Measurement and Evaluation of E-service Quality Dimension on Customer Satisfaction and Brand Loyalty towards Online Travel Agency

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ABSTRACT

The continuous development of the Internet has facilitated businesses to enter into online web services. How businesses can utilize this growing business opportunity and can survive stiff competition is one of the important factors to be considered. Based on E-service quality dimensions, this study attempted to explore and examine the type of different services preferred by consumers of Agoda, a well-known online travel agency, it also further examined the relationship between customer satisfaction and loyalty. Based on the results, it could be observed that perceptions of service quality differed significantly on some demographic variables; e-service quality dimensions had influence on customer satisfaction and customer loyalty; customer satisfaction and customer loyalty were positively related; and e-service quality was a significant predictor of customer satisfaction and customer loyalty. The empirical results about e-service quality dimensions were obtained for the online travel agency Agoda.

Keywords: Demographic Factors, Online Travel Agency Marketing, Customer Satisfaction, Customer Loyalty

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INTRODUCTION

Presently, according to advancement of information communication technology, expansion of electronic commerce businesses (e-commerce), the consumption way throughout consumers has been changed. At the meanwhile, the stay-at-home economy arises globally and the virtual market takes place as the substitution of physically traditional market. Hence, the adaptation of e-commerce during the prosperity of information era becomes the key determinants of business success or failure. Parasuraman et al. (1988) established the SERVQUAL model as way of measuring customer service quality. The aim of SERVQUAL model was to evaluate e-service quality. The model composes of five factors as tangibles, reliability, responsiveness, assurance and empathy. However, during the proceed of e-service evaluation, the SERVQUAL scale factors need to be reassess before they could be applied since evaluating service quality methods are varied between e-commerce and physical marketplace service. In addition, this research intends to explore the major forces that affect to e-service quality by applying an updated version of the SERVQUAL model.

In this study, the target population has been selected as the group of people from the age group 18 and above who are living in Bangkok, who use online e-service for hotel-booking at “www.agoda.com”. The website itself is widely known as e-service booking hotel with a large amount of users getting service from website, so it could be an appropriate representative target for understanding the relationship between each of the e-service quality factors and how it effects customer satisfaction individually. To retrieve all relevant information, the researcher will distribute 300 questionnaires to collect data from the samples. In addition, the questionnaires will be spread through both online and paper based method to in order to approach more diversified group of website users. Due to investigated results from many studies, it has proven that SERVPERF is a more accurate measurement for service quality compared to SERVQUAL by superiority in undertaking service quality comparisons across service industries. Hence, an application concept from SERVPERF would be used in this research to develop more efficient model that can measure e-service quality and provides beneficial information for e-business managers and marketing researchers.

RESEARCH OBJECTIVES

1. This study is aimed to identify and analyze relative significant factors contributing to e-service quality provided by any electronic commerce businesses.
2. This study is also aimed to investigate e-service quality factors where improvement should be made and resources should be allocated by exploring the key characteristics of the target sample regarding customer satisfaction for e-service.

3. The relationship between e-service quality factors that affect to customer perception and customer satisfaction of e-service is another concern in this study. The researcher is aimed to have an in depth understanding of each e-service quality factors that could enhance the level of customer satisfaction among the target sample.

METHOD OF RESEARCH

1. Literature Review

E-service quality dimensions: In this research, the researcher revised the SERVQUAL scale factors and tried to adopt those factors with electronic services environment. Another scale that the researcher used for study’s are based on perception factor of SERVPERF that includes only performance segment, it contains all the SERVQUAL scale dimensions, but uses only service performance (perception) as a measure of customer perceived service quality instead of the gap between expectation and perception (Cronin and Taylor, 1992, 1994). Those revised dimensions are (web site design, reliability, responsiveness, trust and personalization)

