

# Online Service Quality of Tourism Operators in Chiang Mai, Thailand

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## Abstract

This research work is a preliminary study of tourism operators' core internal factors (age, size, function, number of employees, and manager's education) that can have impacts on improving online service quality of tourism operators' websites in Muang City, Chiang Mai, Thailand. In this study, convenience sampling was conducted with tourism operators, which were located in Muang City, Chiang Mai, Thailand, had their own websites, and registered with the Tourism Authority of Thailand during the year 2011. The 70 sampling businesses' websites were evaluated by means of content analysis and coded using a five-point intensity scale to measure levels of online service quality. Statistical tools that were used to analyze all research data included frequency, percentage, mean, standard deviation, and one-way Analysis of Variance (ANOVA).

Research results have shown that most businesses in the sample were small businesses, just started within the last 10 years. They sold both their own tours and the tours of other businesses, were run by managers who had bachelor's degrees, and had English-version websites. However, businesses in the sample had paid too little attention to the importance of online service quality, especially in the dimension of "personalization," and overall, businesses in the sample had not developed their websites adequately in terms of online service quality. In addition, it was found that age, size, and number of employees of businesses had no impacts on levels of online service quality whereas function of businesses and manager's education had impacts on levels of online service quality in the dimension of "trust," and manager's education had an impact on overall online service quality.

**Keywords:** Electronic commerce, online service quality, tourism operator, Chiang Mai

## Introduction

Tourism businesses in Chiang Mai, Thailand depend in part on customers from foreign countries. Their business websites can play important roles in attracting more potential foreign customers and reducing marketing costs and expenses. Increasingly, tourism businesses in the Chiang Mai area have recognized the importance of having their own websites and improving their websites continuously in order to provide their services more effectively. However, online service quality of those websites varies considerably.

There are several factors affecting website quality and Internet usage by the tourism industry in Thailand. For example, Sahadev and Islam (2005) found that factors influencing Internet usage of hotel businesses in Thailand can be categorized into three major groups: location-related factors, intraorganizational factors, and technical factors. This research study focused on and examined only core internal factors (firm age, firm size, firm function,

number of firm employees, and the firm manager's level of education) of tourism firms for the basic investigation.

This research study was aimed at: 1) gathering and analyzing the basic content elements (such as components, features, languages, and ease of use) of tourism operators' websites in Muang City, Chiang Mai Province, Thailand; and 2) developing a preliminary study of the relationships between core internal factors and online service quality of tourism operators in Muang City, Chiang Mai Province, Thailand. Findings from this research work have been expected to answer the research question of whether core internal factors can affect online service quality of tourism operators in Muang City, Chiang Mai Province, Thailand.

### **Literature Review and Conceptual Framework**

Many concepts and theories related to service quality that have been used for traditional businesses can still be applied to online businesses. However, some unique characteristics of the Internet, such as virtual communications without face-to-face interaction, are emerging factors that have recently caused new concepts and theories that would be more appropriate for online businesses. As a result, many researchers have started to question to what extent dimensions of service quality for traditional businesses can still be applied to online businesses (Cox & Dale, 2001). This curiosity has inspired many researchers (Ballantine, 2005; Kim & Stoel, 2005; Yen, 2005) to conduct research studies involving dimensions of online service quality and the relationships between those dimensions and customer satisfaction. These research studies have suggested dimensions of service quality that consumers generally use to evaluate online services.

