



UNF Digital Commons

UNF Graduate Theses and Dissertations

Student Scholarship

2017

The Role of the Quality of a Website in Consumer Perception

Hibah Khalil
University of North Florida

Suggested Citation

Khalil, Hibah, "The Role of the Quality of a Website in Consumer Perception" (2017). *UNF Graduate Theses and Dissertations*. 748.
<https://digitalcommons.unf.edu/etd/748>

This Master's Thesis is brought to you for free and open access by the Student Scholarship at UNF Digital Commons. It has been accepted for inclusion in UNF Graduate Theses and Dissertations by an authorized administrator of UNF Digital Commons. For more information, please contact [Digital Projects](#).

© 2017 All Rights Reserved



THE ROLE OF THE QUALITY OF A WEBSITE IN CONSUMER PERCEPTION

By

Hibah A. Khalil

A thesis submitted to the
School of Computing
in partial fulfillment of the requirements for the degree of

Master of Science in Computing and Information Sciences

UNIVERSITY OF NORTH FLORIDA
SCHOOL OF COMPUTING

April, 2017

Copyright (©) 2017 by Hibah Khalil

All rights reserved. Reproduction in whole or in part in any form requires the prior written permission of Hibah Khalil or designated representative.

The thesis “The Role of the Quality of a Website in Consumer Perception” submitted by Hibah Khalil in partial fulfillment of the requirements for the degree of Master of Science in Computing and Information Sciences has been

Approved by the thesis committee:

Date

Dr. Karthikeyan Umapathy
Thesis Advisor and Committee Chairperson

Dr. Sandeep Reddivari
Committee Member

Dr. Lakshmi C. Goel
Committee Member

Accepted for the School of Computing:

Dr. Sherif Elfayoumy
Director of the School

Accepted for the College of Computing, Engineering, and Construction:

Dr. Mark Tumeo
Dean of the College

Accepted for the University:

Dr. John Kantner
Dean of the Graduate School

ACKNOWLEDGEMENT

Firstly, I would like to express my sincerest gratitude to my advisor Prof. Karthikeyan Umapathy for his continuous support of my thesis research, his patience, his motivation, and his immense knowledge. His guidance has helped me in each phase of research and writing of this thesis. I could not have imagined having a better advisor and mentor for my thesis study.

Besides my advisor, I would like to thank the rest of my thesis committee: Prof. Sandeep Reddivari and Prof. Lakshmi Goel, for their insightful comments and encouragement, and also for the hard questions they asked, which inspired me to widen my research to include various perspectives.

I would also like to thank the director of the graduate school, Dr. Amanda Pascale for her assistance in the research methodology, as well as the program coordinator of bilingual studies at American College of Education Dr. Katrina Landa, as the second reader of this thesis, I am gratefully indebted to her for her very valuable comments on this thesis.

Finally, I must express my very profound gratitude to my parents, my husband, and my family for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. This accomplishment would not have been possible without them. Thank you.

CONTENTS

List of Tables	viii
List of Figures	ix
Abstract	x
Chapter 1. Introduction	1
Chapter 2. Background and Literature review	4
2.1 Background of Website Quality	4
2.1.1 System Quality	5
2.1.2 Information Quality	6
2.1.3 Service Quality	7
2.2 Literature Review	8
Chapter 3. Research Framework and hypothesis development	14
3.1 Relationship Between Website Quality and Purchase Intentions (Initial and Continued)	15
3.2 The Relationship Between Initial Purchase Intention and Continued Purchase Intention	19
3.3 The Moderating Role of Perceived Risk on the Relationship between Website Quality, Initial Purchase Intention, and Continued Purchase Intention	20
Chapter 4. Research Methodology	24
4.1 Survey Development	24
4.2 Task and Procedure	25

4.3	Population and Study Sample Data Collection.....	29
4.4	Pretesting.....	30
4.5	Data Analysis Method	31
4.5.1	Data Examination and Descriptive Statistics	31
4.5.2	T-test.....	32
4.5.3	Reliability Analysis.....	32
4.5.4	Factor Analysis	32
4.5.5	Multiple Regression Analysis	33
4.6	Quality Criteria in Quantitative Research.....	33
4.6.1	Content validity.....	34
4.6.2	Construct validity.....	34
4.6.3	Criterion Validity.....	35
Chapter 5. Data Analysis and Results		36
5.1	Demographic Profile.....	37
5.2	t-Tests.....	39
5.3	Reliability Analysis	41
5.4	Factor Analysis of Website Quality	43
5.5	Testing Hypotheses: Multiple Regression Analysis	44
Chapter 6. Discussion and conclusion		53
6.1	Discussion and Implications.....	53
6.1.1	System Quality.....	55
6.1.2	Information Quality	56
6.1.3	Service Quality.....	57

6.1.4 Purchase Intentions	59
6.2 Conclusion.....	60
6.3 Limitations and Future Research.....	60
References.....	63
Appendix A: The Survey Instrument	68
Appendix B: Experimental Website.....	70
Appendix C: Samples of website quality-Product page	73
Vita.....	82

TABLES

Table 1: List of hypotheses.....	23
Table 2: Construct sources and number of items used	25
Table 3: Levels of website quality	28
Table 4: Demographic Information and level of websites usage	38
Table 5: t-test for the independent variables	40
Table 6: One-way ANOVA for moderator and dependents variables	41
Table 7: Estimates of Cronbach	42
Table 8: Factor analysis of Website Quality	44
Table 9: Collinearity Statistics	45
Table 10: Multiple regression between website quality and purchase intentions.....	47
Table 11: Linear regressions between initial and continued purchase intention	49
Table 12: Multiple regression between website quality and perceived risk on purchase intentions	52
Table 13: Summary of the research model hypotheses	55

FIGURES

Figure 1: Proposed Research Model	15
Figure 2: H1 (a-c) results: website quality and initial purchase intention	46
Figure 3: H2 (a-c) results: website quality and continued purchase intention.....	47
Figure 4: H3 results: Initial and continued purchase intention.....	48
Figure 5: H4 (a-c) results: website quality, perceived risk and initial purchase	50
Figure 6: H5 (a-c) results: website quality, perceived risk and continued purchase	52
Figure 7: Consequent relationships of the proposed research model.....	54

ABSTRACT

The wide spread of the Internet has allowed businesses to present information, sell products, and provide relevant services through websites. Many researchers argue that websites are an imperative channel for communication and online shopping. However, businesses struggle to retain customers due to low switching cost and lack of face-to-face communication. Customers who do not appreciate the user interface and information presented in the website may choose a competitor's site to achieve their goals. Therefore, e-loyalty, which is about attracting and retaining customers in an online environment, is crucial to remaining a successful business.

In the context of e-loyalty, the website serves as a gateway to access loyal customers. Many studies have found that website quality affects customer's perceived risk. Perceived risk is the extent to which a customer believes there is a potential for an uncertain or negative outcome with an online transaction. Several studies have found an inverse relationship between perceived risk and purchase intention, which is the likelihood that a customer will purchase from the website. Studies have also shown that an increase in purchase intentions positively affects e-loyalty.

In this thesis, the effect of perceived risk on purchase intentions is studied. Purchase intentions can be further categorized as initial or continued purchase intention. Initial purchase intention refers to the likelihood that a customer will purchase from the website

for the first time. Continued purchase intention refers to the likelihood that a customer will return to the website to purchase again in the future. Although purchase intentions have been recognized as a major factor affected by website quality and subsequently impacting e-loyalty, few studies have examined how initial purchase intention affects continued purchase intention.

To fill the aforementioned research gaps, the purpose of this study is to examine whether: a) perceived risk moderates the relationships between website quality and initial/continued purchase intention, and b) perception of initial purchase intention influences continued purchase intention in an online context. Survey methodology was used to investigate the relationships between the above factors. The study population was a sample set of University of North Florida students. Multiple regression technique was employed for analyzing data collected from a questionnaire. This research contributes to the understanding of the moderator that could impact website quality in the business environment. Such an understanding would allow researchers to explore a wide range of variables that could affect the relationship between website quality and purchase intention to increase customer retentions.

Chapter 1

INTRODUCTION

The 21st-century is the information technology era. Many people now prefer to do their transactions on the Internet rather than going to shops, banks, or other physical locations (Kim & Lennon, 2013). Therefore, most customers prefer using the World Wide Web (WWW) for their shopping needs. Hence, the main task for an online business is to provide affordable and convenient online services via its website. Typically, the objective of a business website is to retain existing customers and attract new ones. Retaining and obtaining customers is a challenging task for businesses as the cost to a customer for switching to a competitor's website is low (Chang & Chen, 2008a). Studies have shown that a high-quality website increases the likelihood of retaining customers, as it is known to affect the customer's perceived risk (Gregg & Walczak, 2010; Kim & Lennon, 2013).

Perceived risk is the extent to which a customer believes there is potential for uncertain or negative outcomes with an online transaction (Hsieh & Tsao, 2014). It reflects a customer's perspective of the uncertainty and adverse consequences in web shopping (Kim & Lennon, 2013). Perceived risk impacts purchase intention and behavior, and it has significant adverse effects on visitors' perceived usefulness of the website. Therefore, having a high perceived risk causes customers to perceive the website negatively, has a negative effect on purchase frequency, and increases the likelihood that customers will leave negative website reviews. Website reviews can impact a customer's choice as well (Gregg &

Walczak, 2010). Even one negative review can make a customer switch to a competitor. Therefore, website quality should be improved to avoid negative reviews and dissatisfaction (Liang & Chen, 2009). Even though research studies have indicated that customers are more hesitant to purchase from online channels due to the various kinds of risks presented by the online environment, the majority of customers utilize websites to get information regarding products and services (Hsieh & Tsao, 2014).

