



Role of SMO and SEO in e-Tourism information search

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Abstract

e-Tourism is one of the major sources of income for many countries. Therefore, providing efficient, real-time service for tourists is a crucial competitive asset which needs to be enhanced using major technological advances. Social media optimization (SMO) and Search Engine Optimization (SEO) are playing an increasingly important role as information sources for travelers. The analysis of the search results showed that social media constitute a substantial part of the search results, indicating that search engines likely direct travelers to social media sites and also Given the growing importance of search in e-Tourism planning, marketers need to better understand the behavioural aspect of search engines use. This study confirms the growing importance of social media and Search engine in the online tourism domain. It also provides evidence for challenges faced by traditional providers of travel-related information. Implications for tourism marketers in terms of online marketing strategies are discussed.

Keywords: e-Tourism, Internet marketing, Online tourism domain, SEO, SMO

1. Introduction

Information technology (IT), particularly the Internet, has changed the way travel related information is distributed and the way people search for and consume travel (Beldona, 2005; Buhalis & Law, 2008; Weber & Roehl, 1999; Werthner & Klein, 1999). The Internet has fundamentally reshaped the way tourism-related information is distributed and the way people plan for and consume travel (Buhalis & Law, 2008). The World Wide Web is growing fast and thousands of players are entering the information market everyday. The number of firms connected to the Internet is constantly increasing (eBusiness Watch, 2006) and the world Internet usage growth in the period 2000-2007 was 265.6% (internetworldstats.com, 2008). This means that geographical and cultural boundaries are no longer obstacles for global communication and for global commerce.

In recent years, search engines have become a dominant source in consumers' use of the Internet to access travel products. For example, research conducted by the Travel Industry Association of America found that a substantial number of travelers use search engines for travel planning (TIA, 2005, 2008). Another study showed that search engines serve as the number one online information source for American families in the context of vacation planning (eMarketer, 2008).

However, studies have shown that the visibility of many tourism businesses' websites to prospective visitors is diminishing. Recently, for example, Wober (2006) found that many tourism businesses were ranked very low among the search results for travel related queries. This makes it extremely difficult for users to directly access the individual tourism businesses and properties through search engines. Search engines have become a new "battlefield" of marketing for many travel and tourism businesses, e.g. in various forms of directory listing, keyword purchasing, meta tags, sponsored links, and search engine optimization (Google, 2006; Xiang & Fesenmaier, 2006). On the other hand, social media websites, representing various forms of consumer-generated content (CGC) such as blogs, virtual communities, wikis, social networks, collaborative tagging, and media files shared on sites like YouTube and Flickr, have gained substantial popularity in online travelers' use of the Internet (Gretzel, 2006; Pan, MacLaurin, & Crofts, 2007).

Tourism information has spread in a galaxy of different websites (Baggio et al., 2007) and beside the official ones a group of unofficial websites are competing to reach the travellers' attention on the Internet. Web2.0 (O'Reilly, 2005) and the so-called social media websites (the ones that publish User Generated Content - UGC) are now part of the so-called long tail (Anderson, 2006) and they are a valid source for information for the Internet users. These kinds of websites have gained popularity among the travellers who search for online information (Gretzel et al., 2006). As underlined by Henzinger (2007), the amount of information potentially available online is incredibly huge and diverse in nature, and the appearance and the rise of these websites in the tourism domain is dramatically changing the domain itself but also some of the related issues (e.g. information search and online marketing strategies). Tourism online communities or social networks (the Web 2.0 name for such a dynamics), together with blogs, wikis and other different websites, are populating the online tourism domain (Xiang et al., 2008).

One of the major questions to be answered concerns the likelihood with which a traveler will be exposed to social media websites as opposed to other tourism websites when using a search engine to find relevant travel information. Therefore, this study aims at investigating the representation of

social media as part of the online tourism domain in the context of travel information search supported by search engines. It is hoped that this study can document the current trends on the Internet in order to provide useful insights for online tourism marketing.

