Evaluation of Tourism Websites from Urban Development Perspective (Case Study: Metropolitan Tehran)

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ABSTRACT: Tourism organizations have become one of the main users of the internet in recent years by setting their own urban tourism websites. However, not all the websites are effective to promote their goals and objectives. An effective evaluation of urban tourism websites can help organizations on how best to employ them. Using the ICTRT (Information, Communication, Transaction, Relationship and Technical merit) model, this study tries to evaluate the efficiency of Iranian official tourism websites from functional perspective and their role in urban development. The aims of the study fulfilled by content analysis of two official urban tourism websites. The results demonstrated that the websites were not able to support Iranian Tourism Industry effectively. The focuses of these websites mainly based on the basic services such as information and communication. Advanced services such as transaction and relationship building were generally being ignored. Furthermore, a converse correlation was seen between complexity and performance of websites. Based on the research findings suggestions and implications in urban development were discussed.

Keywords: Urban Development, Urban Tourism Website, Website Evaluation, Website Effectiveness, Digital Culture

INTRODUCTION

Within a decade, the tourism and travel industry has become an economic importance in urban development in many countries. Wang et al. (2006 cited in Shemshad & Malek, 2012) proved that "educating local people, about the potential benefits of tourism, is impact factor in improving their participation for tourism and achieving sustainable development" (p. 20). Some elements affected this development, such as the growing wealth in society, an increase in leisure time, new means of communication and a growing population. The communication factor, i.e. the emergence of information and communication technologies (ICT) in the tourism industry,

has allowed travelers from countries around the world to access the essential travel information and services. This is especially so the Internet, which as a global network, has helped promote the tourism industry.

Internet, as a new communication and information tool in urban development, has also brought much profit for every business such as Tourism, which cannot be easily ignored. Vrana & Zafiropoulos (2009) described some of the advantages of using the internet in marketing:

The first advantage relates to the addressability of the Internet, which refers to the various communication paradigms. Specifically, the Internet allows a company to "address" the customers separately in its marketing communications. This is possible, as whenever a user visits its website, the server (used by the company) will have a record of that particular

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user's electronic address. Then the company can "narrow cast" it by sending a specially made message content, i.e. to a minor target audience or an individual customer (Breen et al., 2005).

The second advantage involves the interactivity of the Internet that permits the companies to establish direct communication with their consumers and create an opportunity for consumers to give feedback directly. Moreover, the flexibility of the Internet makes it a multi-usage tool. Tourism companies can use the internet and the Web as an electronic billboard, mainly for advertisement purposes and the preparation of e-catalogues for their products and services.

Finally, Vrana & Zafiropoulos (2009) describes the accessibility of the Web, which refers to the "information availability" and "user interaction". Through efficient web site, a company is on deal with a worldwide field 24 hours a day, 365 days a year. Any net user in the world can access the marketing information of the company at any time suitable for him/ her. Consequently, it is important for every tourism organization to take advantage of all the facilities provided by the Internet. This new channel permits the people to become aware of the Travel and Tourism opportunities, as well as to compare offerings, communicate with tourism organization directly to purchase tourism services, and make post-travel feedback. Therefore, the new environment has potentially created a new competitive situation for all tourism organizations.

This means the tourism organizations should not only employ the Internet features, but also monitor and assess these tools to overcome their rivals in the global market. One of these marketing tools can be the World Wide Web, specifically the websites that serve as interfaces between organizations and consumers. This assessment can vary, depending on the final expected output and it should be based on a certain framework such as according to technical, economical or communicational contexts. This can only be done if there is a good understanding of the Internet, World Wide Web and its advantages to other marketing communication tools.

The internet age, domestically and internationally, has developed new ways for tourism service including travel, accommodation and tourist attractions. Tourism providers and tourism organizations have taken initiative to propose their facilities accessible online to consumers. By using Web-based technologies, they could reduce service costs and subsequently attract customers. These technologies could provide useful and up to date information for customers and travelers to access tourist catalogues, make bookings and payments for airlines and hotels. The travelers can accessed all of these facilities from home.

Tourism E-commerce and its beneficence have been studied in latest years (e.g. Cho & Sung, 2012; Kim et al., 2013; Lim & Yoo, 2012; Zhang et al., 2011). However, consumer necessities and assessment of urban tourism websites and their facilities

have not been adequately investigated (Ip et al., 2011; Law et al., 2010). A literature review on theories or models of tourism websites assessment in urban development shows that by changing consumers and progressing technology some models became outdated and faded in memory. Furthermore, the findings of previous researches were controversial due to the effectiveness of performance and complexity of urban tourism websites. Some studies supported a high degree of technology complexity and believed that this may upsurge the richness of information (Sigala, 2003; Wang, 2008), while the other indicated, websites would be more effective if they are easy to use (Agarwal & Venkatesh, 2002). There are some others, which suggested an inverted-U connection amid performance and complexity (Geissler et al., 2006; Nadkarni & Gupta, 2007).