The main target of the research presentation is to finding the relation between these five factors of e-service quality with customer satisfaction and finally brand loyalty. Website design: A good website design is very important for all kind of online service provider. Cato (2001) defined designing as “the process of creating an artefact with structure of form which is planned, artistic, coherent, purposeful, and useful”. From a consumer perspective, a website must be designed with all these features in order to arouse the affective states of the users and to enhance their online visits or purchase intentions. It can be implied that Website design is the process of planning and creating of websites term of design describes the visual appearance of a website. Reliability: Kim and Lee (2002) stated that there should be three main duties for each web site, (a) Collect and register all customers order perfectly and accurately, (b) Guarantee the lowest delivery time, (c) Protect customer online privacy by keeping their information safe and secure. Responsiveness: A responsive online shop must be aware of customer needs and providing it as quickly as possible. (Liao and Chenug, 2002). Responsiveness shows that how often an online shop gives some important services to its customers, such as customer inquiries, information retrieval and navigation speed. (Parasuraman et al.1988, Yang 2001, Kim and Lee, 2002). Trust: Trust is the belief that the other
party will behave in a dependable manner and it has an important effect on online shopping where buyers can see neither physically products nor sellers. Trust is customer’s belief that the seller is acting ethically and with integrity and to ensure he/she is not trying to take advantage of the customer during or after online transaction. It is the best factor to impress online customers purchase intentions.

**Personalization:** A personalized online shop provides goods and services suited to customer requirements by analyzing customer needs that we call it customer needs analysis (Liang et al., 2012). In actuality, 80 percent of Internet users are highly interested in personalized services (Kobsa, 2007; Liang et al., 2012). Personalization significantly attracts customers to websites and will increase a positive thinking and attitude to these websites (Holland and Baker, 2001).

**Customer satisfaction:** According to Kotler (1996), customer satisfaction is just a difference between the perceived performance and expectation. He also claimed that the level of happiness with a product is output of comparing two factors, perceived performance and individual expectations. If the perceived performance matches or even be more than customers’ expectations of services, they are satisfied. If it does not, the customers are dissatisfied (Fullerton and Taylor, 2015, Oliver 1993, Rust and Zahorik, 1993, Sharifi and Esfidani, 2014). **Brand loyalty:** Loyal customers make repeat shopping, say positive words about that brand and will pay higher prices for buying products/services of their preferred brand (Zeithaml et al., 1996). A long-term relationship commitment by customers with a brand is sign of their loyalty for that brand (Reichheld, 1996); it is a long-term bond between the consumer and the brand (Hiscock, 2001). Brand loyalty is determined by some brand characteristics like brand reputation and brand predictability (Lau and Lee, 1999).

**Related reviews between online store web site design and customer satisfaction in online shopping:** Than and Grandon (2002) mentioned that web site design is crucial for online stores. It represented the appeal appearance of user interface expressing to customers. Moreover, many researchers have conducted various extensive studies about the impact of website design to overall e-service quality leading to customer satisfaction. The results from many studies have proven that customer satisfaction is assessed by the quality of web site design (Cho and Park, 2001).

**Related reviews about correlation of reliability of an online store web site and customer satisfaction for online shopping:** Parasuraman et al., (1988); Janda et al., (2002); Kim and Lee, (2002) defined the reliability of an online store as the ability of the website to fulfill orders correctly, deliver promptly, and keep customer’s personal information securely. It is one of the significant predictors of overall e-service quality, customer satisfaction and purchase intention in online shopping.
Related reviews between responsiveness of online store web site and overall e-service quality for online shopping: Liao and Cheung (2002) shortly concluded the description of responsiveness as customer’s expectation toward online stores to respond to their requests promptly. It is found that responsiveness of web-based service has a mildly positive correlation with customer satisfaction, Lee and Lin (2003). Hence, to promote more customer satisfaction and loyalty, the online store manager should also emphasize an improvement of web site’s responsiveness.

