Impact of perceptual constructs on lodging Web user attitude, satisfaction, and behavioral intentions

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Impact of perceptual constructs on lodging Web user attitude, satisfaction, and behavioral intentions

by

Heng Xu

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Food Service and Lodging Management

Program of Study Committee:
Miyoun Jeong, Major Professor
Mary Gregoire
Troy Strader

Iowa State University

Ames, Iowa

2002

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This is to certify that the Master's thesis of
Heng Xu
has met the thesis requirement of Iowa State University

Signatures have been redacted for privacy
To my parents and my friends for their endless love and support.
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CHAPTER 1. INTRODUCTION

In the past decade, the Internet has induced fundamental changes in the way the travel industry conducts its business. A recent PhoCusWright Travel Consumer Trends Survey (2001) reported that 27 million Americans bought travel online in 2001, up from 21 million in 2000, with online travel buyers representing 13 percent of the travel population. This survey also revealed that for the first time ever, more online travelers booked their trips on the Internet than by using travel agency or by calling a supplier. According to Nielson/Net Ratings (2001), an Internet audience measurement service, the online travel industry obtained $1.2 billion in sales in January 2001, totaling nearly a third of all e-commerce transactions.

The Travel Industry Association of America (TIA, 2001) reported that consumers spent more than $13 billion in 2001 buying travel on the Internet. In addition, it was noted that online travel dollars were expected to increase in the coming years, as more and more consumers became comfortable with the Web. Researchers in TIA indicated that more than 59 million online consumers used the Internet (mainly the Web) in 2000 to search for travel information. Twenty five million people actually purchased travel products or services online, representing a 384 percent increase from 1997 (Travel Industry Association of America, 2001).
The Web has also gained foothold in the lodging industry. As of 1999, 82 percent of luxury hotels and 76 percent of upscale hotels were reported to use the Internet to receive bookings, compared to 68 percent of mid-scale hotels and 54 percent of economy hotels. In addition, the American Hotel and Motel Association (AH&MA) expected that e-commerce in the lodging industry would reach $2.9 billion by 2001 (American Hotel and Motel Association, 2000). E-Travel, another lodging Web research company, found that guests saved 14 percent through the use of Internet reservation systems. By booking directly to a hotel through the Internet thereby bypassing the intermediation costs, which is up to $16 per reservation in travel agent commissions and fees paid to the GDS (Global Distribution System), the switch companies, and the CRS (Central Reservation System), hotels may pass a fraction of the savings to the consumer in the form of lower room rates (PhoCusWright, 2002).

Despite this tremendous growth in online bookings, little information regarding consumer purchasing behavior on lodging Web sites has been garnered by researchers and practitioners. In Arthur Andersen's release of its "Hospitality 2000: The Technology" report, researchers listed issues that the industry was facing (Cline and Rach, 2001). These included the closed nature of technological structures, the way hospitality companies collected information on customers, investment in the Internet, intranet, and extranet
technologies, and adoption of e-business. As of 1999, only 39 percent of the industry’s Web sites were found to handle reservations on a real-time basis. Still fewer (19 percent) collected customer information. At the same time, just 22 percent were using “push” marketing programs, and only 19 percent had extranets to suppliers or customers. Many hotel Web sites were not capable of meeting customers’ expectations (Cline and Rach, 2001).

Confronted with such thorny issues, a number of highly-acclaimed industry leaders have indicated that a satisfied customer with cyber-business can become a company’s champion in that s/he might promote its products and services (Dubé, Enz, Renaghan and Siguaw, 2000). As the dependency on the Internet and the Web increases, so does the need to appraise factors associated with levels of Web user satisfaction. Although there has been a significant amount of literature on Web site design and E-commerce, studies linking Web user satisfaction with its antecedent variables still remain to be seen.

This study attempts to fill this void by integrating the Web User Satisfaction (WUS) research with a variety of literature concerning dimensions of Web user perceptions, user attitude, and behavioral intention. In essence, this study extracts a conceptual framework out of previous literature on Web user evaluation process (Jeong and Lambert, 2001) and Web success (Liu and Arnett, 2000), expanded on Web user satisfaction research, and then
applied this model to a lodging Web setting. This study intends to help industry practitioners better understand the lodging Web user evaluation process by measuring the impact of perceptual constructs on levels of user satisfaction with lodging Web sites.

Specifically, this study attempts to:

1. Determine perceptual variables as antecedents leading to customer satisfaction with a lodging Web site;

2. Determine the relationships among customers' perceptions, attitudes, satisfaction and purchase intentions in regard to using a lodging Web site;

3. Provide the lodging industry with suggestions related to promoting Web user satisfaction.
Definitions of Terms:

The Web: In this study, the Web is a part of the Internet that offers an incredibly rich combination of text, image, sound, animation and video. This study only focuses on lodging Web sites instead of covering all available commercial Web sites.

Web Success: Web success refers to the extent to which a system achieves the goals for which it was designed (Drury and Farhoomand, 1996). As noted in the study of Liu and Arnett (2000), Web success in this study can be measured by factors that affect user’s evaluation of the Web site, include information and service quality, system usage, quality of system design, and playfulness.

Web User Satisfaction (WUS): Customer satisfaction was defined as “post-consumption evaluative judgment concerning a specific product or service” (Westbrook and Oliver, 1991). In a similar vein, Web user satisfaction is defined as post-usage evaluative judgment concerning a specific lodging Web site in this study.
CHAPTER 2. LITERATURE REVIEW

This chapter is a three-section literature review. The first section reviews Web user demographics and Web-based lodging research in general. In the second section, pertinent theories and methodologies underlying the research on Web user perceptions and Web user satisfaction (WUS) are summarized and examined to provide a thorough foundation on user evaluation process with lodging Web sites. Finally, a conceptual framework centered on Web User Satisfaction (WUS) is proposed to better understand the success of lodging Web sites from a user's perspective.