This study proposes that perceived risk is a moderator between website quality and purchase intentions. It is important to mention that purchase intentions subdivide into initial purchase intention and continued purchase intention. Initial purchase intention refers to the likelihood a customer will purchase from a website for the first time. Continued purchase intention refers to the likelihood a customer will return to a website to purchase again in the future. Both initial and continued purchase intentions are affected by perceived system quality, perceived information quality, and perceived service quality (Kuan, Bock, & Vathanophas, 2008). The moderator of perceived risk would clarify the relationship among website quality and initial/continued purchase intentions.

Initial and continued purchase intentions are crucial for a business to remain successful; thus, there is a need to analyze this relation that affects both the business and its customers. This thesis is focused on the degree of influence of several factors that affect purchase intentions. Researchers have identified the key variables of website quality, and purchase intentions (Lin, 2007; Bai, Law, & I., 2008; Kim & Lennon, 2013). Still, the interrelationships among the above with the moderator- perceived risk- have not yet been

explored. Accordingly, in light of the present gaps in the literature, understanding the interrelationships that exist between the previous constructs and their effects on initial/continued purchase intentions were the key concerns in this study that required further examination. We investigated this issue using survey methodology.

Consequently, there are two objectives for this thesis. The first objective is to examine the moderating effect of perceived risk on the relationship between website quality and initial/continued purchase intention, and how initial purchase intention impacts continued purchase intention. The second objective is to develop a research model based on the present literature, apply that model, and then identify the interrelationships between each of the research variables stated above. This thesis establishes relationships between previous constructs and studies which factors have the most impact on purchase intentions.

Chapter 2

BACKGROUND AND LITERATURE REVIEW

2.1 Background of Website Quality

Website quality is considered an imperative concept in the World Wide Web. In the current environment, a business cannot attract a relatively wide range of visitors without a good quality website. Website quality is characterized by website's ability to allow users to fulfill their goals and willingness of users to revisit the site to perform the same on an ongoing basis (Loiacono, Watson, & Goodhue, 2002). Website quality affects the credibility and reliability of a business (Laja, 2015), which in turn is directly associated with customers' intention to make a purchase via the website. (Bai, Law, & I., 2008).

Website quality can be seen as the characteristic of a website that adds value to buyers (Chang, Kuo, Hsu, & Cheng, 2014). Various measurements and dimensions for website quality have been recognized by other researches including information quality, ease-of-use, usability, aesthetics, trust, and emotional appeal (Barnes & Vidgen, 2001). Various researchers studying the effect of website quality characteristics on user perceptions have observed that website quality can impact purchase intention considerably in the online shopping context (Fung & Lee, 1999). Others have found a significant positive relationship between website quality and company trust (Mcknight, Choudhury, & Kacmarc, 2002). Since the website is an essential user interface for an Internet enabled

business, it is vital to evaluate website quality properties and what customers would need from the website (Straub & Watson, 2001).

Recently, a wide range of website quality design features have been addressed and recognized by numerous studies of web-based e-commerce systems. Hsu et al. used three features— information, system, and service quality—to measure website quality (Hsu, Chang, & Chen, 2012). Chang and Chen defined website quality design as customization, interactivity, convenience, and character (graphical design features) (Chang & Chen, 2008a). Based on a review of information systems and marketing literature, Lin proposed website design and interactivity as variables of system quality: informative content and security variables as information quality, and responsiveness, trust, and empathy as service quality variables (Lin, 2007). In addition, Kim & Lennon mentioned website quality features through website structure, client service, accuracy/completion, and privacy/safety (Kim & Lennon, 2013). In summary, as stated above, system, service, and information quality were used as three main dimensions for website quality in this study. The three dimensions could be the essential factors to assess website users' expectations and purchase intentions.

2.1.1 System Quality

In the Internet environment, system quality is associated with ease of use, which is a characteristic of system design (Harper, Slaughter, & Norman, 1997). Similarly, Kirakowski et al. defined perceived system quality as the extent to which the user thinks

the website is easy, reliable, accessible, and adaptable and the interface interaction is consistent (Kirakowski, Claridge, & Whitehand, 1998). Therefore, when users use a system as customers, it is totally different from when they use it as employees, which means poor system characteristics such as lack of responsiveness, usefulness, and suitability discourage the customer from using an e-commerce website and lead to declines in sales and demand. In addition, security becomes a critical issue in the system quality as well, since many sensitive transactions are conducted over the Internet when it comes to e-commerce (DeLone & McLean, 2004).

2.1.2 Information Quality

The second factor is information quality. Rai et al. illustrated information quality as a degree of perceived value of the output provided from the website; which means that the information of the website has to be accurate, relevant, personalized, formatted and easy to understand to encourage initial purchase intention and to have the user return back on a regular basis (Rai, Lang, & Welker, 2002). Because the information quality of e-commerce websites has an extensive effect on the purchase intention, Ahn et al. indicated that in order to provide an enjoyable shopping experience for customers and help them make ideal purchasing decisions, it is important that the website provides quality information (Ahn, Kim, Choi, & Cho, 2004).

2.1.3 Service Quality

The last measurement is service quality, which is an important success measure for a website. It is described as the extent to which a website is reactive, cooperative, and efficient (Palmer, 2002). Zeithaml clarified that in order to expand the purchase intention rate, establish on line loyalty, and guarantee that buyers get satisfying results from e-commerce websites, e-commerce websites must move their focus from the aspect of exchanges and transactions to the aspect of service itself (Zeithaml, 2002). Service quality includes overall customer assessments and judgments about the service provided through the website (Palmer, 2002). Website quality is a key component in electronic business due to the fact that users perception of website positively impacts their intentions to use and purchase from the website (Chang & Chen, 2008b). The real challenge for the e-business is how to convert the website visitors into buyers when they view the website for the first time. According to Chen and Barnes, purchase intention is characterized as the circumstance when a consumer is willing and intends to conduct online transactions (Chen & Barnes, 2007).

There are two kinds of purchase intentions when it comes to e-commerce websites: intention of initial purchase and the intention of continued purchase, and they are intimately correlated to the customer transforming and maintaining rates of e-commerce websites (Gefen, Karahanna, & Straub, 2003). Customer conversion is characterized by a website that has the ability to convert prospective customers into buyers, while customer retention refers to the extent to which the website has the ability to engage buyers to purchase again

(Ittner & Larcker, 1998; Schefter & Reichheld, 2000). In this way, e-businesses need strategic focus and innovative techniques in term of website quality to optimally use their limited resources to increase and expand user conversion and to retention rates.

2.2 Literature Review

In most cases, quality is a term used to describe the characteristics of a product. With the increased use of technology, many researchers have tried to understand the effects of website quality on customer satisfaction (Kuan, Bock, & Vathanophas, 2008). Despite the existence of numerous studies on website quality, e-loyalty, and intention to purchase at e-commerce platforms, many researchers have not given conclusive findings on website quality factors (Hsu, Chang, & Chen, 2012; Masoud, 2013).

For instance, Hsu et al. suggested five quality factors- Information Quality, System Quality, Service Quality, customer perceived flow, and perceived playfulness- using a conceptual framework of stimulus, organism, and response (Hsu, Chang, & Chen, 2012). The results indicated that the e-service quality features directly influenced customer choices and purchase intentions. In a similar study, Chang et al. attempted to explore the influence of website quality and perceived trust on customer purchase intention (Chang, Kuo, Hsu, & Cheng, 2014). Chang et al. analyzed the impact of website brand and perceived value on the customer purchase intention in the hotel sector (Chang, Kuo, Hsu, & Cheng, 2014). They conducted structural equation modeling (SEM) on web-based survey responses. The results indicated that the website brand increased hotel purchases and orders, that there was

a strong connection among website quality and perceived trust for users who perceived superior website brand. They also found another strong relationship between perceived trust and purchase intention due to the moderator of high service value.

Other studies have examined the impact of quality factors on user trust and loyalty. Trust was identified as one of the significant factors for the success of any e-commerce activity (Winnie, 2014). In those research studies, usability was based on dimensions focusing on the ease of use and final fulfillment (Liang & Chen, 2009). However, these dimensions cannot be seen as the only dimensions influencing website usability. There is a need to have a more comprehensive and multidimensional approach that focuses on a number of quality dimensions such as the level of perceived risk, consistency, responsiveness, and customization of the website (Swaid & Wigand, 2009)

In other studies, research focused on performances and operational features. In one such study, Chang and Chen analyzed the impact of customer interface quality, satisfaction, and switching costs (Chang & Chen, 2008a). The researchers analyzed customization features, interactivity, character, and conveniences of the websites. A survey was developed to measure the perception of the customer. Their analysis of survey responses indicated that professional communication and interaction positively affected customer feelings. Moreover, their analysis also revealed interaction, convenience, speed, and personalized interface are critical to attracting traffic and switching costs. Further, their analysis established that switching costs was one of the main factors influencing e-loyalty. Other studies have analyzed customer expectations and continued use of visual designs and aesthetics. Kuan et al. compared the effects of quality on initial customer purchase and

continued purchase at various e-commerce platforms (Kuan, Bock, & Vathanophas, 2008). Their findings indicated that loyalty on e-commerce platforms was considered profitable, since loyal customers provide more repeat business opportunities.

