Virtual Reality and Tourism: Perceptions of Switzerland

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Abstract: The aim of this study was to examine the impact of virtual reality (VR) on the feeling of Switzerland as a tourist destination within the Metaverse enthusiast community. A mixed-methods approach incorporating both quantitative and qualitative methods was employed, encompassing the analysis of responses from 354 participants from the USA, Japan and Germany. The study centred on perceptual changes, emotional engagement and the potential impact of VR experiences on travel intentions. The results show that VR experiences evoke strong emotional engagement, stimulating curiosity, enjoyment and fascination, and more than 70% of respondents declared a strong desire to visit Switzerland after a VR experience, confirming the technology's potential as an effective marketing tool. However, statistical analyses did not show significant changes in beliefs of the country, suggesting that VR can complement traditional promotional methods, but does not always lead to radical changes in belief. The study is not without its limitations, which include the geographical coverage of the sample and the lack of a long-term analysis of actual travel behaviour. Future research should therefore focus on the long-term impact of VR on actual travel decisions, increasing the diversity of the study groups and analysing the integration of VR tourism with other digital platforms.

Keywords: Virtual Reality Tourism, Metaverse-based Tourism, Destination Image Formation, Travel Intention, Emotional Engagement

1. Introduction

Virtual Reality (VR) tourism is increasingly recognized as an innovative and immersive technology that allows individuals to explore, learn and be entertained in virtual environments Huang et al., 2010; Wei et al., 2021; Bilotta et al., 2021; Barrens, 2016; Ulusoy, 2024). This technology enables users to visit destinations and engage in activities that may otherwise be inaccessible due to geographical, financial, or physical constraints (Gutentag, 2010; Ghali, Rather & Khan, 2024; Neuburger, Beck & Egger, 2018; Zhang et al., 2022; Mura et al., 2017; Manda,Bikkinan &Tarnanidis, 2025). While initially considered into an independent form of tourism (Ji, Wang, & Wu, 2023).

Through virtual immersion, users can experience historical places, events, explore extraterrestrial landscapes, or see natural phenomena such as volcanic eruptions (Buhalis, Lenga & Lin, 2023, Bogicevic et al., 2019, Tang and Boccia & Lim, 2014; Soni & Kaur 2023).

VR technology provides a sense of physical and psychological immersion, potentially leading to a temporary detachment from the real world (Tussyadiah et al., 2018; Raucher, Humpe, Brehm, 2021, Merkx & Nawijn, 2021; Hollensen et al., 2022; Bhushan et al., 2024).

Moreover, VR tourism contributes to sustainable tourism by minimizing environmental impact (Schipou et al., 2021).

Advances in hardware and software have facilitated the development of highly immersive virtual tours, interactive travel content, and realistic simulations that enhance both the travel planning process and destination exploration (Lemon & Verhoef, 2016; Buhalis et al., 2023; Lenga & Lin, 2023; Butler, & Paris, 2014; Hollensen et al., 2022). By providing engaging and memorable travel experiences, VR tourism has the potential to expand the tourism market and attract new audiences (Loureiro, Guerreiro & Ali, 2020; Buhalis et al., 2023b).

Recent market analysis highlights the rapid growth of VR tourism, with significant potential to improve the global tourism engagement Dharmadhikari (2022,2023). Virtual tourism enables users to explore diverse cultures, landscapes, and activities from their own homes, making (Gutentag, 2010).

Additionally, empirical research suggests that online interactions, regardless of their format, positively impact consumer well-being and emotional health (Jafar & Ahmad, 2023). Baran & Baran (2024) posit that virtual reality possesses the potential to engender a fundamental shift in our conception of travel and exploration.

The Asia-Pacific region is expected to experience rapid growth in the VR tourism market, while North America is projected to generate the highest revenue by 2023, partly due to the increasing adoption of 3D. The use of 3D technology has enabled the delivery of immersive experiences that are appreciated by European travellers (Dharmadhikari, 2023). Virtual tourism within the Metaverse is recognized for its potential to foster creativity,

ease experience-sharing, and contribute to a more inclusive and diverse tourism ecosystem (Griffin et al., 2017; Raucher, Humpe & Brehm, 2021). The growing integration of VR tourism within the Metaverse is expected to redefine digital engagement and user interaction (Chakraborty et al., 2023).

Despite the increasing adoption of VR in tourism, there is a lack of academic literature examining its role in promoting specific destination, such a Switzerland, within the Metaverse. Previous studies indicated that immersive virtual experiences are being leveraged by tour operators to increase engagement before, during and after travel (Ali, 2016; Woo, Kim, & Uysal, 2015). However, there remains a gap in research on how VR can shape Switzerland's perception as a tourism destination within the Metaverse community (Kim et al.,2023). Limited academic studies explore how disruptive technologies like VR influence consumer behaviour and destination marketing strategies (Sparkers, 2021).

The study aims to evaluate the effectiveness of virtual reality tours in improving Switzerland's image within the Metaverse enthusiast community, assessing their potential as a marketing too. Understand their ability to motivate real-world travel, and their impact on destination perception.

1.1 Research Questions

1. To what extent can virtual reality (VR) tours be used as an effective destination marketing tool for Switzerland within the Metaverse enthusiast community?
2. How does engagement in a virtual reality tour of Switzerland influence users 'intention to visit the country in real life?
3. What are the cognitive and affective shift in perception of Switzerland as a tourist destination following a VR tour experience?