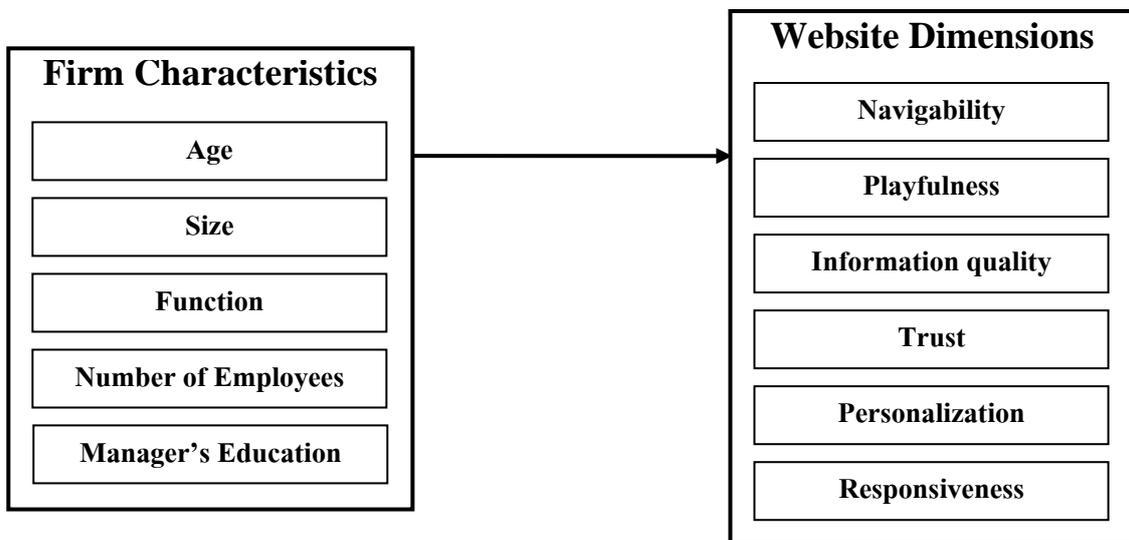
Based on the service quality measurement scale developed by Parasuraman, Zeithaml and Berry (1985) which is called "SERVQUAL", Yoo and Donthu (2001) suggested a measurement scale called "SITEQUAL" for evaluating website quality of online retail businesses. Dimensions of SITEQUAL include: ease of use; aesthetic design; processing speed; and security. SITEQUAL, however, cannot provide website evaluation results that are comprehensive enough (Parasuraman, Zeithaml, & Malhorta, 2005). Zeithaml, Parasuraman and Malhorta (2002) also proposed another measurement called "e-SERVQUAL", which is composed of 11 dimensions of service quality as follows: access; ease of navigation; efficiency; flexibility; reliability; personalization; security/privacy; responsiveness; assurance/trust; site aesthetics; and price knowledge. Loiacono, Watson and Goodhue (2002) developed a measurement scale called "WebQual" which was based on their research study collecting data by interviewing customers and web designers, and consisted of 12 dimensions of: informational fit-to-disk; interactivity; trust; response time; ease of understanding; intuitive operations; visual appeal; innovativeness; flow/emotional appeal; consistent image; online completeness; and better than alternative channels. Later, Parasuraman, et al. (2005) developed a more comprehensive scale for measuring online service quality. It was a multiple-item scale and called "E-S-QUAL" which includes 4 dimensions of service quality: efficiency; fulfillment; system availability; and privacy. Nevertheless, this scale was developed for evaluating online service quality of large firms offering complete online-service (including online-payment) systems, and is suitable for firms that are manufacturing and trading physical products rather than services.

Considering literature related to online service quality of tourism businesses, there is still little literature. van Riel, Lemmink, Streukens and Liljander (2004) proposed, by extending the SERVQUAL model, 6 dimensions of online travel service quality. Those are:

accessibility; navigation; design; reliability; responsiveness; and customization. More recently, Nusair and Kandampully (2008) suggested that the dimensions of online travel service quality that could increase customer satisfaction included: navigability; playfulness; information quality; trust; personalization; and responsiveness. In their research work, content analysis was applied to 6 travel businesses' websites, namely Expedia, Hotwire, Travelocity, Hotels, Orbitz and Priceline. Additionally, Kaynama and Black (2000) developed a scale called "E-QUAL" to measure online service quality dimensions of online travel services' websites. The E-QUAL model has 7 dimensions as follows: content and purpose; accessibility; navigation; design and presentation; responsiveness; background; personalization; and customization whereas Law and Wong (2003) suggested 3 dimensions, namely: secure payment methods; different price ranges for products/services; and user-friendly systems, that could possibly motivate customers to buy travel services online.

Core internal factors that usually influence how firms operate and become successful in their businesses are: firm age, firm size, firm function, number of firm employees, and firm manager's level of education. Because of the influences of these factors combined with the importance of utilizing information systems in tourism businesses in the Chiang Mai area, a research question emerged and became the starting point of this research study. That research question is whether core internal factors can affect online service quality of tourism operators in Muang City, Chiang Mai Province, Thailand. This curiosity can be depicted as the below conceptual framework (Figure 1).

**Figure 1: Conceptual Framework**



According to the above conceptual framework, online service quality of tourism operators in Muang City, Chiang Mai Province, Thailand can be measured by means of six website dimensions as follows:

1. **Navigability.** Navigability is defined as "the sequencing of pages, well organized layout, and consistency of navigation protocols" (Palmer, 2002, p. 155). Attributes in this dimension are: navigation bar (NB), search engine (SE), site map (SM), consistency and standardization (CS), and minimum scrolling (MS).
2. **Playfulness.** Playfulness refers to "the degree of cognitive spontaneity in microcomputer interactions" (Webster & Martocchio, 1992, p. 204). It can

occur after website users' attention is kept by enjoyable functions (Nusair & Kandampully, 2008), and it can be measured by attributes such as ease of use (EU), animation (AM), background music (BM) and pictures and video presentation (PV).

