Tourism Website Development and User Requirements: Who are Tourism Website Users and What are Their Requirements in China

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Abstract

China tourism industry is investing to develop a "Golden Tourism Project". One of the main objectives of this project is to improve web-based tourism online service quality and implement tourism e-commerce. In order to develop successfully the project it is necessary to investigate who are main tourism website users, what are their requirements for online tourism services and how do they assess current tourism websites. The main purposes of this study are to identify current tourism website users, analyse user requirements for tourism online services and explore how design tourism websites to attract users, promote tourism landscape points and improve online tourism service quality in China. Through conducting a survey and analysing the survey results, this paper shows the behaviour characters of current tourism website users, discusses their preferences and requirements for online tourism websites, and identifies the major factors that users concern for tourism website construction in China. Components of tourism websites are analyzed and an evolution model for tourism websites in China is proposed.

Keyword: Tourism websites, E-commerce, Web assessment, User satisfaction, China

1. Introduction

The Internet facilitates various online services, creates more and more virtual products and provides new business transaction models. Tourism e-commerce is one of the fields where Internet is being widely applied in providing online services and products [3] [10]. The development of tourism e-commerce not only changes the tourism marketing models but also results in the changes of the conventional user requirement and conventional measurement of user satisfaction [14] [8]. User satisfaction, which has a great influence on companies' market behaviour, profitability, and competitive advantage, is a very important factor for a company to establish their market competitive strategies. Hence, tourism website suppliers need to know which types of people are the main users for their websites and receiving their online services, if these users are satisfactory with current online services and which kinds of service functions need to be effectively improved.

Tourism is becoming an important industry sector in China. In 2001, China received 333,200,000 tourists and has become the top fifth tourism destination country in the world [1]. Tourists are becoming more initiative and individually in China. simultaneously more and more educated young tourists are obtaining tourism information from the web and making various online orderings and bookings. Tourism e-commerce is benefiting tourism companies in reducing costs and reaching a large user group, also benefiting to tourists in making a clear budget and travel plan.

Base on the requirements of National Information Development in China, a current keystone of tourism industry is "Golden Tourism Project". One of the main objectives of this project is to develop tourism e-commerce and improve tourism online service quality. Today web development in China has increased to the point where hundreds of companies are creating new websites and thousands of people are being new users daily. In 2001, more than 12,450,000 computers were connected with Internet in China. There were 33,700,000 people accessing Internet, 6,720,000 of them using broad band, 21,330,000 using dial up, 5,650,000 using both technology, and the rest 1,180,000 using other information equipment and connection [4]. From 1997 to 2000, the number of people to access Internet is doubling every six months, an increasing 20%-30% since 2000 every six month. Simultaneously, user requirement for tourism online service has been increasing. Through few years practice of tourism

online service, it is very necessary for the government and tourism companies to have a clear understanding and identification for current state of tourism e-commerce applications and users' requirements for tourism online services.

There is no any research result for the development and evaluation of tourism websites in China from literature. In the case of website assessment some publications of results exist, such as [5] [7], but there are not addressing tourism websites. Benefits of tourism online service have been demonstrated, such as [12] [11] [2] and [6], but user requirement and satisfaction for tourism website design and online services, particularly in China, are not sufficiently explored.

The initial objective of the research is to provide a picture of tourism website users and their requirements in China. A further objective is to identify a potential path for the development of a customer oriented tourism e-commerce application from its current implementation. This paper therefore focuses on the identification for tourism website users and the analysis for their preferences, requirements and evaluation for tourism websites in China. The research is conducted based on a questionnaire survey. Through data analysis, this research identifies and discusses several important factors of tourism website development including accessing speed, connection expenses, site links, content/interface design and online ordering/shopping. The findings of the project are expected to help the government and tourism website suppliers in China to understand current online user requirements, preferences, satisfaction and behaviours, which will be very benefit for the development of tourism online service. Finally, Components of tourism websites are analyzed and an evolution model for tourism website development in China is proposed.