2. Literature Review

Several research papers and industry reports have explored the potential of the metaverse and its implications for the tourism industry, particularly in destination marketing and virtual travel experiences. Researchers such as Morris (2022), Diwvedi (2022, 2023) have examined the economic opportunities presented by the metaverse. While Lee et al., (2021), Dolata and Schwabe (2023) provide a more comprehensive analysis by integrating published studies on its theoretical and practical applications. Buhalis, Lenga, and Lin (2023) conceptualized the metaverse as an emerging digital space with significant potential for the tourism industry, particularly in consumer engagement and destination promotion. However, as Dayoub et al. (2024) note, this potential remains largely unexplored in the context of heritage protection and promotion.

2.1 Definition and Conceptualization of the Metaverse

The term 'metaverse' originates comes from the Greek prefix 'meta' meaning 'after' or 'beyond' and 'universe' (Oxford English Dictionary, 2024). It describes a highly immersive digital environment where users can interact with each other and digital entities. Meta (2021) defines the metaverse as a convergence of multiple advanced technologies. Including artificial intelligence (AreI), virtual reality (VR), head-mounted displays (HMDs), augmented reality (AR), the internet of things (IoT) and spatial computing (European Parliament, 2024; Gartner, 2024).

The term gained widespread recognition following Facebook's rebranding to Meta in October 2021, when CEO Mark Zuckerberg found the metaverse as the future of the internet.

Despite its growing prominence, there is np universally accepted governance structure for the metaverse, and its future regulations is still uncertain (Burrows, 2022).

The Cambridge Dictionary (2024), describes the metaverse three-dimensional space virtual space in which users, represent by avatars, can engage in socialization, entertainment, and professional activities.

(Mystakidis, 2022). However, Xu et al. (2022) argue that defining the metaverse is inherently due to its evolving nature and technological dependencies. Damar (2021) characterized as "a shared three-dimensional digital world in which you can perform activities using augmented and virtual reality services" and refers to the metaverse as "a layer between you and reality" conceptualizing it as an intermediary layer between digital and physical realities.

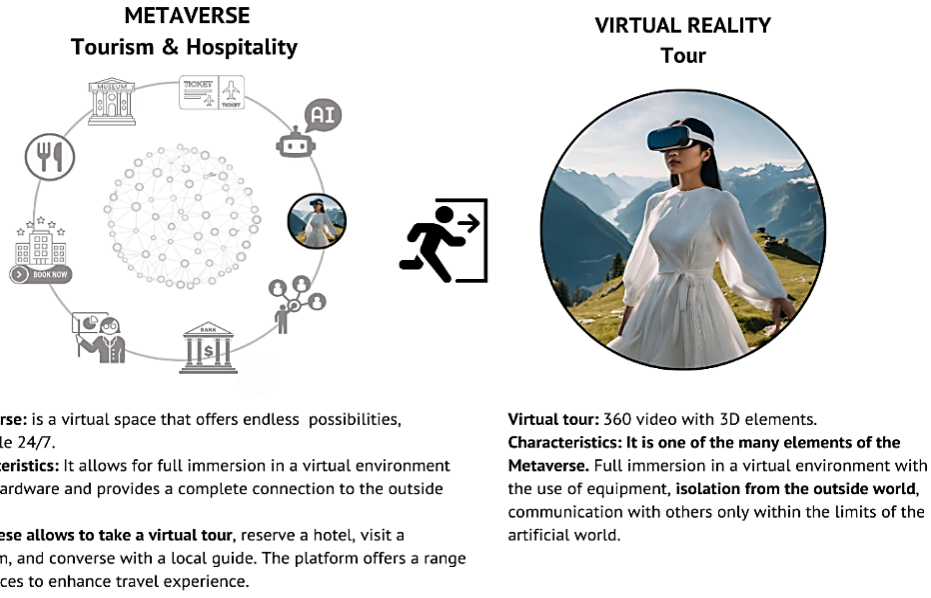
Buhalis, Lenga and Lin (2023), Nazir and Lui (2016), along Sai et al. (2024) highlight that the metaverse is distinguished by its immersive and interactive nature, enabling real-time collaboration and engagement through avatars and VR headsets. Unlike conventional virtual platforms such as Second Life, which limit interactions to a single virtual world, the metaverse offers interconnected digital spaces with cross-platform integration (Chow, 2021).

2.2 Metaverse and Virtual Reality (VR) in Tourism Industry

Several scholars emphasize the transformative potential of VR and metaverse technologies in tourism (Chen, 2024; Unnikrishnan, 2024;Velmurugan, 2025;Asif et al., 2025; Singh & Das, 2025).

Dharmadhikari (2023), Meta (2021), Wei et al., (2019), assert that VR allows prospective tourists to experience destination virtually before making travel decisions, mitigating travel anxiety and enhancing confidence in travel planning. Slater et al. (2009) further highlight the ability of VR to simulate real-world conditions, enhancing the realism of travel experiences. Flavian et al. (2021), Lemon and Verhoef, (2016), Butler and Paris, (2014) support this claim, nothing that VR fosters experimental marketing strategies by enabling users to explore exotic locations in an interactive manner. Additionally, Fan et al. (2021), Hollensen et al. (2022), and Buhalis, Lenga & Lin (2023) indicate that VR can act as a persuasive tool for destination marketing, particularly for travellers with mobility restrictions or financial limitations.

