

Chapter 8

How Technology Is Revolutionizing the Bleisure Experiences of Tourists in Malaysia

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ABSTRACT

This study explores the synergy between technology and bleisure tourism in Malaysia, investigating their combined impact on enriching travel experiences. The chapter aims to uncover insights and implications for the future of bleisure tourism in Malaysia by examining technological advancements, sustainability initiatives, and emerging trends. Findings reveal that technology has democratised travel, making it more accessible and personalised, while sustainability initiatives have promoted responsible tourism practices and environmental conservation. Moreover, emerging technologies such as virtual reality and artificial intelligence offer innovative ways for tourists to engage with destinations and cultural attractions. The study highlights the importance of continued research and collaboration in driving in-

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novation and sustainability in the bleisure tourism industry, positioning Malaysia as a destination for tourists seeking memorable, responsible, and technologically enhanced experiences.

INTRODUCTION

Bleisure tourism, a fusion of “business” and “leisure,” epitomises a contemporary travel trend where individuals merge professional obligations with recreational pursuits, thereby blurring the demarcation between work and play (Miao et al., 2024). This emergent phenomenon has garnered global attention, reshaping conventional business trips into more fulfilling and multifaceted experiences. Technology shapes and enriches bleisure tourism, offering convenience, efficiency, and personalised experiences (Milosh, 2023). In Malaysia, bleisure tourism holds profound significance, fostering growth within its tourism sector and bolstering its economic vitality. This comprehensive introduction will offer an overarching view of leisure tourism, underline the pivotal role of technology in advancing tourism, and illuminate the profound significance of leisure tourism within the Malaysian context.

Bleisure tourism embodies extending business-related excursions to incorporate leisure activities, allowing tourists to explore new locales, immerse themselves in local culture, and unwind from professional commitments (Miao et al., 2024). Historically, business travel was characterised by packed schedules, scant free time, and minimal scope for leisure. However, with evolving work dynamics and an increasing emphasis on work-life equilibrium, many professionals are embracing bleisure travel, considering it a means to intertwine work obligations with leisure pursuits.

Bleisure tourists adeptly leverage technology to seamlessly integrate work and leisure activities (Miao et al., 2024). They often employ mobile applications to secure accommodations, navigate unfamiliar territories and unearth local attractions. Additionally, remote work technology enables professionals to remain connected and productive while moving, further blurring the dichotomy between work and leisure.

The allure of bleisure tourism lies in its ability to furnish a balanced and comprehensive travel experience. Business tourists can optimise their time in a destination by delving into its cultural tapestry, savouring local gastronomy, and engaging in recreational pursuits (Jimenez Ruiz et al., 2024). This amalgamation of work and leisure heightens the travel experience and increases productivity and job satisfaction.

Technology has undergone a paradigm shift in tourism, empowering tourists with unfettered access to information, convenience, and tailored experiences (Pencarelli, 2020). From the initial planning phase to the culmination of the travel journey, technology is indispensable in facilitating every facet of the trip.

Online booking platforms, travel websites, and mobile applications have streamlined the process of researching, planning, and booking travel arrangements (Vayghan et al., 2023). Tourists can seamlessly compare prices, peruse reviews, and secure reservations with minimal effort, thereby obviating the necessity for traditional travel agencies.

Technology perpetuates its role in augmenting the tourism experience throughout the travel phase. Navigation applications furnish real-time directions and traffic updates, ensuring tourists reach their destinations expeditiously (Ye et al., 2023). Furthermore, translation applications obliterate linguistic barriers, enabling tourists to communicate with locals and navigate unfamiliar terrain seamlessly. Moreover, technology engenders personalised and immersive experiences by integrating virtual reality (VR), augmented reality (AR), and interactive mobile applications. Travelers can virtually explore destinations, partake in guided tours, and immerse themselves in cultural showcases, fostering a deeper understanding and appreciation of diverse cultures. Technology engenders efficiency, convenience, and gratification throughout the travel journey, rendering it an indispensable tool for contemporary tourists.

SIGNIFICANCE OF BLEISURE TOURISM IN MALAYSIA

Within the Malaysian context, bleisure tourism holds profound significance for both the tourism sector and the broader economy (Sohaili et al., 2022). As an eclectic and diverse destination, Malaysia boasts an array of attractions, ranging from pristine beaches and verdant rainforests to dynamic urban hubs and rich cultural heritage. Situated strategically within Southeast Asia, Malaysia is a focal point for business and leisure tourists (Sohaili et al., 2022). Endowed with state-of-the-art conference facilities, international airports, and modern infrastructure, Malaysia attracts a steady influx of business tourists from across the globe. Nonetheless, it is not solely business tourists who gravitate towards Malaysia. The country's unique blend of modernity and tradition and its warm hospitality and affordability render it an alluring destination for leisure tourists.