Web User Characteristics

The online travel industry is on the rebound after a noticeable decline in 2001, according to Jupiter Media Metrix (2001). While the travel industry took a strong dent in the wake of the tragic events of September 11, the Internet as a channel for booking travel and lodging is increasingly becoming the method of choice for both consumers and businesses. The overall Web user base grew by 22.4 percent over 2000, while females made up 50.4 percent of the total Web users. Almost half (49 percent) of adult users are
between the ages of 35-54, while 18-34 year olds account for 43 percent of Web users. The average income for net users was $50K - $60K (Internet Marketing Newsletter, 2000). Among Internet users, college students are early adopters and heavy users of the Internet compared to the general population. Use of the Web is deeply engrained in their daily communications on campus and has become a technology as commonplace as the telephone or television. According to the report by Pew Internet & American Life Project (2002), “one-fifth of today’s college students began using computers between the ages of 5 and 8.” Eighty-six percent of college students have gone online, compared with 59 percent of the general population. “About half (49 percent) first began using the Internet in college; half (47 percent) first began using it at home before they arrived at college.” In view of this, this study chose college students as research subjects in part because they, as a demographic group, are highly Web-literate and thus able to better understand the various requirements for evaluating a lodging Web site (Pew Internet & American Life Project, 2002).

**Web-based Lodging Research**

The study undertaken by the Marketing Science Institute (MSI) indicated that the area of consumer decision-making, research on the way that customers gain
information for buying decisions, has been one of the top priorities in the lodging industry (Bowen and Sparks, 1998). Another recent study conducted by the Center for Hospitality Research at Cornell University (CHR) ranked “understanding the customer” as the second most important issue in keeping lodging managers “up at night.” (Enz, 2001).

With the advent of lodging Web sites in the mid-1990’s, researchers tended to look at customer service from a strategic perspective and focused their research mainly on the management of information technology (IT) and on IT’s contribution to competitiveness in the field of customer service (Jogaratnam, Tse, and Olsen, 1999; Piccoli, Spalding, and Ives, 2001). Dev and Olsen (2000) found that six major challenges, such as managing distribution costs, analyzing customers, rethinking the business model, keeping control of technology, evaluating Internet-based opportunities, and keeping up with the current trend of the industry, are the things that lodging operators should seriously consider these days. Of these challenges, analyzing online customers via unraveling the relationships among his/her perception of a lodging Web site, levels of satisfaction, and behavioral intentions is a critical issue that has received little attention from the academia.
A Conceptual Framework on Web User Evaluation Process

**Perceived Information & Service Quality (PISQ)**

As the Web becomes a major information source for lodging businesses, many studies have raised special concerns regarding information quality, questioning whether or not the published information on lodging Web sites meets Web users' information needs.

Liu and Arnett (2000) developed conceptually-based constructs for assessing the factors associated with Web site success and the research framework derived from the study indicates that the contribution of information quality to Web site success is substantial. As to service quality, they pointed out that a service encounter may be so different from traditional customer service activities that it is just a part of the overall information quality. Thus, in their study, the two highly-correlated constructs, i.e., information quality and service quality, were collapsed into one aggregate construct, which was termed Perceived Information & Service Quality (PISQ). The construct of PISQ was measured via gauging the following attributes: Web information’s accuracy, relevancy, completeness, perception of information quality, and perception of service quality.
Adapting the widely-cited TAM model (Davis, 1989) to a lodging Web setting, Jeong and Lambert (2001) theoretically extended and empirically validated the TAM model for measuring information quality on lodging Web sites. They also noted that information needs directly influence perceived usefulness (PU), perceived ease of use (PEOU), and perceived accessibility (PA) by regarding user attitude as the mediating variable between the antecedent perceptual variables and the behavioral intention construct. Based on the definition of Web user satisfaction as the "affective attitude" towards the Web by users who interact with the Web directly (Doll & Torkzadeh, 1988, Otto, Najdawi, & Caron, 2000), it is therefore postulated that Jeong and Lambert's model can be modified to use Web user satisfaction rather than "attitude" as the mediating factor linking those three information quality constructs (PU, PEOU, PA) with behavioral intentions. User attitude was perceived as one of the contributors to the formation of Web user satisfaction with the lodging Web sites.

Prior research regarding various aspects of Web site success, including Web user satisfaction, all stressed the importance of information quality (Amoako and White, 1993). Therefore, it is posited that PISQ has a direct and positive impact on user attitudes toward a lodging Web site and Web user satisfaction (WUS).
Proposition 1: PISQ (Perceived Information & Service Quality) has a positive relationship with WUS (Web User Satisfaction) with a lodging Web site.

Proposition 2: PISQ (Perceived Information & Service Quality) has a positive relationship with UA (User Attitude) towards a lodging Web site.

Perceived Playfulness (PP)

In contrast to information quality, little lodging literature has been documented in the area of playfulness. In general marketing, however, playfulness, denoted by hedonic value, reflects shopper’s potential entertainment and emotional worth.

Lieberman (1977) provided a more concrete theoretical foundation, in which he primarily illustrated the impact of playfulness upon imagination and creativity.

Webster and Martocchio (1992) addressed this issue via two approaches: trait-based and state-based. General traits refer to comparatively stable characteristics of individuals, while states refer to affective or cognitive snapshots that are taken in the short run and evolve over time (Csikszentmihalyi, 1975; Trevino and Webster, 1992).

In a related study, a scale of 44 items among six thematic areas, such as marketing perceptions, entertainment values, information values, easy of use, credibility, and interactivity, was used to gauge perceived benefits from visiting 28 commercial Web
Eighmey (1997) discovered that Web users were assisted by information placed in an enjoyable context and that playfulness emerged as one of the three most important factors that delivered the greatest benefits. Liu and Arnett (2000) concluded that playfulness is one of the four factors that are critical to Web site success. Since Web user satisfaction has been regarded as the surrogate of information systems (IS) success (Cyert and March, 1963), it is postulated that PP has a positive impact on Web user evaluation process of a lodging Web site.

Since the purpose of this study is to illustrate the role of a context rather than individual differences in explaining human motivated behavior, playfulness is regarded as an affective state, which is molded from Web users’ interactions with the Internet-based environment. Moon and Kim (2001) examined playfulness as an intrinsic salient construct that was formed from the Web user’s subjective experience with the Web, and also, defined four dimensions of PP: control, concentration, curiosity and enjoyment. The construct of PP (Perceived Playfulness) was measured in this study via gauging the enjoyment, attractiveness, attention focus, and excitement of lodging Web users (Liu & Arnett, 2000).
Proposition 3: PP (Perceived Playfulness) has a positive relationship with WUS (Web User Satisfaction) with a lodging Web site.

