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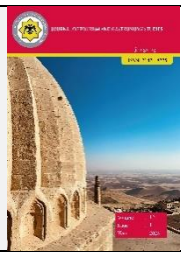

Reflections of Technological Developments on Tourist Guidance: Mobile Tourist Guide Applications

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Abstract

Technology is spreading to all areas of life day by day and has a significant impact on the tourism system, which consists of many different components. The profession of tourist guiding is also affected by technology and innovation. Advanced GPS-supported map applications, applications that offer detailed, written and audio descriptions of museums and protected areas can now offer tourists the alternative of travelling without a guide, even in destinations they visit for the first time. In this study, the effects of mobile tourist guide applications on the field of profession were examined by giving sample technological applications. The research conducted is a review study and the applications related to the subject in the field have been examined. The most preferred or most common 3 mobile tourist guide applications in the field were evaluated together with their features and their effects on the guiding profession. It has been determined that mobile tourist guide applications provide tourists with many different and rich information during their trips and facilitate tourists' trips.

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INTRODUCTION

Today, the importance of mobile applications in the tourism industry is undeniable with the rapid spread of information and communication technologies. Technologies such as computers, laptops, smartphones, databases and mobile phones, which act as guides for tourists in their travels, facilitate the processes to be carried out in the tourism industry (Özen, 2018: p.118). In particular, It is mobile devices that provide information access in the electronic tourism market through these technologies (Gavalas, Konstantopoulos, Mastakas, & Pantziou, 2014: p.320). Tourists' trust and commitment to mobile devices and network technologies are increasing day by day at all stages of travel to get information, share experiences and personalize the trip (Graziano, 2014: p.9; Trakulmaykee, Baharudin, & Arshad, 2013; Germann Molz, 2012). The impact of mobile technology on tourist behavior has been very significant (Singh & Singh, 2015). It has been seen that tourists plan their holidays through their loyalty and confidence in mobile and technological devices since they do not know exactly the cultures, tourist attractions and what and where of the places to visit. Many tourists especially benefit from smartphones to visit popular tourist destinations (Chon & Hojung, 2011).

In recent years, the widespread use of mobile guide applications has taken notice of mobile tourism. As the advancing technology becomes more accessible and cheaper by the masses, a need for guide applications suitable for today's technological developments has arisen in order to facilitate the tourists to better recognize the places they visit. Generally, these applications, in which it is possible to get feedback from tourists by providing the opportunity to interact with tourists, are called “Mobile Tourist Guide (MTG)” (Kın, 2018).

Electronic tour guides that can plan and customize a special tour route for each individual are presented to users (Cheverst, et. al., 2000; Kenteris, Gavalas, & Economou, 2011). Especially, It is known that MTG applications, which provide ease of access to the production of satisfactory goods and services shaped by various tourist demands and technological developments, are used in almost every language. Therefore, in places such as touristic destinations, museums, and ruins, some visitors use MTG applications instead of professional tour guides.

Considering the research on mobile applications in tourism, it is seen that the number of researches on MTG applications is limited. In the relevant study, primarily, the development and the kinds of mobile tourist guide applications will be explained, thereafter the theoretical and practical contributions of the three most popular practices will be evaluated in detail. It is thought to be significant to examine this issue in depth with the increasing importance of digitalization in tourist guide services.

Mobile Tourist Guides

MTG are applications that are designed to provide map services to tourists while they travel, often with the planning of personalized tours and advice on whatever interests them. The mobile nature of these apps has led to the development of a number of context-aware mobile tourist guides (Schwinger, Grün, Pröll, & Retschitzegger, 2009). In this context, mobile tourist guides help tourists to find points of interest (POIs) around the city where they go on holiday (Kim, Seo, Yoo, & Ko, 2016).