LITERATURE REVIEW

Technological Innovations in Transportation

Technological advancements in transportation have significantly transformed how people move from one place to another. From the convenience of ride-hailing services to the precision of navigation apps and the accessibility of public transporta-

tion apps, these innovations have revolutionised the travel experience for individuals around the globe (Iskandar et al., 2020).

Ride-hailing services, also known as transportation network companies (TNCs), have emerged as a convenient and efficient alternative to traditional taxi services (Grahn et al., 2020). Platforms like Uber, Lyft, and Grab have revolutionised urban mobility by connecting passengers with drivers through mobile applications. One of the primary advantages of ride-hailing services is their accessibility and convenience. With just a few taps on their smartphones, passengers can request a ride from anywhere, anytime. This on-demand model eliminates the need to wait for taxis or rely on public transportation schedules, providing greater flexibility and freedom in travel. Moreover, ride-hailing services often offer a range of vehicle options to suit passengers' preferences and needs. Whether it is a standard sedan, a luxury vehicle, or a larger vehicle for group travel, passengers can choose the type of vehicle that best fits their requirements. Additionally, ride-hailing services employ advanced technologies to optimise the efficiency of their operations. Algorithms analyse real-time demand patterns and traffic conditions, enabling drivers to navigate efficiently and passengers to reach their destinations quickly. Despite the numerous benefits, ride-hailing services have faced criticism and regulatory challenges, particularly regarding safety, driver wages, and congestion. However, advancements in technology and regulations continue to address these concerns, ensuring that ride-hailing services remain a valuable component of modern transportation systems.

Moreover, navigation apps have become indispensable for tourists seeking efficient and accurate destination directions (Dickinson et al., 2014). Platforms like Google Maps, Waze, and Apple Maps leverage GPS technology and real-time traffic data to provide turn-by-turn navigation, route optimisation, and traffic alerts. One of the critical benefits of navigation apps is their ability to offer personalised and dynamic routing solutions. These apps can suggest alternative routes to help users avoid delays and congestion by analysing real-time traffic conditions, road closures, and accidents. This saves time and reduces stress and frustration during the journey. In addition, navigation apps have evolved beyond simple directions to offer many additional features and services. Users can find nearby points of interest, such as restaurants, gas stations, and attractions, and access reviews, ratings, and photos to make informed decisions. Some apps even integrate public transportation information, bike routes, and walking directions to provide comprehensive multi-modal navigation options. Another notable aspect of navigation apps is their integration with other technologies and platforms. For example, users can seamlessly share their real-time location with friends and family, coordinate meetups, and track the arrival of delivery services or rideshare vehicles. While navigation apps have undoubtedly enhanced the travel experience for millions of users worldwide, they are not without limitations. Issues such as data privacy, battery consumption, and occasional

inaccuracies in mapping data remain areas of concern. Nonetheless, technological advancements and user feedback continue to drive improvements and innovation in navigation app development.

In addition, public transportation apps have revolutionised how commuters navigate and utilise public transit systems in urban areas (Handte et al., 2016). These apps, offered by transit agencies or third-party developers, provide users with real-time information on routes, schedules, fares, and service disruptions for buses, trains, subways, and other modes of public transportation. One of the primary advantages of public transportation apps is their ability to empower users with up-to-date information and trip-planning tools. By accessing detailed route maps, timetables, and service alerts, commuters can make informed decisions about their journeys, such as choosing the most efficient route or deciding when to leave to catch the next bus or train. Public transportation apps often integrate features such as mobile ticketing and fare payment, allowing users to purchase tickets or passes directly from their smartphones. This eliminates the need for physical tickets or cash, streamlines the boarding process, and reduces the risk of fare evasion. Moreover, public transportation apps contribute to improved efficiency and reliability of public transit systems by providing valuable data insights to transit agencies (Ge et al., 2021). By analysing usage patterns, passenger demand, and service performance metrics, agencies can optimise routes, schedules, and resource allocation to meet commuters' needs better. Furthermore, public transportation apps are vital in promoting sustainable mobility and reducing car dependency in urban areas. By providing seamless and user-friendly access to public transit information, these apps encourage more people to choose public transportation as their preferred mode of travel, leading to reduced traffic congestion, air pollution, and greenhouse gas emissions.

Despite the numerous benefits of public transportation apps, challenges such as limited coverage, integration issues with multiple transit systems, and disparities in digital literacy and smartphone ownership among certain demographic groups remain barriers to widespread adoption (Bian et al., 2022). However, ongoing efforts to expand app availability, improve user experience, and address equity concerns are helping to overcome these challenges and make public transportation more accessible and inclusive for all. Technological innovations in transportation, including ride-hailing services, navigation apps, and public transportation apps, have revolutionised how people travel and navigate urban environments. By offering greater convenience, efficiency, and accessibility, these innovations have transformed the travel experience for millions of users worldwide and continue to drive advancements in mobility and urban transportation systems.

