

MOBILE APPLICATIONS IN TOURISM AND DESTINATION PROMOTION

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Abstract. *The subject of this paper is the potentials of competitiveness of applicative digital technologies, namely mobile applications in the marketing promotion of destination tourism products. The purpose of the paper is to explore the relationship between mobile applications and tourism offers, as well as the attitudes and perceptions of destination offer stakeholders towards the use and efficiency of mobile applications. The paper's aim arises from the aforesaid: an exploration of mobile applications in valorizing the online promotion of tourism destinations. The qualitative methods used in the preparation of the paper are: the methods of description, analysis, synthesis, generalization of methods of compilation, and inductive and deductive methods. The quantitative statistical methods and creative thinking methods have affected the formation of new knowledge and the paper's contribution. The set research goal impacts the formation of the main hypothesis: Mobile applications contribute to promoting, recognisability, and education about destination tourism products. Research so far has dealt very little with the attitudes of different stakeholders who, actually, are the key holders of tourism offers and creators of tourism policies, on the grounds of which specific products are formed. By argumentation and comprehension of the respondent sample diversification and appreciation are achieved of all tourist stakeholders who form quality and influence competitiveness. Their consideration and attitudes represent an innovative contribution of the paper, directed towards specific services, augmented reality, pricing aspects, and digital innovations.*

Keywords: *digitalization, mobile apps, smart tourism destination, technology, tourism offer*

Introduction

The implementation of modern technologies was intensified by the fight for competitiveness in the tourism sector. Through digital strategies, tourism destinations

use numerous tools by which they present their offers in an innovative, attractive, and interactive way. However, the question is asked what exact tools contribute to digital visibility? With the omnipresent Internet, mobile technology of applications for mobile smartphones represents a new marketing challenge, from the application itself as a product, pricing dimension, and promotional aspects, to the method of reaching users, and consumers of information about products that the tourism sector wishes to present and offer. This paper considers the topic area of mobile applications within the digital marketing system of tourism destinations. It explores the attitudes of destination stakeholders and creators of the destination tourism offer. It synergically creates a strategic destination marketing mix within which it is an important factor in digital promotion using mobile applications. The aim is to explore the importance of achieving new competitiveness through a destination digital strategy. The set research goal impacts the formation of the main hypothesis: Mobile applications contribute to promoting, recognisability, and education about destination tourism products. directed towards the impact on competitiveness.

This paper is composed of four chapters. The introductory chapter presents the theory and literature review; namely, it deals with tourism destination products, tourism stakeholders, and the importance of digital promotion. It explains the aspects and importance of mobile apps created specifically for mobile smartphones that enable immediate, just in time, information for tourists, enhancing their tourism experience. The second chapter presents the methodology and research design. The third chapter presents the research results, where each part of the research is discussed, and the significance of the findings is explained. The fourth chapter presents conclusive remarks followed by the references chapter.

Theory and literature review - Destination stakeholders and tourism products - cooperation for competitiveness including mobile applications as specific tourism product

Organisation and marketing of destination tourism offer is an ongoing topic area of the modern organization of both global, Croatian, and Istrian tourism. Strategic management and marketing of tourism organizations and destinations represent a factor of competitiveness, and the ICT technology catalysts are innovations that affect the positioning. This is the topic of research of Sabou and Majorescu (2020) who explore the challenges of smart tourism. Križman Pavlović (2008) studies the marketing of tourism destinations, emphasizing the importance of marketing for sustainable development. Dulčić A., and Petrić L. (2001) write about tourism development management, referring to the organization of tourism offer, while Cooper (2008) studies the stated elements through the prism of the tourism economy. Kušen (2002) explores tourism attraction as a base for valorizing innovative tourism programs.

Tourist satisfaction with their stay in a tourism destination is conditioned by the level of quality and innovativeness of the offer, by which increasingly demanding wishes and needs of modern demand are fulfilled. Retention of the existing and attraction of new tourists is conditioned by a continuous innovation process and development of both destination and accommodation products and offers, as stated by Floričić (2016).