MTG have been developed to personalize guided tours. Also, unlike traditional tours, MTG allow their users to leave or change tours at any time (Kramer, Modsching, ten Hagen, & Gretzel, 2007). MTG, which are designed for tourists to receive easy and permanent information, increase their preferability with the personalization of user

experiences and the wide variety of languages they have. They also allow tourists to get trip information such as accommodation, transportation, maps, values of tourist attraction, gastronomy, entertainment, navigation & orientation, shopping, sports, emergency, safety and security (Grün, et al., 2008; Vansteenwegen, et al., 2011; Dickinson, et al., 2014; Trakulmaykee, Trakulmaykee, & Hnuchek, 2016). In other words, state-of-the-art MTG applications allow tourists to quickly navigate through information of interest through up-to-date information. They also help tourists from choosing their destinations to calculating the shortest routes between destinations (Souffriau, et al., 2008).

The mobile tourist guide can receive tour guide data based on positioning and location information via a web-based data management system and wireless connections such as the internet or Bluetooth, and GPS receivers (Bao, Bie, & Wang, 2009). These personal digital guides that distinguish themselves from traditional tourist information systems through a user interface and uncomplicated, help the tourist save time and effort in making the right decision. In addition, it provides the opportunity to evaluate all these touristic facilities, pre-booking for hotels and restaurants, more satisfied tourists, up-to-date information and pictures about places to visit. At the same time, the process of determining the touristic routes of the tourists when they arrive at a place shortens the time to visit the touristic areas (Peres, Correia, & Moital, 2011; Qoja & Okumuş, 2017).

MTG applications have been developed to understand the personal characteristics and preferences of the user, social and environmental context-aware services such as geographic location info, arrival time, traffic, weather, available time, restaurant's menus, eating and drinking and user's mobility history etc. (Höpken, Fuchs, Zanker, & Beer, 2010; Vansteenwegen & Oudheusden, 2007). General tours do not take into account these user context services (Krüger & Malaka, 2004) So, MTG with context-based application at the forefront (Meehan, Lunney, Curran, & McCaughey, 2016) is defined as using the information/services to the tourist, provides context and location awareness.

In the relevant section, the focus is on web-based mobile tourist guides, which are gaining in importance day by day and offer a map-oriented interaction paradigm to the user. It also provides a general understanding of each of the applications, namely, Compass, Wanderlog and GetYourGuide, which offer unique features especially in terms of context and location awareness.

Mobile Tourist Guide Applications: Compass

"Hold the entire world in your hands"

Context is defined as the environmental conditions in which the application is located and attracts the attention of the user (Chen & Kotz, 2000). Applications which focus on "User context" (profile of user, place, lifestyle), "Physical context" (environmental conditions like noise and traffic) and "Time context" (time of a day, season of the year) create context-aware information and recommender systems (Schilit, Adams, & Want, 1994). Mobile tourist guide systems are generally context-aware applications that use a tourist attraction to provide information about the location, places of interest and sights. The growing interest in context-aware has led to the development of mobile tourist guide systems. At the same time, recommendation systems, which are a way of providing travel advice to tourists by reducing the overload of information, are used in the mobile tourist guide system. This system, adapted for mobile device users, includes specific context-aware services and user evaluations along with its rich content

(Gavalas et al., 2014). Context-aware mobile applications serve by adapting to changing environments. (Le et al., 2023). Thus, COMPASS - abbreviation for COntext-aware Mobile Personal ASSistant - is a context-aware personal assistant which contains recommendations and services systems in mobile tourist applications (Van Setten, Pokraev, & Koolwaaij, 2004).

COMPASS, which makes use of map services such as Microsoft Mappoint, has been developed on the Web-based Web Architectures for Service Platform (WASP). It has a recording mechanism that allows to keep information related to the user's points of interest from content services. The location information is taken from mobile networks such as GPS or GPRS in order to save time and provide the closest services to the user. So, a user profile is created based on the feedback from the user. The user context includes a profile for a specific POI that is automatically updated by the system based on user feedback (Schwinger et al., 2009: p.537-538).

