

**A DIGITÁLIS MARKETING, MINT A FENNTARTHATÓ
TURIZMUS ÖSZTÖNZŐJE: SZISZTEMATIKUS
SZAKIRODALMI ÁTTEKINTÉS**

**DIGITAL MARKETING AS A DRIVER FOR
SUSTAINABLE TOURISM DEVELOPMENT:
A SYSTEMATIC LITERATURE REVIEW**

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Kulcsszavak: *digitális marketing, digitális turizmus, fenntartható turizmusfejlesztés,
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Keywords: *Digital marketing, Digital tourism, Sustainable tourism development, Digital
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ÖSSZEFOGLALÓ

Az elmúlt években kiemelkedően fontos témává vált a digitális marketing fogalma a turizmusban és a marketing kutatásokban egyaránt. Hiányoznak azonban azoknak az elméleti alapokon nyugvó kutatások, amelyek rávilágítanának arra, hogy milyen módon tudná a turizmus szektor alkalmazni a digitális marketing eszköztárát a turizmus fenntartható fejlődésének elősegítésére. Ezt szem előtt tartva jelen írás szerzői szisztematikus szakirodalmi áttekintést (SLR – Systematic Literature Review) végeztek, 2015 és 2021 között a Scopus és a Web of Science adatbázisokban megjelent 83 folyóiratcikk feldolgozásával. Jelen cikk tehát fontos hozzájárulás a már létező és a jövőben megjelenő digitális marketing eszközök lehetséges használati módjaihoz a turizmusban, különös tekintettel a fenntartható turizmus fejlődésének támogatásában. Továbbá a szerzők egy olyan átfogó, integrált elméleti keretrendszer is létrehoztak, amely a technológia, a marketing és a turizmus kapcsolatát mutatja be és remélhetően inspirálja majd a jövő kutatóit.

SUMMARY

The notion of digital marketing has emerged as a prominent topic in the tourism industry and received high attention from the marketing research community in recent years. However, there is a noticeable absence of theoretically grounded research on how the tourism industry should apply and implement digital marketing to bring about sustainable tourism development. To address this concern, the researchers conducted a systematic literature review (SLR) of 83 journal articles related to digital marketing and tourism, indexed in the Scopus database and Web of Science from 2015 to 2021. In doing so, this review makes an important contribution to the identification of existing and future digital marketing tools applied in the tourism industry and their role in the progress of sustainable tourism development. Furthermore, researchers propose an integrated conceptual framework to provide a comprehensive overview of the relationships between technology, marketing, and tourism to add something new to the existing literature and inspire further research in the future.

INTRODUCTION

Due to significant social, economic, and environmental traumas, digitalization and sustainability have become popular topics within business organizations and government institutions (Benckendorff et al., 2019; Stankov & Gretzel, 2021). For instance, the current global health crisis requires the implementation of new digital technologies and customer-oriented business transformation (Saseanu et al., 2020). The application and implementation of digital marketing are current and widely accepted concepts worldwide (Dabas et al., 2021; Damnjanović et al., 2020; Kenan Mahmutović, 2021).

Chaffey & Ellis-Chadwick (2016:11) define digital marketing as the "application of the internet and related digital technologies, such as mobile phones, display advertising, and any other digital medium, in conjunction with traditional communications to achieve marketing objectives or achieving marketing objectives through applying digital technologies and media." According to the author, for successful digital marketing, there is still a necessity to incorporate modern techniques with conventional media such as TV, print, and direct mail as components of multichannel marketing communications. As technology becomes more advanced, the idea of digital marketing also keeps changing. According to Kotler et al. (2020:45), "digital marketing is not solely emphasized on a channel or a technique; it is an upgrading of the strategic marketing mind while at the same time embracing technology, tremendous data technology, by using content and digital platforms to integrate new tools and applications to convey together the analytical and artistic mind into one."

Nowadays, digital marketing has become an integral aspect of the tourism industry, which necessitates the conceptualization of digital marketing as a driver of sustainable tourism development and the establishment of a relevant theoretical framework. To build theoretical foundations and directions for empirical research on sustainable tourism development based on digital

marketing, it is vital to understand the objectives of sustainable tourism and how it leads to these objectives in advance. The concept of sustainability and sustainable tourism development has emerged as one of the most rapidly growing research areas and has captured the attention of many scholars since the late 1980s (Hashemkhani Zolfani et al., 2015). It emerged as a negative and reactive concept in response to many tourism challenges and was accepted as capable of creating positive changes and ways to secure positive social, environmental, and economic benefits (Bramwell and Lane, 2012).

With the advent of the internet and the advancement of technology over the last two decades, the tourism industry has experienced significant social, economic, and environmental traumas (Kim & Kim, 2017). Moreover, the development of many digital marketing tools changes the structure and process of the tourism industry to acquire sustainable tourism competencies and contributes to social, economic, and environmental development (Gretzel et al., 2015). In this regard, the understanding and use of digital marketing tools by the tourism industry are critically important. Also, digital technology in the field of tourism has a positive impact on making the tourism industry more competitive in the modern digital world (Natocheeva et al., 2020).

Furthermore, digital marketing has become one of the key focus areas for tourism businesses and destinations all over the world to design sustainable tourism products and promotions that protect and conserve tourism resources (Riyadi et al., 2019; Shiqun et al., 2021; Tsourgiannis & Valsamidis, 2019; Vázquez Loaiza et al., 2019). For instance, Kuzior et al. (2021) pointed out that digital marketing in the tourism industry helps to ensure sustainable tourism development, creates a new workplace, generates trade opportunities, employment, and decent work, and ensures quality of life. Besides this, it has the potential to play a big role in spreading environmental information and making travelers more aware of how their actions affect the environment by using a

variety of digital marketing tools (Misso et al. 2018). Rodrigues et al. (2021) also highlight that digital marketing is the greatest promotional tool to reach new and larger target audiences more effectively and efficiently in rural tourism.

However, despite its significance, there is a noticeable absence of theoretically grounded research on the role and impact of digital marketing on sustainable tourism development. The researchers investigate this problem and identify gaps in the research conducted by scholars. Moreover, little attention has been paid to the role and contribution of digital marketing to the sustainability of tourism. As an attempt to address this gap, this study investigates a comprehensive review of digital marketing and its role in the sustainability of tourism, including digital marketing tools and their contribution to sustainable tourism development, and builds up a theoretical and conceptual framework to provide new insights on the contribution and role of digital marketing for the sustainability of tourism.

OBJECTIVE OF THE REVIEW

The study's overall goal was to review the recent literature (published from 2015 to 2021) in the area of digital marketing and its contribution to sustainable tourism development. The specific objectives of the review were:

1. to identify existing and future digital marketing tools or concepts applied in the tourism industry.
2. to examine the role and contribution of digital marketing toward sustainable tourism development.
3. to build a theoretical and conceptual framework depicting digital marketing and sustainable tourism development.

REVIEW METHODOLOGY

The systematic literature review was selected for this study because the SLR approach to reviewing previous literature offers a widespread view of the literature in a given field and helps to discover avenues for future research by revealing the research gaps (Swartz, 2011). Guided by PRISMA protocols and a checklist referred to by Rethlefsen et al. (2021), researchers collected data from the database through four main phases: identification, screening, eligibility, and inclusion (see Figure 1).

Identification

In this phase, the researchers determined the search keywords and databases to decide the types of journals to include in this study. Thus, the search keywords that the researchers applied as a selection criterion were based on the topic of the studies and the following terms used in the title, keywords, and abstract of the studies: (digital AND marketing AND in AND tourism AND sustainable tourism) (LIMIT-TO (OA, "all")). Even though all databases have their pros and cons (Amentae & Gebresenbet, 2021), the researchers employed Web of Science and Scopus as sources of publication based on their more comprehensive coverage of high-quality scholarly information used in most review research. Based on this search keyword criterion, initially, the researchers extracted 495 and 98 studies from the Web of Science and Scopus databases, respectively.