This presumes linking, synergy, cooperation, and networking of stakeholders, as well as overcoming individual limitations with a view to creating new values and excellence (Stipanović et al., 2017). The structure and quality of tourist offers result from available resources, from infrastructural to human, which affects the creation of new values in

entertainment, recreation, culture, and accompanying projects. The shaping of tourist offers encompasses a three-dimensional concept that includes the market, the product, and the technology which satisfies the wishes and needs of the tourists' leisure organization. Bordas (1994) presents the concept in which he considers the totality of destination offer, from the resource base, tourism attractions, events, infrastructure and equipment, choice of service facilities, and organization at all levels.

Holders of tourist offer in the destination formulate developmental strategies and online and offline marketing strategies, including all the holders of the tourism offer (Čavlek et al., 2011). In strategic planning that is directed towards the raising of destination competitiveness, the existence of feedback for facilitation of monitoring and control is of the utmost importance; more precisely, of monitoring the realization of the plan of development of the destination products, as well as their promotion (Floričić & Floričić, 2019).

Also, destination management emanates from the need for cooperation of different subjects in tourism, such as the private sector or the local population. Hasan (2000) notes the necessity of rising above the framework of competition among companies and steers towards finding cooperation models, especially through strategic partnership marketing, to achieve new competitiveness. Kušen (2002) identifies the key stakeholders in tourism destination management: tourism boards, local government and self-government, spatial and other developmental planners, statistical services, and the tourism economy. The synergy of their activities is directed towards an adequate organization of tourism products in the destination and efficient promotion as a component of the marketing mix. As a catalyst of the changes towards new competitiveness, technology facilitates a fast, price-wise favorable, and diversified presentation of the resource base, tourism attractions, and other material and non-material destination values in tourist demand. By understanding the platform's importance of cooperation and forming of integral tourism products and their promotion through mobile digital technologies, a basic paper goal is presented: affirmation of the importance of versatile online mobile applications for destination competitiveness and tourism development. This is why the consideration of attitudes of the destination stakeholders about the importance of digital technologies, namely mobile Internet and mobile applications, are the focus of interest and represents the key topic of this paper.

Mobile applications in tourism

As early as in the nineties of the last century, interactive appliances were introduced in tourism destinations, such as audio guides and, somewhat later, also digital handheld appliances. The disruptive innovation was recorded in 2008 when mobile telephony developed the application services iStore and Google play, platforms for downloading of created applications for diversified services and contents, of which write Urvina, 2022 and Jia et al., 2015. Due to the omnipresence of smartphones in everyday life, tourism destinations have today adapted to modern habits and developed digital applications for mobile telephony to improve the experience of visits to the destination and cultural attraction base, which Felicetti et al. (2020) explore, as well as associated tourist facilities (Tsai & Sung, 2012). Griefe (2010) deals with this topic and Dias & Alfonso (2021) deepen it, considering the influence of applications on the overall experience in the destination. This affects the formation of the destination identity, which is communicated through the application design and synergically corresponds to the identity vision (Kuo, 2019).

The basic purpose of tourism mobile applications is assistance and support in the choice and planning of the travel itinerary, as well as of stays in the destination (Tan et al. 2017, Marzano, 2018). Further, it is important to mention that tourists, passing through all the travel cycles, use their mobile telephones to explore, book, photograph, and video destinations and then share their impressions with the wider public. Moreover, Urvina et al. (2022) deal with tourist preferences and consider applications according to predominant interests.

Owing to applications, tourists can more easily find the desired destination, obtain information about the destination's receptive facilities, and other users' comments and reviews can assist them in choosing their accommodation and other services (Law et al., 2018). User experience is the topic area extensively dealt with by Palos-Sanchez et al. (2021) and they develop a discussion related to the question: Do the quality of tourism applications and user experience influence their acceptance by tourists? Furthermore, Choi and Yoo (2021) explore how perceived risk influences tourism consumers' technology readiness toward tourism mobile apps. This problem area is considered as, in comparison to the use of websites optimized for mobile appliances, the predominance in the use of mobile websites is evidenced in relation to the applications.

