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# Usability Analysis of Andalusian Spas' Websites

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Abstract: Health tourism is booming all over the world, and thermal spa tourism in Spain is a type of tourism aimed at integrating with nature, achieving sustainable development. In general, its facilities are located in areas specially protected by environmental legislation. This tourism sector attracts an increasingly wide market segment that has become more demanding and better informed and that more frequently uses the Internet to gather information. Tourists' shopping and consumption habits are increasingly influenced by new information and communication technologies (ICTs), making these a topic of interest among academics and professionals. Website development has been shown to be an area of innovation for spa facilities, but evidence has also been found that this sector has experienced difficulty in adopting ICTs. This research sought to analyse spa websites' usability by conducting an exploratory investigation of different websites' contents. The results reveal that the use of new web technologies by spas is underdeveloped, although these facilities have achieved good positions in Internet search engines due to the synergistic effect of the official tourism websites. That is why most of them tell their story, detail their nature and the protection of their spaces. In this way, spas turn their websites into communication channels that convey to tourists their commitment to the environment and sustainable development.

Keywords: spa; website analysis; tourism; health; Andalusia; environmental sustainability



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# 1. Introduction

This study focused on how spas were able to convey information to their users, through their websites, about thermal water activities and tourism, especially mineral springs, related to the therapeutic use of medicinal waters. This tourism sector is included within the broader concept of health tourism, which covers individuals who travel in search of wellbeing. The sector comprises two basic dimensions: therapies related to medical treatments and tourism related to leisure and wellbeing [1–4].

Thermal and mineral spa treatments are an important therapeutic tool backed by centuries of experience and numerous scientific studies that prove their effectiveness [1]. The common denominator of this tourism segment is water-based experiences with a healthy purpose [5,6] and also tourism can contribute by giving the intangible water heritage a tangible value, that is, an economic value (in addition to the environmental one) of saving them and their connected water ecosystems and biodiversity from destruction. Experiences based on water are possible solutions to preserve both the environmental and economic value of water and its tangible and intangible heritage [7–9].

Territories endowed with water resources, such as the special case of the medicinal mineral water spas in Andalusia, can offer a great variety of products and experiences that in some cases result in the resurgence of ancestral ideas and practices such as their use to improve the physical and psychological well-being due to its healing properties [10].

Connecting or communicating with society in general and with users in particular, in addition to an economic activity, generates educational values as well as habits and knowledge that promote the conservation of the environment from a sustainable perspective [11].

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In Spain, tourism centred around thermal spas has increased in recent years after a period of decline, resurfacing along with the growth of health tourism [12]. The spa tourist segment is characterised by a high number of overnight stays, which has a dynamic effect on local economies as most of these spa facilities are located in regions' interior areas [3].

Statistics on the global wellness economy indicate that, from 2013 to 2017, wellness tourism grew by 14%, more than twice as fast as tourism's overall average (6.9%) [13]. This sector's services and products are in increasingly high demand, and its tourists are becoming more demanding and better informed on all levels [14]. Tourism products that link water and health are a response to modern tourists, increasingly interested in living better [15] and increasingly the tourism experiences based on water, which is not necessarily linked to the therapeutic or medical value of water [16].

These travellers are regularly using the Internet as a source of information on reservations, products, and services and making contact with providers through the Web [12,13,17].

Individual tourists' purchase and consumption habits have in general been influenced by the new technologies [18,19], as corroborated by the Instituto de Estudios Turísticos's [20] annual report. These statistics indicate that 65% of tourists travelling to Spain use the Internet to manage some part of their trip. For example, Rodríguez-Fernández, Sánchez-Amboage, Rodríguez-Vázquez, and Mahauad-Buerneo [21] carried out research in Galicia, which is famous for thermal spa tourism due to its medicinal mineral waters' characteristics and high quality thermal spring facilities. As a result of the development of information and communication technologies (ICTs), this destination is becoming better known, and its spas' online presence has greatly expanded.