Proposition 4: PP (Perceived Playfulness) has a positive relationship with UA (User Attitude) with a lodging Web site.

Perceived System Quality (PSQ)

Research on system quality was popular in the 1990s. Several approaches were developed, but it seems that none of them provides a solution that is generally accepted and adequately detailed for both scientific and practical purposes within the Web scope. Dahlberg and Jarvinen (1997) claimed that most quality approaches concentrate too much on the technical and control oriented aspects of managing quality. IS systems like the Web are creating new challenges for information system designers. Users are becoming increasingly aware of what quality aspects of the Web system appeal to them (Lindroos, 1997).

Dimensions such as well-organized hyperlinks, customized search functions, high speed of accessing the Web and easy of correcting server’s errors, contributed to the overall appraisal of system quality (Liu and Arnett, 2000). Thus, the construct of
PSQ (Perceived Service Quality) was measured via gauging Web site users' sense of security, ease of use, system reliability, organization of hyperlinks, customized search functions, and loading speed.

**Proposition 5:** PSQ (Perceived System Quality) has a positive relationship with WUS (Web User Satisfaction) with a lodging Web site.

**Proposition 6:** PSQ (Perceived System Quality) has a positive relationship with UA (User Attitude) towards a lodging Web site.

*Web User Satisfaction (WUS)*

Web User Satisfaction (WUS) has long been considered one of the most important determinants of Information Systems (IS) success. Long before the advent of the Web, Cyert and March (1963) proposed the concept of User Satisfaction (US) as a surrogate of IS success. The surrogates developed for measuring IS effectiveness fell into three categories: user satisfaction, level of system usage, and information value regarding user decision performance. After comparing these three constructs, a recent study by Gelderman (1998) confirmed that WUS is "the most appropriate measure for IS success."
In today’s Web environment, WUS has been regarded as one of the most widely used measures in determining Web success. A recent study by D’Ambra and Rice (2001) called for an integrative model as well as conceptually-based scales for evaluating the extent to which Web services satisfy information needs. In their study, three streams of literature were considered: usage of the Web, individual performance and the impact of IT, and user satisfaction with the Web. Other studies (Geldman, 1998; Goodhue, Klein and March, 2000) also showed that Web user satisfaction might have a more powerful and more direct influence on performance outcomes than technology utilization constructs, such as usefulness, ease of use, or accessibility.

In the lodging literature, however, little research has been documented to investigate the impact of perceptual constructs on user satisfaction with the lodging Web site (Bowen and Spark, 1998). Therefore, it is postulated in this study that Web user satisfaction (WUS) serves as the intermediary factor in determining the impact of the antecedent perceptual variables, such as information and service quality, system quality and playfulness, on the final user behavioral intentions.

The study is also an extension of the work of Doll and Torkzadeh (1988) to lodging Web sites. Their study expanded on the previous literature (Bailey & Pearson, 1983) and formulated an instrument for measuring a new concept called end-user
computing satisfaction (ECS), which was defined as the "affective attitude towards a specific computer application by someone who interacts with the application directly."

Their survey instrument was proven both reliable and valid for measuring ECS on various computing platforms, including microcomputers. As reasoned by Otto, et.al. (2000), the Web is also "a specific computer application that contains man-machine interface and therefore should exhibit similar qualities to the applications previously studied (i.e., stand-alone information systems)." Hence, Doll and Torkzadeh's instrument for end-user computing satisfaction is adopted in this study to measure user satisfaction with a lodging Web site.

Proposition 7: WUS (Web User Satisfaction) has a positive relationship with BI (Behavioral Intentions).

User Attitude (UA) & Behavioral Intentions (BI)

Attitude referred to individuals' positive or negative feelings about a certain behavior (Fishbein and Ajzen, 1975). Ajzen (1993) proposed that specific human behaviors are determined or affected by behavioral intentions. In his theory of planned
behavior, the behavioral intention can be influenced by three salient belief attributes, the first of which is an attitude towards outcomes, i.e., the person’s attitudes towards outcomes of performing the behavior. The other two attributes are social pressure, which refers to the influence of other people, and perception of control, which explains the extent to which a person believes he or she has control over performance of the behavior. Klobas (1995) identified that among the three salient belief constructs posited by Ajzen (1993), attitude to outcomes was the best indicator to explain potential users’ behavioral intention to use special information technology, such as the Internet. Building on the previous findings, this study employed Web user attitude as an important factor to link the antecedent constructs to the levels of Web user satisfaction and the subsequent behavioral intention.

Proposition 8: UA (User Attitude) has a positive relationship with WUS (Web User Satisfaction).

Proposition 9: UA (User Attitude) has a positive relationship with BI (Behavioral Intentions).
Based on the nine propositions, this study proposed a conceptual framework that investigated Web user’s evaluation process from a user satisfaction perspective (see Figure 2-1).
Figure 2-1. A Conceptual Framework to Measure Web User Satisfaction with A Lodging Web Site
CHAPTER 3. METHODOLOGY

This chapter describes the methodology of this study. It is composed of measurement, sampling, data collection and data analysis. First, the measurement includes the attributes of each construct and the scales of the proposed conceptual framework. Second, sampling illustrates the process of selecting the sample. Third, the data collection section shows the steps of collecting data. Finally, the relevant data analysis techniques are presented in the last section.

Measurement

A self-administered survey questionnaire was developed to measure user satisfaction with a lodging Web site. Students were informed of the research Web site along with a designated lodging Web site (http://www.wellingtonhotel.com/) to complete the questionnaire. Because Wellington Hotel, New York City, boasted a fairly advanced Web site that could be used to measure each item in the questionnaire, it was chosen as the test site. The questionnaire consisted of two parts. In part one, questions were related to respondents' socio-demographic profile, such as gender, age and Web usage. In part two, three Web user perception constructs, such as Perceived Information & Service Quality (PISQ), Perceived Playfulness (PP), and Perceived
System Quality (PSQ), user attitudes toward a lodging Web site, Web user satisfaction, and behavioral intentions were included. In Liu and Arnett's framework (2000), they included items such as follow-up services to customers and empathy to customers' problems, which were more related to issues facing business managers than those facing Web users. Therefore, these items were eliminated from further investigation. Furthermore, their use of “system usage” seemed not to be congruent with the traditional use of the concept as a post-attitude behavioral construct. Therefore, this study combined “system usage” and “system quality” to form a new construct called Perceived System Quality (PSQ). In essence, this study adopted a more user-specific perspective.