The main task of mobile applications for tourism destinations is assistance in the interpretation of the attractiveness base in a modern way, provision of information about destination products, as well as sharing information about the location, hospitality offers, maps and traffic, and numerous other infrastructural services in tourism. Mobile applications of this type provide visitors with very informative and interactive experiences in various locations. They also provide professional guidance in different languages, help get around and offer useful information about tourism products and other destination services. Destination mobile applications serve as digital guides for guiding visitors around the locality resource base (Lombardo & Damiano, 2012), but also as a platform for augmented reality, through which intangible values in the tourism destination are affirmed, discuss Do et al. (2020) and Saragih and Suyoto (2021), who explain that interactive mobile apps use marker-based augmented reality and provide information and maps of tourist sites. By downloading specific applications before visits to desired localities, visitors can obtain information about the facilities on offer and plan their visit in more detail, supported by the geolocation GPS services (Szark-Eckardt, M., 2017). Apart from this, mobile applications can also be used as marketing tools in tourism, so it can be said that they equally have an important promotional role.

Tourism applications can further be divided in more detail; Grieve et al. (2010) divide them into ten main groups:

1. Applications for travel planning – They provide the possibility of creating of the entire travel itinerary, with the possibility of booking of accommodation, tickets and other services (TripIT, Tripcase, TripDeck).
2. Applications for accommodation booking – These applications provide all the necessary information about hotels and other accommodation facilities and their capacities, as well as the possibility of booking (Booking.com, Hotels.com, Airbnb)
3. Applications for transport planning – They enable users to find information about transport and booking and purchase tickets (Kayak, Flight track, Trainline).

4. Applications with information about events – These applications provide information about events and activities in the selected destination, with the possibility of sending recommendations to other users (Buzzd).
5. Applications for satellite navigation – These applications provide satellite navigation services (Google maps).
6. Interactive electronic guides – These are the guides around destinations and have the possibility of exchanging experiences with other users of the same application (NY Travel Guide).
7. Social networks based on locations – This type of social network provides the possibility of finding, i.e. exact locating of attractions and services the selected destination offers (Gowalla and Foursquare).
8. Specialised applications, created for tourism companies – These are the applications that are created for the needs of specific companies and their clients (Lufthansa and British Airways).
9. Specialised applications for museums and cultural institutions – This application represents a substitute for local tourist guides (London Museum Guide and ThrillSeeker).
10. Applications with useful information for tourists – They offer translation services and provide different information, such as weather forecasts, exchange rates, etc. (eCurrency, Language translator).

The technology development and the interest transformation of the segment of tourists of the Millennials and Gen Z generations, the importance is pointed out of the development of different applications belonging to the group of social networks (YouTube, Facebook, Instagram, TikTok, Snapchat). They considerably encourage tourism trends and substantially promote tourism (Naramski & Herman 2020). Apart from their own applications, DMOs and tourism boards are present in social networks with their profiles and websites, also representing the stakeholders of destination applications by which the overall destination offer is integrally presented, and which encourages loyalty and as long and deep as possible interaction which fosters emotional attachment and forms returning guests.

Methodology

In the paper, qualitative and quantitative methodologies have been applied, verifying and descriptively interpreting the results. Qualitative methods include the method of meta-research, analysis, synthesis, the method of deduction, and generalization. They include techniques of creative thinking which influence the formation of new knowledge and the proposal of the scientific contribution. The original empirical research includes a scientific analysis of the potential competitiveness of the usage of mobile applications through digital technologies in tourism. The research was conducted on 31 tourism destination stakeholders in January 2021, in South Istria, Croatia. It was conducted by means of survey questionnaires, which were distributed to the targeted sample of the workshop “Digital marketing” – the importance of innovations and digital marketing – the perspective of tourism destination stakeholders. The questionnaire consisted of three parts. The first part explored the sample demographic characteristics. The second part explored the intensity of agreement and statements as well as the perception of usage of mobile applications using a Likert scale 1-5. The third part of the research was directed toward the attitudes related to the future usage and usefulness of mobile applications in tourism. The research was coded and digitally processed using the IBM SPSS Statistics 21 informatics tool.

Results and discussion

According to the socio-demographic profile of respondents, the largest number of respondents were students, 22.6%, and 19.4% were representatives of the catering–accommodation sector and restaurateurs. DMOs' representatives comprised 16.1%, representatives of educational institutions, 12.9%, DMCs' representatives, 6.5%, and other representatives 22.4% (renters, entrepreneurs, representatives of public institutions, and representatives of family farms and similar). The majority of respondents came from South Istria, 64.6% of whom 45.2% were from the Town of Pula. The respondents from the towns of Zagreb, Poreč, Rovinj, and Svetvinčenat follow, each making up 6.5%, and the lowest number of respondents were from Raša, Rabac, and Buje, each making up 3.2%.

