

Smart Technologies and Tour Guides Beyond COVID-19

Gül Erkol Bayram, Jeetesh Kumar and Anukrati Sharma

Abstract

Tourist guides, one of the important service providers of tourism, have effected greatly by smart tourism technology during the COVID-19 period. It is thought that this trend will continue to increase in the future. Also, there are some challenges of smart tourism post pandemic on tour guides. In this context, the study aims to examine the levels of utilization of smart tourism applications by tourist guides, their activities in the COVID-19 period, and the transformation that tour guiding will undergo in the future. Within the scope of the study, existing smart tourism applications used in tours were examined with opportunities and challenges sides. In addition, the reflection of the guided cultural tours in the future was evaluated.

Keywords: COVID-19 pandemic; smart tourism; tour guides; smart tools; smart cultural tourism; tourism recovery

Introduction

Industry 4.0 which is a concept that has been frequently on the agenda in recent years and has led to concepts such as the internet of generations, artificial intelligence, sensors, cognitive technologies, nanotechnology, internet service, quantum computing, wearable technologies, augmented reality, smart cities, big data, 3D, and smart grid. After COVID-19, many areas such as education, trade, economy, and culture, especially in the health sector, have transformed with different aspects. Many services are now offered online. However, in the tourism sector, which acts together with technology, there have been some serious changes. Industry 4.0, a new era that brings significant changes in our lifestyle, economy, and society, has started with the introduction of new generation technologies such as the internet of things, artificial intelligence, virtual reality, and robots. With the rapid advancement of technology nowadays, most people

Resilient and Sustainable Destinations After Disaster, 241–250

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doi:[10.1108/978-1-80382-021-720231017](https://doi.org/10.1108/978-1-80382-021-720231017)

depend heavily on and rely on the internet to get information when traveling anywhere because of its use has penetrated deeply into people's lives. Another reason for using the internet is that it makes travel planning and traveling easier and more convenient. For example, travel planning can be done using smartphones and applications, and at the same time instant travel needs can be met. Thus, next-generation technologies play a critical role in the travel and tourism industry. [Huanga, Gooa, Namb, and Yoo \(2017\)](#) emphasize that tourists are fully adapted to the use of online tools to facilitate their travel in terms of information search, travel planning, and booking procedures.

[Huanga et al. \(2017\)](#) state that tourists have fully adapted to the use of online tools to facilitate their travel in terms of information search, travel planning, and booking procedures. Currently, the vast majority of the travel preparation phase consists of internet searches for information, booking, and payment. The internet and some mobile applications provide tourists with rich, diverse, and useful information because they are easily accessible ([Huanga et al., 2017](#)). These developments show that the tourism industry is highly influenced by innovations in information and communication technologies ([Avdimiotis et al., 2009](#); [Bahar, Yüzbaşıoğlu, & Topsakal, 2019](#)). Technology also supports tourism development in various ways ([Garda & Temizel, 2016](#)). Technology usage rates are increasing in most popular destinations. On the other hand, tourist guides are also known to play an important role in tourism ([Chilembwe & Mweiwa, 2014](#)). Although technological developments are increasing, human is accepted as the most important element in the tourism industry, where the service to people is essential and therefore a labor-intensive structure is exhibited ([Solmaz & Erdoğan, 2014](#), p. 562). Also, Guide–tourist interaction emerges in tour programs ([Eser, Çakıcı, Babat, & Kızılırmak, 2019](#)). Tourist guides, one of the important service providers of tourism, have benefited greatly from technology during the COVID-19 period. It is thought that this trend will continue to increase in the future. In this context, the study aims to determine the level of utilization of smart tourism applications by tourist guides, their activities in the COVID-19 period and transformation that the profession will undergo in the future are to examine. Within the scope of the study, existing smart tourism applications used in tours were examined. In addition, the reflection of the guided cultural tours in the future was evaluated.

