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An Investigation of The Online Travel Agencies' Usability

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Evaluation,
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ABSTRACT

This study investigated if and why there are gulfs between expectations and perceived value for usability. The main objectives of this study are as follows: (a) to examine the differences between expectation and perceived value for usability toward an OTA; and (b) to investigate the reason and purpose for customer visits toward an OTAs. By analyzing the distance between expected and the perceived value for the usability, OTAs can then close this distance and then be able to improve the usefulness of their websites. In addition, after investigating previous evaluation problems, that the various factors that are associated with tourism website evaluations, may be downsized to fit a comprehensive model for website evaluations. The results help to close the gap between expectation and perceived value by helping with the websites design, development, implementation, and management of systems. Based on those findings, effective strategies for OTAs marketing and promotional strategies are suggested.

1. INTRODUCTION

In order to identify the standards for website evaluations, a myriad of website checklists have been put together. Despite this, many questions have gone unanswered, such as: what online factors organizers should be adopted and how advanced factors can be implemented on the website. Despite the numerous online travel agency (OTA) websites and ever increasing online travel-related websites, standard measurements and evaluation are still deficient for these websites (Morrison et al., 2004; IOC, 2008; Liao et al., 2017). In addition, there are no current guidelines attributed to tourism-related content for website evaluation (Law, 2007). The objective of this study is to classify and determine customers' perception level regarding the usability based on actual experiences with

OTAs. Thus, this study investigated if and why there are gulfs between expectations and perceived value for usability. The main objectives of this study are as follows: (a) to examine the differences between expectation and perceived value for usability toward an OTA; and (b) to investigate the reason and purpose for customer visits toward an OTAs. Therefore, this study identified some of these important attributes from hotel guests who had used OTAs to reserve their products and services they needed. In addition, this study also expects that after investigating previous evaluation problems, that the various factors that are associated with tourism website evaluations, may be downsized to fit a comprehensive model for website evaluations.

In order to develop an appropriate framework, one will need to be able to accurately measure customers' expected

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and perceived values. Then by analyzing the distance between expected and the perceived value for the usability, OTAs can then close this distance and then be able to improve the usefulness of their websites. This study also will be providing the factors that can improve websites and will provide advantageous information for managing OTAs websites. Based on these findings, effective strategies for OTAs marketing and promotional strategies will be suggested.

2. LITERATURE REVIEW

The level of an online user's preference, and knowledge of technology often determines the expectations for the online reservation systems (Wang & Benbasat, 2005). These expectations maybe founded on operational functionality more than humanistic characteristics for the online reservation systems since each online system has different characteristics (McKnight, 2005).

There is often a disconnect between consumers' ideal performance expectations and perceived performance due to the gap that many users' experience between their preferences for value-added service and the companies' offerings of such services (Parasuraman, Zeithaml & Berry, 1985). Thus, if a company wants to retain its customer base and to even attract new potential customers, it needs to close the gap between customers' expected and actual experiences (Zeithaml and Bitner 2002).

Companies can look at how their websites can be reevaluated and how to improve their various services in the increasingly competitive environment in today's online travel sector. Bergin-Seers (2008) explains that the best way to attract and retain customers is for the OTAs to ask themselves three basic questions: 1) What are the important characteristics of an OTA? 2) What factors affect traveler perception towards an OTA? 3) What are the traveler's expectations of each type of OTA?

2.1. Perceived Value & Experience within Websites

A customer's experience before, during and after purchase is referred to as perceived value. However, even though post-purchase is generally accepted to be part of perceived value, few studies have included it during their investigation of overall perceived value of a purchase (Sanchez, Callarisa, Rodriguez, & Moliner, 2006).

Perceived usefulness, according to Davis, Bagozzi, and War-

shaw (1989), is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (p. 320). In addition, Davis et al. (1989) defined perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort" (p. 985). Bhattacharjee (2001) concluded that any consumer will continue the same usage continuously as long as the usage continues to provide beneficial information and as long as the consumer is able to understand and see the websites ease of navigation and other perceived values as being useful.