As for the years of work experience in tourism, 38.7% of the respondents had less than three years of work experience (corresponding to the number of students who were at the beginning of their business careers) or over ten years of work experience. Furthermore, 12% of respondents had three to seven years of work experience in tourism, while 9.7% had between seven and ten years of work experience. The data weighs in favor of the validity of the sample and points to its relevance and reliability, given the years of service in tourism and familiarity with the trends for future development. In further consideration of familiarity with mobile applications, the majority of respondents, 55% of them, stated that they had installed applications related to tourism on their smartphones, while 45% of respondents declared not having installed applications. Further to this, familiarity with applications related to tourism of their destination was explored, where 32.26% of respondents stated that they were familiar with one or two smartphone applications, 29.03% were not familiar at all and 25.81% of respondents were familiar with two to three smartphone applications related to tourism. The lowest percentage of respondents, 12.9%, declared being familiar with more than three smartphone applications related to tourism in their destinations.

The results point to the attitudes which are summarised as follows:

- 45.1% of the respondents agree with the statement that traditional offline promotion (brochures, magazines) was important for the development of tourism, 38.7% of them are indifferent and a mere 16.1% of respondents did not agree with this statement. This points to the fact that offline promotion continues to be valorized as an important tool for affirming destination products and attractions.
- Almost all the respondents agreed that the Internet is an important source of information for tourism and hospitality. 6.5% of respondents agreed, while 93.5% completely agreed.
- 51.6% of respondents agreed or completely agreed that tourism stakeholders use Internet marketing tools efficiently, 25.8% of respondents were neutral, while 22.6% of them did not agree that tourism stakeholders use Internet marketing tools efficiently.
- A total of 45.2% of respondents were familiar or unfamiliar with numerous digital marketing tools and their possibilities. 38.7% were familiar with numerous digital marketing tools and the possibilities of digital marketing. Moreover, 16.1% were unfamiliar with digital marketing tools and possibilities.
- 96.8% of respondents completely agreed or agreed that digital marketing continues to expand, while 3.2% of respondents were not of that opinion.

- 58% of respondents followed the news and innovations related to digital promotion in tourism, while 22.6% of them were neutral and 19.4% of respondents did not follow the news and innovations related to digital promotion in tourism.
- Regarding digital marketing implementation, 51.6% of respondents were neutral in the statement that digital marketing implementation is expensive. 19.4% of respondents believed that digital marketing implementation is not expensive or that, ultimately, it is more expensive. Furthermore, 9.7% of them believed that digital marketing implementation is not expensive at all.
- 38.7% of respondents were neutral as concerned with the statement that, in their work, they were finding it difficult to estimate the financial results of the implemented digital promotion. 29.1% of respondents agreed or completely agreed that they have difficulties in estimating the financial results of the implemented digital promotion in their work, while 32.3% of them did not agree or did not completely agree.
- The majority of the respondents, 84.2%, believed that smartphones have changed the tourism and travel industry, and 16.1% did not agree with that statement.

The results of the exploration of the importance of mobile applications are shown below.

Table 1 Tourism competitiveness of a destination and importance of new tourism products

Statement - Level of agreement *		5*	4	3	2	1	Total	Average grade	Rank
1	N	20	6	2	3	0	31	4.39	1
	%	64.5	19.4	6.5	9.7	0.0	100.0		
2	N	4.0	11.0	10.0	4.0	2.0	31.0	3.35	3
	%	12.9	35.5	32.3	12.9	6.5	100.0		
3	N	14.0	9.0	6.0	1.0	1.0	31.0	4.10	2
	%	45.2	29.0	19.4	3.2	3.2	100.0		
Usage of mobile apps - level of agreement									
4	N	15.0	8.0	7.0	1.0	0.0	31.0	4.19	5.0
	%	48.4	25.8	22.6	3.2	0.0	100.0		
5	N	21.0	6.0	3.0	1.0	0.0	31.0	4.52	1.0
	%	67.7	19.4	9.7	3.2	0.0	100.0		
6	N	17.0	7.0	6.0	1.0	0.0	31.0	4.29	4.0
	%	54.8	22.6	19.4	3.2	0.0	100.0		
7	N	5.0	11.0	14.0	1.0	0.0	31.0	3.65	8.0
	%	16.1	35.5	45.2	3.2	0.0	100.0		
8	N	19.0	9.0	2.0	1.0	0.0	31.0	4.48	2.0
	%	61.3	29.0	6.5	3.2	0.0	100.0		
9	N	10.0	8.0	9.0	4.0	0.0	31.0	3.77	7.0
	%	32.3	25.8	29.0	12.9	0.0	100.0		
10	N	12.0	8.0	8.0	2.0	1.0	31.0	3.90	6.0