Literature Review

General View of Tour Guides

A tour guide explains his country and region to tourists, enables tourists to experience the historical, natural, and cultural accumulation of this region, helps them in many matters during their trips, takes care of them, gives accurate and complete information, and has the authority given by the Ministry of Culture and Tourism ([Köroğlu, 2013](#)). Tourist guides are a professional group that help guests during the tour, convey and make sense of the cultural and historical accumulation of its country, strengthen communication by building a bridge between local people and tourists, protect intangible and tangible heritage, and develop the

awareness of conservation, develop a positive image and provide repeat visitation. In cultural tours, tourist guides not only who are interested with guests from the beginning to the end of the tour, or translate the language, but also help to ensure that tourists define and experience the culture visited and are informed about the natural, historical, and cultural history of that region (Erkol Bayram, 2016). According to the definition of the World Federation of Professional Tourist Guide Associations (WFTGA), “a tourist guide is a person who guides group or individual visitors from home or abroad to monuments, museums, the natural and cultural environment and historical places in a region or city in a language of their choice and conveys them to the visitors with an entertaining interpretation.” Tourist guiding is an educational activity in which the ability to interpret has an important share (Rabotić, 2011).

According to Erkol Bayram (2017), a tour guide is a professional group that helps tourists with many issues during the tour, conveys the historical, natural, and cultural issues of its country and region most accurately and effectively, initiates and strengthens the communication process with local people and tourists, has a great role in the development of intangible and tangible heritage, is a leader to tourists for protecting the cultural and natural resources, and makes a great contribution to the development and strengthening of the positive image. In the tours carried out by the tourist guide in the travel agency, tour guides often take part in the tours on behalf of the travel agency with the tourists throughout the tour and deal with them on many issues, successfully undertaking many tasks such as translation, cultural brokerage, teaching, mediation, and leadership. Tourist guides, tour managers, and group leaders in charge of the realization of the tour program accompanying a group during the trip, such as field guides, and legal or routine procedures are confused with other sector workers who do or help them do it on their behalf (Türkmen, 2017, p. 914). A tourist guide is a professional group that includes many subjects and areas of expertise. They should be a psychologist when they see a worried tourist, an anthropologist when they see a tourist who is curious about cultures, and an archeologist when they see a tourist who has no ancient city left in his life and whose field of interest is the Sarcophagus. In addition to these, the tourist guide in general terms; must take responsibility for the tour during the tour, perhaps be a good educator as if they were telling someone who has never visited a museum in his life, be a friendly, hospitable, tolerant, unique host as if tourists had come to his own home, and he should know and be aware of where and when to use these skills (Ak, Kargiglioglu, & Bayram, 2019, p. 24; Ap & Wong, 2001).

Smart Tourism and Tour Guides: Issues, Challenges, and Opportunities

In general terms, smart tourism is a type of tourism supported by efforts in a city to collect data from physical infrastructure, social connections, state/organization resources, and the human mind. In addition, smart tourism includes tourism activities supported by ICT and smart technology. Smart tourism is a tourism

system that uses smart technologies to create, manage, and deliver touristic experiences. It is defined as a tourism system that benefits from smart technologies. Smart tourism is different from smart destinations. Because smart tourism serves not only local people but also tourists, it also works for the benefit of tourists. Smart tourism is an important and triggering element for sustainable tourism. Because many tools that provide tourist satisfaction in a destination are available in smart tourism (Gretzel, Werthner, Koo, & Lamsfus, 2015). Smart tourism is defined as tourism which is based on the development of innovative mobile communication technologies and combines tourism resources with information communication technologies (ICTs) such as the internet of things, cloud computing, and artificial intelligence to provide accurate information and better service to tourists (Karamustafa & Yilmaz, 2019; Wang, Li, Zhen, & Zhang, 2016; Zhang, Li, & Liu, 2012). Smart tourism has created major changes in tourist behavior. In the tourist typology, a segment that is now accepted as the new tourist has been formed and the name is called “super-smart tourist.” Among the most basic needs of these tourists are the weather, emergency numbers, Wi-Fi map, tourism information offices, hospitals, local governments, metro, buses, bicycles, tourist buses, railways, airports, road data, information about hotels, museums, tourist attractions, entertainment, and restaurants (Mussina & Oryngazhiyeva, 2018). The expectations of super-smart tourists are as follows (Wang et al., 2016 cited, Bahar et al., 2019);

- These tourists usually do their shopping online.
- They design travels online and schedule them on online platforms.
- They prefer the most practical, fast, and costly one to save time.
- They compare prices with different sites before buying travel products.
- It communicates with virtual travel communities and prefers to act together in a possible problem.

