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Comparative Analysis of DMO Website Features: A Case Study of Three Asian Tourism Destinations

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ABSTRACT

In the digital era, more and more people tend to look for travel-related information on the Internet. Hence, destination marketing organization (DMO) websites can play a decisive role in affecting people's destination choices. Based on the study of Pai, Xia, and Wang, Macao's DMO website received the lowest score in the effectiveness when compared to the other four tourism destinations: Japan, Korea, Hong Kong, and Thailand. This paper aimed to carry out a comparative analysis on the functionality among three DMO websites in Asia. Each website was examined in great detail, and the features were categorized according to a well-established conceptual framework pioneered by Li and Wang. Consequently, the results of this study gave useful information and new insights to destination marketing managers in terms of gap analysis and the development of new features for their websites. The results of this research could be used as benchmarking purposes in regards to website functionality. In addition, DMO websites in western countries, such as Canada, were also examined for a better understanding of the comprehensiveness of the available website functionality aimed for prospective visitors. Business and managerial implications were also discussed.

1. Introduction

The structure of the hospitality and tourism industry has been changed by the emergence and advancement of information technologies in the past decades^[3]. Nowadays, it is extremely common for people to search information about tourist destinations on the Internet rather than using the traditional media, as the Internet technology makes it straightforward and convenient^[4]. Almost all hotels and tourism-related organizations strive to enhance their operations and communications by the good use of the Internet technology. At state, regional, or

city level, effective destination marketing can help make a destination more visible and attractive to prospective tourists among various market competitors^[5,6]. The main roles of DMO involve the strategic planning and the implementation of promoting and marketing of a tourist destination^[7]. Websites have become one of the most prominent communication tools for disseminating information to potential travelers^[4]. A *Destination Marketing Organization* is a governmental or semi-governmental office mandated to operationalize in promoting a destination and to enhance its brand so as to increase popularity and nonresidents' visits of the destination^[8]. DMOs not only take a leading

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role in promoting and creating the public image of the destinations, but also have a profound impact on the long-term development of the destinations^[4]. It is also believed that “decisions made by tourists prior to departure are likely to limit the choice of alternative purchases later in the vacation”^[9]. Hence, DMO websites need to provide the sufficient information, which can satisfy the needs of tourists at diverse stages of planning. The primary function of a DMO is to promote its destination to various tourist market segments^[7]. Therefore, DMO should be aware of the global trends and cope with the development among all factors that may affect tourists’ decisions and behaviors.

This paper aims to carry out a comparative analysis on the functionality of DMO websites. In particular, this study intends to compare the Macao’s DMO website with that of other destinations. As a consequence, the gap analysis can help Macao’s DMO to improve its website, a powerful marketing tool. New inspirations and directions are expected to be part of the outcome of this analysis.

People consume and contribute information through blogs, travel sites, or vlogs such as Facebook, YouTube, and Twitter. According to Gon, Pechlaner, and Marangon^[10], contemporary DMO websites are categorized as the Web 2.0. DMO websites can play certain role in affecting consumers’ choice and behavior during the trip-planning stage. It is diffusely believed that destination image is a complete and predominant part of the visitor’s decision progress and travel behavior^[11]. Meanwhile, according to Xiang and Gretzel^[12], the travelers nowadays prefer to collect the useful information by using the online social media platforms and search engines. Therefore, a large proportion of tourists is using a variety of social media platforms: Facebook, YouTube, Twitter, Instagram, Flickr, etc. for their vacation planning. People also contribute to those platforms by sharing personal photos and useful travel tips.

Pai, Xia, and Wang^[1] conducted a study that measures the effectiveness of DMO websites (Japan, Korea, Hong Kong, and Macao), for which numeric scores are computed. Macao received the lowest score among the four destinations. Bastida and Huan^[13] carried out a comparative analysis among four DMO websites: Hong Kong, Beijing, Shanghai, and Taipei, and Hong Kong received the highest rank among the four. Some may argue that a DMO website may be overshadowed by those social media platforms so that tourist consumers may not need it at all. However, a DMO website represents the official view and acts as a state’s proxy for a tourism destination and thus has the dramatic impact on visitors’ choice of destinations^[14]. A DMO website that provides adequate information

and has the ease-of-use capabilities could attract visitors’ attention and could possibly turn a potential visitor into a real one. The key components for successful DMO websites constitute essentially destination information, communication mechanism, electronic commerce disposition, and relationship structure^[15]. In other words, a competent DMO website largely depends upon the synthesis of technology and marketing elements.