3. **Information quality.** Information quality refers to “the amount, accuracy, and the form of information about the products and services offered on a web site” (Nusair & Kandampully, 2008, p. 9), and includes attributes such as: firm information (FI); traveler review (TR); frequently-asked questions (FAQ); customer support (CT) including e-mail, phone and fax numbers, address, and online map; and web feed (FD) including currency converter; and weather and transportation information.
4. **Trust.** Trust is defined as “a consumer’s willingness to accept vulnerability in an online transaction based on their positive expectations regarding an e-retailer’s future behaviors” (Kimery & McCord, 2002, p. 65). Attributes in this dimension include TAT license No. (LN), customer rating & previous services (CR), privacy policy & security certification (PP), terms of use (TU) and trustworthy design (TD).
5. **Personalization.** Personalization refers to “giving customers individualized attention, understanding the specific needs of customers, and providing service related to convenience” (Nusair & Kandampully, 2008, p. 9), and includes attributes such as: recommendations for members (RM); e-mail messages (EM); customized services (CM) such as tour packages; and membership (MB).
6. **Responsiveness.** Responsiveness refers to the promptness of response from the websites (Zeithaml et al., 2002), and willingness to help customers (Watson, Akselsen & Pitt, 1998). Its attributes, therefore, are: loading time (L\_T); cancellation & refund (C\_R); and communication channels for customer services (CC) including Facebook and real-time chatting.

### Procedure for Collecting Data

This research study was conducted by an experienced researcher using the content analysis approach to analyze targeted websites. The researcher also collected additional and necessary basic information (such as operation time period of businesses, business size, business type, number of employees, and owners/managers' level of education) from related firms' owners/managers before all necessary data were statistically analyzed for final research results. The research population for this study was all tourism operators that had their own websites and were located in Muang City, Chiang Mai Province, Thailand during the year 2011. Research samples were derived from a booklet entitled “List of Registered Travel Agents” published by the Northern Office (Region 1) of the Tourism Authority of Thailand (TAT).

Seventy qualified tourism operators were randomly selected from the booklet. The websites of firms from the sample were evaluated by means of content analysis and coded into a prepared evaluation form that was developed through reviewing previous related literature and contained a five-point intensity scale to measure levels of online service quality of the sampling tourism operators. The “5” means the “highest quality level” whereas the “1” means the “lowest quality level”. Content analysis was used to collect data for this research study because it is a suitable and commonly used method for observing or investigating communications phenomena/characteristics (Singleton & Straits, 1999) including

characteristics of different types of websites (Perry & Bodkin, 2002; Cober, Brow, & Levy, 2004; Nusair & Kandampully, 2008). In this study, online service quality was evaluated through 6 dimensions: navigability; playfulness; information quality; trust; personalization; and responsiveness. By using content analysis, the detailed content of communications could be obtained mathematically and systematically through simultaneously observing and analyzing (Malhotra, 1996).

Descriptive statistics, such as frequency and percentage, were tools used to analyze basic information about tourism firms from the sample while the results obtained from content analysis were statistically analyzed further to find the mean and standard deviation of online service quality. Finally, the relationships between firm characteristics and website dimensions were analyzed by one-way ANOVA (Analysis of Variance).

## **Research Results**

### **Descriptive Results**

According to the research results, 50% of tourism operators in Muang City, Chiang Mai Province, Thailand started their businesses less than or equal to 10 years ago, 34.29% and 15.71% of them were between 11 and 20 years old and more than 20 years old, respectively. Most of them (92.86%) had their fixed assets valued at less than 50 million baht, and the rest (7.14%) had their fixed assets valued at between 50 and 200 million baht. The tourism operators mostly offered (65.72%) both their own and their business partners' tour services while the tourism operators that sold only their own tour services or only their business partners' tour services accounted for 17.14% equally. Most of the firms had between 1 and 10 employees, which accounted for 68.57% while 20% and 11.43% of the firms had between 11 and 20 employees and more than 20 employees, respectively.

The study results have also shown that most firm owners/managers (62.86%) had completed a bachelor's degree as their highest level of education. In addition, 21.42%, 12.86% and 2.86% of firm owners/managers had completed a vocational degree, had no diploma or degree, and had completed a master's degree or higher as their highest level of education, respectively. Finally, after selected websites were examined, it was found that most of them (97.14%) were written in English. Furthermore, 20% of them were written in Thai, 17.14% in both English and Thai, and 5.71% in English, Thai and other languages (such as Chinese, Japanese, German, French, Spanish, Dutch, Bulgarian, and so on).