Related reviews between trust and customer satisfaction for online stores: Kimery and McCard (2002) defined trust as a customer willingness to accept vulnerability in an online transaction based on their positive expectations regarding future online store behaviors. It encourages online customer purchasing activity and affects customer attitudes toward online shopping (proposed by Gefen, 2000; Gefen et al., 2003). The analytical result from Lee and Lin (2003) were agreeable with the study of Gefen (2000), the researchers found that trust is the most strongly affected overall e-service quality and positively influence customer satisfaction for online stores. As a result, online business must act as honestly as possible and in the best interest of customer. Nearby case’s result from local study was consistent with the study provided by Lee and Lin (2003).

Related reviews between personalizations’s to customer satisfaction for online shopping: Yang and Jun (2002) defined that personalization is the lack of real-time interaction tends to prevent potential customers from purchasing through online shopping. In common terms, personalization is a process of gathering user-information during interaction with the e-user. Hence, it is unavoidably related to customer’s concern about informational privacy. Apart from that, Lee and Lin (2003) investigated that the personalization in the online store is not significantly related to overall e-service quality and customer satisfaction.

Related studies between demographic factors and customer satisfaction: To find the relationship between consumer satisfaction and demographics factors, one can relate to the studies by Zeithaml (1985) which examined the significant effects of gender, age, and income. Mittal and Kamakura (2001) discovered in one of their research is that female tends to repurchasing the same brand for a given level of satisfaction than men. According to the research it could be found that higher education level consumers had a lower tendency to repurchase and showed different level of satisfaction then customers with lower levels of education. Based on this results people with higher education levels had a greater willingness to search for additional information and the next best alternatives. The behavioral trait for older aged customers has a higher probability of repurchase then the younger customers for the same level of satisfaction.
Related studies between customer satisfaction and brand loyalty for an Internet shopping mall: Jacoby and Chesnut (1978); Olivan and Swan (1989) concluded that brand loyalty means that a customer repeatedly purchasing the same object with affection and emotion regardless of the change in the circumstance or service behavior. Generally, the brand loyalty itself is known to arise from the result of customer satisfaction. Another researchers name Jeong and Lee (2010), they concerned on exploring the influencing factors on customer satisfaction and brand loyalty in the internet shopping mall through service quality. Proven by their study, it could be observed that the factors, which affect to customer satisfaction, are product diversity, tangibles, responsiveness, interaction, and stability.

2. Conceptual Framework

![Conceptual Framework](image)

**Figure 1** Conceptual framework of measurement and evaluation of e-service dimension on customer satisfaction and brand loyalty towards online travel agency
3. Hypothesis

H1a e-service quality in terms of website design, reliability, responsibility, trust and personalization has influence on customer satisfaction

H2a demographic factor in terms of gender is different for customer satisfaction

H3a demographic factor in terms of age is different for customer satisfaction

H4a demographic factor in terms of education is different for customer satisfaction

H5a demographic factor in terms of occupation is different for customer satisfaction

H6a demographic factor in terms of income is different for customer satisfaction

H7a e-service quality and demographic factors in terms of customer satisfaction have influence on brand loyalty

4. Methodology

It is a study designed to describe and depict the people who take part in our study in an accurate way and will show us the characteristics of a particular individual, situation and group (Ehridge, D. E2004). This research will try to show us current issues and problems by process of data collection that will enable researcher to describe the position and condition more completely than possible and accurately (Fox.W and Bayat.M. S, 2007).

The researcher found that questionnaire is a good way to obtain information and data from a large number of people mostly those who do not have enough time to attend interview.

In this study, the researchers choose to apply Non-probability sampling method to find the sampling units. The availability and convenience of sample is an important issue of non-probability sample, when researcher choose to use convenience sampling; researcher choose the best available sample based on availability and time of Sample units, the researcher had to use a systematic procedure that provides reliable information according to Wiid & Diggines (2009). Therefore, the researcher had to apply the technique of non-probability sampling to the project based on judgmental sampling and convenience sampling.

