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# Evaluation of digital tour guide technology and applications by professional tourist guides

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**Abstract.** This study aims to reveal the evaluation of digital tour guide technology and applications used in the tourism industry in terms of tour quality, visitor-digital guide interaction, and professional concerns of tourist guides. The data were collected from 14 professional tourist guides working in travel agencies that organize tours to Istanbul Topkapi Palace Museum, Istanbul Hagia Sophia Museum, Istanbul Archeology Museum, and Istanbul Chora Museum in Istanbul, Turkey. As a result, it has been determined that digital tour guide technology and applications cannot replace human guides but create professional concern for professional tourist guides.
**Keywords:** *tour guide technology and applications, tour quality, visitor-digital guide interaction, the professional concern of tourist guides.*

## Introduction

The first guides to written sources in the world are called Egyptian priests—however, BC. The Olympic Games, which started in the 7th century, became the beginning of organized travel and brought tourist guidance. In this period, reasons such as religion, commerce, and sports generally pushed people to travel. The Roman Empire can be shown as the civilization that traveled the most due to sports, religion, and commercial reasons in the pre-BC era. Thanks to the Olympic Games, which started in the 7th century BC, the travels organized for the participants and the public can be considered the beginning of today's organized travel. We can say that the philosopher Herodotus is seen as the ancestor of the translation profession, as he learned and conveyed the traditions, customs, and cultures of the places he visited and made both written and oral cultural expressions (Kara & Demir, 2021).

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Tour guiding, one of the essential tourism sector actors, can act as a bridge between destination management, visitors, museums-archaeological sites, and local businesses. A tourist guide, as a cultural ambassador of his country, bears responsibility for the cultural values he conveys to tourists and is the person who best interprets and promotes the historical and cultural values of the country. Tourist guides have invaluable cultural, historical, and practical information they can share with tourists. For this reason, tour guiding is considered a profession with an essential function in tourism and the country. However, in recent years, as in every field, the use of digital technology and applications in the field of tour guiding has increased and caused different evaluations by tourist guides.

**Literature**

In general, tourist guides act as the people who carry out the tour programs of the travel agencies and provide information to the visitors about the destination, historical and cultural places, the city, the local people, etc. (Demir, 2017). However, they are also responsible for ensuring the group's safety and keeping visitors together. Tourist guides often have important information about a destination, period, or activity. A guide may have a personal interest in the subject. Still, it is essential for tourist guides that their employer gathers information that may be of interest to or benefit to tourists. This situation is a strict requirement for the personal and professional development of tourist guides in terms of the practice of the profession.

When the studies related to the tourist guiding profession are examined, it is understood that the tour guiding service and obligations are heavy. Responsibility and workload are at the core of the guidance profession. Knowledge and equipment in places visited or in general are not enough to fulfill the guidance work. Along with the necessary expertise and equipment, the style of conveying this information and its presentation is essential. Along with these required features, a professional tourist guide should also have personality traits that can lift the respect and trust of the customer (Çolakoğlu et al., 2010).

Mancini (2001) claims that technological developments will harm tourist guidance. In many excursions and ruins, it can be considered a danger that the visitors can listen to the information via headphones without the need for a guide, thanks to the devices in which the audio narrations of that



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region are recorded before. But according to him, no technological device can match the work of a tourist guide (Kara & Demir, 2021). Above all, no device can add the vitality that a tourist guide adds to the tour and can evaluate the answer to any question a tourist guide will ask.

Technological developments and digital applications related to tourist guidance are increasingly used in the tourism sector. Advanced GPS-assisted map applications provide detailed, written, and audio explanations about museums and sites. They can now offer tourists an alternative to travel without a guide, even in the destinations they visit for the first time (İstanbullu Dinçer & Çakmak 2015). Although these developments cause controversy regarding tourist guidance, they offer essential outputs for guides. On the other hand, the limited number of studies in the literature on digital tour-guiding technologies and applications has left researchers and guides with mixed feelings. Çakmak and Demirkol (2017) argue that the technology element is as essential in each sub-sector of the tourism industry as it is in the execution of the tourist guide profession, and this importance will gradually increase.