### **Overall Quality of the Websites**

The analysis of tourism websites from the sample has shown levels of online service quality on average based on each of six dimensions as follows.

Regarding the "Navigability" dimension, attributes these websites had at a moderate level of online service quality were: consistency and standardization; navigation bar; and minimum scrolling whereas the attributes with the lowest level of online service quality were: search engine; and site map. However, overall online service quality of the websites towards the "Navigability" dimension had its mean at 2.50, which is in the low quality level.

Concerning the "Playfulness" dimension, the attribute that the websites had at a high level of online service quality was ease of use, and at a moderate level was pictures and video presentation. At the lowest level were: animation; and background music. Moreover, online

service quality of the websites towards the “Playfulness” dimension as a whole had its mean at 2.49, which is in the low quality level.

In regards to the “Information quality” dimension, the attribute that the websites had at a high level of online service quality was customer support. A moderate level was firm information, and at a low level were: traveler review; and web feed. The lowest level was frequently-asked questions. Additionally, online service quality of the websites towards the “Information quality” dimension as a whole had its mean at 2.26, which was in the low quality level.

Concerning the “Trust” dimension, attributes that the websites had at a moderate level of online service quality were: trustworthy design; TAT license No.; and customer rating and previous services whereas the attributes with the lowest level of online service quality were: privacy policy and security certification; and terms of use. Similarly, overall online service quality of the websites towards the “Trust” dimension had its mean at 2.37, which was in the low quality level.

Interestingly, all attributes, including customized services, E-mail messages, membership and recommendations for members, of the “Personalization” dimension, had the lowest level of online service quality. As a result, overall online service quality of the websites towards the “Personalization” dimension has its mean at 1.26, which was in the lowest quality level.

Finally, regarding the “Responsiveness” dimension, the attribute that the websites had at the highest level of online service quality was loading time, and at the low levels were: communication channels for customer services; and cancellations and refunds. Overall, the online service quality of the websites towards the “Responsiveness” dimension had its mean at 2.65, which was in a moderate quality level.

### **The Relationships between Firm Characteristics and Website Dimensions**

One-way Analysis of variance (ANOVA) was applied for testing the significance of differences between the means of two or more groups of tourism firms that had different firm characteristics, including age, size, function, number of employees and manager’s education. The research results have shown that when the means of online service quality levels were compared between different groups of firm age, firm size and number of employees, no *F*-statistics are significant at the conventional *P*-value of 0.05 for all website dimensions. Therefore, the results imply no significant differences between firm age, firm size and number of employees in terms of online service quality levels.

However, the means of quality levels were significantly different among different groups of firm functions and manager’s education towards the “Trust” website dimension, but there was no significant difference for the other website dimensions at the *P*-value of 0.05. In addition, when total online service quality was considered as a whole, it was found that the mean difference was statistically significant among different groups of manager’s education at the *P*-value of 0.05.

### **Discussion and Conclusion**

The data analysis results showed that most of the tourism operators that have had their own websites in Muang City, Chiang Mai Province, Thailand have operated their businesses

for ten years or less, have been small in size, and have offered both their own and their business partners' tour services. Thus, it could be assumed that: 1) tourism businesses in Muang City, Chiang Mai Province, Thailand have expanded and increased in number, especially small businesses, during the last ten years; and 2) those small and new tourism firms have realized the benefits and importance of having their own websites better than their old competitors which have operated their businesses for more than ten years. Besides, most of the firm managers have had at least a bachelor's degree, and from the total of 70 websites, there were 68 websites (97.14%) written in English. This implies that most of the firm managers realized the importance of having commercial websites and utilized them to attract target foreign tourists.

Furthermore, the analysis results related to online service quality showed that on average, the online service quality level in each dimension for all sampling websites together is either moderate or lower (See Table 1).

**Table 1: Online Service Quality Level of the Tourism Websites in Each Dimension**

Dimension	Mean	Level of Quality
Navigability	2.50	Low
Playfulness	2.49	Low
Information Quality	2.26	Low
Trust	2.37	Low
Personalization	1.26	Lowest
Responsiveness	2.65	Moderate

When considering each dimension attributes separately, it is noticeable that there was only one attribute, namely "loading time" that, on average, the websites had the highest level of online service quality, and there were two attributes, namely "ease of use" and "customer support" that the average website had the high level of online service quality. The rest of the dimension attributes were in the moderate or lower levels including eight dimension attributes in the moderate level, four attributes in the low level, and the rest of the eleven attributes in the lowest level. See Table 2.