	%	38.7	25.8	25.8	6.5	3.2	100.0		
11	N	15.0	9.0	5.0	2.0	0.0	31.0	4.19	5.0
	%	48.4	29.0	16.1	6.5	0.0	100.0		
12	N	19.0	4.0	7.0	1.0	0.0	31.0	4.32	3.0
	%	61.3	12.9	22.6	3.2	0.0	100.0		

* 5 is the highest level of agreement, 1 the lowest level of agreement with statements.

1. Smartphone mobile applications related to the destination offer are important
2. Tourists in the destination download tourism applications and use them frequently
3. Human factors and people, workers in tourism, are more important than mobile applications and technologies
4. Used as sources of tourist information, tourist guides – tour escorts
5. Used as a source of service information
6. Used as an agency for booking of accommodation, tickets, and cars
7. Used as a guide for shopping
8. Used as navigation
9. Used as a currency rate calculator
10. Used as a translator
11. Used as a photographer
12. Used as a link to social networks

Source: Authors' own research, processing, IBM, SPSS, Statistics 21

The results of the first part of the research indicate that the majority of the respondents, 93.5% of them, agreed or completely agreed that the smartphone mobile applications related to the destination offer are important, while 6.5% of respondents were neutral. Furthermore, 48.4% of respondents agreed or completely agreed that tourists download tourism applications in the destination and frequently use them. 32.3% of the respondents had a neutral attitude, while 19.4% did not agree that tourists download tourism applications in the destination sufficiently or use tourism applications frequently. The majority of respondents, 74.2%, believed that the human factor and people, workers in tourism, are more important than mobile applications and technologies. 9.4% of respondents were neutral, while 6.4% of them did not agree at all or did not agree with that statement. By summarising these three questions, an awareness is presented of how, although the predominant value of smartphone mobile applications is recognized, destination stakeholders perceive human contact, work and interpersonal communication as more important than the exclusive use of technologies.

Further to this, the perception is explored of the usefulness and use of different mobile applications which provide tourists with information and services in order for them to be better informed and to get by in the destination more easily.

- 74.2% of respondents believed that tourism applications are used or frequently used as sources of tourist information, tourist guides – tour escorts. 22.6% of the respondents were neutral, while 3.2% of them believed that they were not sufficiently used.

- 87.1% of respondents believed that mobile applications are used as a source of service information. 9.7% of them were neutral and 3.2% believed that mobile applications are not used as a source of service information.
- 77.4% of respondents believed that mobile applications are used as an agency for booking accommodation, tickets, and cars. 19.4% were neutral, while 3.2% of respondents believed that mobile applications are not used as an agency for booking accommodation, tickets, and cars.
- 51.6% of respondents believed that mobile applications are used as a guide for shopping, 45.2% were neutral, while 3.2% of the respondents were of the opinion that mobile applications are not used as a guide for shopping.
- 90.3% of respondents believed that tourism mobile applications are used as navigation. 6.5% of respondents were neutral, while 3.2% of the respondents were of the opinion that tourism mobile applications are not used as navigation.
- 58.1% of respondents believed that tourism mobile applications are used as a currency rate calculator. 29% of respondents were neutral, while 12.9% of respondents were of the opinion that they are not used as a currency rate calculator
- 64.5% of respondents believed that tourism mobile applications are used as a translator. 25.8% were neutral, while 9.7% of the respondents thought that tourism mobile applications are not used as a translator at all.
- 77.4% of respondents believed that tourism mobile applications are used for photographic purposes, while 16.1% were neutral. A few of them, 6.5%, believed that tourism mobile applications are not used for photographic purposes.
- 74.2% of respondents believed they are used as a link to social networks, while the rest of the respondents, 25.8%, though they are not used as a link to social networks, or were neutral.

The results of the third part of the research are presented below, using open-ended questions, where the respondents could present their ideas and possible innovations for affirmation of the promotion of tourism products.