Accommodation Enhancements through Technology

In today's digital age, technology has transformed the hospitality industry, revolutionising how accommodations are booked, experienced, and enjoyed by tourists worldwide (Buhalis et al., 2019). From the convenience of online booking platforms to the immersive experiences offered by virtual tours and augmented reality and the innovative features of smart hotels, technology has enhanced every aspect of the accommodation experience.

Online booking platforms have become the go-to method for tourists to search for and reserve accommodations. Websites and mobile applications such as Booking.com, Airbnb, Expedia, and Hotels.com offer users a vast selection of hotels, vacation rentals, and other lodging options, along with detailed descriptions, photos, reviews, and pricing information. These platforms allow tourists to browse and book accommodations from the comfort of their homes or on the go, eliminating the need to visit multiple websites or contact individual hotels directly (Gössling & Lane, 2015). Moreover, online booking platforms often feature advanced search filters and recommendation algorithms that help users find accommodations tailored to their preferences, budgets, and travel dates. Many platforms offer secure payment processing and flexible cancellation policies, giving tourists peace of mind when making reservations.

Virtual tours and augmented reality (AR) have transformed how tourists explore and experience accommodations before booking. Virtual tours allow users to virtually navigate through hotel rooms, lobbies, amenities, and surrounding areas using interactive 360-degree panoramic images or videos (Cha et al., 2023). These immersive experiences give tourists a realistic sense of the layout, design, and ambience of accommodations, enabling them to make more informed booking decisions. Similarly, augmented reality (AR) technology enhances the visualisation of accommodations by overlaying digital information, such as virtual furniture, decor, or amenities, onto real-world environments captured through a smartphone or tablet camera. This lets tourists virtually “try before they buy” and envision themselves staying in a hotel room or vacation rental, enhancing their confidence and satisfaction with their booking choices (Slevitch et al., 2022). Moreover, virtual tours and AR experiences can be accessed through websites, mobile apps, or wearable devices, making them accessible to tourists anytime, anywhere.

Smart hotel features leverage the power of technology to enhance the comfort, convenience, and efficiency of the guest experience. Smart hotel features offer guests a seamless and tailored stay, from keyless entry and in-room automation to personalised services and IoT (Internet of Things) connectivity (Das, 2023). Keyless entry systems, such as mobile vital apps or RFID (Radio Frequency Identification) wristbands, allow guests to bypass traditional check-in procedures and access their

rooms using their smartphones or wearable devices, improving security and streamlining the arrival process. In-room automation systems enable guests to control lighting, temperature, entertainment, and other amenities through voice commands or mobile apps, providing a personalised and intuitive experience. Furthermore, smart hotels utilise data analytics and artificial intelligence (AI) algorithms to anticipate guest preferences and deliver personalised recommendations, offers, and services throughout their stay (Das, 2023). Whether recommending nearby restaurants, arranging transportation, or fulfilling special requests, innovative hotel features aim to exceed guest expectations and enhance overall satisfaction.

Technology has revolutionised how accommodations are booked, experienced, and enjoyed by tourists worldwide. From the convenience of online booking platforms to the immersive experiences offered by virtual tours and augmented reality and the innovative features of smart hotels, technology has enhanced every aspect of the accommodation experience. By leveraging advanced technologies, hospitality providers can create more seamless, personalised, and memorable stays for their guests, driving greater satisfaction, loyalty, and revenue in the competitive hospitality industry.

Digital Communication and Information Tools

In today's interconnected world, digital communication and information tools have become indispensable for tourists seeking seamless and convenient experiences (Buhalis et al., 2011). From breaking down language barriers with translation apps to facilitating secure transactions with mobile payment solutions and staying connected with loved ones through social media platforms, these technologies are crucial in enhancing the travel experience.

Translation apps have revolutionised how tourists communicate and interact with people from different linguistic backgrounds (Karusala et al., 2018). Platforms such as Google Translate, Microsoft Translator, and iTranslate enable users to instantly translate text, speech, and images between multiple languages. Whether deciphering street signs, ordering at restaurants, or asking for directions, translation apps provide tourists with a convenient and reliable tool to overcome language barriers and navigate unfamiliar environments. Moreover, many translation apps offer offline functionality, allowing users to access translations even when they do not have an internet connection, making them invaluable companions for international tourists. Additionally, some apps offer advanced features such as real-time conversation translation, voice recognition, and language detection, further enhancing the accuracy and versatility of translation services. Overall, translation apps empower tourists to communicate confidently and effectively in any language, opening up new possibilities for cultural exchange and connection during their journeys.

