an evocative but incomplete cultural narrative (teaser-based content), so that the digital simulation functions as a trigger of curiosity that encourages tourists to come directly to experience authentic spiritual experiences and physical interactions.

Marketing Potential and Booking Conversions

This concern reflects the " *cannibalization vs. enhancement* " dilemma in VR studies. The concern that overly perfect virtual experiences can demotivate physical visits is valid and presents a strategic challenge in content design. This emphasizes the importance of a " *teaser content* " strategy where VR doesn't show everything, but instead inserts elements of mystery, limited interactivity, or specific highlights that spark a desire to experience the full version firsthand (McLean et al., 2023). All tourism industry players (5/5) reported that VR has increased marketing effectiveness. A hotel manager in Kuta (P7) stated:

> "Since we introduced VR tours to showcase rooms and amenities, our online booking conversion rate has increased significantly, by around 30%. Potential guests can 'walk' around the resort before making a booking."

These findings provide direct empirical evidence supporting McLean and Barhorst (2022) and Talwar et al (2023). VR effectively reduces uncertainty *in* travelers' purchasing decision processes. By providing an immersive and transparent experience, VR builds trust and reduces perceived risk, ultimately increasing booking conversions. The 30% figure demonstrates a very strong Return on Investment (ROI) for VR adoption in hospitality marketing. A travel agent (P9) also confirmed:

> "Tour packages equipped with VR content get a better response from the millennial and Gen Z markets."

This quote identifies the market segments most responsive to VR technology. Millennials and Gen Z are *digital natives* who are highly comfortable with new technology and value interactive and shareable experiences . This positive response demonstrates that VR is a strategic tool for reaching and engaging the young traveler market that will form the backbone of the future tourism industry. The Bali Provincial Government (P14) emphasizes that VR must be used wisely:

> "VR content should not solely pursue commercial gain, but should also promote cultural values and sustainability. We are developing guidelines to ensure VR content does not distort Balinese culture."

This statement reflects the perspective *of policymakers* who view VR not merely as a commercial tool, but as a policy instrument for achieving sustainable tourism. This aligns with the findings of Talwar et al. (2022) and Caciora et al. (2021). The government recognizes the need for *guardrails* or guidelines to ensure that technological innovation does not erode the core values that are Bali's appeal: culture and sustainability. Local communities (4/5) see VR as a solution to mitigate the impacts of overtourism. A traditional artist in Ubud (P18) explained:

> "Many sacred sites are damaged by overcrowding. With VR, tourists can learn about our culture without setting foot in vulnerable areas."

This is a critical perspective from a local community directly impacted by *overtourism* . This quote demonstrates the positive acceptance of VR as a *conservation* and *crowd management* tool . VR is seen as a solution to mitigate the negative physical impacts on fragile cultural heritage sites, a VR application that is particularly relevant in the Balinese context (Saputra & Laksmi, 2024). An environmental activist (P20) added:

> "VR can be used to simulate coral reef ecosystems without having to dive, which risks damaging the coral."

This quote expands the benefits of VR from cultural preservation to nature conservation. This VR application for *virtual ecotourism* is a proactive strategy for education and conservation. It allows tourists to experience natural wonders without causing disturbance or pollution, which aligns with the findings of Chernbumroong et al (2024). However, three participants emphasized the importance of involving local communities in content development. A traditional leader (P19) cautioned:

> "If VR content is created by outsiders without an understanding of Balinese culture, it could lead to a simplification or even a distortion of the meaning of rituals. This is dangerous for cultural preservation."

This is the most important warning from a cultural perspective. Concerns about cultural *misappropriation* and *misrepresentation* are real. This quote strongly emphasizes the need for *a participatory approach* and *co-creation* in content development, where local communities are not merely objects, but rather active stakeholders and partners (Bretos et al., 2024). Without this, VR could become a tool that undermines the very culture it seeks to preserve. The high cost of developing VR content (mentioned by 12 participants) is a concern. One content developer (P10) lamented:

> "Producing quality VR content requires significant investment, from 360-degree recording to interactive programming."

In response to these cost constraints, this research data points to the urgency of policies in the form of technology subsidies and the provision of shared creative spaces (co-working spaces) managed by local governments. Furthermore, the establishment of community-based VR centers in tourist villages could be a tactical solution to democratize technology access, enabling local communities to independently produce

Table 2. Perceptions and challenges by participant group

Participant Group	Amount	Support for VR (%)	Key Challenges Identified
Traveler	5	90%	Limited access to VR devices
Industry Players	5	100%	Production costs and technology integration
Government	5	80%	Regulation, standardization, and content oversight
Local Community	5	80%	Cultural preservation and community involvement

authentic content without the burden of high individual infrastructure investments.

This confirms the main challenge identified in the literature, namely high development costs (Polishchuk et al., 2023). High costs are a major barrier, especially for SMEs, and create a digital divide between large and small businesses. This requires collaborative solutions or resource -sharing business models . There is low digital literacy among local stakeholders (eight participants). A traditional tour guide (P17) acknowledged:

> "I still have trouble using a VR headset, let alone explaining it to senior tourists."