The metaverse significant impacts both the tourism and hospitality industries by facilitating personalized experiences through virtual tours (Picture 1, Picture 2). AI-driven concierge services, and virtual events (Galli, Rather, & Khan, 2024; Gutentag, 2010; Neuburger, Beck, & Egger, 2018; Mura et al., 2017; Zhang et al., 2022). Furthermore, local and expert-led virtual experiences improve user engagement by providing culturally and historically rich increasing demand for interactive and immersive pre-travel (Beck et al., 2020; Schipou et al., 2021).

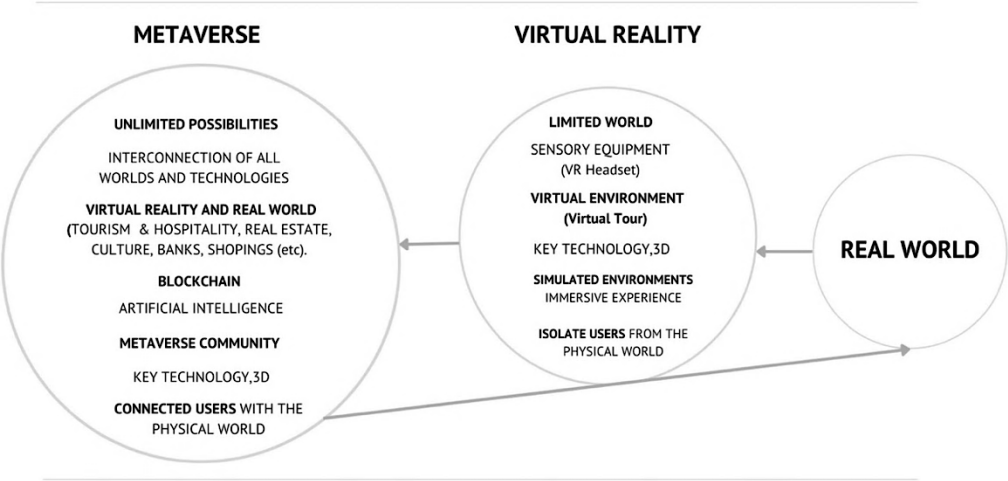


Picture 1: Virtual tour as a part of Metaverse. Author`s work.

2.3 Implications for Destination and Consumer Behaviour

The metaverse has profound implications for tourism marketing strategies and consumer behaviour. Malodia, and Dhir (2022) emphasize the role of the metaverse in redefining consumer engagement, particularly through interactive marketing campaigns. The ability to test different virtual tourism and expirees the ability to test different virtual tourism products and experiences within the metaverse fosters destination viability and supports sustainable tourism practices (Beck et al., 2021; Schipou et al., 2021). Moreover, the metaverse offers a controlled environment to simulate the effects of over-tourism and climate change, allowing tourism stakeholders to devise long-term sustainable strategies. Beyond operational and marketing applications, the metaverse fosters social connections among consumers and tourism service providers (Tsai, 2022). Research by Tussyadiah et al. (2018) suggests that virtual experiences create positive emotional associations with

destinations, increasing the likelihood of real-world visitation. Similarly, a virtual tour allows users to experience a destination's ambiance and cultural richness without physical displacement (Beck & Egger, 2018; Zhang et al., 2022; Barens, 2016). Ali et al. (2016) and Hyun and O'Keefe (2012) highlight the role of VR in creating a strong sense of telepresence, achieved through high-resolution videos, 3D-rendered. environments, and multi-sensory interactions. Unlike singular VR tours, the metaverse provides an interconnected virtual ecosystem that fosters repeated engagement and community-driven experiences (Buhalis, Lenga, & Lin, 2023).



Picture 2: Metaverse & Virtual Reality, comparison. Author`s work.

2.4 Conclusion

The integration of VR and metaverse technologies within the tourism sector presents both opportunities and challenges. While these technologies enhance engagement, reduce pre-travel uncertainty, and contribute to sustainable tourism development, they also cause the evolution of marketing and operational strategies. The growing intersection between digital and physical tourism experiences requires further empirical investigation, particularly in the context of destination branding and consumer behavioural shifts. Switzerland, as a high-value tourism place, has the potential to use VR and the metaverse to enhance its global appeal, yet academic research is still limited on this subject. This study aims to address this gap by exploring the role of virtual reality tourism in shaping Switzerland's image within the Metaverse community and its effectiveness in influencing potential travellers' perceptions and intentions.

2.5 An Analysis of the Group of Respondents

The analysis examined the interest and behavioural characteristics of the Metaverse enthusiast community, focusing on their engagement in virtual experiences and their relationship to real-world tourism (Buhalis et al., 2023). Tsai (2022) argue that the Metaverse fosters social connectivity between consumers and suppliers in the tourism industry. Xu and Buhalis (2023) emphasise the pivotal role of gamification and mobile games in expanding the Metaverse tourism market, particularly among younger digital natives (Buhalis, López and Martinez-Gonzalez, 2020). Pero (2022) highlights that Metaverse natives, especially those under 21, exhibit a strong preference for digital interactions over physical ones. Gursoy, Malodia and Dhir (2022) posit that some users perceive the digital world as more relevant than the physical world, influencing travel behaviour. To increase engagement, it is crucial to integrate immersive experiences before and during virtual tours, enhancing realism and strengthening the connection between digital and real tourism.