In this study, the target populations are people who currently using Agoda online e-service for hotel booking which have the age group of 18 and above living in Bangkok, Thailand. According to Jacobs et al. (1972), Population can be defined as all the possible cases such as person, object or events that constitute to a known whole. The questionnaires were distributed using online-based method. The questionnaires were distributed using social media such as Facebook, LINE, and e-mail, who had previous experience with using Agoda online hotel booking service. The target populations
are generally from the Gen X, Y and Gen Z whose members are also known as Millennials, these group generally spends the highest amount of time online and is perceived as consumption oriented and sophisticated in terms of shopping (Jackson et al. 2011; Wolburg and Pokrywczynski, 2001) Thus, the demographic sample can be a good representation from the target population to understand the customer satisfaction for www.agoda.com.

Zikmund (2003) stated that sampling unit has been defined as a single element or group of elements subject to selection in the sample. The sample unit is only a small part of the population, which will represent of the whole population. In this research, the sample unit will be people from the age group of 18 and above and who are social media users.

To understand and achieve better results the researcher at the National Taiwan University of Science and Technology Lee and Lin (2010) conducted a research and used a sample size of total 305 questionnaires and were distributed to senior year undergraduate students taking the course on e-commerce at St. John’s and St. Mary’s Institute of Technology to learn about the customer perception of e-service. Wu and Tseng (2014) researched on the customer satisfaction and loyalty in an online shop: an experiential marketing perspective and distributed 325 questionnaires and received 315 responses from their target sample. According to McClave et al. (1997) to increase the reliability of the sample size, the bigger sample size represents higher reliability from the population. Therefore, in this study the researcher will use 300 questionnaires as the sample size and distribute through online social networking media to have an in depth understanding of online hotel booking usage and customer satisfaction level.

Judgment technique is a non-probability method that happens when researcher select sampling subject by their own judgment. Judgmental technique is often used when there is limited source of primary data to be collected. Furthermore, this technique does not require a lot of cost and time to accumulate and complete. Thus researcher uses this technique to find reliable data within the research period.

Convenience technique was used to collect the date. The main objective of this technique is to collect information from respondents who are easily accessible to the researcher in close proximity. The data will be collected from online social media user such as Facebook, Line and email user who can be a good representation of the target group as there are many people from different demographic background it can help the researcher to understand the satisfaction level of the consumers towards online hotel booking service such as www.agoda.com.
5. Research Instruments/Questionnaire:

From the previous study, researchers preferred to conduct survey technique by distributing questionnaire online among social media users. According to the target of this study and conceptual framework, researchers considered totally 21 questions in this study, which were divided into four sections.

Section 1: Screening questions: This type of question will be placed at the beginning of a questionnaire to identify whether respondents can take part in this study or not? In other words, are they users of Agoda website or they have never used it to book hotel? If they reply yes, then can continue. Otherwise, they should terminate the survey and return back questionnaire. Screening questions will help the researcher to have helpful information from real users of the website. A simple category scale will be used for screening question with yes or no answer.

Section 2: Demographic data: Questions regarding demographic can give us a lot of great insight about certain populations to learn more about customers, clients and users of Agoda website. Demographic surveys will help researchers to know more about personal information of online customers.

Section 3: Independent variables: According to the previous study, in this research there are six independent variables, one part for each variable has been allocated, part 1 would be web site design and includes 3 related questions from number 1 to 3, part 2 is reliability and includes 4 questions from number 4 to 7, part 3 is responsiveness and includes 3 questions from number 8 to 10, part 4 is trust and includes 2 questions from number 11 to 12, part 5 is personalization and it includes 3 questions from number 13 to 15 and part 6 will be customer satisfaction and it includes 3 related questions from number 16 to 18.

Section 4: Dependent variables: Section 4 comprises of only one part that is devoted to dependent variable, which is brand loyalty, part 7 of questionnaire has been allocated to this variable and it includes 3 related questions from number 19 to 21.