Mobile payment solutions have transformed how tourists manage their finances and make purchases while on the go. With the rise of digital wallets, contactless payments, and mobile banking apps, tourists can now securely and conveniently pay for goods and services using their smartphones or other mobile devices (Bezovski, 2016). Platforms such as Apple Pay, Google Pay, Samsung Pay, and PayPal offer users a seamless and secure way to store payment information, make transactions, and track spending in real time. Whether booking flights, reserving accommodations, or shopping at local markets, mobile payment solutions enable tourists to streamline their financial transactions and reduce the need to carry cash or multiple credit cards. Moreover, mobile payment technologies continue to evolve, introducing features such as peer-to-peer payments, loyalty rewards, and integration with transportation systems, further enhancing the convenience and utility of digital payment methods for tourists. As mobile payment solutions become increasingly widespread and accepted worldwide, they are poised to become the preferred choice for tourists seeking a fast, secure, and hassle-free way to manage their finances.

Social media platforms have become essential for tourists to share their experiences, connect with others, and discover new destinations and activities. Platforms such as Facebook, Instagram, Twitter, and YouTube serve as virtual travel guides, allowing users to access a wealth of travel inspiration, tips, and recommendations from fellow tourists, influencers, and brands (Dimitriou & AbouElgheit, 2019). Through photos, videos, and personal anecdotes, tourists can showcase their adventures, document their experiences, and inspire others to explore the world. Moreover, social media platforms offer a platform for tourists to connect with locals, seek expert advice, and join online communities dedicated to specific destinations or travel interests. Whether it is sharing travel itineraries, seeking restaurant recommendations, or finding travel companions, social media platforms facilitate meaningful interactions and collaborations among tourists from diverse backgrounds and interests. Furthermore, travel brands and businesses leverage social media platforms to engage with customers, promote their products and services, and cultivate brand loyalty through targeted advertising, influencer partnerships, and user-generated content (Gabelaia & McElroy, 2023). As social media continues to evolve and integrate new features such as live streaming, augmented reality, and virtual reality, it will continue to shape how tourists plan, experience, and share their journeys with the world. Digital communication and information tools enhance modern-day tourists' travel experience (Zheng et al., 2022). Whether it is breaking down language barriers with translation apps, managing finances with mobile payment solutions, or connecting with others through social media platforms, these technologies empower tourists to navigate the world with confidence, convenience, and connectivity. As technology continues to evolve and innovate, it will undoubtedly play an increasingly important role in shaping the future of travel, enabling tourists to explore new destinations,

forge meaningful connections, and create unforgettable memories wherever their adventures take them.

Personalised Experiences and Recommendation Systems

Personalised experiences and recommendation systems have become integral components of modern travel, catering to the unique preferences and interests of individual tourists (Wang, 2020). Advanced algorithms, data analytics, machine learning techniques, travel recommender systems, personalised itinerary planning apps, and geo-targeted offers and discounts aim to enhance the travel experience by providing tailored recommendations, curated itineraries, and exclusive deals.

Travel recommender systems leverage user data, historical preferences, and collaborative filtering algorithms to deliver personalised accommodations, activities, and attractions recommendations. Platforms like TripAdvisor, Airbnb, and Netflix analyse user behaviour, search patterns, and ratings to generate customised suggestions matching each tourist's preferences and interests. By considering destination, budget, travel dates, and past experiences, travel recommender systems help users discover new destinations, find hidden gems, and make informed travel plans. Moreover, some recommender systems incorporate social networking features, allowing users to see recommendations from friends, family, and fellow tourists, further enhancing the relevance and credibility of the suggestions. Overall, travel recommender systems empower tourists to explore new horizons, discover unique experiences, and create memorable journeys tailored to their tastes and preferences.

Personalised itinerary planning apps offer tourists a convenient and efficient way to organise and optimise their travel plans (Chiang & Huang, 2015). Platforms like TripIt, Sygic Travel, and Google Trips enable users to create customised itineraries, track reservations, and access real-time information about flights, accommodations, and activities in one centralised hub. These apps automatically generate detailed itineraries by syncing with email accounts, calendars, and booking confirmations and provide personalised recommendations based on user preferences, interests, and available time. Additionally, some itinerary planning apps offer offline access, map integration, and collaborative sharing, allowing users to access their plans anytime, anywhere, and collaborate with travel companions. Whether exploring famous landmarks, trying local cuisine, or embarking on off-the-beaten-path adventures, personalised itinerary planning apps empower tourists to maximise their time, discover new experiences, and create seamless travel experiences tailored to their unique interests and preferences.

Geo-targeted offers and discounts leverage location-based technology and data analytics to deliver targeted promotions, deals, and incentives to tourists based on their current location or travel history (Fong et al., 2015). Platforms like Groupon,

Expedia, and Airbnb use geolocation data, user profiles, and purchase history to offer personalised discounts, special offers, and exclusive experiences tailored to each tourist's preferences and behaviour. By identifying nearby attractions, restaurants, and activities, geo-targeted offers and discounts encourage tourists to explore their surroundings, discover new experiences, and take advantage of exclusive deals available only to them. Moreover, some platforms use push notifications, email alerts, and in-app messages to notify users of relevant offers and promotions in real-time, increasing engagement and conversion rates. Overall, geo-targeted offers and discounts provide tourists with added value, savings, and incentives to enhance their travel experiences and make the most of their journeys.