3. Methodology

This study presents a rigorous mixed methods research approach, the aim of which is to comprehensively analyse the impact of virtual tourism on Switzerland's image and actual travel intentions (Tab.1).

Data were collected between March and May 2024 through online VR communities, Metaverse-focused forums, and social media platforms. The sample comprised 354 respondents from the USA, Japan, and Germany, selected due to high levels of technological adoption and VR market maturity. Inclusion criteria required

participants to be active VR users (Oculus Quest) with a minimum usage frequency of twice per week, ensuring adequate familiarity with immersive environment

Table 1: Methodology Description. Source: Author's work.

Research Stage	Description
Research Design	Explanatory sequential mixed-methods approach (quantitative + qualitative)
Sample	354 respondents (USA, Japan, Germany), VR users (Oculus Quest, min. 2 times/week)
Data Collection Method	Online survery (Likert-scale, closed questions), Semi-structured interviews (45 participants)
Key Variables	Perception of Switzerland before/after VR – Emotions (curiosity, joy, fascination) – Real-world travel intention
Statistical Analysis	- Descriptive statistics (mean, SD) – t-tests/ANOVA (pre/post-tour perception comparison) – Multiple regression (impact of VR on travel decisions)
Qualitative Analysis	Semi-structured interviews (n = 45), purposive sampling; thematic coding of perception changes, emotional responses, and travel barriers
Validation Measures	- Pilot test (n=20) – Cronbach's alpha (>0.7) – Triangulation of quantitative nd qualitative findings
Ethical Considerations	Informed consent, data anoymization, voluntary participation

4. Discussion

This section provides a comprehensive analysis of the survey data collected. It focuses on metaverse enthusiasts' perceptions of Switzerland before and after experiencing a virtual reality (VR) tour. The discussion includes key findings on respondent demographics, emotional engagement, and the impact of VR tourism on real-world travel intentions. The study was supported by rigorous statistical analysis.

4.1 Respondent Demographics

The study involved 354 participants from three main regions: USA, Japan and Germany. A considerable proportion were frequent VR users (at least twice a week). The age distribution varied, with most respondents in the 46-66 age group. This was followed by 19–35-year-olds and a smaller representation of those over 67 (Table 2).

Table 2: Respondent Demographics. Author's work.

Region	Total Participants	VR Users (at least twice a week)	Age Group 19-35 (%)	Age Group 46-66 (%)	Age Group 67+ (%)
USA	120	High	30	50	20
Japan	114	Medium	25	55	20
Germany	120	High	28	52	20

4.2 Initial Perceptions and Associations with Switzerland

Prior to the VR excursion, participants associated Switzerland primarily with:

1. Premium brands (e.g. Rolex, Nestlé)
2. Natural landscapes (e.g. Alps, mountains)
3. High standard of living (environmentally friendly, modern, well-organised, wealthy).

These results reflect Switzerland's well-established global reputation. Repositioned as a prosperous and scenic tourist destination (Table 3).

Table 3: Pre-VR Tour Perceptions of Switzerland, Author's work.

Aspect	Example
Luxury Brands	Rolex, Nestlé
Natural Landscapes	Alps, Mountains
High Standard of Living	Eco-friendly, Modern, Well-organized

4.3 Impact of the Virtual Tour on Perceptions

After experiencing VR, more than 90% of respondents reported a difference in perception. The most significant perceptions included:

1. Wide cultural and linguistic diversity (surprise at the presence of French in Switzerland).
2. Geographical awareness (knowledge that Switzerland does not have a single capital and has vast open spaces).
3. Sustainability and organisation (boosting Switzerland's attractiveness).

Table 4: Post-VR Tour Perceptions of Switzerland, Author's work.

Aspect	New Insights Gained
Cultural Diversity	Presence of multiple languages, French usage noted
Geographic Understanding	No single capital, vast open spaces

4.4 Emotional Engagement During the Virtual Tour

A major proportion (85%) of respondents reported experiencing positive emotions during the VR tour. The most often mentioned emotions were:

1. Fascination
2. Curiosity
3. Joy
4. Excitement

These results highlight the strong emotional engagement evoked by VR tourism. It plays a key role in shaping interest in real-world travel (Table 5).

Table 5: Emotional Engagement During the VR Tour

Emotion	New Insights Gained
Fascination	85 %
Curiosity	85 %
Joy	80 %
Excitement	75 %

4.5 Effectiveness of VR Tourism in Motivating Travel Intentions

One of the most critical findings is that over 70% of respondents expressed a strong interest in visiting Switzerland in real life after experiencing the VR tour. However, 5% showed that the VR experience alone was sufficient, aligning with research suggesting that some individuals treat virtual tourism as a substitute rather than a complement to physical travel.