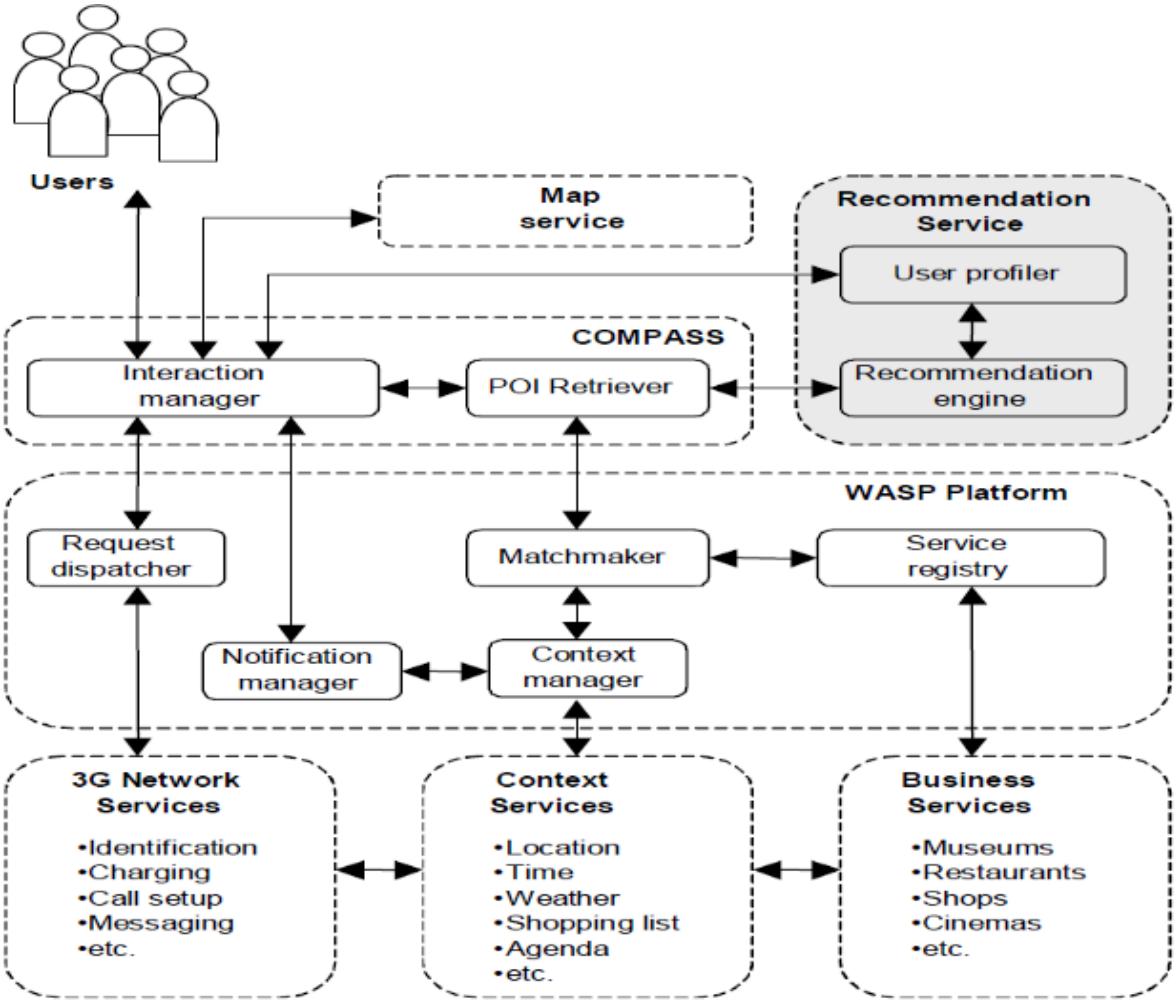

Fig. 1. The WASP and the COMPASS application

Source: Van Setten, et al., (2004: p.239)

This system, which provides user-oriented service, also presents shopping service by booking ticket for a theatre or hotel. Also, some of the contextual information is entered by the user through the graphical user interface. (Vahdat-Nejad, Khosravi-Mahmouei, Ghanei-Ostad, & Ramazani, 2020). The filtering of the content is provided by the adaptation process, which consists of processes such as recommendations, screenshots, and filtering according to the user profile and location. The map and POI are updated automatically when the content changes according to the user's context (Schwinger et al., 2009). Screenshots of the COMPASS application are shown in Figure 2.