Screening

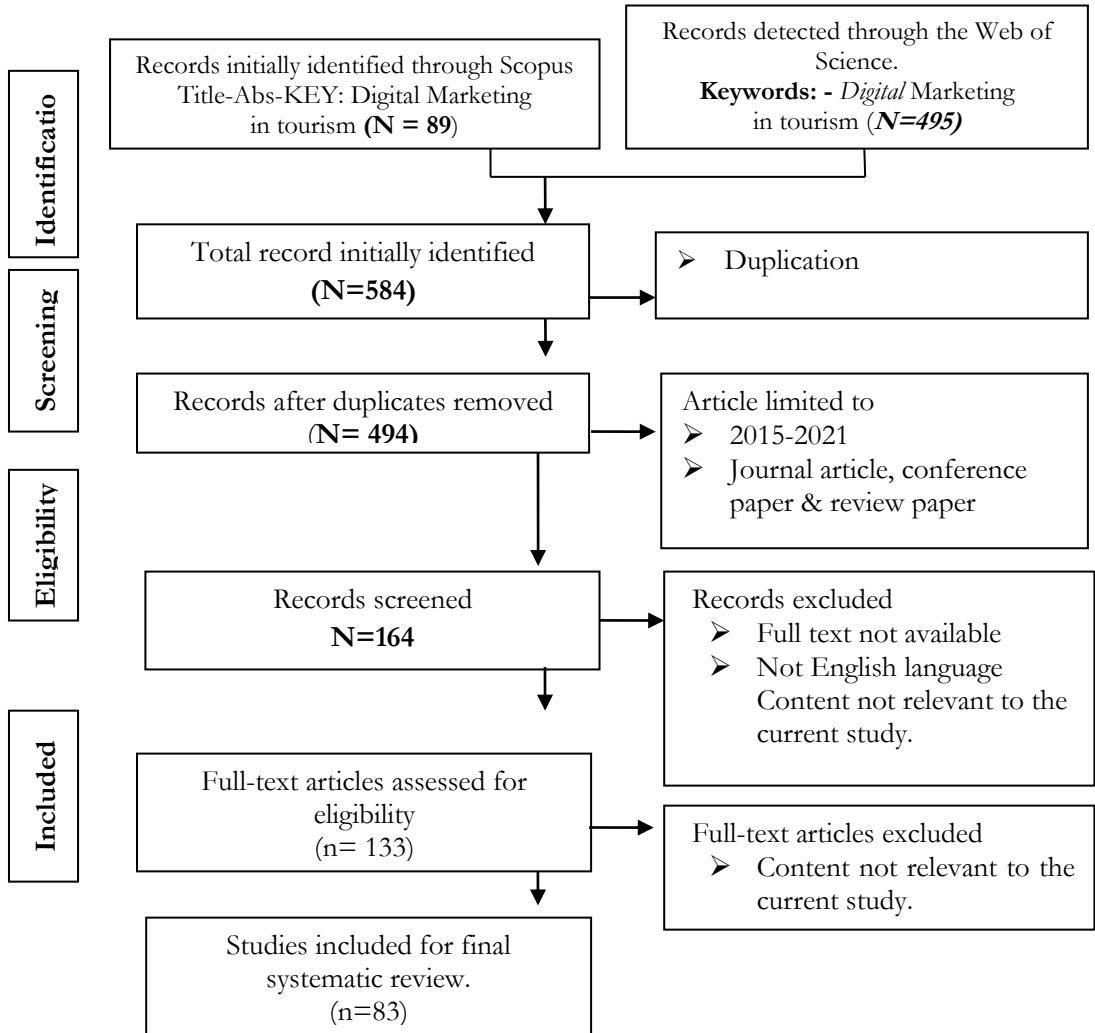


Figure 1. Study selection process

Source: literature review & created by authors

Initially extracted data encompasses studies belonging to diverse languages and different categories, including journal articles, reviews, conference papers, books, book chapters, and editorials. The researchers determined the inclusion and exclusion criteria to select relevant studies for the analysis and used the following inclusion and exclusion criteria: (1) studies related to digital marketing,

tourism, and sustainable tourism; (2) studies discussing digitalization and tourism; and (3) journal articles published in English only from 2015 to 2021. Based on inclusion/exclusion criteria, the researchers were left with 135 Web of Science-listed journals and 36 Scopus-listed journals, for a total of 164 articles in this phase.

Eligibility

Knowledge of the quality assessment criteria is essential in appraising a review's validity, applicability, and comprehensiveness (Rethlefsen et al., 2021). To ensure the quality of the selected article review, the researchers discover and deeply read the abstract, methodology, findings, and conclusion. After reading the articles, the researchers remove those that do not fit the inclusion or exclusion criteria. In this phase, 31 articles were removed for not meeting the criteria, and 133 articles were identified as the most suitable in this stage.

Included

Finally, after applying all inclusion and exclusion criteria, 83 unique articles were included for synthesizing and analyzing the review. The main themes and subthemes, publication year, publishing journal, selected database, and retrieved papers are presented in the next section.

RESULTS AND DISCUSSION

Identified themes and subthemes

This section presents the results from the analysis of the 83 papers. It analyzed the contents of the selected papers to deliver essential insights into the role and contribution of digital marketing toward sustainable tourism development. They were categorized into three broad themes. The categorization process, which was based on our understanding of the reviewed literature, is described in detail

in Table 1. Categorizing the main themes and subthemes addressed by the reviewed literature was not easy, as some concepts were related, and some were inclusive of others. Categorization was performed as follows: all papers aimed at relevance and adoption were categorized under relevance, adoption, and application of digital marketing. All articles aimed at the role and impact were categorized as the role and impact of digitalization. Papers aimed at addressing the digital platform were categorized as digital marketing tools. Papers related to big data, blockchain technology, Web 2.0, and information technology were categorized under other themes. After categorization, a summary of the main themes and subthemes is presented in percentages for each theme (see Table 1). As Table 1 shows, among the 83 studies published in 2015–2021, most of them (40.96%) analyze trends in the relevance, adoption, and application of digital marketing. Moreover, 28.92% of the journal articles discuss the various roles and impacts of digitalization on sustainable tourism. The third identified theme represents 22.89% (digital marketing tools). The first theme- relevance, adoption, and application of digital marketing, includes as sub-topics all the items identifying disciplinary and methodological trends, such as the areas discussed in the tourism literature; topics concerning tourism marketing; geo-tourism; post-industrial tourism; rural tourism; food tourism; regional tourism; green tourism; integrated digital tourism; digital marketing strategy; sustainable tourism and digitalization; cultural and heritage tourism; and digital marketing adoption.

Table 1. Identified themes and subthemes

Key themes	Subthemes	%
Relevance, adoption, and application of digital marketing	Tourism marketing, geo-tourism, post-industrial tourism, rural tourism, food tourism, regional tourism, green tourism, integrated digital tourism, digital marketing strategy, sustainable tourism, and digitalization, cultural and heritage tourism, and digital marketing adoption	40.96
Role and impact of digitalization	Sustainable digitalization, the digital skills gap, tourism digitalization, artificial intelligence, smart tourism, smart tourism cities, virtual tourism, and the digital economy.	28.92
Digital marketing tools	Social media marketing, content marketing, mobile marketing, internet marketing, fuzzy logic approach, digital communication channel, augmented reality, websites, and a digital toolkit.	22.89
Others	Big data, blockchain technology, Web 2.0, information technology, and customer needs in a digital world.	7.23

Source: literature review & created by authors

The second theme of papers focused on the roles and impacts of digitalization, which represent the second emergent theme and discuss sustainable digitalization, the digital skills gap, tourism digitalization, artificial intelligence, mitigating over-tourism, smart tourism, smart tourism cities, virtual tourism, and the digital economy. The third key theme identified includes sub-topics such as social media marketing, content marketing, mobile marketing, internet marketing, fuzzy logic approach, digital communication channel, augmented reality, websites, and the digital toolkit. The last category, “Other” (7.23%), covers scattered minor sub-themes, such as big data, blockchain technology, Web 2.0, information technology, and customer needs in a digital world.

The researchers also portray descriptive statistics in terms of the yearly distribution and reviewed publications by articles, conference papers, and reviews. As can be seen in Figure 2, studies on digital marketing and sustainable tourism from 2015 to 2018 remained relatively low, with a total of 25 studies. However, from 2019 to 2021, there has been an enormous surge in the study of digital marketing in tourism, which is attracting much greater attention in the

field. Aside from that, the researchers describe the distribution of publications by year and evaluate journal articles, conference papers, and reviews.