Table 6: Travel Intentions After the VR-Tour

Intent	Percentage of Respondents
Strong Interest in Visiting	70 %
VR Experience Sufficient	5 %

4.6 Statistical Analysis of the Impact of the VR Tour

A paired t-test was performed to compare participants' ratings of Switzerland before and after the VR tour. The results showed that the difference was not statistically significant ($p > 0.05$), suggesting that although beliefs changed, they did not change radically. Additionally, an ANOVA test was conducted to analyse the variability of responses before and after the VR experience. The test showed no significant differences at the 0.05 level. A multiple regression analysis was conducted to decide whether VR perception ratings can predict travel intentions,and the results were as follows:

1. VR ratings of Switzerland strongly predict travel intention in the real world ($p < 0.001$).
2. The attractiveness of the VR tour itself is not a significant predictor ($p = 0.597$).
3. The model explained 15.5% ($R^2 = 0.155$) of the variation in travel intention.

4.7 Key Implications

1. The potential of VR tourism as a marketing tool for tourism destination the research findings show that virtual tourism can effectively influence perceptions and stimulate interest in real-world travel. Tourism organisations should use VR to attract global audiences, particularly those in the Metaverse and digital native demographics.
2. Addressing the knowledge gap about Switzerland. Many respondents gained new insights into the cultural and geographical diversity of Switzerland. This proves the potential of VR to bridge knowledge gaps and promote lesser-known aspects of a destination**.**
3. The role of emotional engagement in tourism decision-making. The study underlines the pivotal role of emotions in travel decisions. The immersive nature of VR evoked positive emotions, reinforcing VR storytelling as a powerful marketing strategy.
4. 4.Encouraging sustainability through VR. A small proportion of respondents found the VR experience sufficient to satisfy their curiosity about Switzerland. This suggests that VR tourism can contribute to sustainability efforts by offering an alternative to environmentally costly travel.

4.8 Verification of Research Questions

RQ1: The extent to which virtual reality (VR) tours can be used as an effective destination marketing tool for Switzerland within the Metaverse enthusiast community?

RQ2: The influence of engagement in a virtual reality tour of Switzerland on users' intention to visit the country in real life?

RQ3: The cognitive and affective shifts in perception of Switzerland as a tourist destination following a VR tour experience?

The findings show that VR tours elicit strong emotional engagement, which in turn influences destination perception and travel intentions. A sizeable portion of respondents expressed heightened curiosity, joy, and fascination, contributing to an enhanced image of Switzerland. Moreover, a large majority of respondents acknowledged a shift in perception, reinforcing VR's potential as a persuasive marketing tool. These findings underscore VR tourism's ability to boost consumer interest, influence travel preferences, and position Switzerland as a captivating destination within the Metaverse community.

5. Summary and Recommendations

This study examined the impact of VR tourism on the image of Switzerland among Metaverse enthusiasts. The results indicate that VR enhances emotional engagement by stimulating curiosity, enjoyment, and fascination. More than 70% of respondents expressed an increased intention to visit Switzerland after the VR experience, confirming the potential of VR as an effective destination marketing tool influencing travel perception and motivation.

5.1 Limitations of the Survey

Despite its contributions, the study has several limitations. The sample was limited to participants from three countries, which may restrict the generalisability of the findings. Additionally, the use of self-reported data may introduce response bias and reflect short-term emotional effects. The absence of longitudinal tracking also limits the assessment of VR’s long-term impact on actual travel behaviour.

5.2 Suggested Directions for Future Research

Future research should focus on longitudinal analyses of actual travel decisions following VR experiences. Expanding sample diversity across regions and demographic groups would provide a more comprehensive understanding of VR's impact. Comparative studies examining VR effectiveness across different destinations are also recommended. Furthermore, future research should explore the role of emerging technologies, such as haptic feedback and AI-driven personalisation, in enhancing user engagement and shaping destination perceptions.

Ethics Statement

This work did not require approval by an ethics committee as it did not involve human or animal participants, sensitive data, or procedures requiring formal ethical review.

(If ethical approval was required in this case, replace this statement with an appropriate reference to the approval obtained).

AI Statement

Artificial intelligence tools, specifically ChatGPT (OpenAI), were used in the preparation of this article for the following purposes:

1. Linguistic editing and clarity improvement,
2. Assistance with content organisation,
3. Support with formatting citations and references.

All research content, analyses, interpretations and conclusions were developed independently by the author. All materials generated by artificial intelligence were reviewed and adjusted accordingly before being included in the final version of the manuscript**.**

References

Akiduki, H., Nishiike, S., Watanabe, H., Matsuoka, K., Kubo, T. and Takeda, N. (2003) 'Visual-vestibular conflict induced by virtual reality in humans', Neuroscience Letters, 340(3), pp. 197–200.

Ali, F. (2016) 'Hotel website quality, perceived flow, customer satisfaction and purchase intention', Journal of Hospitality and Tourism Technology, 7(2), pp. 213–228.

Armangue, T., Olivé-Cirera, G., Martínez-Hernandez, E., Sepulveda, M., Ruiz-Garcia, R., Muñoz-Batista, M., Villar-Vera, C. et al. (2020) 'Associations of paediatric demyelinating and encephalitic syndromes with myelin oligodendrocyte glycoprotein antibodies: a multicentre observational study', The Lancet Neurology, 19(3), pp. 234–246.

Asif, M., Ersoy, A., Lodhi, R. and Cobanoglu, C. (2025) 'Mapping the metaverse-sustainability nexus in hospitality and tourism: a bibliometric approach', Online Information Review (Print). DOI: 10.1108/oir-09-2023-0510.