The data from Table 2 shows possible modalities of how to present mobile applications to users and how to motivate them to download and use them onto their mobile appliances and use them.

Table 2 Methods of encouraging tourists to download smartphone applications for the purposes of better promotion and sale

	Frequency	% of respondents	Cumulative %
Via social networks	3	9.7	9.7
Via promotional materials	2	6.5	16.1
Benefits	7	22.6	38.7
Other	19	61.3	100
Total respondents	31	100	

Source: Authors' own research, processing IBM SPSS Statistics 21.

The results show that 61.3% of the respondents believed a new product should be suggested that would be unique and interesting for users. It is also desirable to better inform users about the existence of smartphone applications and make the applications as useful and interactive as possible, ensuring they are regularly updated. The

respondents believed it is hard to talk tourists into downloading specific content if they do not benefit from it. For the purposes of better promotion and sale, each tourist has to be approached individually in order to determine their needs and wishes and, ultimately, to offer them a free product or service (for example, a free small bottle of olive oil at the Tourism Board office, a free souvenir made of olive tree wood, tastings, free entrance tickets for museums, churches, etc.). They also mention showing QR codes in busy locations and in accommodation facilities.

Furthermore, 22.6% of respondents believed that one way to ensure better promotion and sales with the realization of benefits is to encourage tourists to download smartphone applications. For example, downloading applications with additional discounts and special offers in the application, facilitating discounts, or appropriate free materials/services (for example a free Uber ride).

Also, 9.7% of respondents declared that one of the ways of encouraging tourists to download smartphone applications and promotions is through social networks (Facebook, Instagram, and similar), and 6.5% of respondents were of the opinion that one of the ways of stimulation is also the promotion of the existence of information desks in the places where accommodation facilities which inform about the availability of applications are situated.

In the research of affirmation of specific forms of tourism, 58% (N=18) of respondents answered that they were familiar with the mobile applications focused on specific forms of tourism. The respondents believed they are important if a certain destination needs to be branded to attract tourists with specific interests, extend the tourist season throughout the year, and reduce the overloading of destinations with mass tourism. With the development of digital technologies and smartphones, applications directed toward tourism are being developed daily. Their creation is very important; as new generations are increasingly directed toward digital technologies. With regard to the larger number of competitors in the market and the development of digital technologies, it is certainly important to offer as much content of products/services to place in the market. 35.5% (N=11) of respondents could not say whether they were familiar with mobile applications focused on specific tourism forms but believed that it would be of great importance to present the destination and its attractiveness to tourists. 6.5% of respondents were still not familiar with the applications, as they think they are too scattered and not unified (for example, for the whole County of Istria, and similar).

In the line with the aforesaid, the creation of applications is an added value by which a service or products can be improved and by which new users can also be attracted.

Table 3 Grade of intensity of the importance of the quoted statements

	AVR	STDEV	Total responses
Grade of the importance of foreign languages in the design of mobile applications for tourism	4.81	0.601	31
Grade of the importance and attractiveness of the creation of the augmented reality as a tourism product of mobile applications	4.16	0.969	31

Source: Authors' own research, processing IBM SPSS Statistics 21.

The average grade of 4.81 refers to the importance of foreign languages in the design of mobile applications for tourism. The respondents believed that the role of foreign languages in the design of mobile applications is of the utmost importance. The respondents are of the opinion that foreign languages are of great importance for attracting potential tourists. Foreign languages are important and represent the breaking down of barriers to communication difficulties.

The largest number of respondents replied that the English language (23.16%), the German language (22.11%), and the Italian language (17.89%) are in the leading places, followed by the French language, 9.47%, Russian 7.37%, Dutch with 4.21%, Chinese with 4.21%, Slovene with 3.16%, and other languages. For tourists, it is easier to access the application in their native language, attracting more interested and disinterested clients and, accordingly, the interested ones become users. The German, English, Italian and French languages are exceptionally important due to the increased tourist traffic from the emissive market.

This is why the respondents, 7.37% believe that it is important to use standard languages and think about creating applications in new foreign languages for the new market due to increasing visits by tourists from those areas (China, Korea, Japan).