All constructs were measured with multiple items using a seven-point Likert scale, from 1: strongly disagree to 7: strongly agree. The construct of PISQ (Perceived Information & Service Quality) was measured with the five attributes such as Web information's accuracy, relevancy, completeness, impression of information quality, and impression of service quality. The construct of PP (Perceived Playfulness) was measured with the four attributes such as enjoyment, attractiveness, attention focus, and excitement. The construct of PSQ (Perceived Service Quality) was measured with the six attributes such as Web site users' sense of security, ease of use, system
reliability, organization of hyperlinks, customized search functions, and loading speed.

Based on the studies conducted by Otto et al (2000) and Doll and Torkzadeh (1988), the construct of attitudes was measured with the three attributes: attractiveness, likeness, and customer-focused. The construct of WUS (Web User Satisfaction) was developed with the two attributes: the level of user satisfaction towards the Web site, and the fulfillment of information needs in this Web site. The construct of behavioral intentions was measured with three attributes: likelihood to use the Web site again, likelihood to recommend the Web site to friends, and likelihood to make a reservation on this Web site. The detailed measurement of each variable is shown in Appendix A. This research project was approved by the review committee of research involving human subjects at Iowa State University.

**Sampling**

Since college students are highly Web-literate and easily accessible, an online field survey was conducted with undergraduate/graduate students who currently were enrolled in College of Family and Consumer Science, the College of Business, and Department of Computer Engineering at a large midwestern university. The survey subjects were contacted via email after obtaining instructors’ permission. The students were directed to visit a Web site that contained a survey questionnaire to participate in
this study and to complete the survey.

Data Collection

A pilot test was conducted with 15 students who currently were enrolled in the Hotel, Restaurant and Institutional Management program at a midwestern university. The pilot test helped check the clarity of wording in the survey instrument.

Eight instructors were contacted to obtain students’ email addresses. Four hundred emails were randomly distributed to invite the students to this study from June to September, 2002. The questionnaire was designed in reference to previous measurement scales (Liu and Arnett, 2000; Otto, et. al, 2000). In order to increase student participation rate, a $30 gift certificate was provided to each of three randomly selected respondents. A week later, a follow up questionnaire was sent to increase response rate. After respondents submitted the questionnaire, all responses were automatically stored in the Web server of the College of Family and Consumer Sciences.
Data Analysis

Data were coded and analyzed using SPSS. First, frequencies were obtained for all the variables to identify socio-demographic characteristics of respondents and potential outliers. Second, factor analyses were conducted to aggregate various attributes in the questionnaire and extract viable factor structures from the data set. Then, multiple regression analyses were employed to test the conceptual framework for this study and correlation analyses were conducted to test the propositions.
CHAPTER 4. RESULTS

This chapter presented the results of data analyses. First, the socio-demographic characteristics of the respondents are reported and analyzed. Second, factor analyses are conducted and relevant factors are extracted from the data set. Third, the conceptual framework in this study is modified accordingly. Finally, multiple regression analyses are conducted and seven propositions are tested by employing correlation analyses.

Socio-Demographic Characteristics of the Respondents

After obtaining instructors’ permission, 400 emails were distributed to potential respondents. Among these emails, 130 responses were returned, which resulted in a response rate of 33 percent. Of the 130 responses, six respondents were found to have multiple submissions, which were then eliminated from further analyses. With the 124 usable responses, a descriptive analysis was conducted to identify socio-demographic characteristics of the respondents, which are summarized in Table 4-1.

Sixty-six respondents (53.2 percent) were females. The largest age group was from 20-25, accounting for 69.4 percent of the respondent, followed by 26-29 (10
percent), 18-19 (8.1 percent), 30 and more (4.0 percent).

More than half of the respondents (53 percent) had 2-5 years of Web experience. Most of them (96.7 percent) had more than 2 years of Web experience.

Seventy-one respondents (57.3 percent) never used an online reservation system to book a hotel room before. About 23.4 percent of them had only reserved rooms online 1 or 2 times. Approximately 14.5 percent of them had 3-5 times of online booking experience. These two groups accounted for approximately 38 percent of the sample.

Only two respondents (1.4 percent) had made online reservations more than 6 times.

Table 4-1. Socio-demographic characteristics of the respondents *

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>66 (53.2%)</td>
</tr>
<tr>
<td>Male</td>
<td>56 (45.2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-19</td>
<td>10 (8.1%)</td>
</tr>
<tr>
<td>20-25</td>
<td>86 (69.4%)</td>
</tr>
<tr>
<td>26-29</td>
<td>13 (10.5%)</td>
</tr>
<tr>
<td>30 and Over</td>
<td>5 (4.0%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration of Using the Web(in years)</th>
<th>Frequency (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>2 (1.6%)</td>
</tr>
<tr>
<td>2-5</td>
<td>66 (53.2%)</td>
</tr>
<tr>
<td>6-10</td>
<td>54 (43.5%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Online Hotel Booking Experience</th>
<th>Frequency (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>71 (57.3%)</td>
</tr>
<tr>
<td>1-2</td>
<td>29 (23.4%)</td>
</tr>
<tr>
<td>3-5</td>
<td>18 (14.5%)</td>
</tr>
<tr>
<td>6 and over</td>
<td>2 (1.4%)</td>
</tr>
</tbody>
</table>

* There were 124 usable samples. A few respondents did not fill out some or all items of the socio-demographic section.
Factor Analysis of Antecedent Perceptual Variables

In order to obtain the factor structure of respondents' perception of a lodging Web site, an exploratory factor analysis was conducted with the 15 perceptual attributes, which resulted in two factors because no a priori factor structure is provided for the 15 items used in this study. The varimax orthogonal rotation technique was utilized in order to achieve a clear, simple, and concise factor structure. As a result of the varimax rotation, all factor loadings on the two factors were greater than .40, which means that these attributes have a significant loading on and correlation with each factor (Hair, Anderson, Tatham, and Black, 1995). However, one attribute, customized search function, resulted in high cross factor loadings between the two factors. To have a more parsimonious factor structure, this study excluded this attribute for further analyses. Based on the characteristics of the comprising items, the first factor was named as Perceived Utilities (PU) and the second as Perceived Playfulness (PP) (see Table 4-2). These two factors accounted for about 62.5 percent of the variation in the 14 items. The coefficient alpha of reliability (Cronbach, 1951) ranged from .88 to 92.