Baran, Z. and Baran, H. (2024) 'Memorable tourism experiences in the metaverse dimension', in Castanho, R.A. and Franco, M. (eds) Cultural, Gastronomy, and Adventure Tourism Development. Hershey, PA: IGI Global, pp. 287–300. DOI: 10.4018/979-8-3693-3158-3.ch015.

Barnes, E. (2016) The minority body: A theory of disability. Oxford: Oxford University Press, pp. 17–42.

Beck, A., Moyle, B., Schaffer, V. and Timms, K. (2021) 'Virtual reality and mixed reality for second chance tourism', Tourism Management, 83, p. 104256.

Beck, J., Rainoldi, M. and Egger, R. (2019) 'Virtual reality in tourism: a state-of-the-art review', Tourism Review, 74(3), pp. 586–612.

Bhushan, R.K., Bhagat, N., Bala, R. and Gupta, R.G. (2024) 'Revolutionizing immersion: VR technology', in 2024 3rd International Conference on Automation, Computing and Renewable Systems (ICACRS), Pudukkottai, India, pp. 96–99. DOI: 10.1109/ICACRS62842.2024.10841654.

Bilotta, E., Bertacchini, F., Gabriele, L., Giglio, S., Pantano, P.S. and Romita, T. (2021) 'Industry 4.0 technologies in tourism education: nurturing students to think with technology', Journal of Hospitality, Leisure, Sport & Tourism Education, 29, pp. 100275–100278.

Buhalis, D. (2020) 'Technology in tourism—from information communication technologies to eTourism and smart tourism towards ambient intelligence tourism: a perspective article', Tourism Review, 75(1), pp. 267–272.

Buhalis, D., Leung, X.Y., Fan, D., Darcy, S., Chen, G., Xu, F. and Farmaki, A. (2023) 'Tourism 2030 and the contribution to the sustainable development goals: the tourism review viewpoint', Tourism Review, 78(2), pp. 293–313.

Buhalis, D., Lin, M.S. and Leung, D. (2022) 'Metaverse as a driver for customer experience and value co-creation: implications for hospitality and tourism management and marketing', International Journal of Contemporary Hospitality Management, 35(2), pp. 701–716.

Buhalis, D., López, E.P. and Martinez-Gonzalez, J.A. (2020) 'Influence of young consumers' external and internal variables on their tourism choices', Journal of Destination Marketing & Management, 15, p. 100409.
Burrows, G. (2012) 'Your Life in Metaverse 221 There is no clarity on how the metaverse will be governed, or if it will be governed at all'. Amazon, p. 262.
Cambridge Dictionary. Word of the Year. Available at: https://dictionary.cambridge.org/editorial/woty [Accessed 01 August 2024].
Chakraborty, D., Polisetty, A., Mishra, A. and Rana, N.P. (2023) 'A longitudinal study on how smart tourism technology influences tourists' repeat visit intentions', Asia Pacific Journal of Tourism Research, 28(12), pp. 1380–1398.
Chen, Z. (2024) 'Metaverse in tourism service: exploring digital tourism innovation', Metaverse. DOI: 10.54517/m.v5i1.2664.
Chow, A.R. (2015) 'Lessons on the Future of the Metaverse from the Creator of Second Life'.
Damar, M. (2021) 'Metaverse: shape of your life for future—a bibliometric snapshot', Journal of Metaverse, 1(1), pp. 1–8.
Dayoub, B., Yang, P., Omran, S., Zhang, Q. and Dayoub, A. (2024) 'Digital Silk Roads: Leveraging the metaverse for cultural tourism within the Belt and Road Initiative framework', Electronics, 13(12), p. 2306. DOI: 10.3390/electronics13122306.
Dennehy, D., Metri, B., Buhalis, D., Cheung, C.M. and Conboy, K. (2022) 'Metaverse beyond the hype: multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy', International Journal of Information Management, 66, p. 102542.
Dolata, M. and Schwabe, G. (2023) 'What is the Metaverse and who seeks to define it? Mapping the site of social construction', Journal of Information Technology, DOI: 10.1177/02683962231159927.
Dwivedi, Y.K., Hughes, L., Baabdullah, A.M., Ribeiro-Navarrete, S., Giannakis, M., Al-Debei, M.M. and Wamba, S.F. (2022) 'Metaverse beyond the hype: multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy', International Journal of Information Management, 66, p. 102542.