The Compass app is a new generation mobile tourist guide application. Compass app supports its clients throughout their trip. With a range of destinations, content and innovative features, this offline app is truly the ultimate travel assistant. It gives flight and accommodation details as well as travel itinerary. The content of the application is very rich in order to provide its users with an unforgettable adventure abroad upon arrival at the destination. From unique attractions and shops to fun restaurants and nightlife, it's easy to navigate with the handy offline map, allowing you to explore everything the destination has offered. (www.mtrip.com). Users can improve their guided tours with a fairly easy-to-use digital companion. It provides the opportunity to discover the best of the destination and tour details and to find out exactly what is included in the tour. Along with the daily travel schedule, the hotel facilities and transfer information of the users are always at hand. By providing a rich experience, it provides users with information about the local culture and conveys interesting information about the places they visit. It is also necessary to provide alternative options for users to evaluate their free time. It offers the opportunity to explore the best restaurants, historical sites, attractions and more nearby. With the interactive map feature, up-to-date information is constantly transmitted from the routes to be traveled. (www.download.cnet.com).

a) **b)** **c)**

Fig. 2. a) Objects near the user, b) Interacting with services offered by objects, c) Category of objects near the user with relevance scores

Source: Van Setten, et al., (2004: p.237)

Wanderlog

"An app for travelers designed by travelers"

Wanderlog is one of the most important applications for planning travel in a enjoy way. With this application, which is a free travel application designed for holidays and road trips, users can create and edit their travel plans and create travel maps themselves. The application offers the opportunity to collaborate with friends in creating itineraries with the help of hundreds of blogs, guides and maps. Users can organize your reservations and determine the direction of their travels. In addition, users can create their own guides for favorite places, record their past trips and share this information with others. Wanderlog is an app that can be used to plan the next vacation with a focus on perfect design. With the documents in the memory of the application, users can follow the plans, discover new places to visit and hotels to book. Also, travel advice can be shared with friends and fellow travelers (www.ycombinator.com).

With Wanderlog, a road trip planner, quality travel content can be produced. With its constantly updated features, users get the chance to learn something new all the time. It stands out from aesthetics to functionality and in many other areas compared to similar applications. This application, which does not have unnecessary interfaces and complex features, offers ease of use to users. Thus, there is no need for a long and devious tutorial in which the application will explain how to use it. To truly enjoy all the features of the app, some time will be needed to try and explore the app. However, this time will naturally occur while the travel plan is being created and will inform the user.

Features of Automatically Generated and User-Generated Travel Programs are available. The "take me anywhere" option, which is one of the important tools on flight websites, provides users with the opportunity to see new places and get experiences. it provides information to users who are undecided or open to experiences by giving them ideas about places they have never heard of before. This feature of the application, which offers the opportunity to explore a new place, also enriches the imagination of users. The experiences of Wanderlogger users also offer important guidance. Whether the trip is organized according to the time or just an idea of what to do, this application can offer a wide variety of suggestions.

The Wanderlog app automatically generates travel plans and ideas, quickly bypassing long advertisements for unconventional destinations. A user's comment on this situation is as follows: "I typed in Tulum, where I blindly decided to settle for a few months with little knowledge of the area or what to do here. Although a user-created itinerary had yet to be made on the app, Wanderlog scraped together four potential auto-generated itineraries. I browsed through what they found and walked away with a multitude of incredible things I wanted to do". For this type of research, for example, Google will be able to cause the user to do research for a long time in the search engine and read travel blogs, but this application reduces this time to a very short time.