Besides website quality, several studies have used reputation as an aspect of user stimulation. For instance, Kim and Lennon used web-based surveys to analyze the effect of reputation on consumer purchase intention (Kim & Lennon, 2013). They found that reputation and the website quality have positive impact on consumers' emotion and negative impact on perceived risk. Both emotion and perceived risk have considerable effects on online shopping. On the other hand, Masoud analyzed the effects of perceived risks on an online shopping setting in Jordan using focus group interviews with online shoppers (Masoud, 2013). The study results indicated that dimensions of perceived risks, such as financial risks, products risks, delivery risks, information security risks, and time risks, directly influenced online shopping. Other researchers have used a relationship approach for exploring ways of reducing perceived online shopping risks. Hsieh and Tsao developed measures for satisfaction for their study, such as time and nature of response from consumers (Hsieh & Tsao, 2014). They also adopted four dimensions of finding e-commerce quality features from customers, such as feedback, interviews, monitoring website traffic, and online poll surveys. In their results, they found that both system and information quality did not have as much of a negative affect on perceived risk as service quality had. Also, they found that perceived risk had a negative impact on e-loyalty and that the negative impact would be stronger on customer-to-customer relationships rather than on business-to-customer relationships.

Other studies have used an emotional model based on past experiences. For instance, in a study carried out by Winnie, the experiential effects on user e-loyalty with references to consumers' outright satisfaction was examined (Winnie, 2014). The data were collected through a set of survey questions about the measurement constructs of the study, and the demographic information of the respondents were also collected. A technique called confirmatory factor analysis (CFA) was primarily used for analyzing the collected data. The results of this study indicated the presence of significant effects of website quality on the trustworthiness of the website and e-commerce activities. They defined the website quality as website design, contents, and structure. The findings showed a positive correlation between the website design and e-loyalty, and a negative correlation between the contents and the structure of the website and e-loyalty.

Different models have been used to show the relations between service qualities and consumer satisfaction. For example, Gregg and Walczak investigated the relationship between perceived website quality, trust, and price premiums at various online auctions (Gregg & Walczak, 2010). A survey of 701 eBay users was conducted to compare the price premiums of two nearly identical online auction businesses, one that had online auction listings with a perceived high quality and the other which had a substantially lower perceived quality. A survey was conducted on the two online auctions with different website quality. The responses indicated that the trust derived from the website quality affects the intention to transact and the price premium significantly. On the other hand, He et al. analyzed the impact of usability features on consumer preferences and repurchase intention on e-commerce (He, Chan, & Tse, 2008). Empirical data from that

study showed that e-commerce personalization features such as logins and ease of use enhanced the credibility of the website and increased price tolerance.

A study carried out by Bai et al. analyzed the direct effects of information content on satisfaction and purchase intention on website visitors in China (Bai, Law, & I., 2008). The researchers found that the flow of information and the nature of the content directly influenced sales. A survey was conducted to investigate the influence of functionality/usability of website quality and customer satisfaction on purchase intentions. The results indicated that the quality of a website positively affects customer satisfaction, which leads to increased purchase intention.

There have been several studies carried out to discover the relationship between website quality and e-loyalty. For instance, Jiang and Rosenbloom reviewed various sites and analyzed how ideas were conceptualized online (Jiang & Rosenbloom, 2005). The researchers investigated price perceptions, check-out customer inclinations, and after-delivery customer feedback. The results indicated that these variables were significant in the overall adoption of online services and intention to return. However, several studies have been conducted to determine the system's quality of e-commerce services based on consumer response on website features and identified other features. For instance, Swaid and Wigand explored the variables that measure the quality of e-services (Swaid & Wigand, 2009). The results indicated the availability, customer relationship, site responsiveness, assurance, and personalization are key dimensions of e-service.

Based on the existing literature there are significant gaps in the research carried out to find the relationships between website quality and purchase intentions. Based on the existing literature in this area, as observed by many researchers who have investigated the influences of website quality dimensions on online shopping, it is clear that there is a relationship between website quality and purchase intentions. However, there is a need to find the impact of website quality on purchase intentions with perceived risk as a moderator, and to measure the influence of the initial purchase intention on continued purchase intention on e-retailing websites.

Chapter 3

RESEARCH FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Based on the review of previous studies, this research suggests an extended and advanced website quality model. It hypothesizes that website quality (system, information, and service quality), affects the performance of the purchase intention whether it is initial or continued, and this effect is influenced by the moderator of perceived risk. Moreover, the second objective of this research is to determine how initial purchase intention is influenced by website quality, which leads to continued purchase intention of e-retailing (also called e-tailing) websites.

In sum, based on the model, our research posits that if online shoppers perceive high-website quality variables, then they are more likely to initiate the purchase process, which in turn contributes to continued purchase intention. Figure 1 shows the model relationships and the hypotheses.

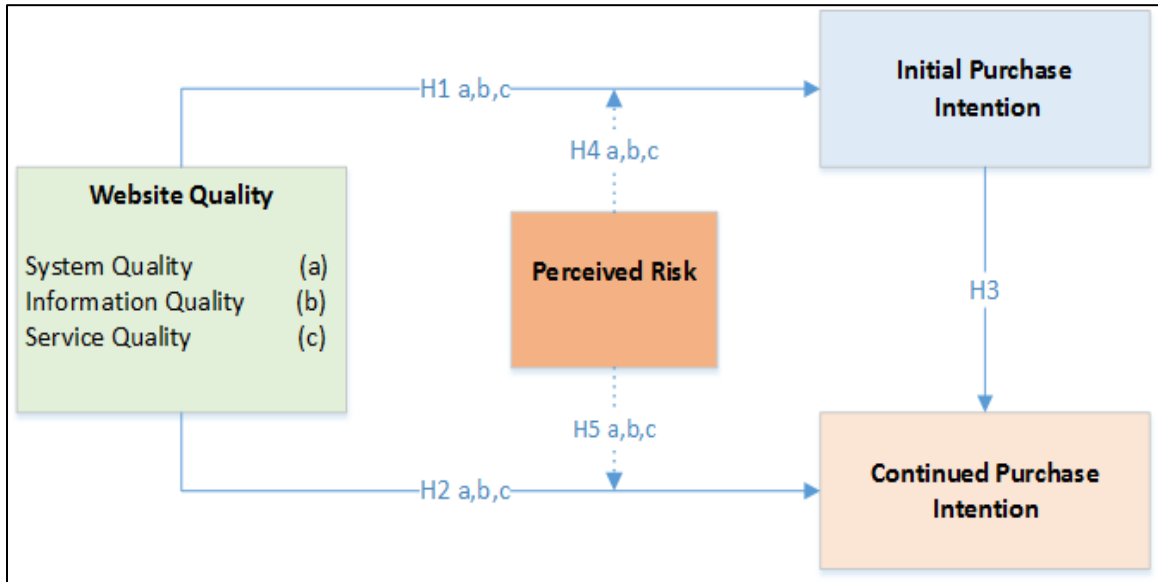


Figure 1: Proposed Research Model

3.1 Relationship Between Website Quality and Purchase Intentions (Initial and Continued)

Website quality encompasses system, information, and service quality. System quality is the degree to which a user thinks the website is easy, accessible, reliable, and adaptable and the interface interaction is consistent related to purchase intention. The importance of system quality to customers means that it contributes to their initial and subsequent purchase intent (Kuan, Bock, & Vathanophas, 2008). A website with a quality system has key features including usability, usefulness, and responsiveness, which encourage customers and other users to use it. A quality system must also have security features.

Users for instance, may be reluctant to make a purchase if they experience challenges using the system. One of the challenges that customers might face is the usability issue. The usability of a website includes how easy the system is to navigate and complete the

purchase process, and how fast the user can accomplish a certain transaction. The system usefulness ensures that the time spent on a website is spent according to the user needs. Another challenge is system responsiveness, which measures the performance of the system to execute any action of the purchase process within a certain amount of time. System security also plays an important role in the purchasing intention, in the sense that the system has to prevent information disclosure, loss of information, and unauthorized access to information (Kim & Lennon, 2013).

In addition, website layout, arrangement of web pages, and regular updating of the website information content are considered essential variables to making the website easy to navigate and explore. Therefore, this research hypothesizes that system quality has an association with purchase intention (initial and continued).

H11a: System quality has a significant positive influence on initial purchase intention on e-tailing websites

H2a: Service quality has a significant positive influence on continued purchase intention on e-tailing websites

Information quality, as a key characteristic of website quality, has a relationship with purchase intentions. According to Kuan et al., perceived information quality affects both initial and continued purchase intention (Kuan, Bock, & Vathanophas, 2008). Rai et al. assert that information quality is a key characteristic of a website (Rai, Lang, & Welker, 2002). Based on the above two researcher arguments, a website with information quality

must be accurate, personalized, relevant, and easy to comprehend. Users will make initial and continued purchases if they feel that all the aforementioned characteristics are met. There are challenges with defining the term “relevant information” as what users might perceive to be relevant information may not be considered relevant by the content developers of the website. The term relevant information in this study is based on what users consider as relevant and what they view might be missing from the website. There are constraints that would make it hard for the developers to determine the information that is relevant to users, such as a difference in geographic location. Specifically, website users or online shoppers tend to be spread across the world. So, a high rate of information quality will lead to greater success of the website, therefore increasing the overall purchase intention. Website developers and content creators should develop a threshold to rate how relevant the information is, based on the responses from the majority of website users, without ignoring the risks inherent in ignoring groups that are observed as less relevant. There is a high likelihood that the users would revisit the website and make a purchase if they find that the website exhibits characteristics such as accurate content, timeliness, and pleasant format (Kuan, Bock, & Vathanophas, 2008). In an online context, users are not completely aware of the products or services offered, thus perceiving high information quality would assist online shoppers in differentiating between one seller and another, even if both sellers provide the same product (Lin, 2007). Therefore, we hypothesize:

H1b: Information quality has a significant positive influence on initial purchase intention on e-tailing websites

H2b: Information quality has a significant positive influence on continued purchase intention on e-tailing websites

According to Palmer, a service quality website is one that is reactive, cooperative, and efficient (Palmer, 2002). Palmer explains that service quality encompasses the overall customer evaluations of the services offered on the website (Palmer, 2002). Based on work by Zeithamal, customers still expect quality service from the website regardless of the execution of their transactions. Therefore, service quality must support purchase intent (Zeithaml, 2002). A potential user is likely to make an initial or subsequent purchase if the user receives good service. Service quality is determined by the structural aspects of the website, such as how easy the website is for the user to understand it and get around it while shopping. The shopping process and particularly the transaction activity should be structured in such a manner that users find it easy and secure. Quality is deemed appropriate and approved by users when they feel that the website can fit into their context (Palmer, 2002). Developers should therefore evaluate the various scenarios that the website users will likely encounter. Additionally, developers should ensure that the website is intuitive, convenient, and clear regarding the privacy issues. Lack of privacy and security in the website weakens the purchase power even if the user might have completed an initial purchase. Therefore, this study hypothesizes:

H1c: Service quality has a significant positive influence on initial purchase intention on e-tailing websites

H2c: Service quality has a significant positive influence on continued purchase intention on e-tailing websites

3.2 The Relationship Between Initial Purchase Intention and Continued Purchase Intention

Gaining customer loyalty is a process that begins with an initial purchase (Jiang & Rosenbloom, 2005). The initial purchase may be intended or probabilistic. A customer for example, may purchase an item online because it is needed urgently. Such a purchase is probabilistic. However, customer may make the initial purchase because the website and the goods on sale have been promoted and packaged to fit his/her needs. Such a purchase is intended. Therefore, the biggest challenge is to ensure that both intended and probabilistic customers come back for their next purchase. Once the organization ensures that the customer makes a continued purchase, loyalty may be achieved (Chang et al., 2014). Given that loyalty towards a website must be achieved over a period of time, it is essential that the first purchase is examined for determination factors that were perceived positively or negatively by the customer. The purchase intention is stimulated by information on the website that customers perceive to meet their needs based on brand promises (Jiang & Rosenbloom, 2005). Some of the factors that influence the initial purchase are the safety and guarantee measures that the website provides. These measures include features like a money back guarantee, warranty of the products and disclosure on how user information is handled, protected and used. Customers are not likely to make an initial purchase where there is a possibility that the goods or services offered are below acceptable quality and they have no easy way of getting their money back. Initial purchase intention is thus based

on the features offered by the website. This also has a bearing on continued purchase intention and loyalty. Therefore, this study hypothesizes that an initial purchase intention is determined by the guarantee and safety offered by the website quality factors (system quality, information quality, service quality), and this is observed in continued purchase intention. Therefore, this study hypothesizes the following:

H3: Initial purchase intention is influenced by safety and guarantee from website quality which stimulates continued purchase intention

3.3 The Moderating Role of Perceived Risk on the Relationship between Website Quality, Initial Purchase Intention, and Continued Purchase Intention

A website that reflects system quality is likely to attract users to make the initial and continued purchases. An organization can create a website of high quality by establishing processes, procedures, responsibilities, and other activities that ensure that the customer receives value when a purchase is made. However, the presence of perceived risks is likely to discourage customers from making a purchase from a quality website (Mcknight, Choudhury & Kacmarc, 2002). A customer, for instance, may shift loyalty if there is a negative review of the e-commerce website. However, perceived risk may have a bigger impact on the initial purchase as compared to subsequent purchases, since the customer has already experienced the quality of the website and may be convinced of the service and quality of the organization. Thus, this study hypothesizes:

H4a: The relationship between system quality and initial purchase intention is weaker when customers perceive higher risk levels

H5a: The relationship between system quality and continued purchase intention is weaker when customers perceive higher risk levels

Although information quality on a website encourages a customer to make a purchase, the possibility of any risk may discourage a customer from making the purchase. Perceived risk refers to the degree to which a customer thinks there is potential for negative outcomes resulting from the online transaction (Hsieh & Tsao, 2013). Masoud identifies several perceived risks including delivery, financial, product, time, and information security risks (Masoud, 2013). An uncertain customer is less likely to make an initial purchase or a subsequent purchase. Customers are also likely to give little consideration to information quality when they perceive transaction on the website to be risky (Bai et al. 2008). In the arena of online shopping, customers are not very knowledgeable of the quality of products or services provided by the website, and because of this customers are looking for informational cues that let them recognize a good quality product from another of lesser quality. It is hypothesized that a perceived higher risk is likely to negatively influence the relationship between information quality and purchase intention (both initial and continued). However, the impact of perceived risk on the relationship between purchase intention and service quality is likely to be higher on initial than continued purchase intention. We therefore hypothesize that:

H4b: The relationship between information quality and initial purchase intention is weaker when customers perceive higher risk levels

H5b: The relationship between information quality and continued purchase intention is weaker when customers perceive higher risk levels

Service quality refers to the overall perception of the quality of services received by a user on a website. Basically, service quality is the performance of a website as compared to the expectations of the user. A website with high service quality will not only help the organization meet the expectations of users, but it will also help the organization remain competitive at the marketplace (Chang& Chen. 2008a). Therefore, quality service on a website is likely to encourage a website user to make a purchase and make subsequent purchases. However, perceived risks have the potential of discouraging a customer from making a purchase. Perceived risks scare customers away. Bad website reviews and other risks may increase the alertness of a customer, hence reducing their interest in buying on the website. Consequently, it is hypothesized that perceived risks negatively influence the relationship existing between service quality and purchase intention; regardless, the influence would be higher in initial than continued purchase intention.

H4c: The relationship between service quality and initial purchase intention is weaker when customers perceive higher risk levels

H5c: The relationship between service quality and continued purchase intention is weak when customers perceive higher risk levels

Hypotheses
H1a: System quality has a significant positive influence on initial purchase intention on e-tailing websites
H1b: Information quality has a significant positive influence on initial purchase intention on e-tailing websites
H1c: Service quality has a significant positive influence on initial purchase intention on e-tailing websites
H2a: System quality has a significant positive influence on continued purchase intention on e-tailing websites
H2b: Information quality has a significant positive influence on continued purchase intention on e-tailing websites
H2c: Service quality has a significant positive influence on continued purchase intention on e-tailing websites
H3: Initial purchase intention is influenced by safety and guarantee from website quality which stimulates continued purchase intention
H4a: The relationship between system quality and initial purchase intention is weaker when customers perceive higher risk levels
H4b: The relationship between information quality and initial purchase intention is weaker when customers perceive higher risk levels
H4c: The relationship between service quality and initial purchase intention is weaker when customers perceive higher risk levels
H5a: The relationship between system quality and continued purchase intention is weaker when customers perceive higher risk levels
H5b: The relationship between information quality and continued purchase intention is weaker when customers perceive higher risk levels
H5c: The relationship between service quality and continued purchase intention is weaker when customers perceive higher risk levels

Table 1: List of hypotheses

Chapter 4

RESEARCH METHODOLOGY

In order to test the research hypotheses, a survey research methodology was employed in this study. Each survey participant was presented with one of three levels of website quality, one that presented high level website quality attributes identified by the literature discussed previously, one that presented a medium level of website quality and a third that presented a low level of website quality. There were a total of 256 participants surveyed to determine if the differences in website quality levels changed their perception of purchase intention, and e-loyalty.

4.1 Survey Development

Based on the research model constructs and previous literature, a survey instrument was created to test the factors of website quality, purchase intentions and perceived risk among three distinct levels of website quality sample. The survey was developed using a seven-point Likert scale for each of the model components ranging from (1) Strongly Disagree to (7) Strongly Agree. The survey questions for each variable have been used in prior research, however some were modified to suit the context of this research. The survey instrument is provided in Appendix A. The sources of the survey constructs are provided in Table 2.

The survey instrument questions for measuring the factors of website quality were derived from Hsu, Chang and Chen (2012). The questions for perceived risk were adopted from Chang and Chen (2008a) with slight revisions. While the questions for purchase intentions were adopted from Kim and Lennon (2013).

Construct name	No. items	Source of scale
Website Quality	12	
System Quality	4	(Hsu, Chang, & Chen, 2012) (Lin, 2007)
Information Quality	4	(Hsu, Chang, & Chen, 2012)
Service Quality	4	(Hsu, Chang, & Chen, 2012) (Lin, 2007) (Liang & Chen, 2009)
Perceived risk	3	(Kim & Lennon, 2013)
Purchase intention	8	
Initial Purchase Intention	4	(Kim & Lennon, 2013)
Continued Purchase Intention	4	(Shen, 2012)

Table 2: Construct sources and number of items used

4.2 Task and Procedure

Participants of graduate and undergraduate students were asked to browse an office furniture website for the purpose of purchasing a desk. An office furniture website with three levels of quality was created and used because it fits the parameters of this study. While previous studies have considered products and services related to pleasure and/or enjoyment (hedonic purchases) to study the effects of purchase intentions, such as booking a travel ticket, or a hotel (Bai, Law, & I., 2008; Chang, Kuo, Hsu, & Cheng, 2014), few studies have investigated the impact of website quality on purchase intentions for purchases

with more utilitarian values (products which are related to perceived usefulness). In order to build on the work of previous research and extend it to this new area of utilitarian products, office furniture was selected as the purchase product in this study. Moreover, office furniture was chosen because students reported being familiar with the product features. The participants for this study were university students, and therefore university students were asked for input when the product was being selected. Ten students were approached in the library of the University of North Florida (UNF) and were given the opportunity to choose which of three product lines they were most likely to complete a survey for: 1) do it yourself websites, 2) clothes, and 3) office furniture. Most respondents (8 out of 10) stated that they would respond to a survey if it was for an office furniture product line. After further inquiry into variety of office furniture products, three websites of differing quality for purchasing desks were built in this study because initial respondents indicated a preference in completing a survey on this product.