According to Bhattacharjee, (2001), consumer behavior dictates that once consumers use an OTA website, they will then compare their actual websites experience, which is based upon their perceptions, to their previously anticipated expectations. As customers develop greater familiarity, a more elaborate cognitive structure will develop (Soderlund, 2002). Therefore, the greater familiarity a user has, the greater their expectations for their future encounters they will have. Specifically, the belief in perceived ease of use and/or usefulness is influenced by customers' actual behavioral experiences (Venkatesh, 2000). Since customers are continuously using products and services, they are then obtaining new experiences that allow them to continuously accumulate knowledge because of the integration of information (Hayes-Roth, 1977).

2.2. Usability in Online Travel Agency (OTA)

The perceived ease by a user in navigating a website is referred to as a factor of usability. Usability also refers to a user being able to use the website components effectively without having any system errors and being able to manage the functions of the systems basics (Bevan, 2001; Flavian, Guinaliu, & Gurrea, 2006). Some website system errors may have a psychological effect on a user, causing a feeling of mistrust and even creating poor perception problems which may negatively affect future transactions (Flavian, Guinaliu, & Gurrea, 2006).

Website evaluation dimensions are not uniformly defined and the number of factors differs according to the various researchers and their studies. Therefore, trying to identify those factors that have been inconsistently used to evaluate the quality of a website is difficult. Among the myriad of studies on this, Kanayama, Ogasawara, and Kimijima found (2002) that content and usability are the most important factors that enhance the attractiveness of a website and the level of usability greatly impacts customers and their potential purchases.

Some factors were found to significantly affect websites

quality. To alleviate a user's feelings of frustration and/or difficulty, Bevan (1998) states that simplicity in design is what is needed to eliminate those feelings. Another factor of usability also includes the language and text understanding which includes the spelling, sentence length, and avoidance of certain words. In addition, the layout and graphics also affect the usability by effecting the visual display of a website which includes the colors and test fonts (Law & Ngai, 2005). Lastly, interface design is another significant factor, since it creates a user's feeling of trust towards a website which will significantly affect the customer's intention to repurchase (Roy, Dewit, & Aubert, 2001).

Sigala (2004) focused on websites for online businesses which he argued must provide adequate functional support for customers. Therefore, this study combined and consolidated these studies and used content, searching, navigation layout, readability, and graphics as the essential website factors based on a previous study (Scanlon, Schroeder, Snyder, & Spool, 1998).

3. METHODOLOGY

3.1. Measurement

The attributes that are proposed the dimensions of usability determinants that are linked to the performance measurements of the expectations level of usability and the customers' perceived value. These attributes were modified from Law and Ngai (2005), Cheyne et al. (2006), Ho and Lee (2007), and Kim et al. (2007).

The survey instrument comprised three parts. The first part asks the respondents' online purchasing experience in regards to their travel-related products within the past 12 months. Additionally, the first section of the survey contained a series of demographic questions. The second part dealt with questions regarding their reasons and purpose for their visit to hotel reservation related OTAs. The third part was focused on the attributes of the website's usability regarding the respondent's expectation level of usability and perceived value with the OTAs. A 5-point Likert scale ranging from 1 (not important) to 5 (very important) was used to measure the customers' expectations level of usability towards the attributes. In addition, a 5-point Likert scale ranging from 1 (very poor) to 5 (excellent) was used for the perceived value.

3.2. Sample and Data Collection

Questionnaires were distributed to the southeastern United

States with an online survey being implemented to gather data using Qualtrics, an online survey tool. The questionnaires were completed by 475 respondents from the southeastern United States. In order to measure any gaps between the expected and actual experience performance, a paired-samples *t*-test was utilized. A descriptive analysis was conducted for analyzing data regarding the general demographic characteristics. Out of the 475 respondents, only 284 of them met the initial qualifications. Any respondents that answered "no" to the initial survey question of, "Did you use an OTA within the past 12 months?" were automatically eliminated. An additional 69 respondents were removed because they gave sporadic answers throughout the survey. The remaining responses were additionally screened for the normal distribution of variables, outliers, and linearity. Finally, 215 respondents were used in the final analysis.

4. RESULTS

4.1. Demographic Profile of Respondents

To examine the gap between the two means of expected usability and perceived value of usability, a paired samples *t*-test was utilized. Usability quality was determined by analyzing the 14 usability variables in relation to their gap scores (perceptions minus expectations).