2. Research background

The primary task in tourism businesses' marketing and promotional efforts is to ensure relevant information is made visible and accessible to potential visitors (Buhalis, 1998; Werthner & Klein, 1999). Within the context of online information search, search engine serves as an important tool that bridges the traveler and the tourism industry online. Different technological interfaces, such as search engines, online travel booking sites, and Websites of destination marketing organizations facilitate the information exchange between online travelers and the so-called "online tourism domain" (Xiang et al., 2008). Presumably, social media, which facilitate the interactions between online consumers, have emerged as an important component of this domain. This section critically reviews the literature on the Search Engine Optimization, online tourism domain and social media and Social media optimization in tourism, and identifies the limitations of existing literature to provide for this study.

2.1. Search Engine Optimization

Data or information about an unknown subject is usually searched on the first page of search engines. After examining first 5 result pages, other remaining pages are not evaluated by users. Because of this, it is important to move a web page to top lists of search engines in order to introduce it better. In order to achieve this, the search engine optimization must be used by web site developers. Because, it is possible to move a web page to the first page of a search engine by using only some necessary optimization rules. It is important to have an effective, well structured and good-looking web page to introduce the related company, services or products better. But it is also too important for customers to search and find the related web page on a search engine easily. Furthermore, 80 percent of Internet users also search for products or services by using search engines mostly (interactive-advertisements)(Internet,2010). search engine optimization (SEO) aims achieving a higher ranking in search engines (Pan, Litvin, & O'Donnell, 2007b). Generally speaking, when exposed to a list of search results, a number of factors can influence the traveller's evaluation and selection of a specific search result. Particularly, the ranking of a specific search result link along with its relevancy to the search query is widely recognized as the most important factor in influencing the travel information searcher's behaviour. For example, the majority of search engine users do not look beyond the first three pages of search results (Henzinger, 2007). Also, the rank position of a specific search result has been shown to determine whether it will be reviewed and evaluated by an information searcher (Pan et al., 2007a).

2.2. Online tourism domain

A domain can be defined as a collection of all informational entities about a specific subject (Hjorland & Albrechtsen, 1995). In the context of the Internet, a domain is the collection of links, domain names, and Web pages that contain texts, images, and audio/video files stored in hypertext formats. The online tourism domain can, therefore, be understood as comprising all such informational entities that relate to travel (Xiang et al., 2008).

Given the continuous growth of the Internet it is expected that the composition of the online tourism domain will continue to evolve and change. Considering social media is a fairly recent phenomenon on the Internet, it is important to understand the direction of the development. Also, recent studies (e.g., Pan, Xiang, Fesenmaier, & Law, 2010a; Pan et al., 2010) on the role of search engines in online travel information search have shown that there are substantial changes in the way search engines represent the online tourism domain over time. That is, the online tourism domain represented by a search engine is dynamic. However, existing studies, e.g., Xiang and Gretzel (2010), only provide a cross-sectional analysis of the current status of social media. It is, thus, argued that, from a marketing perspective, managers must keep track of the dynamics in online information search, particularly in the domains related to social media for travel.

Xiang et al.'s (2008) analysis of the domain showed that the representation of tourism through one of the most important interfaces, i.e., a search engine, is extremely rich, reflecting the idiosyncratic nature of destinations and travelers' heterogeneous information needs. In addition, their study demonstrated that popular search engines (e.g., Google) dictate the representation of the domain and, thus, create potential problems for online travelers and tourism suppliers.

2.3. Social Media and SMO for Travel and Tourism

While there is a lack of a formal definition, "social media" can be generally understood as Internet-based applications that carry consumer-generated content which encompasses "media impressions created by consumers, typically informed by relevant experience, and archived or shared online for easy access by other impressionable consumers" (Blackshaw, 2006). This includes a variety of applications in the technical sense which allow consumers to "post", "tag", "digg", or "blog", and so forth, on the Internet. The contents generated by these social media include a variety of new and emerging sources of online information that are created, initiated, circulated, and used by consumers with the intent of educating each other about products, brands, services and issues (Blackshaw & Nazzaro, 2006).