Tour guides widely use information technologies in their narratives, as the basis of the tourist guiding profession is based on knowledge (Sarı & Kozak, 2005). Technology is seen as an essential element in a comprehensive and interconnected process from the beginning to the end of the tour, such as accessing up-to-date information, obtaining information about the guide, health, safety, destination information, and transportation services (Chaudhary, 2022; Çakmak & Demirkol, 2017). The use of digital technology and applications from the beginning to the end of the tour can significantly increase the quality and efficiency of the time, "head-set" systems, guide-finding applications, navigation applications, digital dictionaries, computers, cameras, etc. equipment provides many advantages to guides (Gökdemir & Göç, 2021, İsçen & Işık, 2020). The use of digital technology and applications in tourist guiding services forces the focus to be more equipped, and guides can develop themselves more easily.

On the other hand, such digital technologies and applications of tourists are seen as a tool for the evaluation of guides as well as their use for information about destinations, museums, and historical sites, geographical

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location, instant sharing of experiences, and access to touristic products (Kenteris et al., 2011; Weiler & Black, 2014). Audio and visual guidance systems used in many areas of the tourism sector can be used with smart digital technologies (Demir & Demir, 2015; Huanga et al., 2017). These facilities provide convenience for guides and tourists to access and use information (Yıldız, 2018). Today, digital applications have become guidance handbooks for tourists who want to visit a destination spontaneously, independent of a tour guide or travel agency.

In addition to various GPS-supported map and location applications that can be downloaded to mobile communication devices in a few minutes, technological and digital products such as guide players, audio guide applications, interactive multimedia tour guides, mobile guides, and guide ports (Chaudhary, 2022; Yıldız, 2018) may also cause the concern of losing the profession in tourist guides (Demir, 2017). Another concern is the vulnerability that digital technology and applications can create for users. In particular, personal data storage, use, or sharing may lead to prejudice against digital technology and applications in tourist guidance.

Research question: participants tour-guided digital technology and its applications

a) Tour service quality

b) Visitor-digital guide interaction

c) How does he evaluate it in terms of professional concern?

**Methodology**

*Sampling*

This research was carried out with professional tourist guides of travel agencies that organize tours to Istanbul Topkapi Palace Museum, Istanbul Hagia Sophia Museum, Istanbul Archeology Museum, and Istanbul Chora Museum in Istanbul, Turkey. The rationale for choosing these tourist guides was: (1) to have digital tour guide technology and applications in the specified museums and (2) to have these tour guides take part in tours for these museums. For confidentiality reasons, the names of the tourist guides participating in this research and the travel agencies they work with will not be disclosed. Two tourist guides from 12 travel agencies operating in Istanbul were contacted and asked to participate in the research. Ten people refused to participate in the study for various reasons, and 14 other tour guides did not complete



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the interviews.

*Interview design*

Online interviews over semi-structured zoom were used to gather information about the tourist guides' experiences with the specified museums and visitors, the features of digital tour guide technologies and applications, and the attitudes, behaviors, and feedback of the visitors who use them. Kumar (2005) argues that interviews are more suitable for elucidating complex situations in collecting in-depth information. In addition, Creswell (2013) claims that it is an environment that uses interview protocol and allows participants to share their ideas and thoughts freely. Unique meeting rooms are provided in each institution for meetings to be held. The interview was based on open-ended questions on the following three main themes to reveal the participants' thoughts on the subject:

a) Tour service quality

b) Visitor-digital guide interaction

c) How does he evaluate it in terms of professional concern?

*Data analysis*

Content analysis of the interview minutes was conducted to identify the main themes described by the interviewees. The data were explained descriptively based on themes with a qualitative data analysis approach.

**Results**

71% of the interviewed tourist guides were male. All of the participants have professional tourist guide certificates and are university graduates. Participants between 27 and 39 work in travel agencies on a contractual basis. 50% of the participants have ten years or more of experience; seven have tourist guide certificates in English, three in German, two in Arabic, one in Russian, and one in Hebrew (Table 1).