Although today’s smart tourist prefers online platforms, the need for a tourist guide will exist now and in the future. Tourist guides are an indispensable part of cultural tours with leader, mediator, ambassador, and director roles (Zhang & Chow, 2004). They act as a bridge between the local population and the tourist group, especially in the destination visited by the tourists, by mediating the group of tourist guides (Howard, Smith, & Twaithes, 2001). However, the adaptation of tourist guides to the changing tourism services with technology is necessary for the sustainability of their professions. For example, thanks to technology, tourists can get information about the hotel they will stay in before going on a tour from the hotel’s social media account and read the comments written by users about the hotel. Also, tourists quickly review good or bad reviews about the tour guide and travel agencies from complaint sites. Today, tourist guides should not be satisfied with classical methods, but also with devices such as smartphones, mobile technologies, tablets, mobile applications, GPS, and microphones to make their tour more interesting (Tekin, Bideci, & Avcıkurt, 2017). In this context, it is possible to express smart tourism applications, which can be the biggest assistant and the

biggest competitor of the tourist guide in cultural tours, as follows (Çapar & Karamustafa, 2018):

Mobile Tourist Guides is a smart mobile application that allows the tourist to access information at any time, from any place, using an environment during the holiday, to get information according to their interests, and to make tours individually (Schwinger, Grun, Proll, Retschitzegger, & Schauerhuber, 2005). Mobile guide applications report location with the help of GPS and provide photos, maps, and descriptions of the region visited, and tourists use this application in museums and archeological sites. Mobile guides, which have functional features, especially in travels abroad, have several disadvantages. Mobile guides do not provide culturally, sociologically, or anthropologically information about the region, archeological site, or museum, and in fact, it offers information that almost anyone can find on the internet only in the application. For cultural tourists participating in experience tourism, a qualified tourist guide offers a superior service that cannot be compared with the infrastructure of mobile guides (Tekin et al., 2017).

Electronic Guides (Audio Guides): It is the system where tourists access information about archeological artifacts in the language they choose with radio, podcast, and telephone applications in museums and ruins (Weiler & Black, 2015). Audio guides are not preferred by tourists due to their limited knowledge. Tourists have questions about museums and ruins. But audio guides cannot respond to this or interact with the tourist (Eser et al., 2019).

Virtual Museums: Virtual museums are collections of digitally recorded images, audio files, text documents, and other historical, scientific, and cultural data that can be accessed through electronic media. Virtual museums do not have the permanence and unique feature of the institutional definition of the concept of a museum since they do not accommodate real objects. The majority of virtual museums exists under the sponsorship of corporate museums and depends on the existing collections of these museums. Yet the hyperlinking and multimedia capabilities of electronic information media, particularly the World Wide Web, the hypermedia system that operates on the internet, are digitized representations that are largely assembled by individual users for entertainment and work purposes (Rodriguez, 2017). The new formation connected to the technology, which is called a virtual museum created using multimedia devices and advanced computer-aided technologies, can be explained as the digitization of museum collections, which are tangible (Cited by Kahraman, 2021). Especially during the COVID-19 period, many museums have been exhibited virtually. Tourist guides have advertised online to do virtual guidance on various platforms.

Mobile technologies and Smart Applications: Thanks to smartphones, which are one of today's important tools, tourist guides use applications such as messaging, web browsing, weather data, phone book, alarm, calculator, chronometer, agenda, voice recorder, notepad, GPS, compass, camera, and flashlight on a single device. It is a great opportunity that many arguments that

tourist guides should have with them during the tour are collected in one device. However, mobile technologies also offer great convenience for tourists (Düzgün, 2022).

Robotization: Robots used in different enterprises of tourism are not yet actively used in cultural tours. Also, it is assumed that if it is used, it can promote and direct museums and ruins in various languages in cultural tours. However, Boboc, Horatiu, and Talaba (2014) identified 27 ready-made robot tourist guides (Düzgün, 2022). If this number increases, tourist guides may face the danger of becoming unemployed.

Information Devices (info-kiosks): Kiosk is a system consisting of a microprocessor-controlled computer and touch screen that can be used comfortably in the outdoor environment. Kiosks, which are usually seen as information inquiry screens in museums, allow a visitor who has just entered the museum to have information about the whole museum (Harmankaya, 2010).