This quote highlights the challenges of the digital literacy gap at the grassroots level (Alghamdi, 2024). The success of VR implementation depends not only on good content but also on the ability of local human resources to operate and explain it. This highlights the need for inclusive training and mentoring programs for all levels of stakeholders. Multisectoral collaboration is needed (15 participants). A representative from the Tourism Office (P15) emphasized:

> "The government cannot work alone. We need private sector support for funding and academics for developing educational content."

This statement is the core of the solution to address the challenges outlined. It reflects the multi-stakeholder collaboration model proposed by Roziqin et al. (2023). The government positions itself as a facilitator and regulator, while the private sector provides innovation and funding, and academics contribute expertise and research to ensure quality and educational content (Schönherr et al., 2023).

Implementation Challenges and Digital Divide

Table 2 presents the perceptions and challenges of using Virtual Reality (VR) for Bali tourism identified by four key stakeholder groups. This data was obtained through qualitative analysis of in-depth interviews with 20 participants, where percentages represent the frequency of archived responses (coded results) to provide a snapshot of the proportion of views within the sample group. Tourists demonstrated a very high level of support at 90% (n=18 of 20 participants), which was validated through a post-interview descriptive questionnaire. They viewed VR as a tool that could enhance the pre-visit experience by providing immersive destination visualizations. However, a key challenge identified was limited access to VR devices, with most participants reporting not having adequate headsets at home and access only available at specific locations such as airports or hotels. This challenge hinders widespread VR adoption, particularly among generations with lower digital literacy.

Tourism industry players have expressed full support (100%) for VR integration. They see VR as a highly effective marketing tool to increase booking conversions and attract younger generations of travelers. However, the biggest challenges they face are production costs and technology integration. Developing high-quality VR content requires significant investment in 360-degree recording, software development, and technology maintenance (Kayumovich, 2020). Small and medium-sized enterprises (SMEs) often lack the financial resources to adopt VR independently (Atzeni et al., 2022).

Governments expressed strong support (80%), but with caution. They view VR as a tool to promote sustainable tourism and reduce overtourism. However, the key challenges they identified were the need for regulation, standardization, and content oversight (Poux et al., 2020). Governments emphasized the importance of ensuring that VR content is culturally accurate and does not distort local values. They also highlighted the need for a regulatory framework to oversee content quality and protect intellectual property rights.

Stakeholder Collaboration Model

Local communities expressed high support (80%) for VR, primarily due to its potential to preserve culture and mitigate the impacts of mass tourism. However, their primary concerns were cultural preservation and community engagement. Local communities emphasized that VR content development must involve them actively to ensure authenticity and avoid irresponsible cultural commercialization. They also highlighted the importance of economic benefits returning to the community. This table reveals that while all groups support VR adoption, each face unique challenges. Multisectoral collaboration is key to addressing these challenges (Kim et al., 2020). For example, the government can provide financial incentives to help industry players cover production costs, while industry players can work with local communities to develop authentic content. Furthermore, technology training programs can help improve digital access and literacy among tourists and local communities.

CONCLUSION

This research confirms that virtual reality (VR) has significant potential as an innovative marketing strategy to support the sustainability of Balinese tourism. Findings show that VR creates immersive experiences that deepen understanding of culture and nature, while increasing visitation through virtual presence and strong emotional engagement. As many as 90% of tourists stated that VR increased their expectations and appreciation of the destination, while industry players reported an increase in booking conversions of up to 30% after integrating VR into

marketing strategies. However, VR implementation also faces several significant challenges, including high development costs, low digital literacy among local stakeholders, and the risk of cultural distortion if content is not developed in a participatory manner.

This research's contribution lies in providing a holistic framework for understanding VR integration in cultural tourism, emphasizing its hermeneutic and sustainability dimensions. These findings complement the literature, which has been dominated by studies on urban or natural destinations, by offering a uniquely Balinese perspective, rich in cultural values but also with complex challenges. This research contributes to the development of a Multistakeholder VR Integration Framework for Cultural Destinations, a collaborative model that synergizes the roles of government, industry players, and local communities. This framework integrates technological dimensions with local wisdom values (such as the Tri Hita Karana concept) to ensure that digital content not only functions commercially but also serves as an instrument for cultural preservation and environmental impact mitigation in Bali. Practically, this research recommends the development of cultural - based VR content guidelines, digital literacy training for local stakeholders, and incentives for MSMEs to adopt this technology through multi-sectoral partnerships and funding schemes. In the long term, ethical and sustainable VR implementation can strengthen Bali's position as an innovative, responsive, and culturally and environmentally responsible tourism destination. While providing in-depth insights, this study is limited by its small qualitative sample size and limited geographic focus on Bali, so generalizing the findings nationally requires caution. Future research is recommended to employ quantitative testing with a broader sample size and longitudinal studies to evaluate the long-term impact of VR use on tourists' sustainable behavior.

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