Furthermore, the average grade of 4.16 relates to the importance of the attractiveness of the creation of augmented reality as a tourism product of mobile applications. Augmented reality represents a novelty in digitalization and an increasing number of users from the younger generations are using it; it is, therefore, increasingly significant in the creation of the tourism product. This technology has not been available previously, and now represents innovation and an approach to the users themselves. Also, augmented reality is of the utmost importance, as it provides a new experience, which is particularly important for disabled persons who, in real life, have not been able to visit a specific locality. Furthermore, the familiarisation with tourism products, related to the associated mobile applications, where 45.2% of respondents declared that they are equally familiar with or are not familiar with tourism products related to mobile applications, while 9.7% were not familiar at all. This shows discrepancies in the results; namely, the respondents did not express awareness of the importance, nor were they sufficiently educated in relation to the existing products and innovations by which they could enrich their destination online promotion using smartphone applications. The products they were familiar with are presented in the following graph:

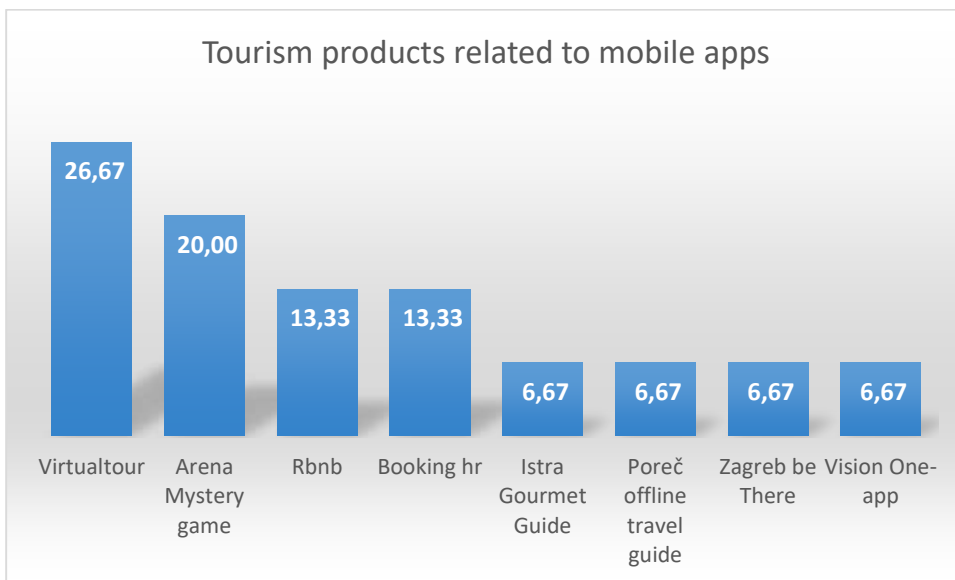


Figure 1 Tourism products related to mobile apps
Source: Authors' own research, IBM SPSS Statistics 21.

The largest number of respondents were familiar with the Virtualtour application (26.67%), followed by the Arena Mystery game (20%). 13.33% of respondents were familiar with the Rbnb and Booking.hr applications, while the rest of the respondents were familiar with the Istra Gourmet Guide, Poreč offline travel guide, Zagreb be There, and Vision one-app applications(6.67%).

Table 4 Tourists are prepared to pay for downloading of augmented reality applications

	N	% Respondents	Cumulative %
Yes	15	48.4	48.4
No	3	9.7	58.1
Maybe	3	9.7	67.7
Do not know	10	32.3	100
Total respondents	31	100	

Source: Authors' own research, processing IBM SPSS Statistics 21.

Table 4 points to how 48.4% of respondents believed that tourists are prepared to pay for the downloading of augmented reality applications, while 32.3% of the respondents were not familiar with the tourists' payment preferences. Moreover, 9.7% of respondents declared that tourists are not prepared to download augmented reality applications, and an equal percentage of the respondents were neutral. The respondents were of the opinion that a certain group of tourists would surely be prepared to pay for downloading of the augmented reality applications (tourists with higher purchasing power). Also, if the application offers something new, not seen yet in the market, and if the current users' reviews are graded satisfactorily, the number of persons prepared to pay to download the application will be greater.

Also, they think that, in the beginning, during their familiarisation with new technologies, the application for augmented reality should be free of charge, after their acquaintance with it and use it. Moreover, when it has already been tried by a considerable number of users, a number of values should be added within, at a certain cost; in the beginning a symbolical sum, and later a little higher. Some respondents stated that tourists should be paying up to €5 or €10, for foreign tourists between one and five euros, and that for domestic tourists it should be free.