Personalised experiences and recommendation systems have transformed how tourists discover, plan, and enjoy their journeys (Kabassi, 2010). Whether receiving customised recommendations from travel recommender systems, organising and optimising travel plans with personalised itinerary planning apps or accessing exclusive deals and discounts through geo-targeted offers, these technologies empower tourists to create memorable and fulfilling experiences tailored to their preferences and interests. As technology continues to evolve and innovate, personalised experiences and recommendation systems will play an increasingly important role in shaping the future of travel, enabling tourists to explore new destinations, connect with local culture, and create unforgettable memories wherever their adventures take them.

Enhancing Cultural and Leisure Experiences

Enhancing cultural and leisure experiences through technology has become increasingly prevalent in the travel industry, offering tourists innovative ways to immerse themselves in destinations' rich heritage and vibrant culture. Technology has transformed how tourists engage with and appreciate cultural attractions, from virtual reality (VR) cultural experiences to the gamification of cultural heritage sites and mobile apps for local events and activities.

Virtual reality (VR) cultural experiences offer tourists an immersive and interactive way to explore museums, historical sites, and cultural landmarks from the comfort of their homes or while travelling (Pillai & Sivathanu, 2020). VR technology allows users to don a headset and enter a virtual environment to walk through ancient ruins, examine priceless artefacts, and interact with lifelike representations of historical figures and events. Platforms such as Google Arts & Culture, Oculus Rift, and HTC Vive offer a wide range of VR experiences that transport users to iconic cultural destinations worldwide, providing a deeper understanding and appreciation of different cultures and civilisations. Moreover, VR cultural experiences can be accessed through VR headsets, mobile apps, or web browsers, making them accessible to tourists of all ages and backgrounds (Bekele et al., 2018). By bringing

cultural attractions to life in a virtual space, VR technology enables tourists to explore the world's cultural heritage in an immersive and engaging manner, fostering a greater sense of connection and empathy with the past.

The gamification of cultural heritage sites incorporates gameplay, storytelling, and interactivity elements to enhance the visitor experience and encourage deeper engagement with historical and cultural landmarks (Khan et al., 2020). Gamification techniques such as scavenger hunts, augmented reality (AR) challenges, and interactive exhibits transform traditional tourist attractions into dynamic and entertaining experiences that appeal to tourists of all ages (Pillai & Sivathanu, 2020). For example, mobile apps such as Pokémon GO and ARtours guide users on virtual treasure hunts through city streets, parks, and landmarks, where they can discover hidden gems, solve puzzles, and unlock digital rewards. Similarly, heritage sites and museums incorporate gamified experiences such as interactive exhibits, themed trails, and digital storytelling installations to engage visitors and make learning about history and culture more fun and memorable (Othman et al., 2021). By combining technology with gamification, cultural heritage sites can attract new audiences, encourage repeat visits, and foster a deeper appreciation for the significance of historical and cultural landmarks in society.

Mobile apps for local events and activities offer tourists a convenient and personalised way to discover and participate in cultural events, festivals, and recreational activities in destinations around the world (Luxford & Dickinson, 2015). From live music concerts and art exhibitions to food festivals and outdoor adventures, mobile apps provide users with up-to-date information, schedules, and recommendations for local events and activities happening in their vicinity. Platforms such as Eventbrite, Meetup, and TripAdvisor offer comprehensive listings of events, attractions, and experiences tailored to each user's interests, preferences, and location. Moreover, many mobile apps feature social networking, allowing users to connect with like-minded tourists, join group activities, and share their experiences with friends and followers. By harnessing the power of mobile technology, local event apps empower tourists to immerse themselves in the cultural fabric of a destination, discover hidden gems, and connect with local communities in meaningful and authentic ways. Whether attending a traditional dance performance, sampling street food at a night market, or exploring nature trails in a national park, mobile apps provide tourists endless opportunities to explore and experience the rich cultural tapestry of destinations worldwide.

Technology has revolutionised how tourists engage with and appreciate cultural and leisure experiences, offering innovative solutions that enhance immersion, interactivity, and personalisation. Whether through virtual reality (VR) cultural experiences, the gamification of cultural heritage sites, or mobile apps for local events and activities, technology enables tourists to explore the world's cultural heritage in

new and exciting ways (Othman et al., 2021). As technology evolves and innovates, cultural and leisure experiences will become increasingly immersive, interactive, and accessible, enriching the travel experience and fostering a deeper appreciation for the diversity and richness of cultures worldwide.