Thus, this research by considering current user requirements pursued two purposes: (i) to evaluate the efficiency of two official urban tourism websites in Iran namely Iranian Tourism Official Website and Iranpedia Tourism Website and their role in urban development, (ii) to examine variations in application of functional features in Iranian official tourism offices' websites. Based on the objectives attempt has been done to answer these two research questions:

Q1. To what extent do Iranian tourism websites promote tourism industry in urban development?

Q2. What suggestions are proposed for sustainable tourism development in Iran by richness of urban tourism websites?

The results will not only be beneficial to urban planners in Iran and the Iranian official tourism offices, but also make available better understanding for destination marketers and tourism administrations with their web marketing efforts.

Website Evaluation Framework and Model

This study attempts to investigate and evaluate two official urban tourism websites in Iran, by using data that was collected through assessment of the ICTRT model: information, communication, transaction, relationship and technical merit. Fig. 1 shows ICTRT model.

As it is shown in Fig. 1, amongst the five aspects, technical merit has direct influence on the effectiveness of the other four marketing dimensions. At the basic marketing level, destination-marketing organizations' (DMOs) website should offer appropriate information regarding the destination. Then it should provide communication function with all parts of promotion and marketing research. At this level, e-mail and contact details are distributed, letting a straight exchange of information among the DMOs and customers that makes way for upcoming connection building.

The transaction function allows DMOs to earn income for internal as well as external usage. The relationship component of the model due to its requirements for great technological expertise and supervision skills is possibly the most difficult part to put into service. It is noteworthy to say
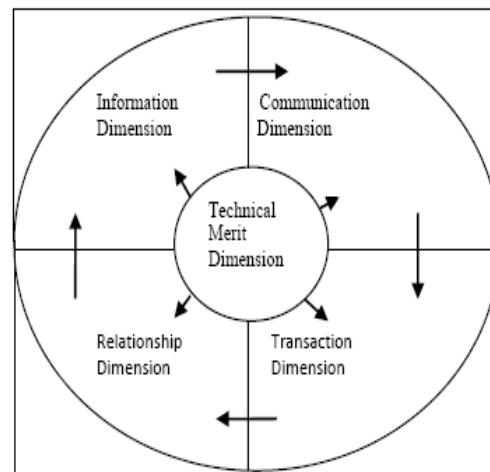
Fig. 1: ICTRT Model, (Source: Li & Wang, 2010)

that the operation of the four marketing aspects depends on the assistance of the technical merit dimension.

The justification of selecting the ICTRT model for urban tourism website evaluation in this study is: (i) the model is innovated recently specifically for DMOs' websites evaluation and has been verified in other DMO settings; (ii) it eases the difficulty of website evaluation by offering a specific framework.

Therefore, the ICTRT model by low level of complexity and high degree of practical relevancy assesses the urban tourism websites and their developments possible.

MATERIALS AND METHODS

Applying the ICTRT model, this research tries to evaluate the usefulness of Iranian urban tourism websites from a functional perspective and their role in urban development. The goals of the study obtained through content analysis of two official urban tourism websites namely Iranian Tourism Official Website and Iranpedia Tourism Website.

Instrument of Evaluation

As suggested in the ICTRT model, an effectual DMO's website would be made up of five aspects (i.e. information, communication, transaction, relationship and technical merit). Each of these aspects composes several items. Thus, for each aspect a list of items was offered according to the review of the literature (e.g. Doolin et al., 2002; Feng et al., 2003; Li & Wang, 2010; So & Morrison, 2004; Wang & Russo, 2007). The lists modified through watchful observations of urban tourism websites by the researcher to keep the items up to date. For example, the item of 'links to social media' not mentioned in previous researches. However, by appearing and developing

Web 2.0 the notion emerged in tourism industry and provided a strong communication stand (Buhalis & Law, 2008). Then two experts in tourism E-marketing were asked to verify the suitability of the list for each function.