2. Research Method

The study is completed by four main phases: questionnaire design, subject identification, survey conduction and data analysis. In order to obtain the information about the composition of tourism website users and their assessment for tourism website service, a questionnaire was designed to include 20 questions. The questionnaire consists of three parts: part one involves user's personal information; part two involves user's requirement, behaviour and attitude in access tourism websites; part three addresses users' evaluation and suggestions to current tourism website development.

This survey was conducted in several popular Internet cafe clubs in Shijiazhang city and several typical tourism companies. The subjects are Internet cafe club members or registered customers in selected tourism websites. The most Internet cafe club members are experiential Internet users. They usually have high information requirement and have visited many tourism websites in the world. They thus could express more

user requirements to tourism websites and give good suggestions for tourism website design. The registered tourism website users have a long and continued experience in receiving online tourism services. They therefore could give a more fair evaluation and report existing practical problems.

The survey was conducted from 15 to 30 May 2001. Questionnaires were given to subjects by emails or individually handouts (in Internet cafe clubs). Total of 290 questionnaires were sent out and 196 complete responses were obtained. These responses indicated their experience in visiting tourism websites or receiving relevant online services, therefore are recognised as 'tourism website users' in the study.

This study also compares the main findings obtained with the relevant results shown in "China Internet Developing Situation Statistic Report" that is completed in June 1999 by China National Network Information Center (CNNIC).

3. Who Are Tourism Website Users

3.1 User Occupation Analysis

The survey result shown in Tab. 1 indicates that the main tourism website users are high school/university students (44.8%) and professionals (15.2%). The CNNIC [4] has similar results for general Internet users. CNNIC reported that in 19 main occupations, the biggest proportion is students (19.3%) and computer technicians (14.9%). The two results tell us that students and computer professionals are two main user groups to access Internet and visit tourism websites in China. User occupation is a very important issue to be considered for website suppliers in identifying users' requirements for online services and designing tourism websites.

Tab. 1 User occupation

Occupation	%
Civilian	11
Student	44.8
Serviceman	10
Professional	15.2
Manager	7.5
Unemployed	7
Others	4.5

3.2 User Education Background

The survey found that most responses have a good education background. There are about 38% of tourism website users has a bachelor degree, and 28% of has a diploma (Fig.1). The result means that the main tourism website users are educated people. The result matches the result of CNNIC [4] which shows that 86% Internet users have diploma, bachelor or above education

background, it is little higher than the result got from the survey. The difference can be explained that Internet use is fast spreading in China during the two years (1999-2001) so that there were more non-high-educated people having become Internet users. This finding also can be explained that more non-high-educated users have become new users of tourism websites. When more un-high educated people becoming tourism website users, tourism website designers must consider how to match the requirements of all levels of use groups.
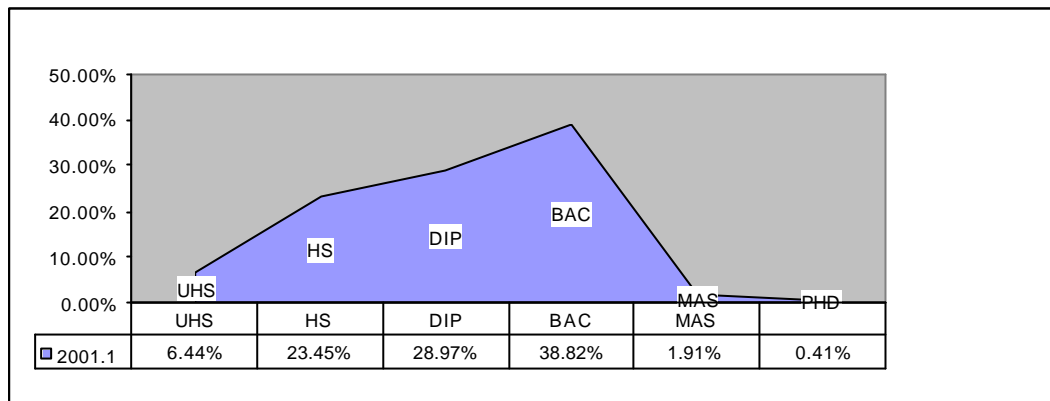
PHD—Philosophy of Doctor, MAS—Master, BAC—Bachelor, DIP—Diploma, HS—High School, UHS--Under High School