Many of social media websites assist consumers in posting and sharing their comments, opinions, and personal experiences, which then serve as information for others. Obviously, from consumers' viewpoint the value of using social media to a great extent lies in its richness as personal experiences

and trustworthiness as electronic word-of-mouth (Gretzel, 2006; Litvin et al., 2008; Pan, MacLaurin, & Crotts, 2007; Pudliner, 2007; Puhlinger & Taylor, 2008; Tussyadiah & Fesenmaier, 2009). Although social media is a recently coined term, research on consumer generated contents in travel and tourism is not new as exemplified by the early studies on online tourists communities (e.g., Wang & Fesenmaier, 2003). More recently, new applications have emerged to contribute to the online information exchange among consumers. Particularly, the so-called Web 2.0 offers a range of applications such as RSS, mash-ups, tagging, wikis, forums, reviews and evaluation systems, virtual worlds, podcasting, blogs, and photos/videos sharing. Generally speaking, the growing body of research on social media focuses attention on its use as well as impact on travel decision making, the creation and sharing of tourism experiences, as well as the implications for marketing practices (Gretzel & Yoo, 2008; Mack, Blose, & Pan, 2008; Pudliner, 2007; Puhlinger & Taylor, 2008; Sigala, 2008; Tussyadiah & Fesenmaier, 2009; Waldhor & Rind, 2008).

2.3. limitations

One important limitation in the existing literature on SEO and SMO is that there is a lack of understanding of its role in online travel and e-Tourism information search, especially the likelihood for an online traveler to be exposed to and actually use these social media Websites when looking for travel information. Specifically, currently available information about travelers' use of social media was based upon data collected through self-reported questionnaires (e.g., using a question such as "how often do you use a specific social media Website") and thus, the degree of objectivity is very limited (e.g., Gretzel & Yoo, 2008). Or, it was based upon controlled experimental settings by asking subjects to conduct a trip planning task online in order to understand the psychological effects of social media on travelers (e.g., Mack et al., 2008). Given these limitations, the extent to which social media constitute the online tourism domain is not well understood in an objective, comprehensive way.

3. Understanding the Role of SMO and SEO in e-Tourism information search

It is argued that the impact of social media in travel and tourism must be understood in relation to the overall online tourism domain and specifically within a travel information search context. By taking into consideration the important role of search engines in travelers' use of the Internet. As the use of search engines grows to become one of the primary modes in traveller's use of the Internet (Hopkins, 2008; TIA, 2008), it is important to understand changes in the online tourism domain that affect travel information search (Xiang et al., 2008). As such, another line of research on social media emphasizes its role in online travel information search. Xiang and Gretzel (2010) recently examined the extent to which social media are represented as search results in Google. Their study clearly showed the growing impact of social media on travellers who are looking for travel products online. It revealed the ubiquity of social media websites in online travel information

search in that social media websites occurred everywhere (i.e., on different search results pages in Google and for different tourist destinations), regardless the search keywords a traveller uses.

the relationship between search engines and social media is a particularly interesting one. First, social media are updated frequently, which “invites” search engines to index social media pages more frequently. Second, social media, due to their very nature of being socially constructed, usually include a lot of hyperlinks, which will influence their ranking within search results in a positive way. This is particularly due to the fact that social media encourage online consumers to be actively engaged in organizing the contents through activities like “digging” and “tagging”, which, in turn, automatically create an ever growing link structure on the Internet (Xiang et al.,2008). All in all, social media are seen as extremely search engine friendly (Gretzel, 2006). Consequently, online tourism marketers potentially face fierce competition from social media because the search process can lead millions of consumers to highly-relevant social media content pages that can influence attention, awareness, trial, and loyalty levels (Blackshaw & Nazzaro, 2006).

4. Methodology

In order to further substantiate the potential impact of social media and search engine on travel information search, the questions focuses attention on more specific issues related to search, including:

How are social media distributed across search results pages?

Are certain types of social media Websites more likely associated with certain keywords used by travelers?