As a result 47 items for the ICTRT model comprising information aspect (19 items), communication aspect (10 items), transaction aspect (4 items), relationship aspect (7 items), and technical merit aspect (7 items) were identified. The performance of each item in the five individual aspect was evaluated on a 5-point Likert scale (1 = very poor, 5 = very good); 0 is reported if the item does not exist. Nevertheless, due to differential function of each item, using the performance result simply as an evaluation of website effectiveness would not be comprehensible.

In other words, those items that are more important in this industry should have more contribution in the total score of website effectiveness. Therefore, to evaluate the effectiveness of the website, the importance of each item was also taken into consideration. Using a 5-point Likert scale (1 = not important at all, 5 = very important) the relative importance of the 47 items was evaluated (See appendix A for instrument of the study).

This followed by assessing effectiveness that measured by multiplying score value of 'performance' with 'importance' of the item. The performance value demonstrates the function of the item in the website, whereas the importance score shows the role of each item in efficiency of the website. Regression analysis has been conducted to assess the result.

Sampling and Procedure of Data Collection

The effectiveness of each website evaluated in January 2015. Forty undergraduate students were participated in the study

Table 1: Importance, Complexity, Performance, and Effectiveness Scores of Iranian Official Urban Tourism Websites

Website attributes	Importance	Complexity	Performance	Effectiveness
Information dimension	3.97	2.24	2.74	11.24
Activities information	4.73	2.18	3.59	19.98
Attraction information	4.64	2.02	3.47	16.10
Accommodation information	4.51	2.52	3.46	15.60
Entertainment information	4.46	2.00	3.25	14.49
Maps and directions	4.34	2.25	3.14	13.62
Events calendar	3.99	2.35	3.42	13.64
Links to regional/city/area pages	4.02	1.50	3.09	12.42
Restaurant information	4.09	2.52	2.92	11.94
Travel guides/brochures	3.63	2.02	3.33	12.08
Photo gallery	4.19	2.01	2.75	11.52
Transportation information	4.24	2.18	2.64	11.19
Shopping information	3.61	2.03	2.94	10.61
Travel packages	3.70	3.35	2.59	9.58
Visitor center information	3.52	1.85	2.43	8.55
Travel tips	3.97	2.18	1.88	7.46
Information by market segment (Business, Family, etc.)	3.73	3.02	2.05	7.64
State facts	3.04	1.52	2.41	7.32
Local weather information	3.66	1.68	1.72	6.29
Virtual tours	3.50	3.52	1.04	3.64
Communication dimension	3.57	2.69	2.12	7.83
Search function	4.51	3.68	3.31	14.92
Contact information	4.49	2.02	3.30	14.81
Catalogue	3.85	2.35	3.28	12.62
Destination image	3.91	2.02	2.66	10.40
Links to social media	2.96	1.85	2.69	7.96
Various language versions	3.59	3.68	1.69	6.06
Email newsletter	2.33	2.68	2.73	6.36
Feedback forms	3.22	3.18	.85	2.73
Frequently asked questions	4.16	2.18	.32	1.33
Surveys	2.74	3.35	.42	1.15
Transaction dimension	3.92	4.54	.92	3.76
Online reservation	4.33	4.52	1.51	6.53
Events tickets	3.94	4.52	.99	3.90
Attraction tickets	4.03	4.55	.94	3.78
Shopping carts	3.38	4.57	.25	.84
Relationship dimension	3.79	3.89	1.22	4.79
Privacy policy	4.23	2.68	2.31	9.77
Deals and discounts	4.58	3.68	1.54	7.05
Personalization	3.85	4.35	1.20	4.62
Cross-selling opportunities	3.38	4.52	1.81	6.11
Incentive programs/contests	3.44	4.18	1.02	3.50
Customer loyalty programs	3.64	4.52	0.46	1.67
Web seal certification	3.47	3.35	0.25	.86
Technical merit dimension	4.50	/	3.06	13.88
Link workability	4.87	/	3.55	17.28
Load time	4.54	/	3.39	15.39
Search engine recognition	4.59	/	3.32	15.23
Visual appearance	4.45	/	3.03	13.48
Navigation	4.59	/	2.90	13.31
Webpage design	4.57	/	2.87	13.11
Site map	3.89	/	2.42	9.41

to assess importance and performance of two Iranian official websites. The evaluators were students who were familiar with hospitality and tourism information technology. Before evaluating the Iranian official urban tourism websites, they participated in two comprehensive training sessions by the researcher to ensure that these evaluators were capable of assessing websites individually and impartially.

These students were considered as qualified evaluators since: (i) they have knowledge in information technology; (ii) they are interested in and are savvy in online activities; (iii) the youngsters are potential consumers of tourism marketing; (iv) more likely they had experience to arrange online travelling. The evaluators randomly assigned into two groups, using random table assignment. Consequently, 20 evaluators assessed each website individually.