*Table 1*

**Demographic characteristics of the participants**

| Participant | Age | Gender | Education | Foreign language | Experience |
|---|---|---|---|---|---|
| TG-1 | 28 | Male | Undergraduate | English | 6 |
| TG-2 | 39 | Female | Graduate | German | 16 |
| TG-3 | 27 | Male | Undergraduate | Arabic | 4 |
| TG-4 | 28 | Female | Undergraduate | English | 5 |
| TG-5 | 31 | Male | Undergraduate | Hebrew | 10 |
| TG-6 | 29 | Male | Undergraduate | German | 5 |

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*Table continuation 1*

| | | | | | |
|---|---|---|---|---|---|
| TG-7 | 32 | Male | Undergraduate | English | 10 |
| TG-8 | 27 | Female | Undergraduate | Russian | 4 |
| TG-9 | 33 | Male | Undergraduate | English | 10 |
| TG-10 | 35 | Female | Graduate | English | 12 |
| TG-11 | 38 | Male | Undergraduate | Arabic | 11 |
| TG-12 | 29 | Male | Undergraduate | German | 4 |
| TG-13 | 30 | Male | Undergraduate | English | 5 |
| TG-14 | 37 | Male | Undergraduate | English | 11 |

*Analysis of themes*

The information obtained from the interviews with the participants was evaluated within the framework of three main themes in terms of tour service quality, visitor-digital guide interaction, and professional concern. The participants' comments were presented descriptively based on the determined themes, and a general evaluation was made at the end.

Tourist guides think that digital tour guiding technology and applications used by visitors in museums and ruins will not positively affect the quality of the time. Participants generally exhibited negative attitudes and behaviors regarding visitor-digital guide interaction of such digital technologies and professional concern of tourist guides. Participants believe that digital tour guide technology and applications cannot replace the human guide and will not contribute positively to the quality of the tour. For example, to summarize some of his views on this subject;

*"Digital tour guide technology and applications have much more excellent uptime, speed, and consistency than manual labor, resulting in considerable gains in productivity. It automates tedious and tedious tasks, but it's a significant drawback in terms of lap quality in that it repeats the same things repeatedly."* (TG-14).

*"They are considering the potential job losses and initial investment costs of digital tour guide technology and applications, providing that investment and value to humans will be more efficient than robots."* (TG-3).

*"Digital tour guide technology and applications perform valuable tasks and expand human-guides capabilities but cannot improve tour service quality."* (TG-7).

*"The digital tourist guide app is appealing at first because it makes your customers feel like they have an authentic experience. But then it creates dissatisfaction among customers."* (TG-11).



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*"The technology and content are designed so the app can be used to know the destination before traveling and discover and experience specific points of interest after tourists arrive. However, these do not provide tour quality and do not provide interaction with tourists."* (TG-12).

On the other hand, it is seen that participants generally exhibit negative attitudes and behaviors towards digital tour guide technology and applications in terms of tourist-guide interaction. Mainly, the general evaluations of the participants, who believe that robots cannot respond to human emotion, are that the interaction of tourist-tour guide technology and applications is impossible. For example;

*"Many museums and sites use robotic assistants to change the customer experience fundamentally. Tourists can ask these assistants questions, obtain information, and even have them perform essential tasks such as room service. Most of these robotic assistants can understand and communicate in multiple languages. But can it provide emotional interaction with them? This is debatable."* (TG-1).

*"The digital tourist guide app is a turnkey destination guide that provides location-based information such as maps, attractions, audio/tour guides, quiz games, local weather, bookable tickets, and other web-based content. But he is never a professional tourist guide."* (TG-4).

*"With the digital tourist guide application, you cannot do the following that a professional tourist guide provides; making research and planning trips; preparing presentations, suggesting, organizing, and managing alternative trips; solving problems; interpreting and socializing with tourists and transporting and accompanying tourists, etc."* (TG-13).

*"If you are unfamiliar with a destination, the Digital tourist guide app will not help you with tours. For example, you will not be able to see other historical monuments, buildings, facilities, and surroundings next door, so extra information will be needed. In this case, you will not be able to share your tour experience with your friends and not have an idea about the region's dynamics."* (TG-6).