The survey was designed as one-factorial experiment manipulating three levels of website quality; high website quality, medium website quality, and low website quality (Cyr, Hassanein, Head, & Ivanov, 2007). Each group of participants were assigned randomly to one quality level of the website. Specifically, each participant in each group was exposed to a single level of the website in order to increase the reliability of the responses. Based on the research model, each level of the website was created based on the factors of system, service, and information quality. The survey was conducted online and the participants could access it from any computer with Internet connection. There was no restriction as far as what computer the respondent used while completing the

survey. All the website samples presented the same content regarding the office furniture purchase, but differed only in terms of the level of website quality.

The high-quality website that was created for this study was adapted from Liang and Chen (2009) and Rai and Walker (2002) in terms of information content. These researchers determined how to present quality information in an online shopping experience. The high-quality information listings included accurate content, consistent format, easily understandable material and relevant, complete and useful information. Also, the high-quality website included quality in regard to the features based on Palmer (2002), who included responsiveness, precision, and interactive security and privacy settings. Responsiveness was addressed in that the users could see user feedback about the products as well as the response availability tools included a listing of the frequently asked questions. The other factor included in the high-quality website was system quality. System quality was based on Kim and Lennon study, which referred to the degree to which a user finds the website easy, accessible, adaptable, reliable, and consistent of the interface interaction in terms of the purchase intention (Kim & Lennon, 2013). For instance, the same red button must be clicked to precede the checkout on each page. In addition, the high quality website demonstrated a consistent website layout, and organized website pages. Therefore, the high system quality website was driven by the characteristics of clear presentation and simple, intuitive navigation.

The other two sample websites, the medium quality and low quality websites were built with listings that were consistent with poor and inferior website quality levels. They had a

minimal level of information, service, and system quality. The following table illustrates each of the characteristics of each level of the website quality that were measured in the three samples. Illustrations of the high, medium, and low quality levels of the website are shown in Appendix B.

Factors of website quality	Levels of website quality		
	Low	Medium	High
Information quality	Minimal information is provided about the product such as name and a picture	In addition to low-level information, brief product description is provided, including overview description, and product dimensions. Also, negative reviews provided in the product reviews	In addition to medium level information, the high level of information quality contains comprehensive description of the product specification, and feature descriptions. Furthermore, positive reviews provided in the product reviews
Service Quality	Few services provided such as FAQ page, and Tag product. No product reviews. Few 404 error on some product pages	In addition to low level of service quality, the number of services provided include: <ul style="list-style-type: none"> • View reviews from other users • Contact Us page • No 404 error pages 	In addition to medium level service, the high level of service quality contains the following: <ul style="list-style-type: none"> • Slide of product pictures • Writing reviews/feedback for the product and rating it • Product Customization • Share product (Facebook, Twitter) • Add to Wish list • Add to Compare
System Quality	Few system quality features are provided such as consistency of the interface elements, such as logos and icons (same red button for Add to Cart in all pages)	In addition to low system quality, the website uses consistent layout in all pages	In addition to the medium level, the website contains overall well organized user interface including consistent placement of interface elements and site features

Table 3: Levels of website quality

In pursuit of the objectives of the study, we requested UNF instructors to post the experimental website link in the Course Management System. This allowed the

participants to see the link to the experimental websites in the Course Management System of the courses at the University. After the links were posted, willing volunteers clicked on the survey participation link, which led them to a consent page explaining the purpose of the study as well as the associated tasks for participants. The volunteers were at liberty to select either “agree” or “disagree” to proceed with the task and the survey. The participants who agreed to take part in the research study were directed to one of the three office furniture websites. Participants were requested to navigate the website and to purchase their favorite desk. Once the item had been selected and the decision had been made, the participant proceeded to check out. When the participant selected a desk by clicking on “add to cart” the task was considered complete and the survey questionnaire was presented to the participant. The survey questionnaire was developed using Qualtrics software (Qualtrics, 2015). Once they completed the survey and clicked “submit”, a page with a “Thank You” message was shown.

4.3 Population and Study Sample Data Collection

The data were collected using a convenience sampling method. The online survey was posted in the participating Course Management System pages to college students. The target participants in this thesis included graduate and undergraduate students at the University of North Florida.

After getting the approval from Institutional Review Board (IRB# 929393-1), the survey questionnaire was distributed to graduate and undergraduate students at the

University of North Florida, by professors who agreed to distribute the surveys doing so in their course management system page. A total of 256 participants provided data by completing the task and completing the survey. All the participants were at least 18 years of age and were informed that completing the survey questionnaire was anonymous, voluntary, and that there were no incentives for participating. Over an eight-week period, the survey link was distributed throughout the various course pages, and data were collected. Incomplete surveys were eliminated from the data set to maintain the accuracy of the results.

4.4 Pretesting

To ensure that all the items of the survey as well as task instructions were well written and understandable, a pretest was conducted prior to sending out the final survey to the actual sample of study. Performing a pretest before actual data collection is considered a method that improves the reliability of the survey (Bernard, 2000). The purpose of the pretest is to identify any communication and interpretation problems. A group of 30 people reviewed the survey items and instructions. The 30 individuals included professional web developers, students, and friends participated in the pre-test, and were asked to report any ambiguities or difficulties they could see in terms of responding to certain items. They were also asked to provide any recommendations regarding the task instructions. Survey items and instructions were modified based on the feedback received from the reviewers. Following the pre-test, a few minor changes in the wording of survey items were made,

and some website features were added to make sure that three office product websites accurately depicted the appropriate level of quality.

4.5 Data Analysis Method

This section describes the statistical tests that were performed on the survey responses. SPSS software tools were utilized to perform the statistical analysis. Descriptive data statistics tests were done first, t-test, and then reliability and validity tests were performed. In the final analysis step, a multiple regression analysis was performed to test whether the stated hypotheses were supported or not.

4.5.1 Data Examination and Descriptive Statistics

The response data set collected from the survey was cleansed to remove redundant and erroneous data. The cleansed data set was imported into SPSS for further analysis.

Descriptive statistics tests were used to describe the basic features of the data in this study. Descriptive analyses provide an overall view and simple summaries about the sample and the measures to deliver a clear view and an easy understanding of the outcomes. Frequency analysis was used as a descriptive statistical method to show the number of occurrences each response was chosen by the respondents to help analyze the results and draw conclusions.

4.5.2 T-test

The t-test (also called "single-parameter t-test" or "single-sample t-test") is a statistical procedure often performed for testing the mean value of distribution. The one-sample t-test is used to determine whether a sample comes from a population with a specific mean. In this study, a t-test was used to identify the differences between the three samples.

4.5.3 Reliability Analysis

Reliability analysis aims to test for consistency (a measure of reliability). Reliability analysis according to Hair et al. can be measured using Cronbach's alpha (Hair et al. 2015). Cronbach's alpha is a measure of internal consistency and has a value between 0 and 1 (Bernard, 2000). Higher values of Cronbach's alpha are better. A good level of internal consistency differs according to what source the study refers to, although all recommended values are 0.7 or higher (Bernard, 2000). In this thesis, the reliability analysis was used to determine how much the items on a scale were measuring the same underlying dimension.

4.5.4 Factor Analysis

Factor analysis is considered as a technique to measure how well multiple items are related to one another and form factors or components. Principal components analysis (PCA, for

short) is a method the factor analysis, whose overall objective is to identify the relationships between measured variables and can accumulate them in groups to give an understanding of the data and to provide high level of internal consistency (Hair et al., 2015). The PCA procedure is considered precise when every factor is represented by several variables. In this thesis, PCA was conducted to get an understanding among multiple variables that were used in this study.

4.5.5 Multiple Regression Analysis

Multiple regression analysis is a suitable analysis to evaluate the hypotheses when there are more than one independent variable measures for each of the dependent variables (Hair et al., 2015). In this thesis, multiple linear regressions were used to measure and observe the effect the relationships between different independent variables on different dependent variables, and to determine if the proposed hypotheses were supported.

4.6 Quality Criteria in Quantitative Research

The quality of a study is determined by the reliability and validity of its findings. Validity refers to being sound in terms of logic and facts (Maxwell, 2002). In research, there exists a very fine line between validity and accuracy, reliability and consistency. Validity in a study can also be looked at as whether the measurement tools in the research measure what should to be measured. Validity in research is wide and can be split into three key areas: content, construct and criterion validity.

4.6.1 Content validity

Content validity in research is focused on whether the questionnaire or interview questions measure what the research is purporting to measure (Maxwell, 2002). It also deals with how comprehensible the questions are to the respondents. To achieve optimal content validity, the questions were reviewed by a group of people who have the relevant knowledge of the topic under study. To ensure the content validity of this research, survey questions and task instructions were sent out to a professional web developer, who has more than five years' experience of UI /UX, graphic, and visual design and another individual who has three years of experience in mobile web development. Also, an experienced researcher in bilingual studies from the American College of Education was consulted. Additionally, a group of acquaintances and students participated in the content validity to ensure there was no any ambiguities or difficulties in responding to the survey questions.