Moreover, complexity of each item assessed through a panel composed of three experts in tourism information technology. Finally, the researcher checked and confirmed the results.

RESULTS AND DISCUSSION

The goal of this study was to evaluate the effectiveness of two Iranian official urban websites namely Iranian Tourism Official Website and Iranpedia Tourism Website through five aspects of the ICTRT model. The following procedures were conducted to achieve the goal of the study.

Assessment of the Effectiveness of the Urban Websites Functions

Table 1 shows the result of effectiveness evaluation of the Iranian official urban websites. As it is presented in this Table the highly effectiveness relates to the 'activities information' (19.98) and the lowest score relates to the 'shopping carts' (.84).

Amongst the four marketing functions, 'information dimension' with an average score of 11.24 is the most effective. This followed by communication dimension (7.83), relationship dimension (4.79) and transaction dimension (3.76). The inconsistency among the dimensions indicates that Iranian official tourism offices (OTO) are not using their websites perfectly. The OTOs employed their websites mostly for information provision and did not emphasize the role of interaction and business transaction.

Information dimension shows the effective mean of 11.24. Among its items 'activities information' (19.98), 'attraction information' (16.10) and 'accommodation information' (15.60) show the uppermost effectiveness. While, 'virtual tours' with value of 3.64 shows the least effectiveness. All the items with an average importance score of 3.97 also evaluated. However, the evaluation demonstrates that the ratings of importance for all of the information items are higher than their ratings on performance. Thus, it indicates a divergence amid the importance and real performance of the functions. The highest rate of performance for information

items are seen in 'activities information' (3.59), 'attraction information' (3.47), 'accommodation information' (3.46) and 'events calendar' (3.42). While the complexity in terms of implementation for most of the information items were evaluated as low level, for 'virtual tours' (3.52), 'travel packages' (3.35) and 'information by market segment' (3.02) shows moderate level. So we can imply that the complexity would be the reason why particular OTOs did not applying such items in designing their websites.

Communication dimension shows the effective mean of 7.83. Among its items 'search function' (14.92) and 'contact information' (14.81) show the uppermost effectiveness. While 'surveys' (1.15) and 'frequently asked questions' (1.33) show the least effectiveness. The dimension shows an average importance score of 3.57 with rated low importance for 'email newsletter' (2.33), 'surveys' (2.74), and 'links to social media' (2.96). In terms of performance, the ratings of 'various language versions' (1.69), 'feedback forms' (.85), 'surveys' (.42) and 'frequently asked questions' (.32) are lower than the average score of communication dimension (2.12), thus their performance have raised up some concerns. As for complexity, 'search function' (3.68), 'various language versions' (3.68), 'surveys' (3.35) and 'feedback forms' (3.18) are four items which are rated complex to implement.

Transaction dimension shows the effective mean of 3.76. Amongst its items, 'online reservation' shows uppermost effectiveness (6.53). While 'shopping carts' (.84) shows the least effectiveness. The dimension demonstrates an average importance score of 3.92 with rated low importance for shopping carts (3.38). In terms of performance, all the items show poor performance with average score of (.92) and the least ratings for 'shopping carts' (.25). Moreover, the items of transaction dimension are evaluated very complex (4.54), signifying that application of it is extremely complex and needed more consideration in terms of technology expertise as well as cooperation and support from commerce and business.

Relationship dimension shows the effective mean of 4.79. Amongst its items, 'privacy policy' shows uppermost effectiveness (9.77). While 'web seal certification' (.86) shows the least effectiveness. The dimension demonstrates an average importance score of 3.79 with rated low importance for cross-selling opportunities (3.38). In terms of performance all the items show extremely poor performance with average score of (1.22) and the least ratings for 'web seal certification' (.25). Furthermore, the items of relationship dimension are evaluated moderately high complexity (3.89). Amongst the seven items, 'privacy policy' (2.68) is evaluated not so complex to implement.

Technical merit dimension entirely shows high important rate for all items with an average mean of 4.50 and nearly a high level of performance with an average mean of 3.06. This function obtains the uppermost effectiveness value amongst

the five proposed dimensions with an average mean score of 13.88. Thus, the outcomes predicted that OTOs are conscious about the significance of technology in promoting and upholding their websites, and keep their efforts to develop this function. However, the evaluation amid performance and importance indicates that these efforts are not sufficient and there is stillroom for enrichment.