Additionally, after examining the relationships between firm characteristics and website dimensions, it was found that tourism operators in Muang City, Chiang Mai Province, Thailand that were different in firm ages (less than or equal to 10 years old; 11-20 years old; and more than 20 years old), firm sizes (less than 50 million baht value of fixed assets; and 50-200 million baht value of fixed assets), and numbers of firm employees (1-10 employees; 11-20 employees; and 21 or more employees), had no statistically significant mean differences for online service quality at the *P*-value of 0.05. Thus, the results of this research study imply that the differences of firm ages, firm sizes, and numbers of firm employees have no effects on online service quality of the tourism websites.

Nevertheless, the research results also reveal that tourism operators that have different firm functions (offering only their own tour services; offering only their business partners' tour services; and offering both their own and their business partners' tour services) and different firm managers' levels of education (no diploma or degree; vocational degree; bachelor's degree; and master's degree or higher) had no statistically significant mean differences for online service quality at the *P*-value of 0.05 either except in the "Trust" dimension. Hence, based on this research study, the differences of firm functions and firm

managers' levels of education can result in different levels of online service quality of tourism websites in the "Trust" dimension.

**Table 2: Online Service Quality Level of the Tourism Websites in Each Attribute**

Attribute of Dimension	Mean	Standard Deviation	Level of Quality
Loading Time (L_T)	4.53	.829	Highest
Ease of Use (EU)	3.94	1.214	High
Customer Support (CT)	3.70	1.121	High
Pictures and Video Presentation (PV)	3.47	1.338	Moderate
Consistency and Standardization (CS)	3.40	1.345	Moderate
Trustworthy Design (TD)	3.30	1.517	Moderate
Navigation Bar (NB)	3.17	1.296	Moderate
TAT License No. (LN)	3.10	1.634	Moderate
Minimum Scrolling (MS)	3.09	1.087	Moderate
Customer Rating & Previous Services (CR)	2.80	1.557	Moderate
Firm Information (FI)	2.63	1.534	Moderate
Traveler Review (TR)	2.06	1.658	Low
Communication Channels for Customer Services (CC)	1.83	1.414	Low
Cancellation & Refund (C_R)	1.60	1.312	Low
Web Feed (FD)	1.54	1.045	Low
Animation (AM)	1.47	1.003	Lowest
Search Engine (SE)	1.44	1.223	Lowest
Privacy Policy & Security Certification (PP)	1.43	1.030	Lowest
Site Map (SM)	1.41	1.123	Lowest
Customized Services (CM)	1.40	.875	Lowest
Frequently-asked Questions (FAQ)	1.36	1.036	Lowest
E-mail Messages (EM)	1.33	.928	Lowest
Terms of Use (TU)	1.23	.935	Lowest
Membership (MB)	1.23	.935	Lowest
Recommendations for Members (RM)	1.10	.593	Lowest
Background Music (BM)	1.07	.354	Lowest

Finally, the research results also show that tourism firms with different firm managers' levels of education possess significantly different online service quality levels at the *P*-value of 0.05. As a result, it can be concluded that firm managers' levels of education can influence the overall online service quality of the firms.

Interestingly, tourism firms in the sample have paid too little attention to the online service quality of their websites, especially in the "Personalization" dimension. And, as a whole, their websites' levels of online service quality are not high enough to be in a competitive position. Moreover, the investigation's results of the relationships between firm characteristics and the online service quality of their websites have suggested that firm age, firm size, and number of firm employees have no effects on online service quality of the firms whereas firm function and firm manager's level of education can affect their websites' online service quality in the "Trust" dimension, and, finally, firm manager's level of

education can influence the overall online service quality of the firms. These findings imply that firm manager's levels of education and knowledge are critical factors for tourism firms to realize how important the "Trust" dimension and the total online service quality of their websites are.

### **Managerial Implications and Recommendations**

Even though this research work is only a preliminary study about online service quality of tourism websites in the area of Muang City, Chiang Mai, its findings can be useful to Chiang Mai tourism firms in general to some extent. Tourism operators both inside and outside the Chiang Mai area should more carefully realize how important the online service quality of their websites is and pay more attention to it in order to stay competitive in the tourism industry. Further research studies should also be conducted towards website characteristics and styles that can help increase tourism firms' online service quality and their domestic and foreign customers' satisfaction.

### **Limitations**

The research results discussed here were based on conducting content analysis of tourism operators' websites that were written in either English or Thai because of the limitations of the researcher's language abilities.

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