Dwivedi, Y.K., Hughes, L., Wang, Y., Alalwan, A.A., Ahn, S.J., Balakrishnan, J. and Wirtz, J. (2022) 'How metaverse will change the future of marketing: implications for research and practice', Psychology and Marketing, DOI: 10.1002/mar.21733.
European Parliament. Metaverse study. Available at: https://www.europarl.europa.eu/RegData/etudes/STUD/2023/751222/IPOL_STU(2023)751222_EN.pdf [Accessed 20 September 2024].
Fan, X., Jiang, X. and Deng, N. (2022) 'Immersive technology: a meta-analysis of augmented/virtual reality applications and their impact on tourism experience', Tourism Management, 91, p. 104534.
Flavián, C., Ibáñez-Sánchez, S. and Orús, C. (2021) 'The influence of scent on virtual reality experiences: the role of aroma-content congruence', Journal of Business Research, 123, pp. 289–301.
Gartner, (2022). What is a Metaverse? And should You Buy it? Available at: https://www.gartner.com/en/articles/what-is-a-metaverse [Accessed 04 October 2024].
Ghali, Z., Rather, R.A. and Khan, I. (2024) 'Investigating metaverse marketing-enabled consumers' social presence, attachment, engagement and (re)visit intentions', Journal of Retailing and Consumer Services, 77, p. 103671.
Glover, G. (2022) 'Glover Bank of America shares how to invest in the metaverse and 13 other disruptive technologies that could transform our lives and become a market worth over $6 trillion by 2030', Business Insider, February. Available at: https://www.businessinsider.com/investing-strategy-tech-6g-metaverse-flying-cars-ai-moonshots-2021-9?r=US&IR=T (Accessed: 20 January 2025).
Griffin, T., Giberson, J., Lee, S.H., Guttentag, D., Kandaurova, M., Sergueeva, K. and Dimanche, F. (2017) 'Virtual reality and implications for destination marketing', Travel and Tourism Research Association: Advancing Tourism Research Globally, 29, pp. 1–418. Available at: https://core.ac.uk/download/pdf/84289283.pdf (Accessed: [15 October 2024]).
Guerra, J.P., Pinto, M.M. and Beato, C. (2015) 'Virtual reality shows a new vision for tourism and heritage', European Scientific Journal. Available at: https://core.ac.uk/download/pdf/236412918.pdf (Accessed: 29 January 2025).
Gursoy, D., Malodia, S. and Dhir, A. (2022) 'The metaverse in the hospitality and tourism industry: an overview of current trends and future research directions', Journal of Hospitality Marketing & Management, 31(5), pp. 527–534.
Guttentag, D.A. (2010) 'Virtual reality: applications and implications for tourism', Tourism Management, 31(5), pp. 637–651.
Hannam, K., Butler, G. and Paris, C.M. (2014) 'Developments and key issues in tourism mobilities', Annals of Tourism Research, 44, pp. 171–185.
Hollensen, S., Kotler, P. and Opresnik, M.O. (2022) 'Metaverse–the new marketing universe', Journal of Business Strategy.
Huang, Y., Huang, Q., Ali, S., Zhai, X., Bi, X. and Liu, R. (2016) 'Rehabilitation using virtual reality technology: a bibliometric analysis, 1996–2015', Scientometrics, 109, pp. 1547–1559.
Huang, Y.C., Backman, K.F., Backman, S.J. and Chang, L.L. (2016) 'Exploring the implications of virtual reality technology in tourism marketing: an integrated research framework', International Journal of Tourism Research, 18(2), pp. 116–128.
Huang, Y.C., Backman, S.J., Backman, K.F. and Moore, D. (2013) 'Exploring user acceptance of 3D virtual worlds in travel and tourism marketing', Tourism Management, 36, pp. 490–501.
Hyun, M.Y. and O'Keefe, R.M. (2012) 'Virtual destination image: testing a telepresence model', Journal of Business Research, 65(1), pp. 29–35.
Jafar, R.M.S. and Ahmad, W. (2023) 'Tourist loyalty in the metaverse: the role of immersive tourism experience and cognitive perceptions', Tourism Review.