The management literature identifies good management practices as keys to the survival of tourism companies in search of competitiveness [22]. The present study was conducted in 2020 in response to the increasingly significant relationship between these new technologies and tourism. This trend highlights the importance of examining how well day spa tourism facilities are integrating their daily management and electronic commerce strategies. The main objective was thus to analyse the usability of Andalusian spas' websites.

New ICTs and the Internet have revolutionised the way companies are managed and compete with each other [23]. The literature review carried out for the current research found wide support for this assertion as many researchers' studies, including Buhalis and Law [24], have demonstrated that technological development and tourism are closely related. Other studies have focused, in particular, on websites' information and entertainment features, confirming significant relationships between these aspects and visitors' interest in specific destinations. Websites can increase the likelihood that potential tourists will plan a trip to a destination by developing users' sense of familiarity and relationship with that destination [25].

In the tourism sector, the online tool most frequently used to promote tourism destinations are websites. In the case of Spain, public institutions related to tourism are responsible for tourism promotion. For instance, www.spain.info (accessed on 30 January 2021) is a specialised public-access portal that reflects the central government's intensive effort to promote tourism [26].

The Internet has transformed people's way of life, but some websites are unreliable, as well as becoming oversaturated with information. Nonetheless, these sites offer a greater possibility of actively intervening in purchase processes [27]. Companies' interactions with customers online are an important instrument with which to create links with consumers and increase their involvement and browsing time, improving firms' image by facilitating better product distribution [28].

It is convenient to point out the psychological influence of the information in social networking services. Although in the current context, social internet services play a leading role as a means of communication, virtual communities can psychologically influence the actors and have a negative and destructive influence. That is why using models that monitor the space of this information could be important to counteract these threats [29].

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This process has made users the owners of communication, so companies have to be more deeply involved in human behaviours and continuously interact with customers' everyday realities. Spa tourism in particular requires multiple interactions with clients. Thus, language barriers are a common limitation of websites that could explain this sector's tendency towards "localism" [30,31].

Companies use the Internet to develop relational marketing strategies and create virtual communities around a product or brand. A reciprocal relationship with users is sought through shared interests and experiences with the products that interest customers (25). Tourism companies must, therefore, encourage the generation of these communities to obtain first-line information and gain control over what is said about their products, thereby ensuring that better adapted versions of these reach the market. Official websites are extremely useful tools with which to promote tourism destinations, as these sites are a great source of information that helps users make decisions [17,32].

Fernández-Cavia, Marchiori, Haven-Tang, and Cantoni's [33] research confirmed that ICTs have had a significant impact on the experience, travel, and tourism industries. More specifically, destination marketing organisations have found that ICTs are a powerful ally in terms of harmonising and coordinating local stakeholders' activities, as well as reaching travellers. However, Fernández-Cavia et al.'s [33] results also show that communication in destination marketing organisations is not yet fully standardised or professionalised. Online tools (i.e. websites, social networks, and mobile applications) are used tactically but not strategically. Social networks and official websites' usefulness are clearly more appreciated by managers engaged in target marketing than those focused on improving mobile applications' utility.

In addition, Rodríguez-Fernández, Sánchez-Amboage, and Juanatey-Boga [21] observe that ICTs' implementation in the tourism industry has resulted in a paradigm shift in not only how companies design their communication strategies but also how consumers plan their vacations. The Internet has become both travellers' main source of information and an important platform from which to develop tourism businesses. Companies must be aware of trends and adapt their strategies to satisfy increasingly informed, demanding, and experienced tourists. The use of ICTs has especially enhanced innovation in tourism by promoting research on and marketing of new products [34].

All these changes in this industry have made online travel communities a reference point for tourists who are planning and managing travel reservations. Chung and Buhalis [35] report that most travel websites' users perceive them as satisfying their information needs through the recommendations and contrasting opinions posted. However, many websites' level of development is still inadequate, especially in terms of improving relationships and communication between public entities and private companies.