The result of the factor analysis derived a somewhat different conceptual framework for this study from the framework originally proposed in chapter 2 (Figure 4-1). The attributes in perceived information and service quality (PISQ) appeared to
have a strong relationship with those in perceived system quality (PSQ).

Table 4-2. Factor Analysis of Antecedent Variables.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Mean (std.)</th>
<th>Loading</th>
<th>Eigen-value</th>
<th>Percent</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived Utilities (PU)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I believe the information on the Web site provided accurate information to potential customers like me.</td>
<td>5.60 (1.07)</td>
<td>.76</td>
<td>8.18</td>
<td>54.54</td>
<td>.92</td>
</tr>
<tr>
<td>• I believe the Web site provided a relevant source of information for me to successfully book a hotel room online.</td>
<td>5.57 (1.22)</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I believe the Web site provided a complete source of information for me to successfully book a hotel room online.</td>
<td>5.49 (1.27)</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I believe the Web site has good information quality.</td>
<td>5.48 (1.11)</td>
<td>.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I believe the Web site has good service quality</td>
<td>5.20 (1.20)</td>
<td>.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I think that this Web site is a reliable information and service provider.</td>
<td>5.46 (1.10)</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I believe the Web site is secure to use</td>
<td>4.89 (1.42)</td>
<td>.58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I believe the Web site is easy to use.</td>
<td>5.83 (1.22)</td>
<td>.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I think the Web site has well-organized hyperlinks.</td>
<td>5.49 (1.36)</td>
<td>.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I think the Web site loaded quickly.</td>
<td>5.57 (1.50)</td>
<td>.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Perceived Playfulness (PP)</strong></td>
<td>1.19</td>
<td>7.96</td>
<td>.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I enjoyed visiting this Web site.</td>
<td>5.49 (1.34)</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• There were charming features on the Web site to keep me staying there.</td>
<td>4.56 (1.51)</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I kept focused during my use of the Web site.</td>
<td>5.12 (1.27)</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I was excited during my use of the Web site.</td>
<td>4.27 (1.48)</td>
<td>.86</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total variance explained 62.50
Factor Analyses with Attitudes, User Satisfaction and Behavioral Intentions

In order to obtain the factor structure of respondents' attitudes, levels of satisfaction and behavioral intentions towards the lodging Web site, another exploratory factor analysis was conducted with the remaining items using a similar technique. Each construct had a single factor for attitudes toward the lodging Web site, Web user satisfaction, and behavioral intentions, respectively. As a result of the varimax rotation, all factor loadings on the each factor were greater than .40, which means that attributes have a significant loading on and correlation with each factor (Hair, et al., 1995). Based on the characteristics of the comprising items, the first factor was named as User Attitude (UA), the second as Web User Satisfaction (WUS), and the third as Behavioral Intentions (BI) (see Table 4-3). The coefficient alpha of reliability (Cronbach, 1951) for UA, WUS, and BI was .82, .91, and .85, respectively.
Table 4-3. Factor Analysis of Dependent Variables.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Mean</th>
<th>Std.</th>
<th>Loading</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>User Attitude (UA)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I have been attracted to this Web site to make a room reservation.</td>
<td>4.44</td>
<td>1.50</td>
<td>.88</td>
<td></td>
</tr>
<tr>
<td>• I like this Web site a lot.</td>
<td>4.55</td>
<td>1.26</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>• This Web site was very customer-oriented.</td>
<td>4.20</td>
<td>1.32</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td><strong>User Satisfaction (WUS)</strong></td>
<td></td>
<td></td>
<td></td>
<td>.91</td>
</tr>
<tr>
<td>• I am satisfied with this Web site.</td>
<td>5.51</td>
<td>1.09</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>• This Web site met my expected information needs.</td>
<td>5.48</td>
<td>1.21</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td><strong>Behavioral Intentions (BI)</strong></td>
<td></td>
<td></td>
<td></td>
<td>.85</td>
</tr>
<tr>
<td>• The likelihood I would use this Web site again.</td>
<td>4.44</td>
<td>1.67</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td>• The likelihood I would recommend this Web site to my friends.</td>
<td>4.50</td>
<td>1.63</td>
<td>.94</td>
<td></td>
</tr>
<tr>
<td>• The likelihood I would make a reservation at this Web site without consulting to other similar Web sites.</td>
<td>3.09</td>
<td>1.89</td>
<td>.91</td>
<td></td>
</tr>
</tbody>
</table>

Based on the factor analyses, this study revised its conceptual framework accordingly (see Figure 4-1).
Perceived Utilities (PU)
- Accuracy
- Relevancy
- Completeness
- Information quality
- Service quality
- Security
- Ease of use
- System reliability
- Organization of hyperlinks
- Loading speed

User Attitudes towards a Web Site (UA)

Perceived Playfulness (PP)
- Enjoyment
- Attractiveness
- Concentration
- Excitement

Web User Satisfaction

Web User Behavioral Intentions

Figure 4-1 The Modified Conceptual Framework to Measure The Impact of Perception

Constructs on Web User Satisfaction with A Lodging Web Site
Relationship of Perceptions to Web User Satisfaction (WUS)

Multiple regression analyses were performed to determine the relationship between perceptual constructs and proposed dependent variables. The results are shown in Table 4.4, Table 4.5, Table 4.6, and Table 4.7.

The multiple regression analysis in Model I showed that the regression model was statistically significant at the significant level of .01. The $R^2$ was .597, which indicated that about 60 percent of the variance in user attitude (UA) was explained by the perceptual constructs. The construct of PP appeared to be a more powerful indicator to predict user attitudes toward the lodging Web site than PU.

<table>
<thead>
<tr>
<th>Table 4-4. Model I: Regression of UA on PU, PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstandardized Coefficients</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Perceived Utilities (PU)</td>
</tr>
<tr>
<td>Perceived Playfulness (PP)</td>
</tr>
<tr>
<td>R-Square</td>
</tr>
<tr>
<td>F</td>
</tr>
</tbody>
</table>

* All correlation coefficients are statistically significant at p<.01

The multiple regression analysis in Model II showed that about 57 percent of the variance in Web user satisfaction (WUS) was explained by the two perception predictor variables. Model II was statistically significant at the significant level of .01. In this model,
PU is a more powerful predictor to evaluate Web user satisfaction (WUS) than PP.