2. Materials and Methods

According to Li & Wang^[2], a DMO website can be evaluated by the following five components: technical merit, communication, information, relationship, and transaction. In general, function, design, and user friendliness are the dominant areas for website evaluation, and most of the other subcategories are grouped under these three distinct areas^[16]. Interface design includes five aspects: intuitive and consistent design, clarity, high responsivity, maintainability, and attractiveness^[17]. Overall, evaluations on website effectiveness lie on two criteria, namely usability and functionality^[18]. Interface design, web layout, and aesthetics are some of the subcategories under website usability^[19], which is regarded as one of the essential features in the website evaluation^[20]. Functionality refers to information richness and the sufficient amount of information provided to potential customers^[19]. According to prior literatures, functionality accounted for the majority of the studies in website evaluation^[18]. Prior studies overwhelmingly focused on one of the two major streams, that is, either functionality or usability evaluation. This study, however, tries to make a good mix of usability and functionality in the overall evaluation process. There is no universal standard for the website evaluation of DMO websites. Li and Wang^[2] established a basic framework for evaluating China’s provincial tourism administration’s websites. This study makes use of this model as the evaluation instrument. Overall, this study intends to decompose DMO websites into distinct elements, known as functions or features, which constitute the evaluation instrument. Next, the functionality of DMO websites can be evaluated in an objective and quantifiable manner by the use of the mentioned evaluation instrument. In addition to this, new concepts and best practices from DMO websites of western countries are examined. Destination Canada, for instance, was ranked as one of the top official tourism websites in 2016 and 2017 for its effective marketing^[21].

This study employs the content analysis approach, by which direct evaluation has been applied to the DMO websites from three Asian destinations (Table 1). Although more than one language options are found on those websites, only the English version is included in the

scope of this study. In addition, DMO websites in western countries, such as Canada, were also examined for a better understanding of the comprehensiveness of the available website functionality aimed for prospective visitors.

Table 1. DMO Websites of the Three Asian Destinations

Destination	Name of DMO Website	URL
South Korea	Visit Korea	http://english.visitkorea.or.kr/enu/index.kto
Hong Kong	Discover Hong Kong	http://www.discoverhongkong.com/eng/index.jsp
Macao	Macao Government Tourist Office	http://en.macaotourism.gov.mo/index.php

A website can come in two distinct versions, namely a desktop site and a mobile site. A desktop site is also known as a full website, which contains more features and contents than its mobile counterpart and thus requires a bigger desktop screen to browse^[22]. The observation and examination of the above websites are carried out by the use of a desktop computer equipped with a 21.5-inch screen. The desktop computer is loaded with Microsoft Windows 10, and the screen resolution of 1920×1080 is set. It is believed that Microsoft Edge could be the best choice of the browser due to its deeply integrated capabilities, but this browser is still at its early stage and hence lacks sufficient user base when compared to other browsers such as Chrome, Firefox, and Opera^[23]. Therefore, Chrome browser has been made as the choice throughout the website evaluation process.

This study used the content analysis approach. Content analysis can be both quantitative and qualitative, and information in study can be matched or coded to different categories according to different levels of abstraction^[24]. The English version of each of the DMO websites was examined carefully and thoroughly. Since DMO websites are public, all available information can be examined by naked eye and all websites functions and features can be experimented at the fingertip. The evaluation instrument made use of the conceptual evaluation criteria from Li and Wang^[2] as the basic framework, which consists of 5 dimensions and a total of 54 attributes (Table 2). By taxonomy, each section or block of elements (e.g. under a menu, image button, or a page redirected from a hyperlink) on a DMO website was categorized according to the best matching of a dimension and an attribute in the evaluation instrument. Two rounds of observations were attempted, in January 2018, by the first author in order to increase the reliability of this research. A one-week cooling period was placed between the two observation periods. Furthermore, if a feature described in the attributes was found

on a DMO website, a check mark (✓) was given and assigned to that specific category. The complete dimensions and their associated attributes are depicted in Table 2. There are a total of 54 items in this instrument, of which 19 items are for the information dimension, 9 items for the communication dimension, 7 items for the transaction dimension, 11 items for the relationship dimension, and 8 items for the technical merit dimension. The evaluation instrument employed in this study for DMO website evaluation is drawn from various prior literatures. Its dimensions and attributes are depicted as follows. The letters K, H, and M denote Korea, Hong Kong, and Macao respectively.