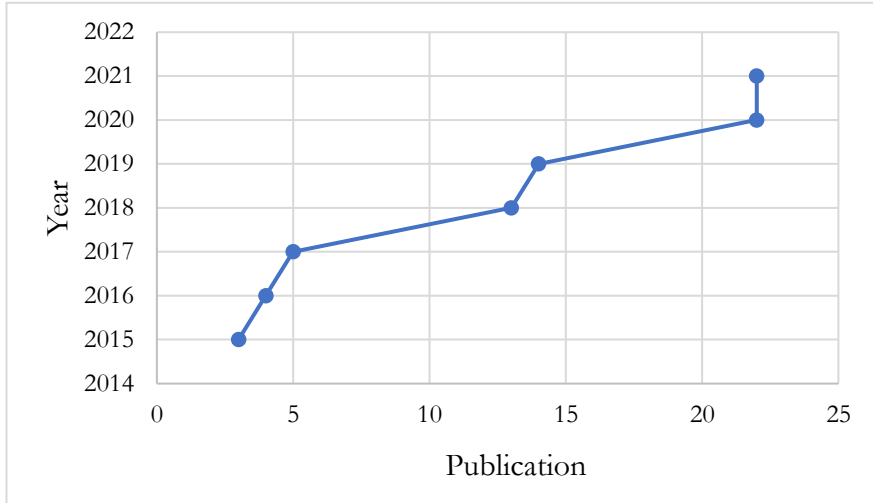


Figure 2. Number of publications by year
Source: literature review & created by authors

As shown in Figure 3, in terms of the type of document, the researcher observed that 84% (70 articles), 12% (10 conference papers), and 6% (3 review papers) were used for this study.

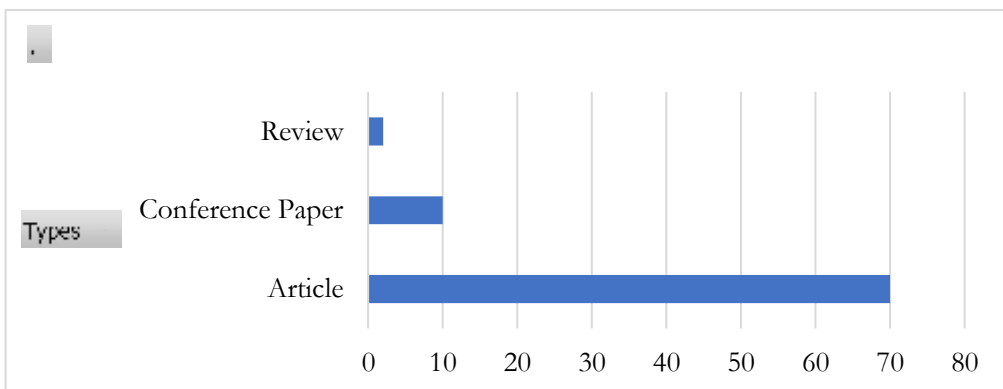


Figure 3. Reviewed papers by journals articles, conferences, and literature review
Source: literature review & created by authors

Table 2 shows that 29 sources of journals were used for this paper, and 28 were published in the Journal of Destination Marketing & Management, Sustainability, Current Issues in Tourism, and Journal of Tourism Futures.

Table 2. Document source

Type of document	Source of title	Number of studies	
Journal article and review N=73	Journal of destination marketing & management	9	
	Sustainability	7	
	Current issues in tourism	6	
	Journal of Tourism Futures	6	
	worldwide hospitality and tourism themes	5	
	Alma tourism-journal of tourism culture and territorial development	4	
	Journal of hospitality marketing & management	4	
	Journal of business research	4	
	Information (Switzerland)	4	
	Tourism management perspectives	3	
	European journal of tourism hospitality and recreation	3	
	Economic research-ekonomska istrazivanja	3	
	World leisure journal	2	
	Geojournal of Tourism and Geosites	2	
	International journal of culture tourism and hospitality research	2	
	International journal of contemporary hospitality management	2	
	International journal of innovative technology and exploring engineering	1	
	Humanities and Social Sciences Reviews	1	
	International Journal of Engineering and Technology (UAE)	1	
	Australasian marketing journal	1	
	International journal of information management	1	
	Cogent social sciences	1	
	International journal of fuzzy systems	1	
	E3S Web of Conferences	5	
	Advances in Intelligent Systems and Computing	1	
	Conference paper N= 10	Vide. Tehnologija. Resource - environment, technology, resources	1
		IOP Conference Series: Materials Science and Engineering	1
		Smart Innovation, Systems, and Technologies	1
International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives		1	

Source: literature review & created by authors

Dominant and existing digital marketing tools applied in the tourism industry

Based on the first goal of the review, the existing digital marketing tools and concepts applied in the tourism sector can be discovered in this paper. To identify the existing digital marketing tools or concepts applied in the tourism industry, the keywords and main digital marketing tools examined in the selected journal articles and conference papers were analyzed. In keyword analysis, words related to the specific method used, specific digital marketing tools, and the country of the study were excluded as not relevant to the research objectives or falling within other research questions.

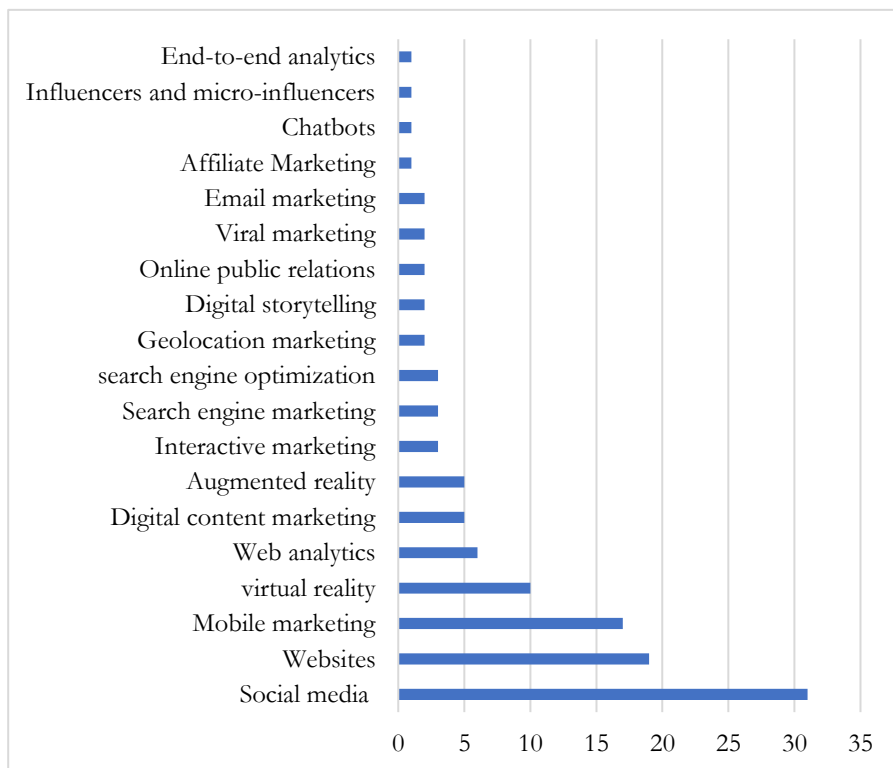


Figure 4. Dominant digital marketing tools applied in the tourism industry

Source: literature review & created by authors

As shown in Figure 4, the most frequently occurring keyword in the research papers that were examined was social media. It was also one of the most important tools that were used in the papers that related to the tourism industry. According to the results of the keyword analysis, the most common keywords in the papers were social media marketing, websites, mobile marketing, virtual reality, web analytics, digital marketing content, and augmented reality, respectively. These were also among the most important and top research topics discussed in the literature review. However, topics such as interactive marketing, search engine marketing, search engine optimization, geolocation marketing, digital storytelling, online public relations, viral marketing, email marketing, affiliate marketing, chatbots, influencers and micro-influencers, and end-to-end analytics were not covered to great extent in the reviewed papers.

Digital marketing tools are technologies and methods that allow potential tourists to learn about one place or another, share experiences, share their impressions, make purchase decisions, and book goods and services. As shown in Table 3, currently, the list of digital marketing tools is quite extensive and is expanding every year as the global network resources offer more and more new opportunities and prospects. In keyword analysis, social media marketing, mobile marketing, digital marketing content, websites, web analytics, interactive marketing, search engine marketing, search engine optimization, geolocation marketing, augmented reality, virtual reality, digital storytelling, online public relations, viral marketing, email marketing, affiliate marketing, chatbots, influencers and micro-influencers, and end-to-end analytics were identified as the existing digital marketing tools applied to the tourism industry in this paper. Social media marketing, mobile marketing, websites, web analytics, and virtual reality were among the top research topics discussed in the literature review (see Table 3).

Table 3. Digital marketing tools in tourism.