The most serious concern of professional tourist guides is that digital tour guide technology and applications will take their place in the future. Although they are self-confident in this regard, it is clear from the answers of the participants that their concerns. For example;

*"Digital tour guide technology and applications assist*

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*human workers in completing tasks in various service-oriented industries. It cannot directly assume the main task."* (TG-2).

*"The advantages of digital tour guide technology and applications are cost effectiveness, improved quality assurance, increased efficiency, and use in hazardous environments. But it can never replace human-guide."* (TG-9).

*"Technology can change how people visit museums and sites by providing convenience, security, and fewer touchpoints. Therefore, it threatens the future of tourist guidance."* (TG-10).

*"The customer data and analytics these technologies provide can help businesses better understand their customers' needs and improve their future experiences. Still, it won't create as much value as a human guide."* (TG-5).

*"Robots can free up human guides' time and help personalize a guest's visiting experience. Their uses are almost limitless, with imagination and cost only limiting factors."* (TG-8).

*"….. It is a professional concern only for professional tourist guides. Because that is how it benefits travel agencies."* (TG-7).

The participants' comments show that digital tour guiding technology and applications used instead of professional tourist guides in museums and historical sites cause significant problems in terms of tour service quality, visitor-digital guide interaction, and experienced concern. However, most tourist guides' concern about losing their future jobs due to digital tour guiding technology and applications is seen as perhaps the most critical problem.

**Conclusion and discussion**

Tour guides are responsible for informing and entertaining visitors to their area and helping them interpret the sights they visit. Tour guides are often an essential component of a great trip to help tourists have a positive experience and take care of their guests as best they can. They can be a wealth of information and a valuable resource when learning about a new destination. A quality tour guide displays accurate and vital information while providing an engaging experience for guests. Therefore, tour guides are one of the most influential architects of a trip for visitors (Demir, 2017).

Digital innovations in the field of tour guidance lead to new trends and solutions that museums and ruins, tourism



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institutions, and businesses include in their systems (Demir & Demir, 2015). The tourism industry is also trying to use these solutions to keep up with new customer demands and survive the competition. In addition, the purpose of digital innovations is to facilitate the work of companies, automate their operations and increase customer loyalty. However, digital tour guiding technology and applications in the field of tour guiding cannot be evaluated unilaterally like other services in the tourism sector because professional tourist guidance can directly affect the quality of the tour as a result of the guide-visitor relationship beyond ordinary information.

Contrary to digital tour guiding technology and applications, professional tourist guides can significantly improve the tour adventure of the visitors with their extensive tour area knowledge, take them on a historical and cultural journey, and provide a unique experience. It also ensures the socialization of the tour group by establishing effective communication with the visitors, thus minimizing possible conflicts. Because tour guides can interact with people from all over the world. Maintaining respect for all, understanding cultural differences, and helping individuals make the most of their time together also facilitate tour guides' tasks. Because cultural differences not only offer a unique aspect but hosting guests with special needs also require extra empathy and understanding.

Tour guides are not only experts in certain subjects that digital tour guide technology and applications cannot, but they can also advise on places to stay and other must-sees (Huanga et al., 2017). With his charismatic leadership, he helps groups enjoy each other, get the most out of tour services, and are more likely to recommend them to friends and family. Experienced tour guides are familiar with improvisation, and this ability to adapt to changing situations cannot be achieved with digital tour guide technology and applications. In addition, tour guides interact with group members throughout their excursions in a patient yet encouraging and cheerful manner, encouraging effective conversations, asking questions, providing information, and showing closeness. Anyone can learn from a book or digital tour guide technology and applications, but it takes someone with a command of the stage to bring it to life and create an exciting experience for others.

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The biggest concern for tour guides, who always perform their duties professionally, is the investments in digital tour guide technology and applications to be used more and more in the tourism industry. Tour guides need to go with the flow in terms of the overall program. However, flexibility may be required depending on the group's specific situation. A flexible approach to a problem can make a good tour even better. Tour guides learn by encouraging guests to provide necessary feedback to use the information to improve future terms.

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