Following from Xiang and Gretzel (2010), this study employed a similar method to retrieve search engine results from Google by mimicking a traveller's use of the search engine for travel purposes. Google was chosen due to its dominant status in the online search market (Bertolucci, 2007). The search engine provided by Google was used as the technology in focus. Google was chosen because it represents the current state-of-the-art online search technology, and it is highly popular among Internet users and dominant in the online search market. Currently, Google serves the largest percentage of queries (approximately 47.3%) on the Internet, with an index of around 25 billion Web pages and 250 million queries a day (Bertolucci, 2007; Burns, 2007). Specifically, a set of 9 pre defined keywords in combination with five destination (in Iran) names were used to form queries to search Google. These keywords, including “accommodation”, “hotel”, “activities”, “attractions”, “park”, “tourism”, “restaurant”, “shopping”, and “crafts”, represent the top level travel-related terms that will likely be used by travelers when they are looking for tourism-related information about a specific destination. and keywords recommended by Google AdWords Keyword Tool (<http://adwords.google.com>) based upon their popularity during a certain time period. The selection

of these keywords was based upon a number of past studies and was intended to reflect the “generic” terms or “broad” categories that represent tourism (Pan, Litvin, & O’Donnell, 2007; Wober, 2006; Xiang et al., 2008).

The focus of the study was on urban destinations to keep the information search context constant. five Iran cities, ranging from large to small in terms of volume of visitation, population size as well as reflecting a certain geographic diversity, were selected to represent urban tourism destinations in the Iran. These destinations include Shiraz, Esfahan, Tabriz, Rasht and Mashhad. The 9 keywords in combination with the 5 destination names, as mentioned above, resulted in 45 queries, which were entered into Google to obtain the search results. According to the past literature (e.g., Spink & Jansen, 2004), the majority of search engine users will only review search results in the first three pages (assuming 10 search results on one page by default). In this study, search results on the first 10 pages were retrieved in order to provide a more comprehensive representation of social media in the context of online trip planning. Table 1 shows the number of search results extracted for the five destinations with a total of 7,950. On average, there were 176 search results extracted per query for each destination.

Destination	Search Results
Shiraz	1800
Esfahan	1700
Tabriz	1100
Rasht	1250
Mashhad	2100
Total	7950

Table 1. Search results retrieved from Google

5. Findings

Data analysis involved content analysis to identify social media websites and descriptive analysis based upon the unique domains of social media identified throughout the 6-month period. This was accomplished in several steps: (1) the proportion of social media among all the search results retrieved by the search engine; (2) the way the search engine represented social media Websites across different search result pages; (3) the types of social media Websites; and, (4) the relationships between the types of social media Websites and specific search keywords and destinations. the descriptive analysis results are presented to show the extent to which social media constitute the

online tourism domain represented by Google. And a correspondence map was generated to show the associations between keywords and social media type.

Among the total 7,950 search results, there were 318 (approximately 4%) identified as search results representing social media. Given the otherwise rather fragmented nature of the search results, this suggests that social media, indeed, represent a substantial part of the online tourism domain and play an important role. Fig. 1. shows the distribution of unique domain names among these social media search results. In total, there were only 33 unique domain names which represented the 318 search results of social media. And Table 2 shows the breakdown of the types of social media.

My study shows virtual communities represent approximately 33% of all the 318 identified social media sites. This seems to indicate the status of virtual communities as the primary platforms for online travelers to share their experiences. The longer history of these sites might also play a role. Consumer review site come next, representing about 31% of all social media sites. Personal blogs and blog aggregators also represent a substantial part of social media 22% retrieved by Google in the context of travel information search. These three categories, in combination, constitute over 80% of social media represented in Google. In addition, there are social networking sites (e.g.,facebook.com) and media sharing sites (e.g.,youtube.com), representing 6% and 4% of all social media sites, respectively. The last type, namely “other”, includes sites that could not be easily categorized (e.g., Wikipedia-type sites), constituting 4% of all social media sites.(Table 2 shows Composition of social media represented in Google.)