Sustainability and Responsible Tourism Technologies

Sustainability and responsible tourism have become increasingly important considerations in the travel industry as concerns about environmental conservation and social responsibility continue to grow (Mihalic, 2016). In response to these challenges, various technologies have emerged to promote eco-friendly practices, reduce carbon footprints, and support sustainable tourism initiatives.

Eco-friendly transportation options are essential to sustainable tourism, offering tourists environmentally friendly alternatives to traditional modes of transportation such as cars and aeroplanes (Olszewski-Strzyżowski, 2022). Electric vehicles (EVs), hybrid cars, bicycles, and electric scooters are eco-friendly transportation options that help reduce greenhouse gas emissions, minimise air pollution, and alleviate traffic congestion in popular tourist destinations. Moreover, initiatives such as bike-sharing programs, carpooling services, and shuttle buses powered by renewable energy sources provide tourists convenient and affordable ways to explore destinations while minimising their carbon footprint (Gordon, 2023). By embracing eco-friendly transportation options, tourists can contribute to preserving natural resources, protecting fragile ecosystems, and supporting local communities while enjoying sustainable travel experiences.

Carbon footprint calculators enable tourists to measure, track, and offset their carbon emissions associated with travel activities such as flights, accommodation, and transportation (Barret, 2020). These calculators use algorithms and data inputs such as distance travelled, fuel consumption, and energy usage to estimate the carbon dioxide (CO₂) emissions generated by individual travel itineraries. Travelers can then use this information to make informed decisions about their travel plans, such as choosing more sustainable transportation options, staying at eco-friendly accommodations, or participating in carbon offset programs. Moreover, some carbon footprint calculators offer personalised recommendations for reducing emissions, educational resources on climate change and sustainability, and links to carbon offset projects that support renewable energy, reforestation, and conservation efforts worldwide. By raising awareness and promoting accountability for carbon emissions, carbon footprint calculators empower tourists to minimise their environmental impact and make responsible choices that contribute to a more sustainable tourism industry.

Sustainable tourism apps and platforms are digital tools that promote environmentally friendly practices, support local communities, and facilitate responsible travel experiences (Bhuiyan et al., 2022). These apps and platforms give tourists access to information, resources, and services, prioritising sustainability and social responsibility. For example, platforms such as Responsible Travel, Ecobnb, and Green Key offer curated listings of eco-friendly accommodations, tours, and activities that adhere to sustainable tourism principles such as resource conservation, waste reduction, and community engagement. Moreover, sustainable tourism apps and platforms often feature user-generated content, reviews, and ratings to help tourists make informed decisions about their travel plans and share their experiences with like-minded individuals. By promoting sustainable tourism practices and supporting responsible travel initiatives, these apps and platforms empower tourists to minimise their environmental footprint, preserve cultural heritage, and promote social equity while enjoying authentic and meaningful travel experiences.

Sustainability and responsible tourism technologies are vital in promoting environmental conservation, social responsibility, and sustainable development in the travel industry (Streimikiene et al., 2021). Whether it is through eco-friendly transportation options, carbon footprint calculators, or sustainable tourism apps and platforms, these technologies empower tourists to make informed decisions, reduce their environmental impact, and support local communities while enjoying memorable and responsible travel experiences. As sustainability continues to be a top priority for tourists and tourism stakeholders alike, adopting and integrating these technologies will be crucial in shaping the future of travel toward a more sustainable and resilient industry.

CHALLENGES AND FUTURE DIRECTIONS

In the ever-evolving landscape of bleisure tourism, challenges and opportunities shape its trajectory. From addressing the digital divide and accessibility issues to navigating data privacy and security concerns and exploring emerging technologies and trends, bleisure tourism's future is dynamic and complex.

The digital divide remains a significant challenge in ensuring equitable access to bleisure travel opportunities. While technology has facilitated connectivity and convenience for many, disparities in access to digital resources persist among different demographic groups and geographic regions. Socioeconomic factors, including income level, education, and infrastructure development, determine individuals' access to technology and the internet (Hargittai et al., 2019). Addressing the digital divide requires concerted efforts from governments, businesses, and civil society to invest in infrastructure, provide digital literacy training, and bridge the gap between

urban and rural areas. By promoting digital inclusion and accessibility, stakeholders can ensure that all tourists can participate in bleisure tourism activities and benefit from its advantages.

Tene (2011) stated that data privacy and security concerns loom large in an increasingly interconnected world, where personal information is often shared and stored across various digital platforms and devices. As tourists engage with online booking platforms, mobile apps, and social media platforms to plan and document their bleisure experiences, they entrust their sensitive data to third-party providers. However, data breaches, identity theft, and privacy violations pose significant risks to tourists' personal and financial information. Moreover, the proliferation of location-based services and data-tracking technologies raises ethical questions about surveillance and consent (Abbas et al., 2014). To address these concerns, policymakers must enact robust data protection regulations, and businesses must implement stringent security measures and transparent data practices. Additionally, tourists should exercise caution when sharing personal information online and familiarise themselves with privacy settings and data management tools to safeguard their privacy and security while enjoying bleisure travel.