Many other researchers have focused on whether tourism companies develop and optimise their corporate reputation in digital environments, concluding in some cases that these efforts are incipient and tourism providers' convergence with social media still falls short of the ideal [36]. However, Leung, Law, Van Hoof, and Buhalis's [37] overview of academic publications in the field of tourism confirms social networks' strategic importance to companies' competitiveness and the tourism industry's widespread adoption of new technologies in various areas [38]. According to DiPietro and Wang [39], this acceptance of new technologies by tourism companies has directly influenced societies, cultures, and economies. Website evaluation models have to become diverse and accurate and websites have to become high-level communication systems [40].

An up-to-date comprehensive review of hospitality and tourism website evaluation studies [41] indicate that a website plays a key role in consumer purchasing decisions in hotels, from the search for information, the evaluation of alternatives, and the final decision making. In this sense, Wang et al. [42] indicates that tourism professionals should dedicate more resources to improving their websites.

The spas are visited mostly by retirees and this senior tourist mostly uses indirect channels to hire their trips. However, today there is already an increase in the use of Sustainability 2021, 13, 2307 4 of 14

> electronic channels. That is why any e-commerce initiative has to adapt both to the reality of the environment and to that of its users [43].

#### 2. Materials and Methods

This study analysed the contents of websites associated with medicinal thermal and mineral water spas in Andalusia. Andalusia is a region in Southern Spain, with 87,268 km<sup>2</sup> and 8 million inhabitants, and well known as one of the main tourist destinations for sun and beach (for example, Costa del Sol, Marbella, Malaga, etc.) and for cultural tourism (Córdoba, Granada, Alhambra, etc.); however, spas have not been extensively studied [44].

The group of experts formed by the authors and university professors specialized in tourism decided that the variables discussed below be defined by conducting an exploratory research on the different characteristics of these websites, based on the methodology applied by Guevara Plaza, Caro Herrero, Gómez Gallego, Leiva Olivencia, and López Valverde [45] and methodology of Del Vasto-Terrientes, L., Fernández-Cavia, J., Huertas, A., Moreno, A., and Valls, A. [46]. Similar methodology is also used by other authors [32,47,48].

The data collected for the current study were compared to the information provided by other studies that have addressed this issue [49–51] to which the variables social networks were added (see Table 1). Data was collected between January and February 2020.

Table 1. Website elements.

Home Page										
Option of skipping the introduction	2. Geographical position	3. Language selection								
4. Clear star menu	5. Extendable menu	6. Home page search engine								
7. Direct link to website map	8. Photos and/or images	9. Links to language versions								
10. Multimedia effects	11. Changing images	12. Logo and/or corporate image								
13. Contact address information	14. Telephone information	15. Postal address information								
16. Website update date	17. Main menu visible									
Contents of Website Information										

- 1. Geography and/or orography
- 2. Information on how to get there
- 3. History and/or description of the spa
- 4. Information on different spa techniques
- 5. Information on different services available
- 6. Information about medical services
- 7. Information on spa's specific features
- 8. Information about facilities
- 9. Accommodation information
- 10. Information on catering services
- 11. Information on alternative activities
- 12. Information on visits to surrounding area
- 13. Information about the natural environment
- 14. Links to other websites of interest

### Languages

1. Spanish 2. English 4. German 5. French 6. Italian 7. Portuguese 8. Other

#### **Contents of Reservation Information**

- 1. Reports on room availability appear on the website.
- 2. Reservations can be made on the website.
- 3. Payments can be made on the website.

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Table 1. Cont.