Table 4-5. Model II: Regression of WUS on PU, PP

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Utilities (PU)</td>
<td>.578</td>
<td>.576</td>
<td>9.573*</td>
</tr>
<tr>
<td>Perceived Playfulness (PP)</td>
<td>.491</td>
<td>.489</td>
<td>8.128*</td>
</tr>
<tr>
<td>R-Square</td>
<td></td>
<td>.570</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>78.854*</td>
<td></td>
</tr>
</tbody>
</table>

* All correlation coefficients are statistically significant at p<.01

Model III indicated that about 65 percent of the variance in Web user satisfaction (WUS) could be explained by the two perceptual variables and user attitude (UA). In sharp contrast with Model II, however, PP dropped out of Model III when UA was introduced into the model, which could be explained by the previous research finding that UA were also strongly correlated with PP (Jeong and Lambert, 2001). Therefore, UA was found to be more suitable to explain the variance in Web user satisfaction than PP. In addition, of the three constructs, PU appeared to be the most influential indicator to predict Web user satisfaction with the lodging Web site. The Model III was statistically significant at the significance level of .01.
Table 4-6. Model III: Regression of WUS on PU, PP and UA

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Utilities (PU)</td>
<td>.443</td>
<td>.441</td>
<td>6.614*</td>
</tr>
<tr>
<td>Perceived Playfulness (PP)</td>
<td>.284</td>
<td>.282</td>
<td>3.636</td>
</tr>
<tr>
<td>User Attitude (UA)</td>
<td>.345</td>
<td>.341</td>
<td>3.951*</td>
</tr>
<tr>
<td><strong>R-Square</strong></td>
<td></td>
<td>.645</td>
<td></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td></td>
<td>71.472*</td>
<td></td>
</tr>
</tbody>
</table>

*All correlation coefficients are statistically significant at p<.01

In Model IV, about 47 percent of the variance in Behavioral Intentions (BI) was explained by PU, UA, and US, which was statistically significant at the level of .01. Among the four constructs only three constructs appeared to have a statistically significant relationship with behavioral intentions. User attitudes toward the lodging Web site was the most powerful indicator to predict behavioral intentions, followed by Web user satisfaction, and perceived utilities, which resulted in a negative relationship with behavioral intentions. PU and PP were somewhat mediated by WUS towards BI.
Table 4-7. Model IV: Regression of BI on PU, PP, UA and WUS

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Utilities(PU)</td>
<td>-.295</td>
<td>-.295</td>
<td>-3.071*</td>
</tr>
<tr>
<td>Perceived Playfulness(PP)</td>
<td>-.111</td>
<td>-.111</td>
<td>-1.085</td>
</tr>
<tr>
<td>User Attitude (UA)</td>
<td>.521</td>
<td>.518</td>
<td>4.575*</td>
</tr>
<tr>
<td>Web User Satisfaction (WUS)</td>
<td>.433</td>
<td>.432</td>
<td>3.824*</td>
</tr>
<tr>
<td>R-Square</td>
<td></td>
<td>.471</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>25.579*</td>
<td></td>
</tr>
</tbody>
</table>

*All correlation coefficients are statistically significant at p<.01

Evaluating the Propositions in the Revised Model

Correlation analyses were conducted to identify the relationships among these constructs and to test the seven propositions in the revised model. The results were presented in Table 4-8.

**Proposition 1:** PU (Perceived Utilities) has a positive relationship with UA (User Attitude) towards a lodging Web site.

The result of the correlation analysis showed in Table 4-8 that the correlation between PU and UA was .44 (p<.01). Therefore, proposition 1 was supported at the significance level of .01.

**Proposition 2:** PP (Perceived Playfulness) has a positive relationship with UA (User Attitude) towards a lodging Web site.
Table 4-8. Correlation Analysis

<table>
<thead>
<tr>
<th>Item</th>
<th>Perceived Utilities</th>
<th>Perceived Playfulness</th>
<th>User Attitudes</th>
<th>Web User Satisfaction</th>
<th>Behavioral Intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Utilities</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Playfulness</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Attitudes</td>
<td>0.44**</td>
<td>0.64**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web User Satisfaction</td>
<td>0.59**</td>
<td>0.50**</td>
<td>0.72**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Behavioral Intentions</td>
<td>0.18*</td>
<td>0.44**</td>
<td>0.63**</td>
<td>0.57**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*All correlation coefficients are statistically significant at p<.05

**All correlation coefficients are statistically significant at p<.01

The correlation between PP and UA was .64 (p<.01). Therefore, proposition 2 was supported at the significant level of .01.

Proposition 3: PU (Perceived Utilities) has a positive relationship with WUS (Web User Satisfaction) with a lodging Web site.

The result of the correlation analysis showed in Table 4-8 that the correlation between PU and WUS was .59 (p<.01). Therefore, proposition 3 was supported at the significance level of .01.

Proposition 4: PP (Perceived Playfulness) has a positive relationship with WUS with a lodging Web site.

The correlation between PP and WUS was .50 (p<.01). Therefore, proposition 4 was supported at the level of .01.
Proposition 5: User attitude toward a lodging Web site (UA) has a positive relationship with their satisfaction with using the Web (WUS).

The correlation between UA and WUS was .72 (p<.01). Therefore, proposition 5 was supported at the level of .01.

Proposition 6: User Attitude (UA) has a positive relationship with Web users’ behavioral intention (BI).

The correlation between UA and WUS was .63 (p<.01). Therefore, proposition 6 was supported at the level of .01.

Proposition 7: Web user satisfaction (WUS) has a positive relationship with Web users’ behavioral intention (BI).

The correlation between BI and WUS was .57 (p<.01). Therefore, proposition 7 was supported at the level of .01.