The functionality and app integration features that the application has are among the characteristic that satisfy users the most. The variety of features included in Wanderlog give users a comprehensive tool for adventure planning, from the essentials like itinerary planning to the smaller things like showing the travel time between points of interest. It is quite different from similar applications as a route mapper. Unlike other applications for road trips and long-term trips, it allows an unlimited number of stops to be added to the itinerary. This feature makes Wanderlog truly one of the most comprehensive trip planners on the market. One of its important features in this context is that it is well integrated with other applications such as Google Maps on the users' phone. Often, when creating a travel plan, many stopover notes may not be selected. By including the travel time in the travel schedule, Wanderlog will also tell its user how far these destinations are from each other. Another thing that Wanderlog excels at and that many travel apps have struggled with is collaborative trip planning. Users can find their companions on Wanderlog and plan a trip together. The application is a very budget-friendly program. It shows all possible price options, making it easier for the user to make a logical decision.

Wanderlog is designed as an application that anyone can use comfortably. Whether the user is an active planner or a casual browser, there are travel notes that anyone can find suitable for their planning. It's also a great tool to get ideas and recommendations from other travelers. From planning an international trip to Japan to checking out a new vegan restaurant in San Francisco, Wanderlog has everything. That's why the app has something for everyone. It can offer very good ideas as to whether a particular itinerary or recommendation is suitable for the user's interests or

travel style. Wanderlog offers a platform designed to inspire and easily digestible information based on the user's curiosity. It allows the user to really go into the details. Whether you're planning a future itinerary or recording an already completed trip, Wanderlog will make a great build. It usually starts with some local tips and important things to note about the destination, such as the recommended mode of transport. It offers places to stay, restaurants and bars to visit, and of course the best things to do in the area so that the user can create a travel plan. For longer trips with multiple destinations, it also offers the opportunity to split the itinerary by day or by destination (www.thepartyingtraveler.com).

When the Itinerary tab is touched and registered, all places will be listed in chronological order. Under each entry, Wanderlog provides relevant suggestions that can be added to each day's itinerary. The Map icon can also be tapped at any time to view itinerary items on the map of the city or location visited. Seeing where each point of the itinerary is relative to the others allows the user to visualize their trip and become familiar with the layout of the city or area. In fact, while on vacation, Wanderlog helps users keep their spending under control. If the user wishes, an alert can be created by tapping the icon at the top to set a trip budget that will notify him/her of overspending. When the user pays while traveling, they tap the Expenses tab (the little $ sign) and then Add Expense. If certain itinerary items are identified, it will be suggested to add them to the spend, making it quick and easy to note down restaurant bills, museum ticket fees, and the like (www.tapsmart.com).

GetYourGuide

GetYourGuide is a premium app where people can book tours, tickets, attractions, excursions and activities for their next vacation or weekend adventure. With more than 75,000 fun activities to choose from worldwide, the app is a place where users can find everything they're looking for. Tours are provided by knowledgeable local guides and there is free cancellation up to 24 hours before activities start. With GetYourGuide, you can pre-book entry to the most famous attractions around the world and offer skip-the-line entry (www.en.norwegianreward.com. The application offers special proposals for unforgettable moments and offers users the opportunity to save money without waiting in line. GetYourGuide offers its users a huge selection from tens of thousands of experiences around the world. Users and enthusiasts can easily learn about the largest online platform for tours, attractions and events. GetYourGuide offers the perfect vacation experience and earns miles at the same time.

The benefits of GetYourGuide at a glance:

- Professional providers of tours and activities
- The best last-minute availability for tickets and tours (especially interesting for attractions that sell out quickly)
- Customer service in six languages, seven days a week
- Quick and easy booking
- Best prices guaranteed
- Users earn miles on every booking with GetYourGuide (www.miles-and-more.com).