#### Other Marketing on Website

- 1. Offers for those visiting the website
- 2. Last minute offers
- 3. Other products sold: cosmetics
- 4. Other products sold: books, maps and clothes

#### **Position in Search Engines**

- 1. Position in 1 search engine
- 2. Position in www.yahoo.com (accessed on 30 January 2021) search engine
- 3. Position in www.bing.com (accessed on 30 January 2021) search engine

#### Seguimiento en Redes Sociales

- 1. Facecebook
- 2. Twiter
- 3. Pintrest
- 4. Instagram
- 5. Google +
- 6. YouTube
- 7. Other

#### 3. Results

An analysis of the characteristics of the websites' home page revealed that only 3 of the 10 spas selected include more than 65% of the items indicated in the previously defined "ideal website" template. The elements present on 90% of the pages studied are "clear start menu," "physical contact address information," "direct telephone or fax information" and "postal address information." Of the variables that experts consider essential to help users to navigate and not get lost within websites, only one of the sites studied have a "search engine on the home page" and none has a "link to the website map." Only 10% of the websites have the "option of skipping the introduction" and "date of website's last update," while "direct links to language versions" are only available on 60% of the home pages studied (see Table 2).

**Table 2.** Characteristics of website's home page (number = 10 spas).

	Spa											
Item	1	2	3	4	5	6	7	8	9	10	Total	(%)
1. Option of skipping introduction											1	(10.0)
2. Geographical location											10	(100.0)
3. Language selection											6	(60.0)
4. Clear start menu											9	(90.0)
5. Expandable menu											5	(50.0)
6. Search on home page											2	(20.0)
7. Direct link to website map											0	(0.0)
8. Photos and/or images											10	(100.0)
9. Direct links to language versions											5	(50.0)
10. Multimedia effects											5	(50.0)
11. Changing images											7	(70.0)
12. Logo and/or corporate image											9	(90.0)
13. Physical contact address information											10	(100.0)
14. Direct telephone or fax information											10	(100.0)
15. Direct postal address information											9	(100.0)
16. Page refresh date											1	(10.0)
17. Main menu always visible											7	(90.0)
Total (%)	10 (58.8)	11 (64.7)	11 (64.7)	11 (64.7)	12 (70.6)	13 (76.5)	11 (64.7)	12 (70.6)	8 (0.0)	10 (47.6)		

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With regard to the "contents of the information provided on the website," the pages analysed from the spas' websites have more complete information than that found for the previous set of variables. For 7 of the 10 pages, over 60% of the analysed variables are present. The items least often present are "Links to other websites of interest" (20%), "information on alternative activities" (50%), "information on visits to surrounding area" (50%), "information on medical services" (40%) (see Table 3). According to website experts, these items' adequate development positively influences websites' good position in search engines and thus these spas' potential for successful marketing of their products. This finding corroborates previous research's results [24].

Spa Item 1 2 3 4 5 7 9 10 Total (%) 1. Geography and/or orography (60.0)2. Information on how to get there 10 (100.0)3. History and/or description of spa 8 (80.0)4. Information on different spa techniques 10 (100.0)9 5. Information on different services available (90.0)4 (40.0)6. Information about medical services 7. Information on spa's specific features 8 (80.0)8. Information about facilities 10 (100.0)10 (100.0)9. Accommodation information 10. Information on catering services 7 (70.0)11. Information on alternative activities 5 (50.0)12. Information on visits to surrounding area 5 (50.0)13. Information about the natural environment 6 (60.0)14. Links to other websites of interest 2 (20.0)Total 11 12 (42.8)(42.8)(85.7)(64.3)(57.1)(92.8)(78.5)(78.5)(71.4)(%)

**Table 3.** Contents of information provided on website (number = 10 spas).

An analysis of the variables connected to "languages on the website" overall produced poor results. All the pages except for that of two spas show less than 40% of the expected items. Of the specific languages checked, English appears 60% of the time, followed by French with 30%, and German with 20% (see Table 4). The absence of alternative languages has a negative effect on tourism companies' search for alternative markets in a world in which users are the owners of communication [52].