Even though perceptual variables could satisfactorily explain the variance in user satisfaction, the results still lacked the explanation power on Web user behavioral intentions (BI). Furthermore, perceived playfulness seemed to be more closely related with BI than perceived utilities. Another important implication of this study corroborated the claim that user satisfaction with a Web site has a statistically significant relationship with BI (0.57) (see Figure 4-2).
Figure 4-2 Results of the Regression Model to Measure Web User Satisfaction with A Lodging Web Site
CHAPTER 5. CONCLUSIONS AND SUGGESTIONS

This chapter presents the conclusions of this study as well as suggestions for lodging managers. In the conclusion section, relationships among the constructs in the conceptual framework were summarized. Limitations of the study and suggestions for lodging practitioners as well as for future research were discussed in the suggestions section.

Conclusions

In the widely-cited TAM framework, Davis (1989) pointed out that users' behaviors in different types of computing technology were influenced by PU (Perceived Usefulness), PEOU (Perceived Ease of Use), UI (User Attitude), and BI (Behavior Intention). Jeong and Lambert (2001) applied the TAM model to a lodging Web setting and suggested that adding another perceptual construct, i.e. PA (Perceived Accessibility), to TAM would increase the explanatory power of the model. Perceptual Dimensions such as Perceived System Quality, Perceived Information Quality, and Perceived Playfulness also contributed to the overall appraisal of system success (Liu and Arnett, 2000). Based upon the previous literature, a conceptual framework was
developed to incorporate another important determinant of Web user behavior -- Web user satisfaction (WUS) and to investigate the interactions among these constructs.

This study included both perception and satisfaction items, which were adopted from previous research to ensure content validity (Davis, 1989; Jeong and Lambert, 2001; Liu and Arnett, 2000).

Contrary to previous literature (Liu and Arnett, 2000) and the original theoretical framework in this study, the factor analysis showed that Perceived Information and Service Quality (PISQ) and Perceived System Quality (PSQ) were highly correlated with each other and thus could be merged into one aggregate perceptual construct, which was then termed Perceived Utilities (PU) in this study.

Accordingly, the original nine proposed hypotheses were reduced to seven instead.

The results of the study showed that the modified propositions 1, 2, 3, 4, 5, 6, and 7 were supported at the level of .01. Web users’ perception of the lodging Web site had a positive relationship with their levels of satisfaction. Of the two perceptual constructs, Perceived Utilities (PU) exerted more influence over User Satisfaction (WUS) than Perceived Playfulness (PP). This conclusion was consistent with previous studies (Davis, 1989; Liu and Arnett, 2001). Web user attitudes toward the online hotel reservation system significantly correlated with their levels of satisfaction to use the
system. Customers’ behavioral intentions were also significantly correlated with user satisfaction.

It is relatively difficult to measure customers’ actual use behavior. However, previous literature provided a way to measure behavioral intention, which is correlated with web user’s actual behavior (Jeong and Lambert, 2001). By gauging Web user behavioral intentions, actual usage of lodging Web site could be predicted because system usage intention determines actual system use and the actual use of system is affected exclusively by the intention to use (Davis, 1989). Results of the correlation analysis and multiple regression analysis both confirmed that the two perceptual constructs were significantly related to Web user satisfaction (WUS) and user satisfaction was in turn significantly correlated with user behavioral intentions (BI).

In short, the findings of the study illustrated the relationships among Web user perceptions, user attitudes, user satisfaction and behavioral intentions. It was found that perceptual constructs (perceived utilities & perceived playfulness) were significantly related to Web user satisfaction. Among these two perceptual constructs, perceived utilities (PU) stood out as the more influential factor in determining Web user satisfaction (WUS). Additionally, of those constructs that influenced behavioral intentions (BI), both user attitudes (UA) and Web user satisfaction (WUS) played a
significant role in Web user evaluation process. Data analyses also suggested the possibility of using user satisfaction as a mediating factor linking perceptions to behavioral intentions.

Suggestions and Limitations

Internet users have come to rely heavily on the vast amount of information online, and often consulted the Web before making important purchase decisions. An increasing number of Americans used the Internet and the Web as a basic reference tool to garner information, or to compare alternative courses of action when it came to making lodging and travel decisions. Learning to attract Web user attention is an important economic issue in electronic commerce and Web surfing (Lindroon, 1997). Lindroon also claimed that practices for designing traditional transaction systems tailored to a specific segment of users might not be valid when designing for unspecified users who usually voluntarily choose services.

Satisfaction-focused Web user evaluation process investigated in this study, however, will provide important insights for lodging practitioners because user behavioral intentions were found to be strongly related to Web user satisfaction. Under today’s ultra-competitive business environment, high level of user satisfaction with a lodging Web
site may prove to be a critical competitive advantage. Identification of features connected with consumer perceptions that will have a great impact on user satisfaction or dissatisfaction adds value to lodging Web sites and their owners.

Future lodging Web designers should improve on these features that maximize the likelihood of user satisfaction and repeat visits. These key perceptual attributes that have a lasting influence on Web user satisfaction should be incorporated in a company's Web marketing efforts to gain a strategic advantage. It is important for lodging managers to realize that measuring levels of user satisfaction with their Web sites can be critical to improving the overall Web success. In addition, in order to improve Web user satisfaction, lodging operators should focus on improving the various attributes of customers’ perceived utilities (PU), such as accuracy, relevancy, completeness, information and service quality, security, ease of use, reliability, organization of hyperlinks, and loading speed. Even though fancy features, such as video stream and Flash, can be important in alluring Web users, lodging operators should pay special attention to the basic perceived utility (PU) aspects of the Web site. For example, they should ensure that the information on the Web site is as accurate as possible. Inaccurate information may mislead Web users, which often results in customer dissatisfaction. Lodging companies also should make sure that the information on the Web is relevant to consumer needs. Consumers are concerned with information that
can affect their surfing or purchasing decision-making regarding lodging products or services and they do not want to be inundated with irrelevant materials. The information on the Web should be complete and fulfill the needs of Web users. Lodging practitioners should strive to emphasize an ambience of high quality on the Web site. They should develop or polish their Web sites to make them look more professional. Security is also a concern. SSL, digital signature, and digital certification may be possible solutions to enhance perceived security. Lodging Web sites should also be user-friendly. Operations and marketing people should actively participate in the development and maintenance of their corporate Web sites. In addition, lodging Web sites should be generally perceived by users as reliable, i.e., the site is always accessible to the users, which can be achieved by installing more advanced hardware or software systems and by employing more Web-savvy system administrators. As for the organization of hyperlinks, lodging managers should make sure that the hierarchy of these hyperlinks is not very deep and that the layout of the Web site is well-organized. Loading speed should be considered in Web site design. Lodging companies can improve on their Web system to reduce average wait time and increase loading speed.