Sources	Digital marketing tools	Role and contribution
(P ₂) (P ₁₃) (P ₁₉) (P ₂₂) (P ₂₆) (P ₃₄) (P ₃₆) (P ₄₀) (P ₄₆) (P ₅₅) (P ₅₇) (P ₆₆) (P ₇₄) (P ₇₈)	Social media marketing	Social media marketing is the most important and widely used digital marketing tool by destinations and tourists as a source of information, to promote tourism products and services, engagement, and the formation of virtual communities. It also plays an important role in influencing decision-making when people publicly share their travel experiences.
(P ₃), (P ₃₇)	Digital content marketing	An effective method of creating and distributing valuable online, credible, and quality content for tourists about destinations, tourism products, and services to consistently attract, retain, and motivate tourists and brand the business.
(P ₈) (P ₂₉) (P ₃₂) (P ₄₁) (P ₇₁) (P ₇₂)	Mobile Marketing	It is a tool that enables tourism marketers to research the target audience in a relevant manner through any mobile device and assist customers in deciding when, where, and what to view by using travel applications on their smartphones.
(P ₂₅)	Interactive marketing	Digital marketing tools used widgets and opt-in features to make their website interactive, solicit feedback, track user behavior, engage with the customers actively, and customize offers based on their preferences and browsing activities.
(P ₅₉),	Search engine marketing	Marketing digital tools and practices that target various types of searches, including image search, video search, news search, and industry-specific search engines.
(P ₄₄)	search engine optimization	The process of increasing the quality of relevant organic traffic from search engines to your website through the use of keywords to gain better visibility and increase sales.
(P ₁₂)	Geolocation marketing/ geo-marketing	Digital marketing tools used location-based or geographic information to locate people or places so they could deliver their messages to the most relevant audience at the right time.
(P ₃₁), (P ₄₉),	Augmented Reality (AR)	The digital marketing tool used to amplify the real-world environment using virtual objects, data, computers, and smartphones that has a profound effect on improving tourism while roaming in an unknown environment.
(P ₄), (P ₄₇), (P ₈₀)	virtual reality (VR)	The digital marketing tool substitutes actual tourism for virtual tourism and ensures anyone virtually engages with and interacts with destinations and attractions from anywhere in the world.
(P ₁₈)	Digital storytelling	Telling personal stories using digital forms through audio clips, photos, videos, and graphic visualization stimulates a tourist's desire for a tour by appealing to their eagerness and imagination, prolonging the experience, and capturing the attention of future tourists.

(P ₁₀)	Online Public Relations	A process of publishing articles in online public relations catalogs, online press releases, forums, and sharing videos containing commercial messages concerning tourism products or services.
(P ₇₅)	Viral marketing	The technique provides preliminary information about the tourist destination in the form of memes, shares, likes, and forwards.
(P ₂₈), (P ₇₀)	Email marketing	An effective way to capture high-quality leads and convert them into customers is by sending personalized emails to the target audience.
(P ₄₃)	Affiliate Marketing	It is the mechanism of paying publishers who bring you customers, and publishers give you space on their pages to advertise your tourism destination, product, or service.
(P ₄₅)	Chatbots	Digital marketing tools that give customers a frontier employee and make customers happier by giving them accurate information and letting them talk to you in real-time
(P ₅₈)	Influencers and micro-influencers	It is a way of inviting superstars on social media to tourist destinations and promoting their tourism potential to millions of people.
(P ₅), (P ₄₈), (P ₅₀)	Web Analytics	Digital marketing tools help you collect, understand, measure, analyze, plan, report, and predict web activities for your business.
(P ₁) (P ₂₄) (P ₃₃) (P ₃₅) (P ₅₁) (P ₅₄) (P ₅₆)	Websites	The foundation and place of business where the organization distributes trustworthy and credible digital information about tourism products or services to their customers by cutting out the middlemen.
(P ₂₇)	End-to-end analytics	The most effective way to optimize advertising budgets and make calculations of the frequency of trips and the intensity of travel.

Source: literature review & created by authors

Future trends and application of digital marketing tools in tourism

Benckendorff et al. (2019) pointed out that social, economic, technological, and environmental factors have fundamentally altered how visitors experience travel and how destinations market themselves, which, in turn, influences how the tourism industry develops and measures its success. Thus, the Internet is no longer a gigantic digital marketing platform; instead, it provides immeasurable networks and platforms striving for the traveler's attention and spending power (Kotler et al., 2020). Consequently, the travel industry has moved its focus to digital marketing. It will be necessary to think about how the rise of computing

power and intelligence will change the travel experience (Chiang, 2020). It materializes those emerging technologies becoming influential enough to empower people within the framework of the human experience rather than defining human character and behavior around the needs of computer designers (Lukas Grundner & Barbara Neuhofer, 2021). Several robotics applications and many tasks are required to create memorable tourist experiences that can be automated (Kapoor & Kapoor, 2021). This implied that the impact of robotics applications on tourism would be significant in the future. The following tools are seen as the travel and tourism industry's digital marketing tools of the future.

Table 4. Future digital marketing tools in tourism

Source	Tools	Description and Application
(P ₁₆), (P ₁₇), (P ₂₀), (P ₂₃), (P ₅₃), (P ₇₃)	Artificial intelligence and cloud computing	While travel will always be a people-focused industry, further developments in artificial intelligence and cloud computing will result in new backstage and frontstage applications in the tourism industry. So, smart tourism services, green tourism, and the modernization of the tourism business would be driven by the use of AI and cloud computing in tourism marketing, in addition to the use of digital marketing tools that are already in place.

Source: literature review & created by authors

Contribution of digital marketing toward sustainable tourism development.

Since the late 1980s, the concept of sustainability and sustainable tourism development has been one of the most rapidly growing research areas and has captivated the attention of many scholars (Hashemkhani Zolfani et al., 2015). Currently, it has been presented as encouraging digital practice and innovative technology involvement towards sustainability in connection with the environment and social and economic aspects to maintain and improve sustainable tourism (Misso et al., 2018; Ferrara et al., 2020; Oxoli et al., 2020). Furthermore, due to its nature, the tourism sector has been interested in recent

decades in ensuring the sustainability of tourism by minimizing its negative impact on the social, cultural, and natural environment (Saseanu et al., 2020). With the spread of information technologies and changing customer needs, digital marketing has become apparent as one way to ensure sustainable tourism development (Reichstein & Härting, 2018; Duy et al., 2020; Menon et al., 2021; Vaculčikova et al., 2020).

While tourism is an information-oriented business, digital marketing is one of the crucial communication tools that connect and allow marketing information to be transmitted directly to potential visitors without the need for an intermediary in a low-cost but effective way (Cheuk et al., 2018; Suyunchaliyeva et al., 2020). It is also one of the greatest promotional tools and helps tourism organizations to reshape brand competitiveness, enhance brand communication, and deepen product integration, as well as reach larger and new target audiences more effectively and efficiently (Riyadi et al., 2019; Rodrigues et al., 2021; Shiqun et al., 2021).

A tourist can be a thousand kilometers away from the destination. However, digital marketing tools and technology assist them to get friendly, fast, accurate, and updated information about a destination, make online reservations and payment methods, and enhance and know about the travel experience, products, and services provided by tourism organizations (Peixoto et al., 2018; Gursoy et al., 2019). Tourists enjoy a range of tourism services from when they leave their residences to their final destination using digital marketing (Zhou, 2019). Besides, with the help of digital marketing, tourism organizations create and develop a better digital marketing strategy to attract more tourists, increase sales, and increase brand awareness by making alternatives to motivate and encourage their target audience to take the right and appropriate action (Natocheeva et al., 2020; Kullada & Michelle Kurniadjie, 2021). Thus, to encourage sustainable tourism development, digital marketing is expected to have an indispensable

effect on tourists and tourism organizations by connecting supply and demand (Alberto Romolini et al., 2017).

Moreover, it plays an essential role in environmental and economic sustainability in terms of income and employment for regional and national socio-economic development (Karvele & Znotiņa, 2019; Rahmoun & Baeshen, 2021). For instance, in terms of economic sustainability, digital marketing may allow tourism destinations to promote their unique tourism attractions to the world in a simple way, which provides an opportunity for generating employment and income for regional and national socio-economic development. On the other hand, to ensure environmental sustainability, digital marketing plays an indispensable role in maintaining, enhancing, and promoting the ecological and natural resources of a destination by creating credible and quality content on different digital marketing tools (Bu et al., 2021; Gregoriades, 2021).