Whether users are planning a vacation or looking for last-minute jobs to do in any destination, this app has made it easy to book tours, day trips and events. It offers the opportunity to choose from culture, food, adventure, nature and more experiences. It offers access to the world's most important attractions and museums, as well as the

opportunity to discover highlights and hidden gems. Offering more than 75,000 experiences, the app book tickets for unmissable destinations. For example, Colosseum, Eiffel Tower, London Eye, TV Tower, Sagrada Familia etc. It offers expert guided discovery tours to unforgettable travel destinations in Paris, Dubai, London, Florence, New York City, Berlin, Vienna, New Orleans, Cancun, Tuscany, Lisbon and more. The application seems to be a candidate to be a city guide for destinations around the world and to give users an unforgettable experience (www.getyourguide.en.aptoide.com).

Conclusion and Discussion

Today, with the development of information and communication technologies, consumers have the opportunity to access the information they want whenever they want. The period of demanding and waiting for information is now over. In the traditional marketing period, the friend-friend recommendation, which is among the promotional activities that is effective in the destination selection of tourists, still maintains the efficiency of benefiting from the services before, but tourists use the internet environment effectively before and after the trip. In recent years, all traditional travel procedures, including on-site activities, have been fundamentally revolutionized by the use of technology. For example, traditional travel companies have started to offer fully online services to their customers (Aboelmagd, 2023). In the second decade of the twenty-first century, virtual technologies have taken their place among the widely used new technologies in the tourism sector in general, and in particular in the visitors' tour experiences from the facility to the tour experiences (Ren et. al, 2024). Informing the tourists about the tourism region prior to their travel will make it easier for tourists to travel to the region by reducing the disadvantages such as the intangible nature of the touristic products, their consumption where they are produced, and the lack of the luxury of testing. Especially in recent years, the use of websites based on database technology in all communication tools, dynamic and interactive sites add value to the touristic area and create a competitive advantage.

Nowadays, the use of social media, smart phones and downloadable smart applications for mobile devices has started to affect the tourism sector increasingly, as well as other sectors, and to guide tourists' travel decisions and shape their trips. It is obvious that mobile tourist guidance applications affect tourists in many ways. For example, the biggest problem faced by tourists before traveling is to determine the destination they will visit. Smartphones, which replace city maps, enable tourists to discover the destination and to obtain more information about the destination from interactive sources. Thus, tourists can obtain more detailed and extensive information about the destination and the types of tourism carried out in that destination (Gavalas, et. al., 2015). At the same time, the money spent on these applications is less than the amount spent on tours with tourist guided tours. Moreover, being accessible from anywhere and personalized services that will be provided by using the application suitable for the existing content are among the biggest advantages of mobile guides. In this context, the possibility of personalization, adaptability of user interfaces, guiding and use of adaptive mobile computers can be shown as important factors in tourists' preference for mobile guides (Kenteris, Gavalas, & Economou, 2009).

Traveling with mobile guide applications can sometimes make tourists more independent about the destinations they will choose, because in visits carried out with a mobile guide, the obligation to act according to any tour program or group is eliminated. This situation can make the tourist feel more free compared to the trips they make with professional tourist guides. It is predicted that mobile guide applications will be more preferred when there are not enough staff to guide, and tourists who have limited time and cannot get a guide have the opportunity to travel

individually, mobile guide applications offer explanations in different languages to visitors from different countries. It is suggested that mobile tourist guide applications should be preferred more by eliminating the shortcomings of mobile tourist guide applications with developing technologies, and that mobile tourist guide applications should be used in all museums and ruins by expanding their usage areas, and in order to prepare mobile guide materials, it is recommended to develop purposeful data and software by communicating with archaeological sites and museum experts. There are also considerable studies on the subject. Mobile guide applications to be designed especially for disabled individuals are considered very important. Each application has its own strengths and weaknesses. However, in this research, 3 mobile tourist guide applications with the highest scores on Google Play were examined.

Declaration

All authors of the article contributed equally to the article process. The authors have no conflicts of interest to declare.

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