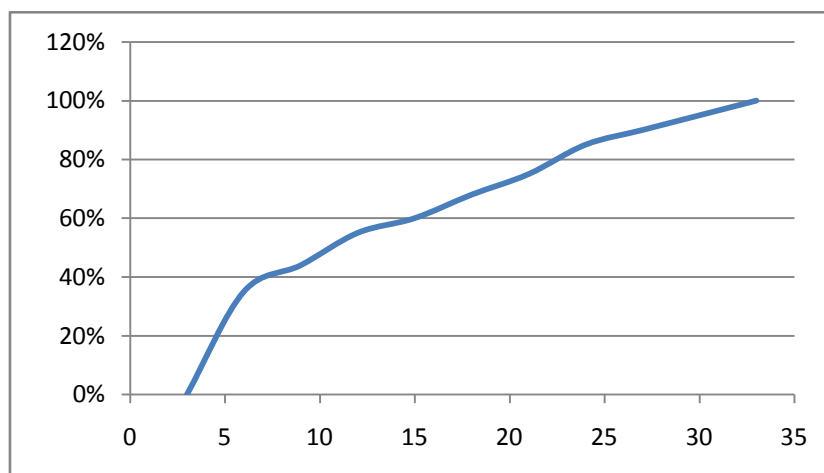


Fig 1: Distribution of unique domain names among social media websites.

Part	Percent
virtual communities	33%
review	31%
Blogs	22%
social networking	6%

media sharing	4%
other	4%

Table 2. Composition of social media represented in Google.

Table 3 shows the distribution of social media Websites among the selected destinations. And Table 4 shows the distribution of social media sites among the 9 pre-defined keywords. Among these keywords, “craft” and “shopping” generated the most social media-related results (25% and 17%, respectively). Other keywords also generated a substantial number of social media sites. This indicates that the sizes of the sub-domains represented by these keywords are quite different.

Destination	Percent
Shiraz	33%
Esfahan	21%
Tabriz	14%
Rasht	14%
Mashhad	18%

Table 3. Distribution of social media by destination.

Keywords	Percent
accommodation	6%
hotel	9%
activities	4%
attractions	12%
park	5%
tourism	7%
restaurant	15%

shopping	17%
crafts	25%

Table 4. Distribution of social media by keyword.

Given their important role in facilitating travelers' access to the online tourism domain, search engines directly and indirectly promote social media to travel information searchers. This study explored the extent to which social media Websites are represented in one of the most powerful search engines, i.e., Google. Although the investigation involved a very limited number of destinations and a handful of search queries that are likely used by travelers, the findings revealed interesting dynamics in some of the key areas in online tourism. Thus, this research contributes to the understanding of the online tourism domain and its implications for online tourism marketing in a number of ways.

6. Conclusions

The fast changing technological environment requires marketers and managers to be equipped with fresh thinking and abilities to learn. Social media, along with other increasingly important tools and channels for online consumers, pose opportunities and challenges for tourism businesses and destinations. This study provides a preliminary analysis of the changing nature of social media based upon data retrieved over a "short" time period on the Internet. It contributes to our knowledge of social media for travel and tourism in several ways. This study confirms the existing understanding of the role of social media in online travel information search in that it shows social media web sites constitute a considerable proportion of the tourism domain online within the context of using a search engine for trip planning purposes (Xiang & Gretzel, 2010). It seems the presence of social media in a search engine like Google is fairly stable over the time period of data collection. While this seems to contradict our expectation that there should be observable growth of the amount of social media, this finding may not be surprising given the limited length of time. While exploratory in nature, this study offers several useful insights into the online tourism domain, the role of search engines in representing this domain, as well as the implications for tourism marketers. Since it has been argued that the future of Internet-based tourism will be focused on consumer centric technologies that will support tourism organizations in interacting with their customers dynamically (Buhalis & Law, 2008), this study provides useful insights into the new avenues tourism marketers need to pursue in order to achieve such a goal. The findings clearly indicate a great need for search engine optimization efforts as well as search engine advertising to ensure that a tourismWebsite is represented and can compete with the rankings of social media sites. An alternative strategy is to embrace social media and (1) advertise or provide contents on those sites or (2) integrate social media components on the tourism destination or supplier Website. With the so-called Web 2.0 technologies, such integration is not only possible but also relatively easy.

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