Industry practitioners can incorporate these findings in their Web site design and should pay more attention to both Perceived Utilities (PU) and Web user satisfaction
(WUS), thus better serving the customers visiting their Web sites. By placing great emphasis on the all-important issue of Web user satisfaction in the special domain of lodging e-commerce, practitioners can improve their decision-making in terms of designing e-business marketing strategies.

In addition, lodging managers need to pursue both maximization of satisfaction and minimization of dissatisfaction. The negative attributes that contribute to Web user dissatisfaction offer insights to correct problems at early stages. Increases in this understanding will contribute to development of new ways to decrease Web user dissatisfaction and increase Web user satisfaction.

This study attempted to investigate the determinants of levels of user satisfaction with a lodging Web site. The findings of the study were mostly consistent with previous studies in this direction. However, there were some limitations in the study that warrant further investigation due to a couple of factors.

Due to time and budget constraints, the sample pool was selected mainly from undergraduate students majoring in hospitality, business or computer engineering in a state university in the mid-west area in the United States. College students tended to be more Web-literate and might be more active in using the Internet than other users. Their perceptions and use of online reservation systems might be significantly
different from other demographic segments. Care should be observed when
generalizing the results to other Internet user groups.

In addition, this study focused on measuring customers' perception of using an
online reservation system for a mid-priced hotel in New York City. Thus, the results of
this study could not be generalized to other segments of the hotel industry. Since the
construct of actual system use is difficult to measure, a longitudinal study should be
developed to obtain a consistent user pattern if time allows.
APPENDIX
SURVEY INSTRUMENT
Dear Students:

This study is designed to measure user satisfaction with a lodging Web site. The research is being conducted as part of my graduate research. By participating in this study, you will help hoteliers to better understand Web users’ online behavior. It will also help lodging practitioners improve their Web sites to better serve Web users like you.

Please click on the linked Web site below http://www.fcs.iastate.edu/hrim/xu/questionnaire.html to complete the survey questionnaire. It will take approximately 10 minutes to complete the questionnaire. The information you provide will be kept confidential and will be analyzed only in aggregation.

Thank you very much for your cooperation in this study. I look forward to receiving your response. If you have any questions about this study, please feel free to contact me.

Sincerely,

Heng Xu
Graduate researcher
(515)572-6109
xuheng@iastate.edu

Miyoung Jeong, Ph.D
Major Professor
(515)294-3038
mjeong@iastate.edu
WEB USER SATISFACTION STUDY

WHEN COMPLETED, PLEASE CLICK ON THE "SUBMIT QUESTIONNAIRE" BUTTON AT THE END OF THE SURVEY QUESTIONNAIRE.

Please provide information about yourself.

1. Gender: Male
   Female
2. Age: 18-19
   20-25
   26-29
   30 or more
3. How many years have you been using the Web?
   0-1 Year
   2-5 years
   6-10 years
   11 and above
4. How many times have you made hotel room reservations via the Internet since January 2001?
   1-2 time/times
   3-5 times
   6-10 times
   10 times and above

BEHAVIOR OF AN ONLINE RESERVATION

Please suppose you are going to New York City for sightseeing in the summer break and want to make a reservation via the Web. Please visit www.wellingtonhotel.com and go through the steps to make a reservation, except not confirming your reservation. After finishing the reservation process, please come back to the questionnaire and click here to complete the questionnaire.

After carefully reading each question below, please click the circle below to a number that best indicates your opinion using the following scale.
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

1.1 I believe the information on the Web site provided accurate information to potential customers like me.  
1.2 I believe the Web site provided a relevant source of information for me to book hotel rooms online.  
1.3 I believe the Web site provided a complete source of information for me to book hotel rooms online.  
1.4 I believe the Web site had good information quality.  
1.5 I believe the Web site had good service quality.  

2.1 I believe the Web site is secure to use. (SSL, Digital signature inquiry when downloading, or other features)  
2.2 I believe the Web site is easy to use.  
2.3 I think the Web site is a reliable information and service provider.  
2.4 I think the Web site had customized search functions.  
2.5 I think the Web pages loaded quickly.  
2.6 I think the Web site had well-organized hyperlinks.  

3.1 I enjoyed visiting this Web site.  
3.2 I think there were charming features on the Web site to attract me.  
3.3 I remained focused during my use of the Web site.  
3.4 I remained excited during my use of the Web site.
Strongly Disagree 1 2 3 4 5 6 7
Neutral 4 5
Strongly Agree 6 7

4.1 I think the Web site met my information needs. 1 2 3 4 5 6 7
4.2 I would have been attracted to this Web site to make a room reservation. 1 2 3 4 5 6 7
4.3 I liked this Web site a lot. 1 2 3 4 5 6 7
4.4 I think the Web site was very customer-oriented. 1 2 3 4 5 6 7
4.5 I would like to check other Web sites for more information before I made any reservations. 1 2 3 4 5 6 7

5.1 How would you rate the overall quality of the Web site? (Low ← 1 2 3 4 5 6 7 → High) 1 2 3 4 5 6 7
5.2 How well does the Web site meet your expectations? (Loosely ← 1 2 3 4 5 6 7 → Perfectly) 1 2 3 4 5 6 7
5.3 How satisfied are you with the Web site? (Slightly ← 1 2 3 4 5 6 7 → Highly) 1 2 3 4 5 6 7

6.1 The probability that I would use this Web site again would be (Low ← 1 2 3 4 5 6 7 → High) 1 2 3 4 5 6 7
6.2 The likelihood that I would recommend this Web site to my friends is (Low ← 1 2 3 4 5 6 7 → High) 1 2 3 4 5 6 7
6.3 The likelihood that I would make reservation at this Web site without consulting other Website is (Low ← 1 2 3 4 5 6 7 → High) 1 2 3 4 5 6 7
In order to enter the drawing for $30 in cash, please provide your name and email below:

Name

Email Address

Thank you for your assistance with my research.

You have completed the questionnaire. Please click the button below to submit the questionnaire.

Submit Questionnaire
REFERENCES


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