It has the potential to play a significant role in the dissemination of environmental information and the promotion of heightened awareness among travelers regarding the ecological impacts of their actions through the use of various digital marketing platforms. It is obvious that visitors and organizations connected to the tourism industry consume an enormous number of products and services inadvertently. Hence, the tourism sector needs to consolidate the standards and practices of environmentally responsible usage through digital tools such as virtual reality, which substitutes actual tourism for virtual tourism and ensures anyone virtually engages with and interacts with destinations and attractions from anywhere in the world (An et al., 2021; Navarrete, 2019; Voronkova, 2018). Thus, shifting tourism patterns toward digitalization has a significant and beneficial effect on the environment (Almeida-Santana et al., 2020).

Additionally, social participation, social spread, and social interaction are key roles of digital marketing to increase customer participation by communicating

with them, allowing tourists to stay updated and get clear information about the tourist destination, products, or services, giving tourists the opportunity to share their travel experiences with others, and generally enabling the creation of customer relationships (An et al., 2021). Hence, using digital marketing tools and activities in the right way and putting them together in the best way possible leads to better results and sustainable tourism development (Tarazona-Montoya et al., 2020).

Theoretical and conceptual framework

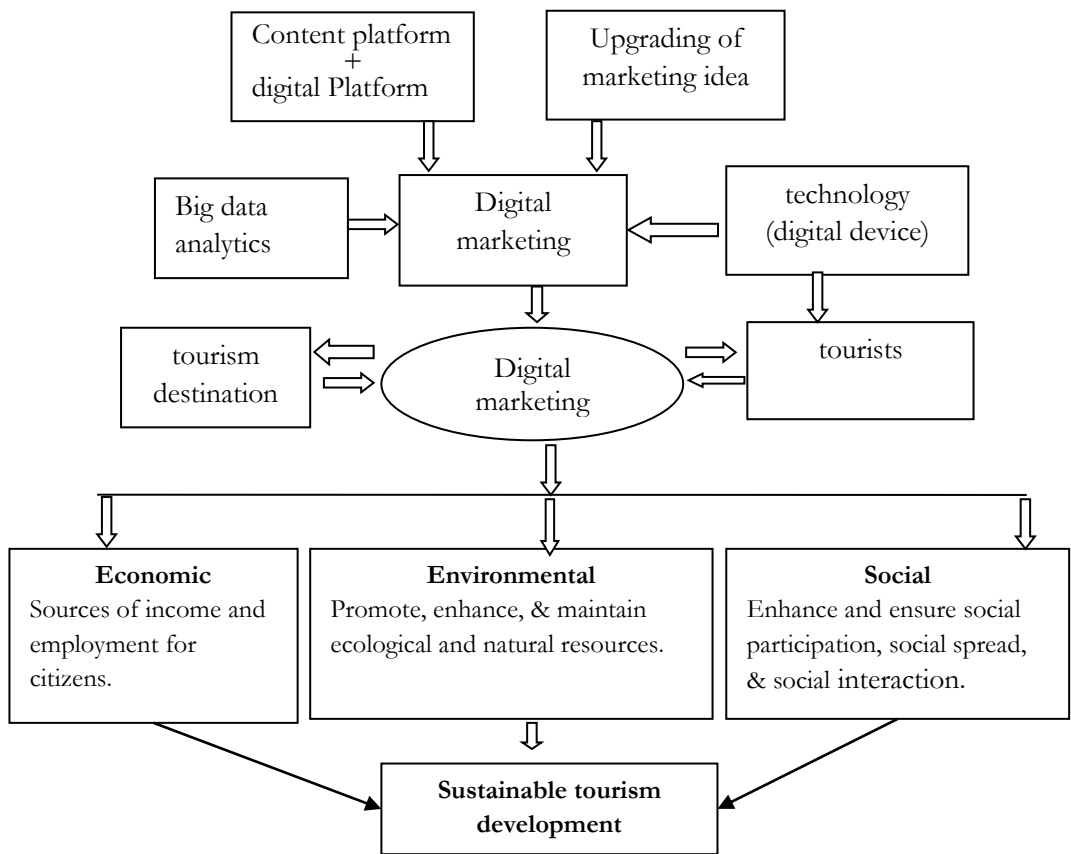


Figure 5. Conceptual frameworks between technology, marketing, tourist, tourism destination, and sustainable tourism development.

Source: literature review & created by authors

Based on the insights obtained from this review, the researchers develop a conceptual framework to offer a comprehensive overview of the relationships between digital marketing and sustainable tourism development (see figure 5). In particular, the researcher focuses on the key constructs (i.e., technology, marketing, and sustainable tourism development). In detail, the framework demonstrates that digital marketing is a combination of advanced strategic marketing minds embracing technology and massive data technology through content and digital platforms. Using digital marketing tools, suppliers (tourism destinations or organizations) upload updated and relevant information about tourist destinations, products, and services.

On the other hand, consumers (tourists) get precise information about the tourist destination, products or services, price, and process using digital marketing tools. Moreover, it offers tourists a chance to share their travel experiences with other customers. Collectively, tourists and tourism organizations maintain economic, social, and better environmental tourism conditions, which promote sustainable tourism development. As shown in Fig. 4, our framework highlights the relationships between technology, marketing, tourism destinations, and sustainable tourism development.

IMPLICATION

The reviewed papers indicated that the digital marketing tools summarized in Table 3 could act as enablers for sustainable tourism development. As shown in Figure 5, digital marketing plays a significant role in achieving sustainable tourism development. It is a crucial tool that contributes to economic, social, and environmental issues. As the tourism industry is associated with many subsectors such as hotels, restaurants, meetings and events, theme and amusement parks, car rental, airports, travel agencies, and tourism information centers (Stankov & Gretzel, 2021), the application of digital marketing concept

is indispensable for all subsectors in the tourism industry (Jovicic, 2019). Therefore, the application of digital marketing could provide a competitive advantage for tourism organizations (Karvele & Znotiņa, 2019). Besides providing tourism organizations with a competitive advantage (Kim & Kim, 2017), it allows tourists to receive clear, relevant, and appropriate information about the organization's tourism destination, products, or services. This can help tourists decide where, when, and what to visit before going to a tourist destination. Furthermore, it has a great potential to ensure environmental sustainability by creating awareness among travelers regarding ecological and environmental issues. This has a significant and beneficial effect on maintaining, enhancing, and promoting ecological and natural resources.

There are two main implications of this review. Firstly, the application of digital marketing is a crucial and timely issue to consider in the tourism industry to bring social, economic, and environmental sustainability, which leads to sustainable tourism development. Secondly, digital marketing is well-advanced and rapidly evolving. However, its application in the tourism industry has untapped potential.

CONCLUSION

The rapid technological advancement and upgraded marketing strategy jointly altered how tourism marketers developed, measured, and provided quality products or services to their customers. In this paper, the researcher acknowledged that tourism marketers could benefit from digital marketing tools and that using digital marketing can reshape the competitiveness and sustainability of the tourism industry. This review thus identifies three themes and subthemes, uncovers the critical gaps in the literature, and discovers existing and future digital marketing tools in the tourism industry, the role of digital marketing in sustainable tourism development, and the anticipated conceptual

framework to inspire further research in the future. The data used in this study were collected from scholarly journals published in English only, which exclude textbooks, book chapters, and doctoral theses related to the topic.

The researchers recognize that including all the different types of sources would have provided a more comprehensive assessment of the existing literature. Nevertheless, we believe that the scholarly work issued in journal articles is still highly representative of the topic and is often regarded as an essential platform to produce and disseminate knowledge. Future researchers should take these sources into account and include them in their studies.

Moreover, a systematic literature review may not have used an exhaustive list of search keywords, although many relevant keywords were considered. We acknowledge that digital marketing and sustainable tourism are expressed using several terms, some of which might have been missed in this research. This study concludes with 83 articles, which we conceive to be adequate and offer supportive insight into digital marketing and sustainable tourism.

DECLARATION

We declare that we have no potential conflicts of interest related to the topic "*Digital marketing as a driver for sustainable tourism development: a systematic literature review*" and that we have not previously published. Material that was taken from other sources and used in the research was properly credited.