In addition, emerging technologies and trends promise to reshape the landscape of bleisure tourism and enhance the travel experience for modern-day tourists. Virtual reality (VR), augmented reality (AR), and artificial intelligence (AI) are poised to revolutionise how tourists explore destinations, interact with cultural attractions, and plan their leisure activities. VR and AR technologies offer immersive and interactive experiences that allow tourists to virtually visit museums, historical sites, and natural wonders from anywhere in the world. AI-powered chatbots and virtual assistants provide tourists with personalised recommendations, itinerary suggestions, and real-time assistance, enhancing convenience and efficiency throughout their journey (Pillai & Sivathanu, 2020). Furthermore, blockchain technology has the potential to improve transparency, security, and trust in the travel industry by enabling secure transactions, digital identity verification, and decentralised booking platforms (Banerji et al., 2021). As these technologies mature and become more accessible, they will shape the future of bleisure tourism by offering tourists new ways to explore, connect, and experience the world.

Bleisure tourism presents a unique blend of opportunities and challenges as it continues to evolve in response to changing travel preferences, technological advancements, and global trends. Addressing issues such as the digital divide and accessibility, data privacy and security while harnessing the potential of emerging technologies will be crucial in shaping the future of bleisure tourism and ensuring that it remains accessible, inclusive, and sustainable for all tourists. By embracing innovation, promoting responsible practices, and fostering collaboration across

stakeholders, the future of bleisure tourism holds great promise in delivering enriching and memorable experiences for tourists around the globe.

DISCUSSION

The study surrounding the intersection of technology and tourism, particularly in the context of bleisure travel, is multifaceted and dynamic. As outlined in the preceding sections, technology plays a pivotal role in shaping the landscape of modern travel, offering both opportunities and challenges for tourists, businesses, and destination communities.

Digital communication and information tools have revolutionised how tourists plan, book, and experience their journeys (Pencarelli, 2020). Technology has empowered tourists with unprecedented access to information, convenience, and personalised experiences, from online booking and navigation apps to social media and translation apps. However, as highlighted, disparities in access to technology and concerns about data privacy and security persist, posing barriers to digital inclusion and raising ethical considerations about using personal data in the travel industry.

Moreover, the emergence of sustainability and responsible tourism technologies underscores a growing awareness of travel's environmental and social impacts. Eco-friendly transportation options, carbon footprint calculators, and sustainable tourism apps offer tourists tools to make more responsible choices and reduce their environmental footprint. However, challenges such as the digital divide and accessibility issues remain, as not all tourists have equal access to these technologies and resources. Furthermore, the ethical implications of data privacy and security in sustainability initiatives raise questions about transparency, consent, and accountability in collecting and using personal data for sustainability purposes.

Looking to the future, emerging technologies such as virtual reality (VR), augmented reality (AR), and artificial intelligence (AI) hold immense potential to transform the bleisure travel experience (Balasubramanian et al., 2022). VR and AR technologies offer immersive and interactive experiences that allow tourists to explore destinations, interact with cultural attractions, and engage in virtual tourism from anywhere in the world. AI-powered chatbots and virtual assistants provide personalised recommendations, itinerary suggestions, and real-time assistance, enhancing convenience and efficiency throughout the travel journey (Pillai & Sivathanu, 2020). Additionally, blockchain technology has the potential to revolutionise the travel industry by enabling secure transactions, digital identity verification, and decentralised booking platforms, fostering trust and transparency in travel transactions.

The discussion on technology and bleisure tourism is characterised by a complex interplay of opportunities and challenges. While technology can enhance the travel experience, promote sustainability, and drive innovation in the tourism industry, it also presents risks related to digital inclusion, data privacy, and ethical considerations. Moving forward, stakeholders in the travel industry need to embrace responsible practices, prioritise digital inclusion and accessibility, and navigate the ethical implications of emerging technologies to ensure that bleisure travel remains accessible, inclusive, and sustainable for all tourists. By fostering collaboration, innovation, and accountability, the future of bleisure tourism holds great promise in delivering enriching and memorable experiences for tourists worldwide.

Implications for Bleisure Tourism in Malaysia

The findings discussed have several implications for bleisure tourism in Malaysia. As a popular tourist destination known for its cultural diversity, natural beauty, and vibrant urban centres, Malaysia benefits from leveraging technology to enhance the bleisure travel experience. By embracing digital communication and information tools, Malaysian tourism stakeholders can improve the accessibility and convenience of bleisure travel for visitors. Online booking platforms, navigation apps, and translation tools can help tourists easily navigate the country's diverse attractions and engage in leisure activities.