Spa Item 9 10 Total (%) 1. Spanish 10 (100.0)2. English (60.0)3. German 2 (20.0)4. French (30.0)5. Italian (0.0)6. Portuguese 0 (0.0)7. Other (10.0)1 Total (28.5) (14.2)(28.2) (28.2)(57.1) (14.2)(14.2)(14.2)(57.1) (71.4)

**Table 4.** Languages on website (number = 10 spas).

The language barrier is a significant handicap in spa tourism in which human relationships are extremely important. The websites' lack of language options corroborates the Instituto de Turismo de España's [53] report that this limitation contributes to thermal spa tourism's localism.

Regarding the "contents of reservation information" variables, experts consider three items necessary to ensure adequate websites. These variables are "reports on room avail-

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ability given on the website" (80% of websites), "reservations can be made on the website" (80%), and "payments can be made on the website" (70%). None of the home pages analysed contain 100% of these items (see Table 5).

**Table 5.** Contents of reservation information (number = 10 spas).

Item	1	2	3	4	5	6	7	8	9	10	Total (%)
1. Reports on room availability are given on the website.											8 (80.0)
2. Reservations can be made on the website.											8 (80.0)
3. Payments can be made on the website.											7 (70.0)
Total	3	3	3	3	3	0	0	3	2	3	
(%)	(100)	(100)	(100)	(100)	(100)	(0)	(0)	(100)	(66.6)	(100)	

With regard to "other marketing on the website," 50% of the items are only present on two of the pages examined. The "last minute offers" variable is the most common feature at 60% of the pages. The most frequent diversification of products is in cosmetics, as 20% of the spas have their own brand, but these are not available for purchase online (see Table 6). The analysis, therefore, showed that the spas have the potential to market other product lines, yet 40% of them fail to offer anything on their websites, even though these aspects, according to Choi et al. [25], help attract tourists.

**Table 6.** Other marketing on website (number = 10 spas).

Item	1	2	3	4	5	6	7	8	9	10	Total	(%)
1. Offers for those visiting the website											0	(0.0)
2. Last minute offers											6	(60.0)
3. Other products sold: cosmetics											2	(20.0)
4. Other products sold: books, maps, clothes and so on											0	(0.0)
Total (%)	2 (50.0)	2 (50.0)	0 (0.0)	0 (0.0)	1 (25.0)	1 (25.0)	1 (25.0)	1 (25.0)	0 (0.0)	0 (0.0)		

In terms of the spa websites' position in search engines, the results show that these sites are quite well placed, especially those associated with public entities' promotion of features in surrounding areas, such as villages, places of interest, and cultural attractions. This rich context highlights the spas more clearly as offering tourists added value. A full 60% of the websites appeared in the first three positions in a Google search, and 70% of them were in the first three positions of a Yahoo search. When Microsoft Search Network (MSN) was used, the websites' positions fell to only 30% in the first three places.

The results overall show that 30% of the spas appear in unfavourable positions in the search engines, which points to spa managers' inadequate strategies in these digital environments (see Table 7). This finding contrasts with previous researchers' conclusion that a paradigm shift has occurred in the tourism industry for how companies design their communication strategies and consumers plan their vacations. That is, the Internet has become travellers' main source of information [34,54].

**Table 7.** Search engine position (number = 10 spas).

	Spa											
Search Engine	1	2	3	4	5	6	7	8	9	10		
1. Search engine position for www.google.com (accessed on 30 January 2021)	3 b	1	4 <sup>b</sup>	3	1	4 <sup>b</sup>	1	1	6 <sup>a</sup>	1		
2. Search engine position for www.yahoo.com (accessed on 30 January 2021)	1	1	5 a	1	3 ь	1	1	2	5 a	1		
3. Search engine position for www.bing.com (accessed on 30 January 2021)	4 <sup>b</sup>	4 <sup>b</sup>	5 a	7 c	5	3	1	7 c	5 a	2		

Note: <sup>a</sup> Appearance in search engines from page 5 onward; <sup>b</sup> appearance from page 3 onward; <sup>c</sup> appearance from page 7 onward.

Eighty percent of the spas include at least the following through the social network Facebook, 50% include the Twitter network, while Instagram only includes it 40%. Only 10% include another type of Social Network such as Google + or LinkedIn (Table 8).