REFERENCE

1. Ali, A., Murphy, H. C., & Nadkarni, S. 2016. Hospitality employers' perceptions of technology for sustainable development: The implications for graduate employability. *Tourism and Hospitality Research*, 18(2), 131–142. <https://doi.org/10.1177/1467358416636929>.
2. Almeida-Santana, A., David-Negre, T., & Moreno-Gil, S. 2020. New digital tourism ecosystem: understanding the relationship between information sources and

- sharing economy platforms. *International Journal of Tourism Cities*, 6(2), 335–345. <https://doi.org/10.1108/ijtc-09-2019-0173>.
3. Almeida-Santana, A. & Moreno-Gil, S. 2017. New trends in information search and their influence on destination loyalty: Digital destinations and relationship marketing. *Journal of Destination Marketing & Management*, 6(2), 150–161. <https://doi.org/10.1016/j.jdmm.2017.02.003>.
 4. Amentae, T. K. & Gebresenbet, G. 2021. Digitalization and Future Agro-Food Supply Chain Management: Literature-Based Implications. *Sustainability*, 13(21), 12181. <https://doi.org/10.3390/su132112181>.
 5. An, S., Choi, Y. & Lee, C. K. 2021. Virtual travel experience and destination marketing: Effects of sense and information quality on flow and visit intention. *Journal of Destination Marketing & Management*, 19, 100492. <https://doi.org/10.1016/j.jdmm.2020.100492>.
 6. Atadil, H. A., Erdem, M., Green, A. J. & Crinson, D. 2021. Digital natives in the hospitality workforce: an exploratory study on mobile dependency. *Journal of Hospitality Marketing & Management*, 30(7), 785–798. <https://doi.org/10.1080/19368623.2021.1897054>.
 7. Azevedo, A. L. R. A. 2017. The Role of Digital Marketing: A perspective from Porto Hotels' Managers. *International Journal of Marketing, Communication and New Media*, 88–105. <http://u3isjournal.isvouga.pt/index.php/ijmcmn>.
 8. Ban, O. & Popa, A. L. (2015). Investigating digital divide in travel distribution: The use of the Internet and new media technologies in travel agencies of Bihor, Romania. *Tourism: An International Interdisciplinary Journal*, 63(4), 479–496.
 9. Benckendorff, P. J., Xiang, Z. & Sheldon, P. J. 2019. *Tourism Information Technology, 3rd Edition. CABI Tourism Texts* (3rd ed.). CABI.
 10. Ben-Shaul, M. & Reichel, A. 2017. Motives, Modes of Participation, and Loyalty Intentions of Facebook Tourism Brand Page Consumers. *Journal of Travel Research*, 57(4), 453–471. <https://doi.org/10.1177/0047287517704087>.
 11. Bigne, E., Ruiz, C. & Curras-Perez, R. 2019. Destination appeal through digitalized comments. *Journal of Business Research*, 101, 447–453. <https://doi.org/10.1016/j.jbusres.2019.01.020>.
 12. Bramwell, B. & Lane, B. 2012. Towards innovation in sustainable tourism research? *Journal of Sustainable Tourism*, 20(1), 1–7. <https://doi.org/10.1080/09669582.2011.641559>.
 13. Bu, Y., Parkinson, J. & Thaichon, P. 2020. Digital content marketing as a catalyst for e-WOM in food tourism. *Australasian Marketing Journal*, 29(2), 142–154. <https://doi.org/10.1016/j.ausmj.2020.01.001>.
 14. Campillo-Alhama, C. & Martínez-Sala, A. M. 2019. Events 2.0 in the transmedia branding strategy of World Cultural Heritage Sites. *Profesional de la Información*, 28(5). <https://doi.org/10.3145/epi.2019.sep.09>.

15. Chaffey, D., Ellis-Chadwick, F. & Pearson Education. 2016. Digital Marketing. Pearson.
16. Cheuk, S., Atang, A., May Chiun, L. & Ramayah, T. 2018. Barriers to digital marketing adoption at remote rural tourism destinations in Sarawak: an exploratory study. *International Journal of Engineering & Technology*, 7(2.29), 86. <https://doi.org/10.14419/ijet.v7i2.29.13135>.
17. Chiang, C. T. 2020. Developing an eMarketing model for tourism and hospitality: a keyword analysis. *International Journal of Contemporary Hospitality Management*, 32(10), 3091–3114. <https://doi.org/10.1108/ijchm-03-2020-0230>
18. Coca-Stefaniak, J. A. 2020. Beyond smart tourism cities – towards a new generation of “wise” tourism destinations. *Journal of Tourism Futures*, 7(2), 251–258. <https://doi.org/10.1108/jtf-11-2019-0130>
19. Dabas, S., Sharma, S. & Manaktola, K. 2021. Adoption of digital marketing tools in independent businesses: experiences of restaurant entrepreneurs in India and United Kingdom. *Worldwide Hospitality and Tourism Themes*, 13(2), 214–235. <https://doi.org/10.1108/whatt-09-2020-0120>.
20. Damnjanović, V., Lončarić, D. & Dlačić, J. 2020. Digital marketing strategy of Accor Hotels: shaping the future of hospitality. *Tourism and Hospitality Management*, 26(1), 233-244.
21. Duy, N. T., Mondal, S. R., Van, N. T. T., Dzung, P. T., Minh, D. X. H. & Das, S. 2020. A Study on the Role of Web 4.0 and 5.0 in the Sustainable Tourism Ecosystem of Ho Chi Minh City, Vietnam. *Sustainability*, 12(17), 7140. <https://doi.org/10.3390/su12177140>.
22. Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A. S., Kumar, V., Rahman, M. M., Raman, R., Rauschnabel, P. A., Rowley, J., Salo, J., Tran, G. A. & Wang, Y. 2021. Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*, 59, 102168. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>.
23. Enza, C. & Parmová, D. Š. 2020. Significance of digital communication channels for tourism providers in holiday regions. *The central European Journal of regional development and tourism*, 12(2), 140-165.
24. Farhangi, S. & Alipour, H. 2021. Social Media as a Catalyst for the Enhancement of Destination Image: Evidence from a Mediterranean Destination with Political Conflict. *Sustainability*, 13(13), 7276. <https://doi.org/10.3390/su13137276>.
25. Ferrara, C., Pierdicca, R., Paolanti, M., Aleffi, C., Tomasi, S., Paviotti, G. ... & Frontoni, E. 2020. The role of ICTs and public-private cooperation for cultural heritage tourism. The case of Smart Marca. *Studies on the Value of Cultural Heritage*, (10), 189-204. <https://doi.org/10.13138/2039-2362/2424>.

26. Filimonau, V. & Naumova, E. 2020. Blockchain technology and the scope of its application in hospitality operations. *International Journal of Hospitality Management*, 87, 102383. <https://doi.org/10.1016/j.ijhm.2019.102383>.
27. Fortezza, F. & Pencarelli, T. 2015. Potentialities of Web 2.0 and new challenges for destinations: insights from Italy. *Anatolia*, 26(4), 563–573. <https://doi.org/10.1080/13032917.2015.1040813>.
28. Giaccone, S. C. & Bonacini, E. 2019. New Technologies in Smart Tourism Development: The #iziTRAVELSicilia Experience. *Tourism Analysis*, 24(3), 341–354. <https://doi.org/10.3727/108354219x15511864843867>
29. Gregoriades, A., Pampaka, M., Herodotou, H. & Christodoulou, E. 2021. Supporting digital content marketing and messaging through topic modeling and decision trees. *Expert Systems with Applications*, 184, 115546. <https://doi.org/10.1016/j.eswa.2021.115546>.
30. Gretzel, U., Sigala, M., Xiang, Z. & Koo, C. 2015. Smart tourism: foundations and developments. *Electronic Markets*, 25(3), 179–188. <https://doi.org/10.1007/s12525-015-0196-8>.
31. Grundner, L. & Neuhofer, B. 2021. The bright and dark sides of artificial intelligence: A futures perspective on tourist destination experiences. *Journal of Destination Marketing & Management*, 19, 100511. <https://doi.org/10.1016/j.jdmm.2020.100511>.
32. Gupta, A, Bakshi, S. & Dogra, N. 2018. Engaging consumers in the digital era: An analysis of official tourism Facebook pages in India. *Tourism: An International Interdisciplinary Journal*, 66(1), 63–77.
33. Gursoy, D., Chi, O. H., Lu, L. & Nunkoo, R. 2019. Consumers' acceptance of artificially intelligent (AI) devices uses in service delivery. *International Journal of Information Management*, 49, 157–169. <https://doi.org/10.1016/j.ijinfomgt.2019.03.008>.
34. Happ, E. & Ivancsó Horváth, Z. 2020. A study of digital marketing tools usage habits among Hungarian tourists. *GeoJournal of Tourism and Geosites*, 32(4), 1283–1289. <https://doi.org/10.30892/gtg.32414-570>.
35. Hartemo, M. 2016. Email marketing in the era of the empowered consumer. *Journal of Research in Interactive Marketing*, 10(3), 212–230. <https://doi.org/10.1108/jrim-06-2015-0040>.
36. Hashemkhani Zolfani, S., Sedaghat, M., Maknoon, R. & Zavadskas, E. K. 2015. Sustainable tourism: a comprehensive literature review on frameworks and applications. *Economic Research-Ekonomska Istraživanja*, 28(1), 1–30. <https://doi.org/10.1080/1331677x.2014.995895>.
37. Hausmann, A., Toivonen, T., Fink, C., Heikinheimo, V., Kulkarni, R., Tenkanen, H. & di Minin, E. 2020. Understanding sentiment of national park visitors from