4.6.2 Construct validity

Construct validity studies how the items of the study streamline with variables in the research model (Garver & Mentzer, 2009). Also, it deals with the extent to which the constructs hypothetically relate to one another to measure a concept based on the theories underlying a research study. Therefore, this thesis aims to identify correlations between survey items on the same construct. That means high correlations exist between survey items relevant to a construct. Construct validity can be measured via principle components

factor analysis (PCA) of the data collected. To ensure construct validity in this study, SPSS software was used to analyze the correlation of the questions asked and the results that were obtained with the well-established variables in the field of website quality. Thereby, factor analysis was conducted to determine the construct validity and to determine the relationship between the underlying variables and the survey questions.

4.6.3 Criterion Validity

Criterion validity is the measure that tells how variables can predict the outcome of research model interactions (Maxwell, 2002). It is also the extent to which the measurement of a variable relates to its outcome. To ensure the criterion validity of this study, a hypothesis test (multiple regression analysis) was done using SPSS. It is believed that a hypothesis test can show whether findings of a study support a given relationship.

Chapter 5

DATA ANALYSIS AND RESULTS

The results of this study were gathered in a multi-stage approach. A total of 262 responses were received. Of the responses received, 256 were usable survey responses. Invalid responses were either incomplete or filled out incorrectly (meaning that the respondent went down one column of the survey answering every question with the same response). Six invalid responses were excluded, leaving 256 usable surveys, which were analyzed. Survey participants were recruited from graduate and undergraduate student population at the University of North Florida. The demographic profile of the respondents is presented in the following section. Subsequently, the results of reliability of each measure, factor analysis, and multiple regression analysis of the hypothesized relationships are presented.

Statistical analyses were conducted using Statistical Package for Social Science (SPSS) software package to test the hypotheses relating to website quality, and their impacts on initial and continued customer purchase intentions. Frequency distribution, descriptive statistics, reliability test, factor analysis, and multiple regression statistical methods were used for analyzing data in this study.

5.1 Demographic Profile

Descriptive statistics were used to identify the demographics of the study participants. A total of 256 usable surveys were analyzed. The mean age was between 18 and 25 years old. The sample consisted of majority of males ($n = 256$, 58.2%), senior and junior students ($n = 256$, 33.2%, and 21.5% respectively). The majority participants ($n = 256$, 46.9%) participated in the low-level website, followed by high-level website ($n = 256$, 34.8%), then ($n = 256$, 18.4%) the medium-level website.

In terms of the Internet usage, most of the participants ($n = 256$, 77.7%) use the Internet many times a day. In the frequency of online shopping, around 33% of the respondents made once a week or more purchases online, followed by 29.2% made 2–3 online purchases monthly, around 20% made once a month purchases, and 13.3% made online purchases every few months. Table 4 shows the demographic information of the three website samples in this study.

	Variable	Frequency	Percent
Gender	Male	149	58.2
	Female	107	41.8
Age	18-25	133	52
	26-35	81	31.6
	36-45	38	14.8
	45+	4	1.6
Education Level	Freshman	17	6.6
	Sophomore	17	6.6
	Junior	55	21.5
	Senior	85	33.2
	Graduate	82	32
Internet Usage	Many times a day	199	77.7
	Several times a day	42	16.4
	Once a day	7	2.7
	Several times a week	5	2
	Once a week	1	0.4
	Less than once a week	1	0.4
	Don't Know	1	0.4
Times of shopping online	Once a week or more	84	32.8
	2-3 times a month	75	29.3
	Once a month	50	19.5
	Every few months	34	13.3
	Rarely/Never	13	5.1
Rate of Website	Very Good	46	18
	Good	98	38.3
	Above average	11	4.3
	Average	61	23.8
	Below average	30	11.7
	Poor	9	3.5
	Very poor	1	0.4
Level of website you will answer questions about	High-quality website	89	34.8
	Medium-quality website	47	18.4
	Low-quality website	120	46.9

Table 4: Demographic Information and level of websites usage

To ensure that the rating of the website quality level was completed at the proper time (once the participant had experience with the website), the manipulation question was only

visible to the participants after they reviewed the website. This question was phrased as follows: “After reviewing the Office Shoppe website, how would you rate the level of the website quality?” Seven options were provided on a scale ranging from “very good” to “very poor” as shown in Table 4. This study assumes that the average of participant responses to the high-quality website sample would be rated and categorized as either “very good”, “good”, or “above average”; the average of the medium-quality website would be rated and categorized as “average”, or “below average”; and the average of the low-quality website would be rated and categorized as “poor” or “very poor”. However, the high-quality website sample (n=89) was rated on average as “good”, and the medium (n=47) and low quality website samples (n=120) on average were reviewed as “below average” websites. Therefore, it can be concluded that the expectations regarding the high website quality and medium website quality manipulations were met more than the low-quality website.

5.2 t-Tests

As shown in Table 4, most participants answered the survey questionnaire based on their use or experience of high quality and low-quality websites (n = 256, 46.9%, 34.8% respectively). To examine whether there is a significant difference between the means of high-quality, medium-quality, and low-quality websites responses, data was divided into three independent samples; one sample for high-quality website users solely, the other one for medium-quality website users, and the last one for low-quality website. t-tests were used to identify the mean differences between the three samples. As shown in Table

5, significant differences (sig. (2-tailed) < .05) were found between the three samples. Significant differences were found for all four questions relevant to system quality. The average of means were as follows: high-quality website: M = 5.983; medium-quality website: M = 4.644; low-quality website: M = 5.184, sig. (2-tailed)= 000. For all four questions relevant to information quality the average of means were as follows: high-quality website: M = 5.744; medium-quality website: M = 4.697; low-quality website: M = 4.087, sig. (2-tailed)= .000. Last, for all four questions relevant to service quality, the average of means were as follows: high-quality website: M = 5.983; medium-quality website: M = 4.628; low-quality website: M = 4.01, sig. (2-tailed)= .000.

Based on the t-tests for the three samples, the average respondents of the high-quality website agreed that the site provided an overall high quality in terms of system quality, information quality, and service quality. Whereas participants chose “somewhat agree” in the medium quality website and “neither agree nor disagree” in the low-quality website.

Variable		Average of Means		
		High	Medium	Low
Independent Variables	System quality	5.983	4.644	5.184
	Information Quality	5.744	4.697	4.087
	Service Quality	5.983	4.628	4.01
Scale range: 1 = “Strongly Disagree”, 7 = “Strongly Agree”.				

Table 5: t-test for the independent variables

Additionally, one-way ANOVA was conducted for measuring whether there are any statistically significant differences between the means of the moderator, perceived risk,

and dependent variables, purchase intentions, among the three samples of the website. Based on the following table, results show that there were statistically significant differences between the means of the three samples of the website (p -value $< .05$).

Variable		Average of Means			F	Sig.
		High	Medium	Low		
Moderator	Perceived Risk	3.232	4.794	4.403	25.072	.000
Dependent variables	Initial purchase intention	4.629	3.787	3.725	10.424	.000
	Continued purchase intention	4.5	3.585	3.558	10.101	.000

* The mean difference is significant at the 0.05 level.

Table 6: One-way ANOVA for moderator and dependents variables

Accordingly, we conclude that users have different perceptions of the website attributes, perceived risk, and purchase intentions. Therefore, combining all the website samples data into one would bring compounding results. Thus, it was decided to use the entire sample ($n=256$) for testing the research model hypotheses.

5.3 Reliability Analysis

Reliability analysis is the appropriate measure to ensure that the scale is consistently measuring the variables used in the survey questionnaire (Bernard, 2000). According to Hair et al. Cronbach's alpha is an index of reliability, which determines the internal consistency among survey items (Hair, F., Wolfinbarger, Money, Samouel, & J., 2015). The value of Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The higher the score, the more reliable the generated scale is. Since 0.7 is widely considered an accepted reliability coefficient (Bernard, 2000), it is used as the threshold

in this study. Cronbach's alpha was calculated to confirm the construct reliability of the scales for each attribute of website quality (i.e., System quality, Information quality, and Service quality), moderator of perceived risk, and the attribute of purchase intentions (i.e., initial purchase intention, and continued purchase intention).

The Reliability of the attributes of website quality are provided with the factor analysis results in Table 8. The moderator of perceived risk and purchase intentions (initial and continued) are presented in Table 7. A total of three items of perceived risk were measured in Cronbach's alpha of 0.879. A total of four items for purchase intention and four items for intention to revisit were measured, resulting in Cronbach's alpha of 0.932 for purchase intention and 0.941 for intention to revisit.

Accordingly, a questionnaire was used to measure different, underlying constructs (perceived risk, and initial/continued purchase intentions). All of the above constructs showed a high level of internal consistency, as determined by a Cronbach's alpha.

	Dimension	# Items	Cronbach α
Moderator	Perceived risk	3	0.879
Purchase intentions	Initial purchase intention	4	0.932
	Continued purchase intention	4	0.941

Table 7: Estimates of Cronbach

5.4 Factor Analysis of Website Quality

Factor analysis is a technique to measure how well multiple items are related to one another and form factors (Hair et al., 2015). Factor analysis was conducted for website quality since the constructs used to measure website quality were a culmination of previous studies. The principal component analysis (PCA) was applied to a total of 12 items for website quality for further investigation in this study. PCA with Varimax rotations was used. Results revealed three distinct underlying dimensions, namely, system quality, information quality, and service quality. As a rule of thumb, a survey items loads highly on a factor if its loading coefficient is above 0.6 and does not load highly on a factor if the coefficient is below 0.4 (Hair et al., 2015).