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Spa 1 5 7 8 10 Total (%) Item 6 1. Facecebook (80.0)5 (50.0.0)2. Twiter 3. Pintrest 1 (10.0)4. Instagram 4 (40.0)5. Google + 3 (30.0)6. YouTube 1 (10.0)7. Other 3 (30.0)(14.3)(85.7)(57.4)(57.4)(0.0)(42.9)(57.4)(14.3)(42.9)(%)

Table 8. Seguimiento en Redes Sociales en sitio Web (number = 10 spas).

#### 4. Discussion

Website evaluation has greatly evolved in theoretical and methodological perspectives from its first appearance in the 1990s to the present day.

Although different models have been applied to evaluate website performance, website functionality (i.e., information) and usability (i.e., design) have consistently been considered as the two common dimensions used to measure performance from the website [41,55]. The existing literature has been insufficient to safely support the claim that modern approaches are superior to traditional ones. Therefore, empirical evidence is still lacking to confirm this proportion [40].

According to Guevara Plaza et al. [45], the Web or Internet is constantly growing. Something new is constantly being added to the Web, thereby generating increasing amounts of information. Thus, tools are needed that offer ways to help users locate the information for which they are looking. Search engines' usefulness arises from how they constantly monitor the Internet, building and updating large databases and returning results that may interest users. Furthermore, it has been shown that the quality of hotel websites has a significant and positive influence on consumer electronic trust [50].

The variables analysed thus do not appear on all websites, which indicates possible areas of improvement for spas in their confidence towards the Internet as a marketing tool and/or a lack of knowledge about how important this medium has become in health tourism. Parallel results obtained by Fernández-Cavia et al. [32] confirm that ICTs have a significant impact on the tourism industry but that they are not yet completely standardised or professionalised. In addition, companies' commitment to improving their corporate reputation in digital environments is still underdeveloped [36]. Other studies also go in the same direction—for example, the research that analyses the reservation intentions of hotels online [42].

However, studies have shown that when users rely on search engines, they rarely go beyond the first pages of results. Other research has confirmed that the majority of visits websites receive are due to search engines. Those responsible for websites must, therefore, ensure they appear in the top positions of search engine results pages. In a world in which information is constantly growing, most users would remain uninformed without search engines' help to distinguish between their best options and less desirable offers [56].

In our study, we found that the spas are well located in search engines, although their websites do not follow the approaches of the experts as an ideal template. This may be due to the fact that almost all Andalusian spas are close to protected natural areas and these places are promoted on institutional or public websites.

Based on the present study's results, the thermal spa websites' strong positions in search engines can be explained by the synergistic effect of public institutions' efforts to promote the surrounding destinations' wealth of attractions. This finding confirms Fernández-Cavia et al.'s [32] observations about the value of spas' location, geographical placement, or immediate surrounding area

Our focus may imply a limitation since we have not considered the OTAs (Online travel Agencies). Users' interactions with websites have become so important that, in what

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is called "Tourism 2.0" or "Travel 2.0," managers must take advantage of user-generated content and opinions in social networks in order to market tourism services.

Tourists prepare for trips by not only checking destinations' websites but also going to social media sites, checking out travel blogs, viewing other users' photos and videos, using geolocation systems, and seeking other individuals' opinions. Once at a destination, tourists take photos and videos and later share their experiences on the Internet so that others can consult theis content. Travellers' use of the Web has thus changed from consulting static websites to adding to platforms in which users participate and which they build even while using these sites [45,57].

However, in our research we found the potentiality of these aspects underdeveloped. One possible explanation is argued by Cristóbal-Fransí [43], since spas are visited mostly by retirees who mostly use indirect channels to hire their trips.