Ji, F., Wang, F. and Wu, B. (2023) 'How does virtual tourism involvement impact the social education effect of cultural heritage?', Journal of Destination Marketing & Management, 28, p. 100779.
Koo, C., Kwon, J., Chung, N. and Kim, J. (2023) 'Metaverse tourism: conceptual framework and research propositions', Current Issues in Tourism, 26(20), pp. 3268–3274.
Koohang, A., Nord, J., Ooi, K., Tan, G., Al-Emran, M., Aw, E., Baabdullah, A., Buhalis, D., Cham, T., Dennis, C. and Dutot, V. (2023) 'Shaping the metaverse into reality: multidisciplinary perspectives on opportunities, challenges, and future research', Journal of Computer Information Systems.
Lee, L.H., Braud, T., Zhou, P., Wang, L., Xu, D., Lin, Z., Kumar, A., Bermejo, C. and Hui, P. (2021) 'All one needs to know about metaverse: A complete survey on technological singularity, virtual ecosystem, and research agenda', arXiv preprint, arXiv:2110.05352.
Lemon, K.N. and Verhoef, P.C. (2016) 'Understanding customer experience throughout the customer journey', Journal of Marketing, 80(6), pp. 69–96.
Loureiro, S.M.C., Guerreiro, J. and Ali, F. (2020) '20 years of research on virtual reality and augmented reality in tourism context: A text-mining approach', Tourism Management, 77, p. 104028.
Manda, V.K., Bikkina, A. and Tarnanidis, T. (2025) 'Future trends in virtual reality (VR)', in Darwish, D. (ed.) Virtual Reality Technologies and Real-Life Applications. Deep Science Publishing, pp. 83–96. DOI: 10.70593/978-81-982935-1-0_5.
Merkx, C. and Nawijn, J. (2021) 'Virtual reality tourism experiences: Addiction and isolation', Tourism Management, 87, p. 104394.
META. Meta Platforms Inc. Available at: https://www.meta.com [Accessed 12 November 2023].
Mura, P., Tavakoli, R. and Pahlevan Sharif, S. (2017) 'Authentic but not too much: exploring perceptions of authenticity of virtual tourism', Information Technology & Tourism, 17(2), pp. 145–159.
Mystakidis, S. (2022) 'Metaverse', Encyclopedia, 2(1), pp. 486–497.
Nazir, M. and Lui, C.S.M. (2016) 'A brief history of virtual economy', Journal for Virtual Worlds Research, 9(1).
Neuburger, L., Beck, J. and Egger, R. (2018) 'The "Phygital" tourist experience: The use of augmented and virtual reality in destination marketing', in Tourism Planning and Destination Marketing. Emerald Publishing Limited, pp. 183–202.
Oxford English Dictionary. Metaverse. Available at: https://www.oed.com/dictionary/metaverse_n?tl=true [Accessed 14 December 2023].
Pero, J. (2022) 'Sorry, Metaverse is the word of the year whether you like it or not', Inverse. Available at: www.inverse.com/tech/metaverse-word-of-the-year-vr-roblox-fortnite (Accessed: 21 October 2024).
Polechoński, J. and Tomik, R. (2019) 'Can "Tourism" in immersive virtual reality replace real travel?', Folia Turistica, 52, pp. 11–30.
Rauscher, M. (2021) 'Virtual reality in tourism: Is it "real" enough?', Academica Turistica - Tourism and Innovation Journal, 13(2). Available at: https://academica.turistica.si/index.php/AT-TIJ/article/view/201 (Accessed: 14 November 2024).
Sai, S., Goyal, D., Chamola, V. and Sikdar, B. (2024) 'Consumer electronics technologies for enabling an immersive metaverse experience', IEEE Consumer Electronics Magazine, 13(3), pp. 16–24. DOI: 10.1109/MCE.2023.3327530.
Schiopu, A.F., Hornoiu, R.I., Padurean, M.A. and Nica, A.M. (2021) 'Virus tinged? Exploring the facets of virtual reality use in tourism as a result of the COVID-19 pandemic', Telematics and Informatics, 60, p. 101575.
Singh, A. and Das, R. (2025) 'Exploring tourism opportunities in the metaverse and technology era', Advances in Business Information Systems and Analytics Book Series. DOI: 10.4018/979-8-3693-9005-4.ch007.
Slater, M., Khanna, P., Mortensen, J. and Yu, I. (2009) 'Visual realism enhances realistic response in an immersive virtual environment', IEEE Computer Graphics and Applications, 29(3), pp. 76–84.
Soni, L. and Kaur, A. (2023) 'Immersive journeys: unveiling historical places through virtual reality', in 2023 International Conference on System, Computation, Automation and Networking (ICSCAN), IEEE, pp. 1–6.
Sparkes, M. (2021) 'What is a metaverse', ScienceDirect. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0262407921014500 (Accessed: 25 May 2024).
Statista, (2022, February). Share of adults worldwide who are interested in trying select types of virtual or online experiences. Available at: https://www.statista.com/statistics/1305147/interest-in-trying-metaverse-experiences-worldwide-generation/
Statista. (2024). Interest in trying virtual or online experiences worldwide. Available at: https://www.statista.com/statistics/1304932/interest-in-trying-virtual-or-online-experiences-worldwide/ [Accessed 7 December 2024].
Sylaiou, S., Mania, K., Karoulis, A. and White, M. (2010) 'Exploring the relationship between presence and enjoyment in a virtual museum', International Journal of Human-Computer Studies, 68(5), pp. 243–253.
Tsai, S.P. (2022) 'Investigating metaverse marketing for travel and tourism', Journal of Vacation Marketing. DOI: 10.13567667221145715.
Tussyadiah, I.P., Wang, D., Jung, T.H. and Tom Dieck, M.C. (2018) 'Virtual reality, presence, and attitude change: Empirical evidence from tourism', Tourism Management, 66, pp. 140–154.
Ulusoy, S. (2024) 'The use of augmented reality (AR) and virtual reality (VR) in tourism marketing', DULATY University Bulletin, 14(2), pp. 212–225.
Unnikrishnan, T. and Sibi, P.S. (2024) 'Metaverse tourism: exploring the potential of virtual realms for destination marketing', in A Research Agenda for Tourism, Hospitality and the Metaverse. Edward Elgar Publishing, pp. 85–98. DOI: 10.4337/9781035328222.00011.

Velmurugan, R., Sudarvel, J., Jothi, K. and Thirumalaisamy, R. (2025) 'Use of metaverse in tourism and hospitality services', IGI Global eBooks. DOI: 10.4018/979-8-3693-7245-6.ch005.

Wei, W., Qi, R. and Zhang, L. (2019) 'Effects of virtual reality on theme park visitors' experience and behaviors: A presence perspective', Tourism Management, 71, pp. 282–293.

Wei, Z., Zhang, J., Huang, X. and Qiu, H. (2023) 'Can gamification improve the virtual reality tourism experience? Analyzing the mediating role of tourism fatigue', Tourism Management, 96, p. 104715.

Woo, E., Kim, H. and Uysal, M. (2015) 'Life satisfaction and support for tourism development', Annals of Tourism Research, 50, pp. 84–97.

Zhang, H., Wu, C., Zhang, Z., Zhu, Y., Lin, H., Zhang, Z., Sun, Y., He, T., Mueller, J., Manmatha, R. and Li, M. (2022) 'Resent: Split-attention networks', in Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition, pp. 2736–2746.