A total of four items loaded into the dimension of system quality with a reliability score of Cronbach's Alpha was accepted as .844 and explained 81.35% of the total variance, four items of information quality with a reliability score of .801 and explained 82.78% of the total variance, four items for service quality with a reliability score of .833 and explained as 79.45% of the total variance. As illustrated in Table 8, all factors load highly greater than .6 and all coefficient alpha greater than 0.7. These results imply that all three constructs comply with the requirement of high internal consistency, which demonstrated the construct validity. Therefore, all factors illustrate good internal consistency. Factor analysis results are shown in Table 8.

Construct	Scale Items	F.L.*	α^*	E.V.*
System Quality	SQ1	0.861	0.844	81.35%
	SQ2	0.906		
	SQ3	0.906		
	SQ4	0.932		
Information quality	IQ1	0.907	0.801	82.78%
	IQ2	0.929		
	IQ3	0.875		
	IQ4	0.927		
Service Quality	SVQ1	0.825	0.833	79.45%
	SVQ2	0.926		
	SVQ3	0.895		
	SVQ4	0.916		
N= 256. Scale range: 1 = “Strongly Disagree”, 7 = “Strongly Agree”.				
F.L.*: Factor Loading, E.V.*: Explained Variance, α^* : Cronbach’s Alpha.				

Table 8: Factor analysis of Website Quality

5.5 Testing Hypotheses: Multiple Regression Analysis

To evaluate the hypothesized relationships of H1 through H5, multiple regression analysis was conducted. Multiple regression is used when one wants to determine the relationships among multiple (two or more) independent variables and one dependent variable. The independent variables (system quality, information quality, and service quality) are the predictor variables, and the dependent variable is the outcome variable (initial purchase intention/continued purchase intention). Multiple regression analysis compares data and then prioritizes the effects. In this study, multiple regression determined the relative importance and significance of the relationships between website quality and purchase intentions, with perceived risk as a moderator. To detect multicollinearity among independent variables, the Variance Inflation Factor (VIF) was

examined in all three samples. A VIF value of above 10 was used as a cut-off threshold, showing multicollinearity problems among independent variables in multiple regression models. The VIF values among all independent variables that measures the website quality are shown in Table 9. Since all the VIF values among multiple independent variables are below 10, there is no multicollinearity issue in this study.

Construct	System Quality	Information Quality	Service Quality
VIF	2.792	3.782	3.763

Table 9: Collinearity Statistics

H1 (a-c): Website quality (a: system quality, b: information quality, and c: service quality) has a significant positive influence on initial purchase intention on e-tailing websites

In order to test H1, multiple regression analysis was used. The three factors of website quality including system quality, information quality, and service quality were used as independent variables, or predictors, and initial purchase intention was the dependent variable. The results show that there are significant positive relationships between two factors of website quality (information quality and service quality) and initial purchase intention ($F= 56.625$; $Adj. R^2= .396$; $p< .001$), specifically, for information quality ($Beta= .210$ and $p> .05$) and for service quality ($Beta= .486$ and $p< .001$). Therefore, H1b and H1c are supported (See Figure 2 and Table 10).

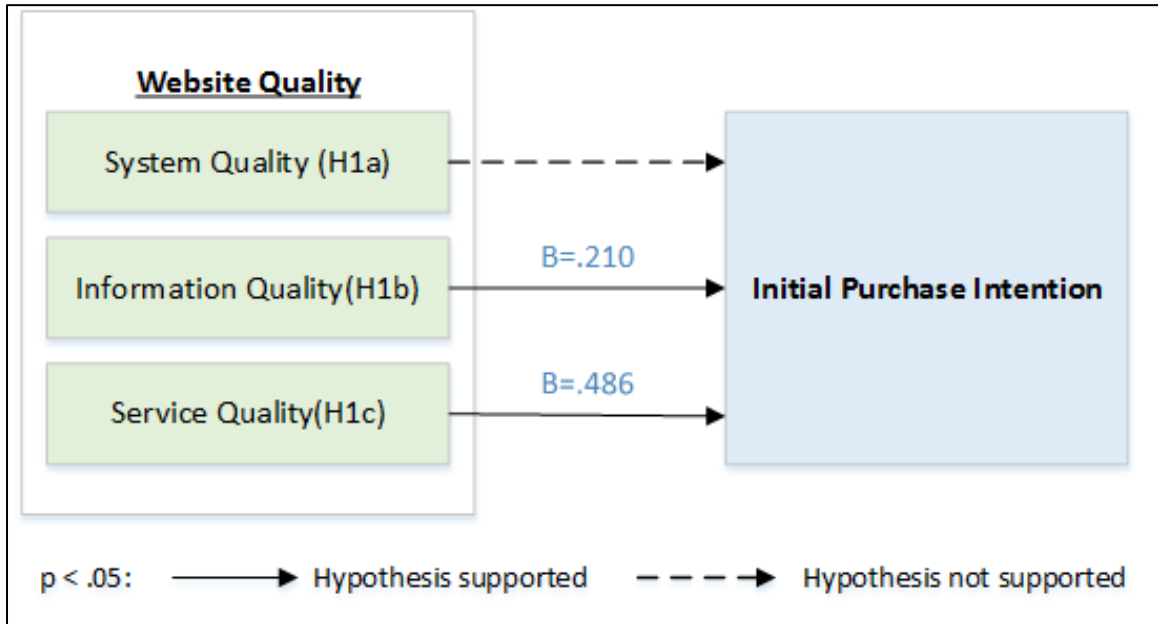


Figure 2: H1 (a-c) results: website quality and initial purchase intention

H2 (a-c): Website quality (a: system quality, b: information quality, and c: service quality) has a significant positive influence on continued purchase intention on e-tailing websites

For examining H2, multiple regression analysis was used. The three factors of website quality including system quality, information quality, and service quality were used as independent variable, or predictors, and continued purchase intention was the dependent variable. As shown in the results, significant positive relationships were found between website quality factors (information quality and service quality) and continued purchase intention ($F= 54.424$; $Adj. R^2= .386$; $p< .001$), specifically, for information quality

(Beta = .250 and $p < .05$), and for service quality (Beta = .496 and $p < .001$). Therefore, H2b and H2c are supported (see Figure 3 and Table 10).

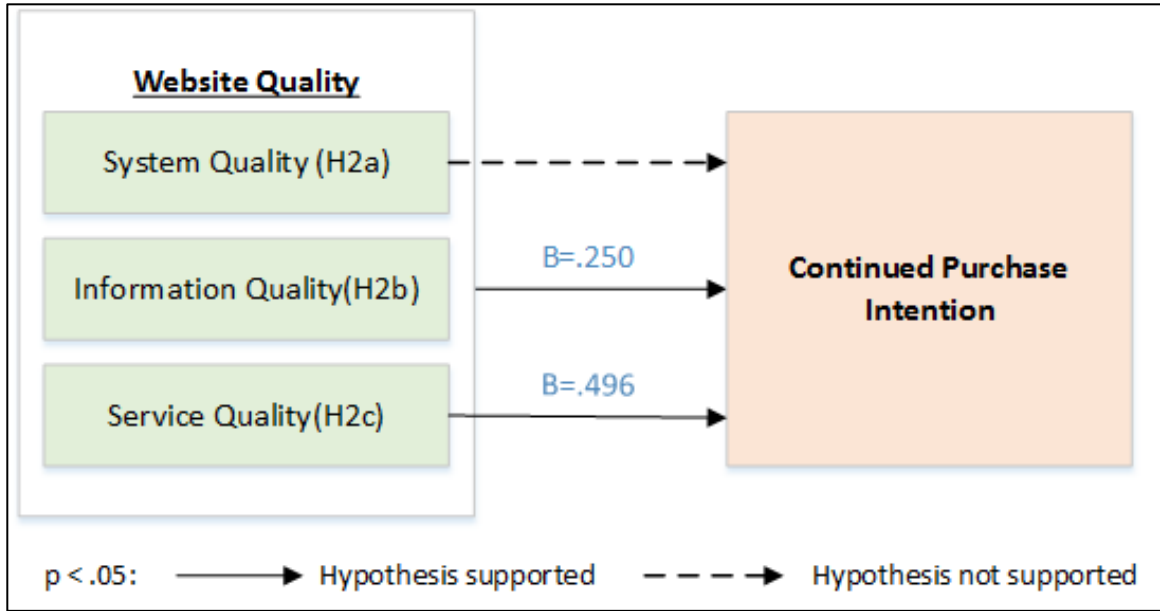


Figure 3: H2 (a-c) results: website quality and continued purchase intention

Predictor	Outcome	Initial purchase intention	Continued purchase intention
	System quality		n/s
Information quality		0.210*	0.250*
Service Quality		0.486***	0.496**
F		56.625	54.424
Adj. R ²		0.396	0.386
Sig.		0.000	.000
***p < .001, **p < .01, *p < .05, n/s: not significant			

Table 10: Multiple regression between website quality and purchase intentions

H 3: Initial purchase intention is influenced by safety and guarantee from website quality which stimulates continued purchase intention

To test H3, linear regression was used. Initial purchase intention was used as an independent variable, or predictor, while continued purchase intention was used as the

dependent variable. The results show that there is a significant positive relationship between the above factors. Specifically, initial purchase intention is positively related to continued purchase intention ($F = 788.605$; $\text{Adj. } R^2 = 0.755$; $\text{Beta} = .929$; $p < .001$). Therefore, H3 is supported (See Figure 4 and Table 11).