Fig.1 User education levels

3.3 User Age Analysis

Age is also an important factor to determine users' preferences and choices for tourism products and services. The survey shows that about 97.5% of responses are younger than 35 years old and there is no responsr over 45 years to participate with the survey as an Internet cafe club member or a website register members (Tab.2). This result matches with the relevant results of CNNIC [4]. The result can be explained as that young generation more likes to use Internet as a tool for seeking information and receiving services.

Tab. 2 User age

Age	< 18	18-24	25-34	35-44	>45
%	12.5	65	20	2.5	0

3.4 User Income Analysis

.**Tab. 3 Users' monthly income and Internet accessing cost (yuan RMB)**

Monthly income				
Less than 500	500-1000	1000-1500	More than 1500	No income
28%	17%	8.5%	9.5%	37%
Monthly Internet access cost				
Less than 100	200--300	400-600	Not sure	
44%	21%	13%	22%	
Payment type				
Self pay		Business cover		
61%		39%		

As shown in Table 3, most responses have a lower income or no income as most of subjects are students and young people. About 82% of users' income is less than RMB1,000 per month. Only 9.5% of users' income is over than RMB1,500 per month. About 44% of users have a monthly Internet access cost less than RMB100 and 61% of users need to pay their main connection fees by themselves. For such users who do not have strong financial ability and business financial support, the Internet connection/access fees is one of important factors to be considered for access online services

4. How Do Users Evaluate Tourism Websites

4.1 Accessing Speed and Connection Expenses

The most important factors affecting users' to receive tourism websites are identified in the survey. Responses indicate that the first important factor was "accessing speed", followed by "connection fees", and "service quality" (including information content quality and ease of use). For the question "what are the unsatisfied aspects for current tourism websites", 35% of users mark "speed is too slow". In the question "what are the most important factors for supporting a tourism website success", 40% of responses think it is "high accessing/searching speed". Website accessing speed has become one of the most important factors for users to visit websites and a major problem complained by users in China. The main reasons for having such a lower accessing speed in China are (1) the narrow bandwidth cannot meet the requirement of large information such as photos; (2) there are large amount

of users accessing same data at the same time; and (3) relevant networking technology problems, such as software architecture, search engine algorithms and server output channels, need to be solved. Therefore, the development of tourism websites needs a more effective technical support and regional infrastructure construction.

4.2 Search Engine and Relevant Site Links

Search engine is a key function of Internet applications. Installing a search engine to a website will help users to find what they are looking for quickly. In the question "how to know a new website", about 69% of responses marked "by search engine and site links from existing websites". In the question "which function is the most frequently used in web service", search engine is listed with a high rate, following chat room, email and information content. Today's search engines, such as SOHU, have a fast search speed and wide range of information domain, but lack a clear classification for tourism information. This makes users hard to find what they are looking for. They have to guess a website' name or key words, and then try various solutions. Integrated tourism websites should define a suitable classification for tourism information and provide tourism packages which combine several tourism components together, such as accommodations, transports and attraction-point information. Particularly they should build enough links to related websites. As some kinds of tourism information, such as transport timetables, are often changed, database is a useful technology for maintaining up-to-date information and allows users to search both static and dynamic information on the websites.