For study section 3 and 4, necessary data have been collected by using likert scale, according to a lecture by professor Yolanda Williams (2014), likert scale had been defined as a psychological device that we use to measure attitudes and opinions. It works by using person’s complete questionnaire to indicate they agree or disagree with series of statement. The original inventor of likert scale was Renis Likert who developed it in 1932 which developed into being the most popular type of scale to be used in most survey research. Generally the level of agreement or disagreement from strongly disagree to strongly agree is measured by using 4, 5, 7, 9 or 10 point scale but 5 and 7 point
scale are most common. The format of a typical five-level Likert scale that has been used in this research is like this: 1) strongly disagree 2) disagree 3) neither agree nor disagree (neutral) 4) agree and 5) strongly agree

6. Collecting Data

Primary data are used in this study. The primary data is collected using a survey questionnaire from 300 respondents both male and female who had experience in using “www.agoda.com” as hotel booking service. According to the research findings by Comfrey and Lee (1992) suggest that “the adequacy of sample size might be evaluated very roughly on the following scale: 50 – very poor; 100 – poor; 200 – fair; 300 – good; 500 – very good; 1000 or more – excellent” (p. 217). The questionnaires were distributed through one main channel that is online-based method during February to August 2017. For the online research, the 300 questionnaires were distributed using social media such as Facebook, LINE, and e-mail. Regression line was used to analyze hypothesis one and seven, Independent T-test for hypothesis two and ANOVA analysis was used for Hypothesis three-six.

RESULTS

According to the collected data, seven hypotheses have been tested by using Regression line one sample T test and ANOVA. The result indicates that six null hypotheses are rejected and one failed to reject. There are three hypotheses that have a strong positive relationship which are the relationship between website design and customer satisfaction and the relationship between responsiveness and customer satisfaction and lastly the relationship between customer satisfaction and brand loyalty. The other three hypotheses which have a moderate positive relationship are the relationship between reliability and customer satisfaction, the relationship between trust and customer satisfaction and lastly the relationship between personalization and customer satisfaction.

DISCUSSION AND CONCLUSION

Firstly, based on the result of testing the 1st hypothesis, it is found that there is a significant relationship between service quality and customer satisfaction. Moreover, a strong positive relationship with .356 as the Beta for personalization can be found in (H1) which implies that the higher performance of e-service quality may lead to higher level of customer satisfaction to Agoda website. The second hypothesis there is no statistical significant difference for customer satisfaction
by gender. Hence, the differentiated content in website can lead to an increase of customer satisfaction. Thirdly, the result from investigating the 3rd hypothesis, the researchers found that there is a difference for customer satisfaction by age with a significance level of 0.009 lower than 0.05, which could be implied people from different age, has different level of satisfaction. Therefore, an awareness of different customer needs and respond to their requests promptly will enhance the level of customer satisfaction. Gwo-Guang Lee, Hsiu-Fen Lin (2003) also proved that responsiveness of web-based service has a positive correlation with customer satisfaction.

Next, after testing the 4th hypothesis in this study, the result revealed that there is difference in customer satisfaction by education level with 0.000 significance level for (H4). Thus, customers with different level of education perceive satisfaction differently. The analytical result from testing of the 5th hypothesis has shown that there is difference in customer satisfaction level by income with 0.000 of significance level as people with different income level has different level of satisfaction. McMillan and Hwang (2002) have found that personalized services enhance customers’ level of interaction and finally will increase customer loyalty and satisfaction toward online shopping. From the analysis of 6th Hypothesis it can be observed that occupation or work sector has no significant for difference for customer satisfaction level. Thus, the hypothesis was failed to reject H6o. Finally, according to the examined result of testing the 7th hypothesis, the researchers found that there is a strong positive influence of customer satisfaction on brand loyalty with 0.762 significance level (H7). So, the brand loyalty itself could be known to generate from the result of customer satisfaction. Supported by the study of Yongju Jeong and Yongsung Lee (2010), those researchers concluded that customer satisfaction with service quality in online shopping mall would have positive effect to brand loyalty. Based on the previous research study it could be concluded that customer satisfaction establishes customer loyalty. Therefore, satisfied customers are also loyal customers.