Table 2. Evaluation Instrument of DMO Websites and the Simplified Results

Dimension	Attributes	K	H	M
Information	Attraction information	✓	✓	✓
	Activities information	✓	✓	✓
	Maps and directions	✓	✓	✓
	Destination background information	✓	✓	✓
	Themed products	✓	✓	✓
	Transportation information	✓	✓	✓
	Events calendar	✓	✓	✓
	Restaurant information	✓	✓	✓
	Travel guides/brochures	✓	✓	✓
	Travel agents	✓	✓	✓
	Accommodation information	✓	✓	✓
	Travel packages	✓	✓	n/a
	Entertainment information	✓	✓	✓
	Local weather information	✓	✓	✓
	Shopping information	✓	✓	✓
	Travel tips	✓	✓	✓
	Trip/vacation planner	✓	✓	✓
	Linked to regional/city/area pages	✓	✓	✓
	Customs and excise	✓	✓	✓
Communication	Search bar/function	✓	✓	✓
	Interactive communication tools	✓	✓	n/a
	Online forum	n/a	n/a	n/a
	Comment box	✓	✓	n/a
	Online survey	n/a	n/a	n/a
	Frequently asked questions	✓	✓	n/a
	Email newsletter	n/a	✓	✓
	Brochure request capabilities	✓	n/a	✓
	Language clarity (free of mistakes)	✓	✓	✓

Dimension	Attributes	K	H	M
Transaction	Online reservation	n/a	n/a	n/a
	Secure transaction	n/a	n/a	n/a
	Attraction tickets	n/a	n/a	n/a
	Events tickets	n/a	n/a	n/a
	Shopping carts	n/a	n/a	n/a
	Themed products	✓	✓	✓
	Banner advertisements	✓	✓	✓
Relationship	Personalization	✓	✓	✓
	Complaints handling	✓	✓	✓
	Best deals	n/a	✓	n/a
	Virtual tours	n/a	✓	✓
	Cross-selling opportunities	✓	✓	n/a
	Privacy policy	✓	✓	✓
	Special offers	✓	✓	n/a
	Web seal certification	n/a	n/a	n/a
	Customer loyalty programs	✓	✓	n/a
	Incentive programs	n/a	n/a	n/a
Direct email campaign	✓	✓	✓	
Technical merit	Search engine recognition	✓	✓	✓
	Webpage design	✓	✓	✓
	Link check	✓	✓	✓
	Load time	✓	✓	✓
	Navigation	✓	✓	✓
	Visual appearance	✓	✓	✓
	Site map	✓	✓	✓
	Multiple languages	✓	✓	✓

3. Ethics Statement

The research carried out by the authors is independent and impartial, which does not favor one destination over another. The authors adhere to research integrity, and all the DMO websites were evaluated without prejudices.

4. Results

The results are reported in a simplified tabular format and can be found in Table 2. Each tick represents the existence of the item under study whereas n/a represents nonexistence.

5. Discussion

Information dimension. All the three DMO websites received similar results. The information about travel packages, however, was not found on Macao’s website. Travel packages refer to a number of interrelated tourism prod-

ucts or services delivered by third-party providers such as airlines, hotels, cruises, amusement parks, and even horse racing.

5.1 Communication Dimension

There were apparent differences in the results among the three samples. Hong Kong has the most features and Macao has the least. Both destinations had the search function for a basic use, but Macao DMO website did not provide an interactive communication tool to the visitors. Korea and Hong Kong’s DMO websites had the signup function to allow people to register their email and to become a member for a more complicated experience. Meanwhile, Hong Kong also provided the membership system for online users to sign up their account in order to unleash more functions to facilitate their vacation plan. In addition, it was observed that none of the websites provided the online forum capability. Finally, both Korea and Hong Kong’s websites provided a comment box, the area on which users could fill out their feedbacks or questions. This feature was not found on the Macao’s counterpart.

5.2 Transaction Dimension

Similar results were received. Although the websites provided much information about attractions, events, and festivals, none of the websites provided the online reservation function. Links and redirections to third-party websites were provided for interested customers to make online bookings there. All the websites promoted themed products, such as a traditional attire called *hanbok* (in the case of Korea), Chinese snacks and dried seafood (in the case of Hong Kong), and Portuguese food and wine products (in the case of Macao).

5.3 Relationship Dimension

The “special offer” is only available in Korea and Hong Kong’s DMO website, which was named as “discount coupon” and “e-coupons”. For the Hong Kong’s DMO website, there were almost two hundred free coupons. In contrast, only seven coupons were found on Korea’s website and none was found on Macao’s.

5.4 Technical Merit Dimension

All the three websites received the same number of ticks, covering all the eight attributes. It is noted that visual appearance is difficult to measure and can be subjective to individuals. The authors, nevertheless, made an effort to make a judgement on the visual attractiveness and neatness of the three websites. When the web design elements were compared, the one in Hong Kong was the best for

its striking visual art effects and consistent theme colors across all pages. In terms of readability, all the information there was shown clearly with a concise format. Korea's website followed a succinct design. Nevertheless, its extensive use of the white color made the webpages less attractive. Macao's website tried to put too much information within a same page, reducing the overall readability.