The Contribution of Complexity and Performance of Website

As above mentioned, in the current research the complexity means technological aspects of a website which was judged by using a 5-point Likert scale (i.e. 1 = very easy to implement and 5 = very complex to implement). There were strong believes among tourism organizations that website complexity completely contributes to website performance. Thus, attention paid to the efforts on recognizing and applying the most advanced technology tools, neglecting the crucial its aim is achieving business purposes and communicates with customers.

This study aimed at empirically examine whether there is a positive linear relationship amid complexity and performance of the websites. The results of a linear regression model is not shown a significant relationship (F = 2.79, p > .05) amid complexity and performance of websites. However, further analysis by a quadratic model demonstrates a converse, curvilinear relationship (F = 4.38, p <.05) amid complexity and performance. This means that by increasing the level of complexity, we can witness the improvement of the function of the websites. However, this relationship continues to a specific level of complexity after which the performance of the websites deteriorates. This would imply that OTOs need supplementary technology competence and organization resources to implement sophisticated items. Therefore, websites in moderate level of complexity seem to be the most effective.

This study by applying a comprehensive model of evaluation website provided fresh empirical evidence for the function of two official urban tourism websites in Iran as well as their role in urban development. The result substantiates similar findings of earlier study by Li & Wang (2010) who found out a curvilinear relationship amid complexity and performance of website. The reason for such a result may be due to the fact that customers get bored by low level of complexity, while confused by high level of it (Geissler et al., 2006; Nadkarni & Gupta, 2007). However, we can also indicate that the curvilinear relationship is driven by technology competence of an organization.

Even though high level of complexity helps to develop website performance, the capability of OTOs' use of complex items is restricted. Thus, moderate level of complexity would make best use of performance by harmonizing amid function of website and OTOs' technology capability.

CONCLUSION

In urban development, a destination marketing system is an appropriate device for tourists to become aware of a destination. The DMOs' websites as well as being efficient marketing tools are systems that provide facilities for travelers. Therefore, the DMOs' websites are significant because of their potencies to catch the attention of more travelers to the destination and enhancement of consumer satisfaction. Based on the ICTRT model, a DMO's website is a technical growth stage for prospective consumers who require comprehensive product information, efficient communication, appropriate transaction procedure, public relation activities and post-purchase facilities. Thus, a website of DMO would be assessed on the five dimensions of information, communication, transaction, relationship and technical merit. From these, the technical merit directly influences the performance of the other four dimensions, which all together employed to achieve website's marketing function. This study used the ICTRT model, which is consisted of marketing as well as technical factors, to assess two Iranian OTOs' websites.

As a whole, the study found that OTOs in Iran did not comprehensively use their websites. As paid attention, mostly they use the website for distributing information. The functions of transaction dimension as well as relationship dimension were not considered properly.

While due to rising competition, OTOs not only have to make available basic destination and tourism product information, but also to implement more sophisticated marketing functions. According to Han & Mills (2006), OTO's can preserve customers on their websites if pay more attention on transaction features.

Therefore, OTOs should expand e-commerce functions throughout watchful and consistent collaboration with the main tourism suppliers. The relationship dimension aids OTOs fortify their destination role as communicators and marketers. This also confirmed in a study by Wang and Russo (2007) in which mentioned the missing of transaction and relationship dimensions in DMOs' websites and its consequences in tourism marketing.

The current study also demonstrates that the performances of majority of advanced items in OTO's websites are not satisfied and further improvement is necessary, although it shows that the performance of OTO's websites enhanced through combination of text information with graphics.

The study suggests OTOs employ different types of technologies of web 2.0 such as social networking programs, through which traveling experiences among website visitors could be shared, so the visitors can illuminate their uncertainties by finding answers to their questions.

Comprehensive evaluation of the consumer-generated content allows OTOs to explore strong and weak points of the destination, and make them available to access a 'difficult to reach' market segment (Choi et al, 2007).

The results by providing empirical data in urban development, proposed that OTOs be more aware of the quality as well as quantity of their website. They should properly adjust the function and features of the websites to satisfy their potential customers.

The outcome of this study also demonstrates an inverted-U-shape relationship within performance and complexity features of the urban tourism websites. This means that increasing the level of complexity is useful until reaching a certain level, after which sophisticated website features might have a negative effect on the sites' performance. Thus, it is useful for OTOs to consider optimal use of sophistication in technological features.

This research took the approach of employing experts for the aims of assessment. It should be mentioned that employee from OTOs can also be considered as experts on their working experience. Thus, In future researches participation of staff from OTOs in research can increase the validity and reliability of the assessment outcomes.

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