4.3 Information Provision

In the responses for the question "what are the main purposes to visit tourism websites", "to get tourism information" obtains a highest rate. For the question "what is the most popular online service on tourism websites", "providing information" is listed as the first item. The responses also expressed a very widely information requirements for tourism websites, which involves six basic tourism factors—eating, living, travelling, wandering, enjoying and shopping, as well as relevant tourism association information such as weather, news, products and prices. The questionnaire also lists the question "what are the most important factors for a tourism website success", 52.5% of responses believed that the most important factor is "providing large amount, updated and attractive information", followed by "fast access speed", "good interactive function" and "refinement/exquisite page design". The result means that tourism website users are very concern about the information content provided on tourism websites. Therefore information provision function is the first issue to be concerned in website design.

One of the common problems for tourism website development in China is the lack of integrative online information management. As there is no tourism website registration management system in China, it is very difficult for website designers to build links from one site to relevant sites and hard for them to obtain complete tourism information of the whole country or province. The CNNIC result [4] shows that about 14% of Internet users obtained tourism information from Internet, it was rated at the 9th of the 13 main kinds of information obtained from Internet. In our survey results, about 24% of users complain that tourism information provided in tourism websites cannot meet their requirements. For the question "what are the unsatisfied aspects for current tourism websites", "not enough useful information" is listed as the second important item. The item's rate is higher than "high connection fees" and "poor personal security". Therefore, when information obtaining is still a main purpose for web users, increasing useful web information and improving web information management level are two major tasks of current tourism website development.

4.4 Information Interchanging and Interaction Functions

In the survey, "refined page design" is marked as the second important factor for a tourism website success by users. The result indicates that web page design is affecting users for receiving online service. Many tourism websites in China don't have a clear target user group and promotion direction. Website designers don't understand user requirement well. These websites only focuses on a pretty interface and put many page-items (some are relevant and some not relevant to the theme of the website), therefore, they may lose the characteristics of a tourism website and make users feel the site is not very trustworthy, dependable and reliable.

"Information interchange/interaction functions" is identified as the third important factor for a tourism website success in the survey results. A lot of users are interested in online chat, online consultation and email requiring. The results reflect that users require the online service that combing information content (such as tourism guide) and community (such as web consultation). Normally, many users like to get others' opinions for landscape points before they have a tour. They thus wish to share ideas, information, experiences and knowledge with other tourists via the websites. Tourism websites are expected to provide an interactive space to users and service providers.

4.5 Doing Tourism E-Commerce via Websites

In this survey, only 2.5% of responses chose "web-based e-commerce" as a "purpose to visit tourism websites". There were more than 1/3 of responses indicating that "the main disadvantage of tourism e-

commerce" is "security problems", followed by "payment methods", "online cost" and "information service quality". Almost responses didn't have any experience in online payment. Only 5% of responses had online ordering/booking experience. Therefore, for both questions "do you have any tourism e-commerce experience" and "are you satisfied with current tourism e-commerce", most responses marked 'NA'. Actually almost responses did not think they really need doing web-based tourism e-commerce urgently. There are several reasons for Internet users to keep tourism e-commerce away. The first reason is that most responses have middle or lower financial ability and they think that to participate e-commerce actions will have a higher cost than traditional way. Another reason is there are security and network technical problems in e-commerce transaction/payment systems to be solved. Users don't trust e-commerce applications well. Credit cards are not popular used in China is the third reason.

5. Components of Tourism Websites

A successful website is one that attracts users, makes user satisfactory [7]. Basically, user satisfaction is based on two groups of evaluation criteria: 'information content' and 'ease of use' [13]. 'Information content' is the assessment of information provided on the website. That is, it is useful and up-to-date, it matches user needs and links relevant sites to the users. 'Ease of use' includes E-commerce application format design, facilitated browsing, a search engine provision, accessing speed and user control of a transaction process. Based on the two criteria, the survey identifies a number of tourism website components. These components should be taken into account when designing a tourism website.

The first component is about information content published on websites. Tourism websites should publish useful, update and clear information about tourism products and services by using photos, audio and text [12]. The information involves destinations' attractions, activities, hotels, restaurants, transportation, tours, shops, entertainment, sports and recreations.