5.5 New Insights

In regards to the gap analysis of features of DMO websites, a review of contemporary DMO websites from western countries can help obtain a full picture. Tourisme Montreal (<https://www.mtl.org/en>) is the DMO website for the largest city located in the province of Quebec in Canada. At the home page, the website contents are customizable, according to the users' preferences: choosing to give a "like" to five particular moments of the city. Users can choose to save the information they like on the go. This unique feature allows its users to obtain customized experience. Users not only can see the moments that they liked before, but also can see how many people have given a like to the same moments. The entire website is built with the mind of interaction and personalization, which are the two major factors for website users' satisfaction. In addition, the website is strongly associated with social media sites. A total number of seven social media platforms were discovered on Tourisme Montreal website: Facebook, Instagram, Twitter, YouTube, LinkedIn, Pinterest, and Google Plus.

Through those famous social media channels, the customer base can be enlarged and it is important to reach the younger generation. By DMO websites alone, it cannot be achieved.

6. Conclusion

This part aims to conclude the beneficial functions that Macao DMO website should aware and follow. First of all, the eleven missing items "travel package", "interactive communication tools", "online forum", "comment box", "online survey", "frequently asked questions", "best deals", "cross-selling opportunities", "special offers", "customer loyalty programs" and "incentive programs" are the primary task that should add or improve in a better level. For the "best deals", transportation (bus and ferry), museum tickets, hotel room, shopping mall, food & beverage, and event tickets are the six major directions that MGTO can do as a reference. Meanwhile, the "special offer" can be recognized as the vacation package that provided for tourists. According to Hong Kong's DMO website, there are twenty-one countries that allow the users to

choose their own regions in order to enjoy the customized special offer which includes airline package and hotel package etc. It is interesting to note that Hong Kong has a close cooperation with other destinations in order to provide more cross-regions benefits to the tourists, including Australia, China, Japan, Singapore, etc. Furthermore, the webpage design and format of Macao is not fashionable enough by using the vintage template, hence, it is also a crucial component to keep the users stay. According to the western features and concepts from Montreal, a more customized and interactive function needs to develop in order to catch up with the latest trend. In terms of social media usage, Macao Government Tourist Office should put more efforts into promoting on the well-developed social media channels (e.g. Facebook, Instagram, and Twitter) and put these social media's links on the official tourism website for the users' reference. It is also recommended that a DMO should engage in more rigid quality assurance testing on their online platforms. Last but not least, regular updates on web contents can help improve websites' usefulness. Additional tools can also be used to check browser compatibility and smartphone readiness to ensure highest possible user experience on the DMO website.

The three DMO websites provide very simple personalization service to the users, for example, offering multiple languages for individual web users' own preference. As far as personalization is concerned, Canada's DMO website was probably more advanced in this regards, featuring different needs for business and leisure travelers respectively by providing theme websites to distinct groups of travelers.

In addition, it was noted that the Korean DMO website was not supported on the Microsoft Edge browser, making it less accessible to a large group of web users worldwide. After the English version of the Korean DMO website is launched on a Microsoft Edge browser, it displays an error note: "*This website runs on older technology and will only work in Internet Explorer.*" Overall, the three DMO websites should focus more on improving their online transaction capabilities in order to meet the current and future demands for streamlining e-commerce processes.

This empirical study compared three DMO websites, representing three Asian destinations only. Although every website was carefully examined in blocks of information and elements, human errors could possibly exist. The taxonomy of few blocks of information was based on personal experience and judgment. Hence, independent observations by two persons for the website evaluation could be implemented to increase the reliability of the study. Finally, the website evaluation was carried out homogeneously by the use of a desktop computer whereas

the mobile version of those websites was excluded.

Appendix

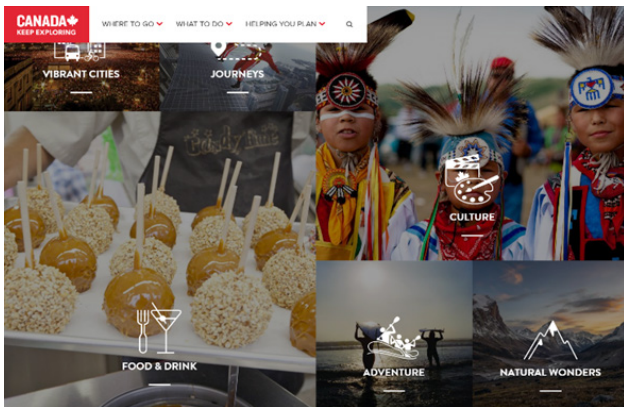


Figure 1. Canada's DMO Website. (Image Source: <https://www.destinationcanada.com/en>)

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