The socio-demographic profile of the respondents is shown in Table 1. Respondents ($n=215$), were 49.3% female and 50.7% male. A slight majority of Caucasians (59.1%, $n=127$) were included in the sample. Majority participants already had a bachelor's degree (33.0%, $n=71$) or a graduate degree (32.6%, $n=70$), followed by those who were still attending college (28.8%, $n=62$).

In regards to purpose, almost 90% of respondents ($n=193$) indicated that their purpose for visiting an OTA was for "personal travel" in Table 2. The perceived price of an OTA was Good (44.2%, $n=95$) followed by Very Good (24.3%, $n=52$), Fair (22.3%, $n=48$).

Table 3 lists the expectations and perceived value mean scores for each of the 14 usability quality attributes and the gap score. Six attributes, which are "correct spelling and grammar", "legible text colors", "overall visual appearance", "easy to navigate on the website", "functioning internal links", and "back to main page or home", had deviations of ($M \geq 3.87$), which are relatively high expectation scores. However contrary to this, seven attributes, which are "minimum usage of Inter-

Table 1. Socio-demographic characteristics of respondents (n=215)

Variables	Frequency	%
Gender		
Female	109	49.3
Male	106	50.7
Ethnicity		
Caucasian	127	59.1
Native American	3	1.4
African American	6	2.8
Hispanic	27	12.6
Asian	48	22.3
Other	4	1.8
Education level		
Less than high school	1	0.5
High school	6	2.8
Attended college	62	28.8
Undergraduate degree	71	33.0
Graduate degrees	70	32.6
Other	3	1.4
Missing	2	0.9

Table 2. Reason and perceived price for online travel agency (n=215)

Variables	Frequency	%
Purpose of visit to online travel agency		
Personal travel	193	89.8
Business travel	17	7.9
Other	2	0.9
Missing	3	1.4
Perceived price to online travel agency		
Poor	2	0.9
Fair	48	22.3
Good	95	44.2
Very good	52	24.3
Excellent	16	7.4
Missing	2	0.9

* Note (1) multiple responses allowed for reason to choose online travel agency.

net jargon", "terminology, headlines or banner related to context", "minimum scrolling of web pages", "the use of bullet list", "availability of multimedia/virtual tours", "has own unique characteristics that distinguish it from other websites", and "standard link colors" had deviations of ($M \leq 3.87$) for their expectation scores.

The perceived value's mean scores were consistently higher than the expectations scores, but with four notable attribute exceptions; which are, "Availability of multimedia/virtual tours," "Easy to navigate on the website," "Functioning internal links," and "Ability to search internal information." The lowest mean scores for expectation and perceived value were "Standard link colors" ($M=3.41$, $SD=1.212$) and "Availability of multimedia/virtual tours" ($M=3.67$, $SD=0.970$). On the other hand, the highest mean scores for expectation and perceived value were "Easy to navigate on the website" ($M=4.55$, $SD=0.631$) and "Correct spelling and grammar" ($M=4.30$, $SD=0.680$).

The highest gaps were found in the attributes of "Standard link colors" and "Minimum usage of Internet jargon". The smallest gap existed in "Ability to search internal information". The average gap for the 14 attributes was +0.11 and the overall results revealed that perceived value of usability toward OTA did not meet online users' expectations. Differences between perceived value and expectations' mean scores were not statistically significant for 5 of 14 items: "Availability of multimedia/virtual tours," "Has own unique characteristics that distinguish it from other websites," "Overall visual appearance," "Back to main page or home," and "Ability to search internal information."

5. CONCLUSION AND DISCUSSION

This study investigated the level of the expectation and perceived value with regards to the usability of OTA by travelers within the United States.