The second component is associate information provision. Associated information includes local maps, news, healthcare, laws and culture environment that are very helpful for user to make a tourism plan.

The next is online user supports that include a fast search engine, frequently asked questions, and allowing information and products to be downloaded by users. Interaction between users and systems is also a kind of important support to users. Interactive function helps users to share knowledge and experiences directly.

In order to facility tourists to arrange their tourism plans via Internet, the tourism websites should have enough links to relevant websites which provide online information service for eating, living, travelling, wandering, joying and shopping. It should be encouraged for web designers to build more links with relevant websites, and more packages that integrate a group of relevant services together.

Online ordering/booking for tourism products and services is another important component. Ticket and accommodation booking is the most popular application in the aspect.

The last component is about building customer relationships with tourism companies by mining customer information via their direct interaction with the website. The customer information obtained can be used to create an online customer profile and build a specialized information provision according to the profile of the users.

The six components express the standard quality criteria for tourism website design. Another survey reported in [9] shows that about 80% of tourism websites in China only implement the first four components.

Online tourism service is still a new experience for most tourism managers, end-users and customers in China. As the technology is new, tourism managers cannot clearly define their expectations, and tourism companies have not got enough feedback from customers and their experiences. Therefore, website developers have to lead the process of defining the requirements of tourism web users. The provided components are expected to help them in the development of tourism websites.

6. An Evolution Model for Tourism Websites in China

Business website development typically begins simply and evolves over time with the addition of features as the site takes on more functionality and complexity. Based on literature review, this study proposes a five-stage evolution model for tourism websites development in China (Figure 2).

Stage 1: Simple and isolated: only presenting simple tourism information and contact details of tourism suppliers/agents. The basic information provided is regional tourism destination introduction with nice pictures. The websites' owners are mainly regional destination organizations. Very few links are built with other sites. Such kind of websites only implements component 1.

Stages 2: Interactive and integrated: various information relevant to tourism is presented, such as train/coach timetable, hotels and souvenir information. Supporting information (such as map and news) and product catalogue are provided. Users are allowed to

make enquiries about tourism products and services. Those websites have implemented component 1, 2, and 4.

Stage 3: Linked and dynamic: through a destination website, users can access relevant external products and services, including transport, accommodation, tourism foods/tools, culture activities, and training/conference centres. Product and service catalogues are provided with price information which can be changed by an online database. Such websites have implemented component 1 to 4.

Stage 4: Online ordering/booking: based on above stages websites are designed to allow customers to make a booking via email but the payment is still carried out by using a conventional method. Further, on-line payment will be provided with the use of credit cards.

Stage 5: High-level, full-function, and comprehensive: building registration with user ID, and using registration scheme to provide more personality and regular services to customers for direct purchase. The stage implements all six components.

Component / Stage	1	2	3	4	5	6
Stage 1	Y	N	N	N	N	N
Stage 2	Y	Y	N	Y	N	N
Stage 3	Y	Y	Y	Y	N	N
Stage 4	Y	Y	Y	Y	Y	N
Stage 5	Y	Y	Y	Y	Y	Y

Fig. 2 Components and stages of tourism website development

7. Conclusions

China has obtained initial experience in the development of tourism websites and online tourism service. As a developing country, China has different E-commerce development environment, barriers and challenges from developed countries. Through the research, we found that the main barriers for tourism e-commerce development in China are Internet access speed, web information presence, site links and application security. Many tourism websites need to have a systematic design in information content and online service items. Tourism service characteristics should been presented in webpages. Information interaction functions (online ordering/booking) need to be implemented in a high level to meet the user requirement. The interface of tourism websites is expected to improve in ease of use. It is still a long process for tourism websites to realize online payment in China. The current tasks for tourism e-commerce development should focus on redefining online information content, building helpful web links, providing customer oriented online services and implementing more effective online booking functions. Tourism online suppliers need to identify their target user groups and seek the way to meet users' requirements in developing tourism websites and improving tourism online service quality.

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