According to official statistics, tourism is the industry that, in recent years, has most intensively used the Internet and new technologies with a substantial increase in sales through the Web. Experts predict that in the future the volume of online sales will continue to grow, which benefits companies operating through the Internet. Tourists' overall profile has changed so that they are more independent, informed travellers who organise their trips personally using mobile devices and social networks, among other tools, managing the flow of information in real time [58], and we find that the websites of the Andalusian spas mainly promote information on geographical location, their geological and natural history, as well as natural spa techniques. From them, the value of sustainable tourism is offered and integrated with nature, which makes their websites a communication instrument with the user of these values. That is why any e-commerce initiative has to adapt both to the reality of the medium and to that of its users [43].

The market for tourism-related services has been globalised. On the one hand, this shift is beneficial because companies can offer products and services to the entire world regardless of location. On the other hand, a negative result of globalisation is that competition has increased.

The new technologies further facilitate the best possible communication between firms and customers, providing more information on tourism destinations and better services. Electronic business includes many ways to promote products and attract new customers through strategies such as search engine optimisation and marketing, social media promotion, and emails. From the users' perspective, the Internet presents a greater range of offers more directly and economically and the possibility of choosing a customised trip and escaping from tour packages, as well as the comfort of doing this from home. Users are also more demanding and spend more time searching for information on different tourism products [59]. However, spas have poor results in the translation of their websites into other languages, although it is a weakness that they also appear in research on other types of tourism companies such as airlines [49].

These changes mean that, to remain successful, any company in the tourism industry must adapt to the new technologies and gain competitive advantages from the possibilities these technologies offer to promote and sell services. These strategies have, therefore, become essential to firms that want to continue being competitive [57,60].

According to Guevara Plaza et al. [45], Web marketing refers to all the actions aimed at promoting businesses through the Internet, in which companies not only set up websites but also make the most of online adverts and promotions. Fundamental aspects that need to be considered in electronic business are that websites can help firms attract new customers, sell products online, or provide better services to customers. Thus, websites have to be an easy, convenient, and fast way for users to locate the information they are looking, as well as making other online functions easy to use, such as purchases and reservations.

To fulfil the above tasks, websites must have good usability, that is, allow users to navigate intuitively, effortlessly, comfortably, and quickly. Website design needs to be focused on reaching the target market segment, so information should be collected with surveys, questionnaires, and interviews, among other methods. The sites' information

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must be organised and grouped in a way that is clear to clients. Website design and visual aspects are also of great importance. In short, good usability means making sure everything on websites works well [61].

The literature on this topic highlights the importance of website usability as a determining factor on which the sites' success or failure depend [42]. Previous studies, including research on how to improve a government agency's portal in the United States, have found that investment in usability is justified by statistically significant results [62]. In addition, users get into the Internet using a wide range of devices, software, and browsers, so websites have to be accessible to and viewed from any option, thereby multiplying the number of potential customers [45]. However, as shown in the present research, their websites focus more on informing their geographic location aspects and on the description of their services than on dynamic and interactive development.

The framework for website standardisation includes standards set by the International Organization for Standardization (ISO), which serve as reference points in terms of improving usability. The ISO/International Electrotechnical Commission (IEC) 9126 standard set in 1991 defines usability as a characteristic of quality software. The term "usability" refers to a product's capacity to be easily used. In the ISO 9126-1 standard of 2001, which was revised and replaced by ISO/IEC 25010 in 2011, usability is assessed in terms of whether a product is understandable, easy to learn, operational, and attractive, so usability is the interface between aesthetics and recognition. The ISO 9241-11 standard of 1998 defines usability as effectiveness, efficiency, and satisfaction in the context of a product's use. The ISO 13407 standard set in 1999 and revised by ISO 9241-210 in 2010 provides a manual for how to achieve usability by incorporating activities designed so that they centre around users throughout the entire cycle of computer systems' interactions with customers.

In the results obtained in this investigation, as in other investigations [42,51], it is observed that although Andalusian spas have the potential for improvement on their websites, they are nevertheless capable of transmitting their value as nature and sustainable tourism through their content.