Furthermore, Malaysia can position itself as a leader in sustainable tourism by adopting eco-friendly transportation options, promoting carbon offset initiatives, and supporting sustainable tourism practices. By investing in renewable energy, conservation efforts, and community engagement, Malaysia can attract environmentally conscious tourists and showcase its commitment to sustainability. Additionally, Malaysia can capitalise on emerging technologies such as VR, AR, and AI to offer tourists unique and immersive bleisure experiences. By integrating these technologies into cultural attractions, heritage sites, and leisure activities, Malaysia can differentiate itself as a cutting-edge destination and appeal to tech-savvy tourists seeking memorable and innovative experiences.

Recommendations for Future Research and Industry Practice

There are several recommendations for future research and industry practice in bleisure tourism. Firstly, further research is needed to explore the impact of technology on tourist behaviour, preferences, and satisfaction in the context of bleisure travel. By understanding the motivations and expectations of bleisure tourists, tourism stakeholders can tailor their offerings and experiences to meet the evolving needs of this segment. Additionally, there is a need for more comprehensive data

collection and analysis regarding the environmental and social impacts of bleisure travel. Tourism stakeholders can assess sustainability initiatives' effectiveness and identify areas for improvement by measuring and monitoring factors such as carbon emissions, resource consumption, and community engagement.

Furthermore, industry collaboration and knowledge sharing drive innovation and best practices in bleisure tourism. Malaysia can create a supportive ecosystem for technological innovation, sustainability initiatives, and responsible tourism practices by fostering partnerships between government agencies, tourism boards, businesses, and academia. Technology can enhance the bleisure travel experience, promote sustainability, and drive innovation in the tourism industry. By embracing digital communication tools, sustainability initiatives, and emerging technologies, Malaysia can position itself as a leading destination for bleisure tourists, offering unique, memorable, and responsible experiences that showcase the country's cultural heritage, natural beauty, and technological prowess.

CONCLUSION

The exploration of technology's influence on enriching bleisure tourism experiences in Malaysia unveils a multifaceted landscape where innovation intersects with tradition, sustainability intersects with convenience, and personalisation intersects with responsibility. Throughout this chapter, we have delved into how technology is reshaping the bleisure travel experience, from the convenience of online booking platforms to the immersive potential of virtual reality cultural experiences. Let us now reflect on the critical insights gained and the implications for bleisure tourism in Malaysia. Technology has undeniably democratised travel, making it more accessible, convenient, and personalised for a broader range of tourists. Online booking platforms, navigation apps, and translation tools have empowered tourists to explore destinations and engage in leisure activities easily, transcending language barriers and logistical challenges. In Malaysia, where cultural diversity and natural beauty abound, leveraging these digital communication tools can enhance the bleisure travel experience, allowing visitors to immerse themselves in the country's rich tapestry of sights, sounds, and flavours.

Sustainability has emerged as a paramount consideration in the tourism industry, driven by growing environmental awareness and the need to preserve natural resources for future generations. Eco-friendly transportation options, carbon footprint calculators, and sustainable tourism apps offer tourists the tools to make more responsible choices and support sustainable tourism initiatives. In Malaysia, with its lush rainforests, pristine beaches, and diverse ecosystems, embracing sustainable tourism practices is essential for preserving the country's natural heritage and

attracting environmentally conscious tourists who seek authentic and eco-friendly experiences. Moreover, emerging technologies such as virtual reality, augmented reality, and artificial intelligence hold immense potential to transform the bleisure travel experience, offering travelers new ways to explore destinations and engage with cultural attractions. By integrating these technologies into cultural sites, heritage trails, and leisure activities, Malaysia can offer immersive and innovative experiences that captivate and inspire visitors while showcasing the country's technological prowess and commitment to innovation. Looking ahead, there are several recommendations for future research and industry practice to enhance the bleisure tourism experience in Malaysia further. Firstly, continued research is needed to understand better the motivations, preferences, and behaviours of bleisure tourists, enabling tourism stakeholders to tailor their offerings and experiences to meet the evolving needs of this segment. Additionally, more comprehensive data collection and analysis are required to assess the environmental and social impacts of bleisure travel and to identify opportunities for improvement and innovation.

Furthermore, industry collaboration and knowledge sharing drive innovation and sustainability in bleisure tourism. Malaysia can create a supportive ecosystem for technological innovation, sustainability initiatives, and responsible tourism practices by fostering partnerships between government agencies, tourism boards, businesses, and academia. By embracing technology, sustainability, and innovation, Malaysia can position itself as a leading destination for bleisure tourists, offering unique, memorable, and responsible experiences that showcase the country's cultural heritage, natural beauty, and technological prowess. Technology can enrich the bleisure travel experience in Malaysia, offering convenience, sustainability, and innovation in equal measure. By leveraging digital communication tools, embracing sustainable tourism practices, and embracing emerging technologies, Malaysia can create a vibrant and inclusive bleisure tourism ecosystem that delights tourists, supports local communities, and preserves the country's natural and cultural heritage for future generations.

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