The overall perceived value of travelers' in the performance of the travel agency website was greater than that initially expected. With regard to managerial implication, the dimension of related to language presented the largest gap between the levels of usability. This indicates that language was an important factor for users of online travel websites. This indicates that website pages filled with mistakes and inconsistent language will badly affect the professional image of OTAs. To prevent this, OTAs should regularly inspect their websites for spelling and textual accuracy. This will help OTAs

Table 3. Usability gap between users' expectation and perceived value

(n=215)

Attribute	Expectation mean (SD)	Perceived value mean (SD)	Gap	t-value
1. Correct spelling and grammar	4.00(1.096)	4.30(0.680)	+0.30	-4.002 [*]
2. Minimum usage of Internet jargon (terminology)	3.65(1.125)	4.06(0.705)	+0.41	-4.940 [*]
3. Headlines or banner related to context	3.60(1.098)	3.87(0.844)	+0.27	-3.431 [*]
4. Legible text colors	3.93(1.021)	4.10(0.764)	+0.17	-2.109 [*]
5. Minimum scrolling of web pages (content showed in one page)	3.70(1.051)	3.87(0.838)	+0.17	-2.035 [*]
6. The use of bullet list	3.57(1.153)	3.75(0.831)	+0.18	-2.589 [*]
7. Availability of multimedia / virtual tours	3.72(1.105)	3.67(0.970)	-0.05	0.664
8. Has own unique characteristics that distinguish it from other websites	3.85(1.054)	3.89(0.822)	+0.04	-0.531
9. Overall visual appearance	3.96(0.980)	4.04(0.716)	+0.08	-1.200
10. Easy to navigate on the website	4.55(0.631)	4.15(0.740)	-0.40	7.259 [*]
11. Functioning internal links	4.30(0.885)	4.12(0.751)	-0.18	3.017 [*]
12. Back to main page or "home"	4.04(0.936)	4.09(0.768)	+0.05	-0.520
13. Standard link colors	3.41(1.212)	4.00(0.749)	+0.59	-6.625 [*]
14. Ability to search internal information	4.03(0.909)	4.00(0.815)	-0.03	0.820

Notes: (1) The items were measured on a 5-point scale, ranging from 1 (not important) to 5 (very important) regarding the level of expectation and 1 (very poor) to 5 (excellent) regarding the level of perceived value.

(2) ^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

language usability by increasing their credibility. In addition, OTAs also need to inspect their existing layout and graphics since inappropriate colors and awkward arrangement could possibly be perceived as unprofessional regardless of the websites usefulness. At the same time, OTAs should also provide clear, jargon-free labels for their website navigation system. In regards to the websites information, all products and services related to tourism should be updated regularly in order to provide the most accurate and latest information or news for their users.

Among the criteria within perceived usability, "Standard link colors" scored the highest gap value. This indicates that OTAs should also evaluate their pick of link colors and background coloring of their webpages. Furthermore, before OTA operators launch their websites, they should make sure that all internal links are working. In addition the webpage operator and manager should also continue to closely monitor their website after the initial launch for any problems. The findings will enable practitioners to design, develop, and realistically build their websites usability. With regard to theoretical implication, the study results also confirm the representative usability attributes, signifying that the usability attributes

could help to map specific performances or service domains. When OTAs attempt to examine their online operations efficiency, the measurement items from this research are effective checklist.

From the study findings, OTAs and hospitality agencies can better develop their current websites to better meet their customers' needs, wants, and usability. OTAs need to invest more in promoting their usability in order to enhance their websites' effectiveness.

6. LIMITATIONS AND FURTHER RESEARCH

As for the limitations of this study, even though OTAs usually sell many other products and services, such as flights, car rentals, and cruises, only hotel room searches and reservations were chosen as the subject matter. In order to gain greater insight into the actual perspectives of online customers, broader research should be conducted focusing on many other travel products and services. Another limitation was that the results may have suffered from self-selection bias because the respondents were restricted to active consumers who had already purchased their tourism-related products from OTAs.

In addition, hindsight bias may have affected the results since the survey asked the respondents to answer the questionnaire on both their expectation level and perceived value at the same time. However, their expectations may have been affected by their perceptions of the usability dimensions. This area of research was based on a panel approach with a retrospective study relying on memory, which is often deemed unreliable. Alternatively, new measurement instruments could be proposed to be included in further studies of OTAs websites. Also a longitudinal study could be undertaken to obtain a vastly more comprehensive level of evaluation. Finally, more studies should be undertaken to develop further the usability concept within the hospitality sector and add to the items for the dimension of usability in order to perform factor analysis on the collected data. The future success of OTAs depends on their greater understanding of consumer behavior towards their products and services, so that they can create and operate their products and services more efficiently and effectively for their target market.

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