- social media data. *People and Nature*, 2(3), 750–760. <https://doi.org/10.1002/pan3.10130>.
38. Hausmann, A. & Weuster, L. 2017. Possible marketing tools for heritage tourism: the potential of implementing information and communication technology. *Journal of Heritage Tourism*, 13(3), 273–284. <https://doi.org/10.1080/1743873x.2017.1334786>
 39. Hu, L. & Olivieri, M. 2020. Social media management in the traveler's customer journey: an analysis of the hospitality sector. *Current Issues in Tourism*, 24(12), 1768–1779. <https://doi.org/10.1080/13683500.2020.1819969>
 40. Huang, T. L. & Liu, B. S. 2021. Augmented reality is human-like: How the humanizing experience inspires destination brand love. *Technological Forecasting and Social Change*, 170, 120853. <https://doi.org/10.1016/j.techfore.2021.120853>
 41. Hudson, S., Roth, M. S., Madden, T. J. & Hudson, R. 2015. The effects of social media on emotions, brand relationship quality, and word of mouth: An empirical study of music festival attendees. *Tourism Management*, 47, 68–76. <https://doi.org/10.1016/j.tourman.2014.09.001>.
 42. Bijay Prasad, K., Raj Kumar, S., Nikhil, V. & Vibhuti Narayan, S. 2020. Integrating social media and digital media as new elements of integrated marketing communication for creating brand equity. *Journal of Content, Community and Communication*, 11(10), 52–64. <https://doi.org/10.31620/jccc.06.20/05>.
 43. Iryna Lorvi, O. P. 2019. Digital Toolkit for Promoting Tourist Destinations. *International Journal of Innovative Technology and Exploring Engineering*, 8(12), 4982–4987. <https://doi.org/10.35940/ijtee.l3745.1081219>.
 44. Jorge, F., Sérgio Teixeira, M., Fonseca, C., Correia, R. J. & Gonçalves, R. 2019. Social Media Usage Among Wine Tourism DMOs. *Marketing and Smart Technologies*, 78–87. https://doi.org/10.1007/978-981-15-1564-4_9
 45. Jorge, F., Teixeira, M. S., Correia, R. J., Gonçalves, R., Martins, J. & Bessa, M. 2018. A Conceptual Research Model Proposal of Digital Marketing Adoption and Impact on Low Density Tourism Regions. *Advances in Intelligent Systems and Computing*, 528–537. https://doi.org/10.1007/978-3-319-77703-0_52
 46. Jovicic, D. Z. 2017. From the traditional understanding of tourism destinations to the smart tourism destination. *Current Issues in Tourism*, 22(3), 276–282. <https://doi.org/10.1080/13683500.2017.1313203>
 47. Kapoor, R. & Kapoor, K. 2021. The transition from traditional to digital marketing: a study of the evolution of e-marketing in the Indian hotel industry. *Worldwide Hospitality and Tourism Themes*, 13(2), 199–213. <https://doi.org/10.1108/whatt-10-2020-0124>
 48. Karvele, L. & Znotiņa, D. 2019. Evaluation of digital marketing use in the promotion of large region tourism. *Environment. Technologies. Resources. Proceedings of*

- the International Scientific and Practical Conference*, 2, 195.
<https://doi.org/10.17770/etr2019vol2.4055>
49. Ketter, E. & Avraham, E. 2021. #StayHome today so we can #TravelTomorrow: tourism destinations' digital marketing strategies during the Covid-19 pandemic. *Journal of Travel & Tourism Marketing*, 38(8), 819–832.
<https://doi.org/10.1080/10548408.2021.1921670>
 50. Kim, D. & Kim, S. 2017. The Role of Mobile Technology in Tourism: Patents, Articles, News, and Mobile Tour App Reviews. *Sustainability*, 9(11), 2082.
<https://doi.org/10.3390/su9112082>.
 51. Kotler, M., Cao, T., Wang, S. & Qiao, C. 2020. Marketing Strategy in The Digital Age: Applying Kotler's Strategies to Digital Marketing. World Scientific.
 52. Kullada, P. & Michelle Kurniadjie, C. R. 2021. Examining the Influence of Digital Information Quality on Tourists' Experience. *Journal of Quality Assurance in Hospitality & Tourism*, 22(2), 191–217.
<https://doi.org/10.1080/1528008x.2020.1769522>.
 53. Kuzior, A., Lyulyov, O., Pimonenko, T., Kwilinski, A. & Krawczyk, D. 2021. Post-Industrial Tourism as a Driver of Sustainable Development. *Sustainability*, 13(15), 8145. <https://doi.org/10.3390/su13158145>.
 54. Leung, X. Y. & Wen, H. 2020. Chatbot usage in restaurant takeout orders: A comparison study of three ordering methods. *Journal of Hospitality and Tourism Management*, 45, 377–386. <https://doi.org/10.1016/j.jhtm.2020.09.004>.
 55. Mahmutović, K. 2021. Development and validation of the scale for measuring digital marketing orientation in the hotel industry. *Ekonomski Vjesnik*, 34(1), 115–129. <https://doi.org/10.51680/ev.34.1.9>.
 56. Marin, J., Figueroa, A. & Mundet, L. 2018. TBEX Europe Costa Brava 2015: Effective strategy for branding mature tourist destinations? *Journal of Destination Marketing & Management*, 8, 337–349.
<https://doi.org/10.1016/j.jdmm.2017.07.004>.
 57. Menon, S., Bhatt, S. & Sharma, S. 2021. A study on envisioning Indian tourism – Through cultural tourism and sustainable digitalization. *Cogent Social Sciences*, 7(1).
<https://doi.org/10.1080/23311886.2021.1903149>.
 58. Misso, R., Andreopoulou, Z., Cesaretti, G. P., Hanna, S. S. & Tzoulis, I. 2018. Sustainable development and green tourism: new practices for excellence in the digital era. *J. for International Business and Entrepreneurship Development*, 11(1), 65.
<https://doi.org/10.1504/jibed.2018.090035>.
 59. Mitsche, N. & Strielkowski, W. 2016. Tourism e-services and Jewish heritage: a case study of Prague. *European Journal of Tourism, Hospitality, and Recreation*, 7(3), 203–211.
<https://doi.org/10.1515/ejthr-2016-0022>.