**RECOMMENDATION**

Based on the results of hypothesis one to hypothesis seven, researchers found that almost all five dimensions of E-service quality have positive relationship to customer satisfaction and also there is a strong positive relationship between customer satisfaction and brand loyalty. In other words, this study suggests that to enhance brand loyalty. Agoda.com should develop marketing strategies to achieve higher level of customer satisfaction and also devote valuable corporate resources to the important E-service quality factors.
First, among the five dimensions of E-service quality, researchers have found that responsiveness was recognized as most important factor with highest correlation. This finding suggests that respondents were more impressed with the responsiveness created by Agoda.

Hence, the researchers will suggest managers of Agoda website constantly observe and analyze responsiveness based on the highest correlations and predictors found in this study in the development of their marketing strategies. Furthermore, based on the Table 5.2.3, the analysis of Agoda’s responsiveness by using Mean and Standard deviation, researchers have found that the highest mean belongs to the question of Agoda.com gives prompt service such as hotel price up to date and fast payment transaction and the lowest mean belongs to the question Agoda.com is always willing to help customers. It can be recommended that more effort should be made by Agoda.com to help customers such as providing customers immediate access to help by using 24 hours a day and 7 days a week online chat system and also it will help customers if they become confused about the booking and payment or have a question. By being helpful to customers, Agoda can certainly increase customer satisfaction and brand loyalty.

Second, researchers have found that the customer satisfaction has the highest correlation with brand loyalty, it can be inferred that more satisfaction with Agoda.com appeared to have more positive influence on this brand loyalty. In result, the consumer satisfied with Agoda.com can keep consistent relation with this brand in the future; they will be sticky and not easily influenced by competitors.

Based on the Table 5.2.6, The analysis of online user’s satisfaction on service provided by Agoda website, using Mean and Standard deviation, researchers have found that the lowest mean belongs to the question of Agoda.com services are much better than I expected. Hence, the researchers will have recommended that Agoda.com increase its effort in understanding customers’ needs and expectations and try to develop and improve their services and solve any problem encountered by its customers. Agoda should create a simple customer feedback surveys to understand and be aware of customer needs and expectations and trying to meet those expectations by delivering excellent quality and providing the best possible services.

Third, researchers have found that the majority of respondents are females with salary of over 50000 Baht per month. It can be inferred that it would be much better if Agoda.com be focused on four and five-star luxury hotels with elegant spas, hair and nail salons, relaxing therapies, beauty treatments and fantastic rooftop bars.
Based on Agoda’s Demographic factors analysis it can be assumed that customer occupation had little impact on the customer satisfaction however customer gender and age played a significant role with each gender satisfying their needs differently and different age group with higher income had a significant influence on customer satisfaction and brand loyalty.

Further Studies: The Research focused mainly on the factors such as website design, reliability, responsiveness, trust and personalization influencing customer satisfaction and demographic factors which lead to brand loyalty. While it might give a good insight into understanding the key factors that are affecting to customer satisfaction, further studies focusing individually on each component may give a more concrete result to support the research findings. The research considered only 7 variables and only focused on one website; as a result, it may not be true and applied on all websites. Therefore, further research can be conducted including other variables that might have significant impact on customer satisfaction and brand loyalty.

In the research findings, it could be observed that the majority of the users were Female in the age range of 18-30, 36-40 with an income level of 50,000 baht and above. Based on the data further studies can be conducted on the target population personal likings and preferences to improve the website service quality and expanding potential market.

Due to limited resources the researcher could only gather a small segment of the total population, which might not represent much diversity. It would be more effective if researcher who would be interested to repeat or do further studies increase the area and diversity of the sample size to understand the difference in the behavior of different nationalities and population.

Since this research was focused on only one website such as Agoda.com further studies maybe conducted on other website to understand the market and customer behavior.

In conclusion, this research will provide a guideline to researcher interested to develop a strategic marketing plan to attract more of the target audience and understand customer behavior towards Brand loyalty.

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