Andalusian spas, like all non-essential activity in Spain, have stopped during the period of confinement. Some of them have taken advantage of the parenthesis to carry out conditioning works. Most of them have collaborated closely with all public and private tourism agents to implement the protocols for the prevention of contagion risks against COVID-19, thus offering a safe environment to visitors, workers, and residents. However, the data collection of this study was prior to the pandemic, so its effects are outside the objective of this research.

## 5. Conclusions

# 5.1. Theoretical Implications

This paper presented the results of an evaluation of Andalusian spa websites' usability through an exploratory investigation of their different contents. The findings include evidence of the sites' efficiency, effectiveness, and satisfaction and of the need to implement specific improvements, which can also serve as a basis for ongoing comparisons of websites. The study's results thus provide guidelines that should be useful to the spas in question and that can be applied to the design and evaluation of spa websites in other communities.

A key to success in online business is to confirm that a website's design and content are aligned with the relevant companies' goals.

This strategy combines well with the added value of these facilities' natural environments and their communities' cultural, monumental, or gastronomic richness. In addition, the ancient tradition of the beneficial effects of spa waters makes this unique heritage potentially extremely attractive to a wider group of clients. Using new technologies and the Internet will provide new users access to the spas' services and thus stimulate an increase in and diversification of demand.

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Formulating and implementing joint strategies and taking advantage of Andalusian public institutions' portals are clearly good tools that help spas maintain a favourable position in search engines. This strategy needs to be implemented without forgetting that, for centuries, cultural traditions have included using these spas' springs and that their preservation and sustainability is a challenge that must always be met even as these facilities consider boosting their online marketing.

In summary, the spas use their website as an instrument of communication of their sustainable natural value, but its use can be enhanced as a window into a vast world filled with potential clients who can be attracted at a relatively low cost.

# 5.2. Managerial Implications

Another important finding is that spas need to focus on users' perspectives in combination with these facilities' objectives to produce successful websites. The present research revealed that many requirements of an ideal home page design have not yet been met. This finding means that the spas' managers must find the tools to ensure that the websites are correctly developed so that clients will have satisfactory experiences and want to return to the sites.

In general, Andalusian spas do not use two-way communication in real time. Other studies indicate deficits of this type also in other companies such as airlines [51].

The results, nonetheless, reveal a poor use of the tools currently available to develop websites' use of new technologies, which also indicates that the spas under study have received incorrect or inexperienced advice on marketing. Andalusian spas' uniqueness has a great potential for attracting clientele who have yet to discover their products and services. Therefore, providing customers access via the Internet and its resources should not be neglected by those responsible for promoting these facilities.

Beauty products and opportunities to relax are elements increasingly in demand among members of many societies, so Andalusian spas need to exploit all options to diversify their products.

Currently, due to the COVID-19 crisis, the hydrotherapy sector is reinventing itself in search of opportunities such as alternative tourism, claiming its sanitary character. That is why a large number of spas have offered their facilities and medical equipment to the authorities, either welcoming patients, health personnel, or transporters, or offering their experiences in the respiratory treatments of their waters at the service of research [63].

### 5.3. Limitations and Future Lines of Research

We have tried to improve the concept of methodological validity, defining it as internal validity, differentiating it from the concept of generalization or extrapolation of results to other populations, defining it as external validity. This research focuses only on the usability of websites, which presents a limitation to potential external validity, but it will be the reader who must interpret whether or not these results may be applicable to their environment, based on possible similarities. In our opinion, it would be extrapolated to any spa in Spain or countries with similar customs and weather conditions.

The present analysis did not include the spas' presence in social networks. Thus, this phenomenon could be of significant interest to those conducting further research

Another limitation of the study is that it has not addressed the psychological effects that virtual communities can have on actors, which suggests another possible line of future research.

There are also limitations inherent to the research methodology used. Despite the advantages of the exploratory methodology, consistent with the object of this study, the authors are aware of the limitations of this type of research technique.

As a future line of research, it is proposed to try to find causal explanations. In this case, it is suggested to use multivariate techniques.

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