60. Mountasser, I., Ouhbi, B., Frikh, B. & Hdioud, F. 2020. Big Data Research in the Tourism Industry. *International Journal of Mobile Computing and Multimedia Communications*, 11(4), 26–41. <https://doi.org/10.4018/ijmcmc.2020100102>.
61. Munjal, S. & Singh, A. 2021. going digital is the only way forward for the Indian tourism and hospitality industry. *Worldwide Hospitality and Tourism Themes*, 13(2), 291–295. <https://doi.org/10.1108/whatt-09-2020-0119>.
62. Natocheeva, N., Shayakhmetova, L., Bekkhozhaeva, A., Khamikhan, N. & Pshembayeva, D. 2020. Digital Technologies as a Driver for the Development of The Tourism Industry. *E3S Web of Conferences*, 159, 04002. <https://doi.org/10.1051/e3sconf/202015904002>.
63. Navarrete, T. 2019. Digital heritage tourism: innovations in museums. *World Leisure Journal*, 61(3), 200–214. <https://doi.org/10.1080/16078055.2019.1639920>.
64. Nilashi, M., Yadegaridehkordi, E., Ibrahim, O., Samad, S., Ahani, A. & Sanzogni, L. 2019. Analysis of Travellers' Online Reviews in Social Networking Sites Using Fuzzy Logic Approach. *International Journal of Fuzzy Systems*, 21(5), 1367–1378. <https://doi.org/10.1007/s40815-019-00630-0>.
65. Opportunities of mobile marketing in tourism. 2020. *Journal of Critical Reviews*, 7(12). <https://doi.org/10.31838/jcr.07.12.15>.
66. Oxoli, D., Terza, V., Cannata, M. & Brovelli, M. A. 2020. An open infrastructure for green tourism management and promotion: the insubri parks project. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, XLIII-B4, 277–281. <https://doi.org/10.5194/isprs-archives-xxiii-b4-2020-277-2020>.
67. Paliokas, I., Patenidis, A. T., Mitsopoulou, E. E., Tsita, C., Pehlivanides, G., Karyati, E., Tsafaras, S., Stathopoulos, E. A., Kokkalas, A., Diplaris, S., Meditskos, G., Vrochidis, S., Tasiopoulou, E., Riggas, C., Votis, K., Kompatsiaris, I. & Tzovaras, D. 2020. A Gamified Augmented Reality Application for Digital Heritage and Tourism. *Applied Sciences*, 10(21), 7868. <https://doi.org/10.3390/app10217868>.
68. Palos Sánchez, P. R., Saura, J. R., Reyes Menéndez, A. & Vásquez Esquivel, I. 2018. User's acceptance of location-based marketing apps in the tourism sector: an exploratory analysis. *Journal of Spatial and Organizational Dynamic*, 6 (3), 258-270.
69. Peixoto, C., Martins, J., Gonçalves, R., Branco, F. & Au-Yong-Oliveira, M. 2018. A Conceptual Model Proposal for Characterizing Discount and Outlet Platforms Adoption. *Advances in Intelligent Systems and Computing*, 538–548. https://doi.org/10.1007/978-3-319-77703-0_53.
70. Rahmoun, M. & Baeshen, Y. 2021. Marketing Tourism in the Digital Era and Determinants of Success Factors Influencing Tourist Destinations Preferences. *Asia-Pacific Management Accounting Journal*, 16(1), 163–181. <https://doi.org/10.24191/apmaj.v16i1-07>.

71. Reichstein, C. & Härting, R. C. 2018. Potentials of changing customer needs in a digital world – a conceptual model and recommendations for action in tourism. *Procedia Computer Science*, 126, 1484–1494. <https://doi.org/10.1016/j.procs.2018.08.120>.
72. Reimers, V., Chao, C. W. & Gorman, S. 2016. Permission email marketing and its influence on online shopping. *Asia Pacific Journal of Marketing and Logistics*, 28(2). <https://doi.org/10.1108/apjml-03-2015-0037>.
73. Rethlefsen, M. L., Kirtley, S., Waffenschmidt, S., Ayala, A. P., Moher, D., Page, M. J. & Koffel, J. B. 2021. PRISMA-S: an extension to the PRISMA Statement for Reporting Literature Searches in Systematic Reviews. *Systematic Reviews*, 10(1). <https://doi.org/10.1186/s13643-020-01542-z>.
74. Riyadi, S., Susilo, D., Armawati Sufa, S. & Dwi Putranto, T. 2019. Digital marketing strategies to boost tourism economy: a case study of Atlantis land Surabaya. *Humanities & Social Sciences Reviews*, 7(5), 468–473. <https://doi.org/10.18510/hssr.2019.7553>.
75. Rodrigues, S., Correia, R. F. & Martins, J. 2021. Digital Marketing Impact on Rural Destinations Promotion: A conceptual model proposal. *2021 16th Iberian Conference on Information Systems and Technologies (CISTI)*. <https://doi.org/10.23919/cisti52073.2021.9476533>.
76. Romolini, A., Fissi, S. & Gori, E. 2017. Integrating territory regeneration, culture, and sustainable tourism. The Italian Albergo diffuso model of hospitality. *Tourism Management Perspectives*, 22, 67–72. <https://doi.org/10.1016/j.tmp.2017.02.002>.
77. Roque, V. & Raposo, R. 2015. Social media as a communication and marketing tool in tourism: an analysis of online activities from international key player DMO. *Anatolia*, 27(1), 58–70. <https://doi.org/10.1080/13032917.2015.1083209>.
78. Saseanu, A. S., Ghita, S. I., Albastroiu, I. & Stoian, C. A. 2020. Aspects of Digitalization and Related Impact on Green Tourism in European Countries. *Information*, 11(11), 507. <https://doi.org/10.3390/info11110507>.
79. Shiqun, Y., Chengjun, Z. & Yu, Z. 2021. The role and path of digital marketing in tourist souvenir brands. *E3S Web of Conferences*, 251, 03044. <https://doi.org/10.1051/e3sconf/202125103044>.
80. Sotiriadis, M. D. 2016. The Potential Contribution and Uses of Twitter by Tourism Businesses and Destinations. *International Journal of Online Marketing*, 6(2), 62–77. <https://doi.org/10.4018/ijom.2016040105>.
81. Stankov, U. & Gretzel, U. 2021. Digital well-being in the tourism domain: mapping new roles and responsibilities. *Information Technology & Tourism*, 23(1), 5–17. <https://doi.org/10.1007/s40558-021-00197-3>.
82. Supiyevna, K. O. K. 2020. Opportunities of Mobile Marketing in Tourism. *Journal of Critical Reviews*, 7(12). <https://doi.org/10.31838/jcr.07.12.15>.

83. Suyunchaliyeva, M., Shedenova, N., Kazbekov, B. & Akhmetkaliyeva, S. (2020). Digital Economy: Information Technology and Trends in Tourism. *E3S Web of Conferences*, 159, 04029. <https://doi.org/10.1051/e3sconf/202015904029>.
84. Swartz, M. K. 2011. The PRISMA Statement: A Guideline for Systematic Reviews and Meta-Analyses. *Journal of Pediatric Health Care*, 25(1), 1–2. <https://doi.org/10.1016/j.pedhc.2010.09.006>.
85. Tarazona-Montoya, R., Peris-Ortiz, M. & Devece, C. 2020. The Value of Cluster Association for Digital Marketing in Tourism Regional Development. *Sustainability*, 12(23), 9887. <https://doi.org/10.3390/su12239887>.
86. Tenkanen, H., di Minin, E., Heikinheimo, V., Hausmann, A., Herbst, M., Kajala, L. & Toivonen, T. 2017. Instagram, Flickr, or Twitter: Assessing the usability of social media data for visitor monitoring in protected areas. *Scientific Reports*, 7(1). <https://doi.org/10.1038/s41598-017-18007-4>.
87. Tsourgiannis, L. & Valsamidis, S. 2019. Digital marketing in tourism: why Greek tourists use digital marketing applications like Airbnb. *International Journal of Culture, Tourism and Hospitality Research*, 13(4), 473–486. <https://doi.org/10.1108/ijcthr-03-2019-0043>.
88. Vaculčíkova, Z., Tučkova, Z. & Thanh Nguyen, X. 2020. Digital marketing access is a source of competitiveness in traditional Vietnamese handicraft villages. *Innovative Marketing*, 16(1), 1–10. [https://doi.org/10.21511/im.16\(1\).2020.01](https://doi.org/10.21511/im.16(1).2020.01).
89. Valentinetti, D. & Flores Muñoz, F. 2021. Internet of things: Emerging impacts on digital reporting. *Journal of Business Research*, 131, 549–562. <https://doi.org/10.1016/j.jbusres.2021.01.056>.
90. Vázquez Loaiza, J., Pérez-Torres, A. & Díaz Contreras, K. 2019. Semantic Icons: A Sentiment Analysis as a Contribution to Sustainable Tourism. *Sustainability*, 11(17), 4655. <https://doi.org/10.3390/su11174655>.
91. Voronkova, L. P. 2018. Virtual Tourism: on the Way to the Digital Economy. *IOP Conference Series: Materials Science and Engineering*, 463, 042096. <https://doi.org/10.1088/1757-899x/463/4/042096>.
92. Xiao, Y. 2019. Tourism Marketing Platform on Mobile Internet. *Journal of Electronic Commerce in Organizations*, 17(2), 42–54. <https://doi.org/10.4018/jeco.2019040104>.
93. Yu, K. J., Ying, J., Tian, Q. L., Sun, L. J. & Huang, G. 2019. The measure of input/output efficiency of the introduction of digital marketing into green products in the ecological industry. *Journal of environmental protection and ecology*, 20, 346-354.
94. Zhou, C. 2019. Research on Development Mode of Intelligent Rural Tourism under Digital Background. *Informatica*, 43(3). <https://doi.org/10.31449/inf.v43i3.2806>.