Augmented Reality: Augmented reality applications are related to the exhibition of the original state of the tangible and intangible cultural heritage elements of the past in museums and archeological sites with today's technology. In doing so, wireless connections are established with various devices such as digital cameras and GPS, and images are projected in three dimensions through computers, and the people who visit these places are tried to visualize them in their minds and to give the feeling of living in that period (Harmankaya, 2010). With such technological applications, it is aimed to establish a connection between visitors and cultural artifacts. Especially with augmented reality and virtual museum applications that provide distance from the routine in museums, the information that is pictorial or textual is almost three-dimensional with the help of virtual data. The cultural work is created as if it existed in the real environment (Styliani, Fotis, Kostas, & Petros, 2009 cited, Düzgün, 2022). According to United Nations reports, the average age of developed countries is increasing, birth rates are decreasing, and life expectancy is increasing. Generation Y is brave, a frequent traveler has a greater sense of wonder. This generation attaches more importance to the inner journey, to spiritualism. A guide who can be the answer to the inner quest is only possible with his knowledge and experience, and experience (Black & Weiler, 2005). Zători (2013) holds the view that developments in the modern digital world will allow the physical disappearance of tourist guides. Most importantly, the fact that access to information has become so easy, thanks to technology, can be considered as a sign that the ability of guides to transfer information should now pass to the dimension of "experience marketing" and the probability of guides finding a job in the market in the future can be measured by the quality and experience in the field of "experience marketing" mentioned above rather than information. However, smart tourism is of such dimensions that it can take the place of tourist guides in terms of navigation, access, translation, and expression (Arslantürk & Gül, 2019; Weiler & Black, 2015). Tourists use smart

tourism at almost every moment of their travel. Before the tour, they examine various travel blogs and social media platforms, do research, and shape their holiday plans after this research. In the survey of [Bayram, Ak, and Erkol Bayram \(2018\)](#), the top three social media tools that come to mind when it comes social media are Instagram, Facebook, and Twitter, and 89.8% of the participants are Instagram, 75.8% are Facebook, 58.5% are YouTube, 55% are Google+, and 50.3% are Twitter users. It was found that 57.6% of the participants spent 4–5 hours or more on social media. While 40.3% of the participants stated that they had previously made changes in their holiday plans by being influenced by social media, 60.3% stated that they could change their holiday plans by being influenced by social media. Tourists also have information about what to do at the destination they will visit, where to go, and what to eat through the same platforms. It is useful to emphasize the importance of the concepts of YouTuber and Instagrammable, which have increased recently, in travel preferences. Tourists rate and comment on the performance of tourist guides on web pages. So, tourist guides are better prepared for the tour, thanks to smart technologies. In addition, smartphones can communicate with travel businesses and other guides via WhatsApp and different platforms. Tourist guides facilitate their tour with a microphone, headset, navigation system, and tablets during the tour ([Çapar & Karamustafa, 2018](#)).

Conclusions and Discussions

Smart tourism often offers opportunities for the functions of guides to be fulfilled with information technologies. However, applications to information technologies should be considered as a supporting element for the presentation of tourist guides. Tourist guides need to be used as a tool to transform technological applications, tours, and narrations into more effective and enjoyable ones. It is considered a necessity for the guide to know the technological applications well and to support their narratives by using them actively for the contemporary tourists to be satisfied with their trips. In this way, guides will be able to find effective solutions to the problems they may encounter during the tour processes in a short time so that they can be effective on the tourists' holiday experiences. Although these practices seem interesting for tourists at first glance, tour guides' cultural background, knowledge, experience, and interpretation skills will ensure that the information is permanent ([Çapar & Karamustafa, 2019](#)). According to [Bahar et al. \(2019\)](#), smart tourism will see some changes for tour guides in the future. We can express them as follows;

- Smart tourist guides (applications) developed with new generation technologies will now be able to offer location-based guidance services to the visitor with more advanced software.
- Translation into alternative languages in a very short time through applications with very fast processors and guidance services in their language for tourists with different languages in the same group can be provided. For this reason, it

is very recently that the guidance service has become a service with a cultural content rather than a language-based service so that there is an adequate guidance certificate in any language. It will be possible for individuals to offer this service to everyone in the desired language.

- With the new generation of technologies, there will be a need for a visual guide instead of a physical guide. This emerging need will be able to be presented interactively in 3D through hologram guides.

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