Furthermore, 9.7% of respondents believed that they would not be prepared to pay, as they find everything on Google and, even if they paid, it would have to be a negligible amount and an application that they would be able to use repeatedly, and which would always be attractive and up to date.

A few of the respondents were not informed about the prices and could not estimate them; they would probably pay only if it included some benefits they would be able to use during their stay, but also following their stay (discounts, materials, a certain number of something = a prize).

Table 5 Grade of the potential of entertainment through tourism mobile applications (gamification, storytelling)

	AVR	STDEV	Total - Responses
Grade of the potential of entertainment through tourism mobile applications (gamification, storytelling)	4.23	0.990	31

Source: Authors' own research, processing IBM SPSS Statistics 21.

Overall, the respondents produced an average grade of 4.23 which concerns the potential of entertainment through tourism mobile applications. The respondents thought that the entertainment potential through tourism mobile applications is very interesting and encouraged the development of such products. The applications containing gamification and storytelling will certainly attract people to use the application as they provide entertainment.

The respondents believed that the mobile application Storytelling would be excellent because, when a tourist connects to Wi-Fi, the option of downloading the application with geolocation would be provided, by which he would be able to, simultaneously, perceive the attraction through narration. They also thought that, apart from the usual approach, a different approach to sightseeing in a town would be also interesting.

Conclusion

The need for tourism mobile applications has emerged due to accelerated digitalisation and the omnipresence of mobile phones in peoples' everyday lives. There are several types of mobile applications in tourism; those based on metasearch, narration, interactive games, and applications based exclusively on audio or video recordings.

Today, people spend increasingly more time on mobile appliances, networks, and pages, and it is a great possibility to interest potential users in their downloading and usage. The potential is pointed out of affirmation of tourism mobile, entertaining applications which can represent a kind of destination social network where users, while staying

there, can share their experiences using pictures, sound, and text as well as their impressions and grades. It is easier to reach users through entertainment; therefore, the potential for entertainment through tourism mobile applications is substantial. A certain dose of entertainment in mobile applications is an advantage, especially for younger generations.

Examining the trends of remote work and digital nomads, the potential of the competitiveness of the formation of applications with diversified information for digital nomads, given that they are used to digital technologies in broad application. Generationally considered, for Generation I and Millennials, applications and mobile ICT are a part of their lives that has been present since they were born while, for Generation X, an amusing attraction and, for older tourists, they can represent a problem, expressed through the absence of humanization. With the development of technology during the COVID-19 pandemic isolation, augmented reality has increasingly been gaining importance. Tourists appreciate such content which, in the international environment, is more developed than in Croatia. The respondents believe that tourism is one of the fastest growing sectors in the economy and that the plans for tourism product development should be directed towards not only the current sector needs, but also towards the future period and that destination stakeholders should take account of all reactive groups, including disabled persons, to whom mobile applications can bring them closer and present destination offers in a quality way, as well as facilitate their use in both personal and virtual ways. The importance of the creation of augmented reality as a tourism offer is at a very high level. Quality mobile applications, developed by the destinations, have entertaining characters and develop attractive games that surpass local aspects, and have the potential for monetarization and financial gain. It is important to recognize consumer needs, and this is possible by in-depth profiling of the market segments, regardless of whether it concerns geographical segmentation or is based on specific interests. Consumer needs evolve, and the tool must follow or even get ahead of the trend.

The research responds positively to the paper's problem question: How important are mobile applications for digitalizing tourism products in destinations? The importance of product diversification has been recognized but their integration into the unique platform, specific products have been graded and ranked, and the importance of cooperation between destination stakeholders, focused on excellence and quality, has been emphasized. New knowledge also opens new questions and represents a platform for future research. The question directed toward comprehending the attitudes of potential and real users of mobile applications in tourism can be distinguished. It is also necessary to explore the applications' functionality and the transformation of traditional destinations into smart destinations, which base their development on technology, inclusion, sustainability, and affirmation of cultural heritage. Also, broadening of the research is proposed to national levels and within the European context, by which the limitation of the study related to the sample will be bridged, which, although local, and at the same time indicative, presents the attitudes of the key destination stakeholders engaged in the creation of the destination policy and online marketing strategy.

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