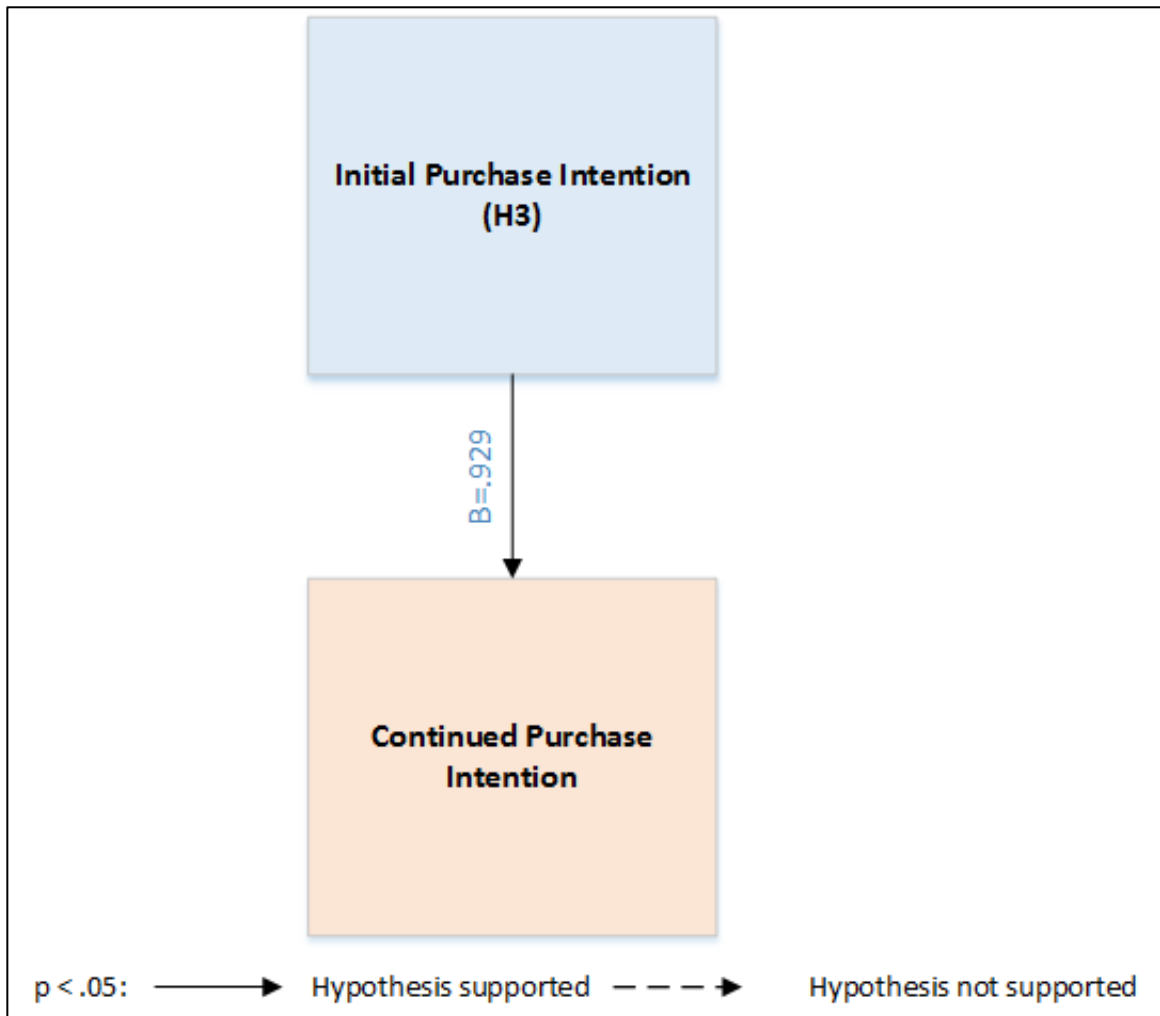


Figure 4: H3 results: Initial and continued purchase intention

Predictor \ Outcome	Continued purchase intention
Initial purchase intention	0.929***
F	788.605
Adj. R ²	0.755
Sig.	.000
***p < .001, **p < .01, *p < .05, n/s: not significant	

Table 11: Linear regressions between initial and continued purchase intention

H 4 (a-c): The relationship between website quality and initial purchase intention is weaker when users perceive higher risk levels

For examining H4, multiple regression analysis was used. The three factors of website quality, i.e., system quality, information quality, and service quality, were used as independent variables or predictors and initial purchase intention was the dependent variable, while perceived risk was used as the moderator between the above relationships. H4 hypothesized a negative moderating effect of perceived risk on the relationship between website quality factors and initial purchase intention. The results show that only significant relationship was found between system quality, initial purchase intention and the moderator of perceived risk (F= 7.137; Adj. R²= .067; p< .001). To be specific, perceived risk negatively moderated the effect of system quality and initial purchase intention (Beta= -.027; p<001). However, in terms of service quality, a positive relationship was found; the relationship between service quality and initial purchase intention were stronger when perceived risk was high, to be specific, Beta=.022 and p < .05.

That is, perceived risk positively moderated the effect of service quality on initial purchase intention, contrary to hypothesis H4c. Therefore, only H4a is supported (see Figure 5 and Table 12).

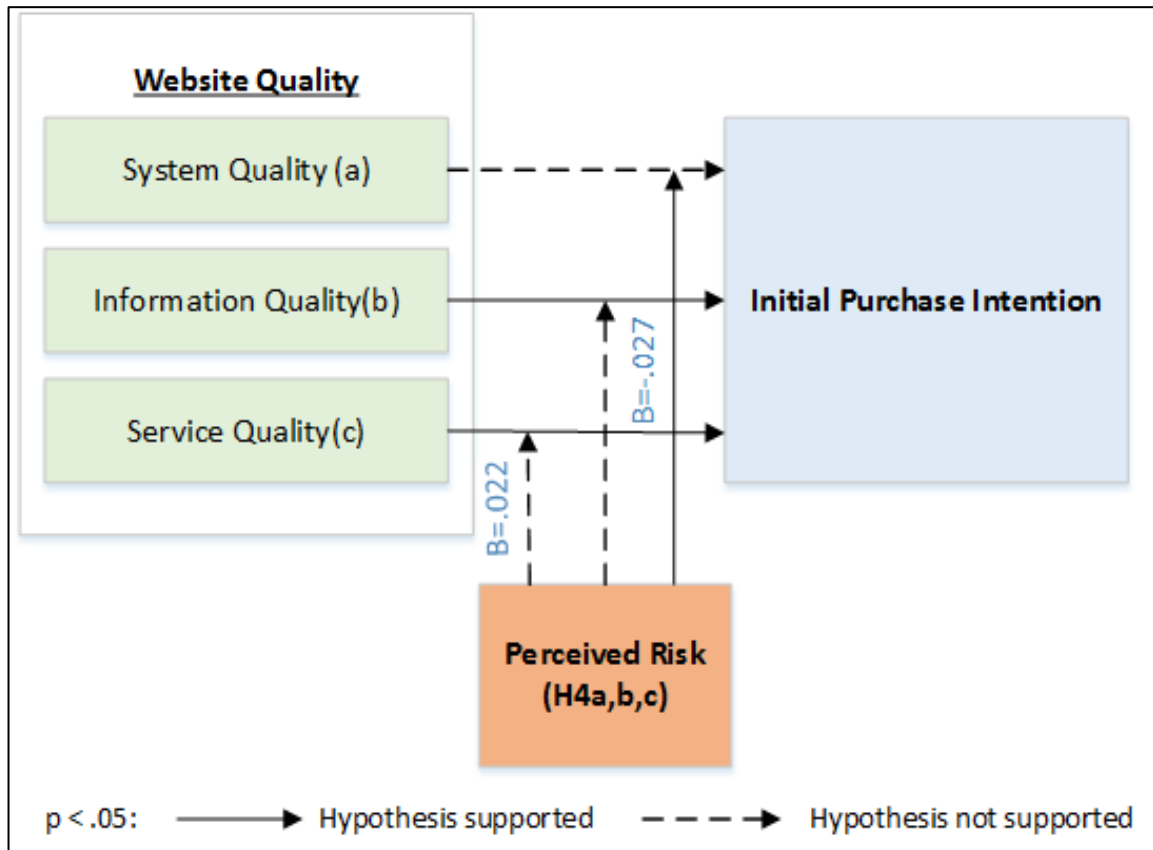


Figure 5: H4 (a-c) results: website quality, perceived risk and initial purchase

H 5 (a-c): The relationship between website quality and continued purchase intention is weaker when users perceive higher risk levels

For examining H5, multiple regression analysis was used. The three factors of website quality, i.e., system quality, information quality, and service quality, were used as independent variables or predictors and continued purchase intention was the dependent

variable, while perceived risk was a moderator between the above relationships. H5 hypothesized a negative moderating effect of perceived risk on the relationship between website quality and continued purchase intention. The results show that only for system quality a negative continued purchase intention exists. The results also show that only significant relationship was found between system quality, continued purchase intention and the moderator of perceived risk ($F= 6.089$; $\text{Adj. } R^2= .056$; $p < .01$). To be specific, perceived risk negatively moderated the effect of system quality and initial purchase intention ($\text{Beta}= -.028$ and $p < .000$). For unpredictably, in terms of service quality, a positive relationship was found; the relationship between service quality and continued purchase intention were stronger when perceived risk was high, to be specific, $\text{Beta}= .020$ and $p < .05$. That is, perceived risk positively moderated the effect of service quality on continued purchase intention, contrary to hypothesis 5c. Therefore, only H4a is supported (see Figure 6 and Table 12).

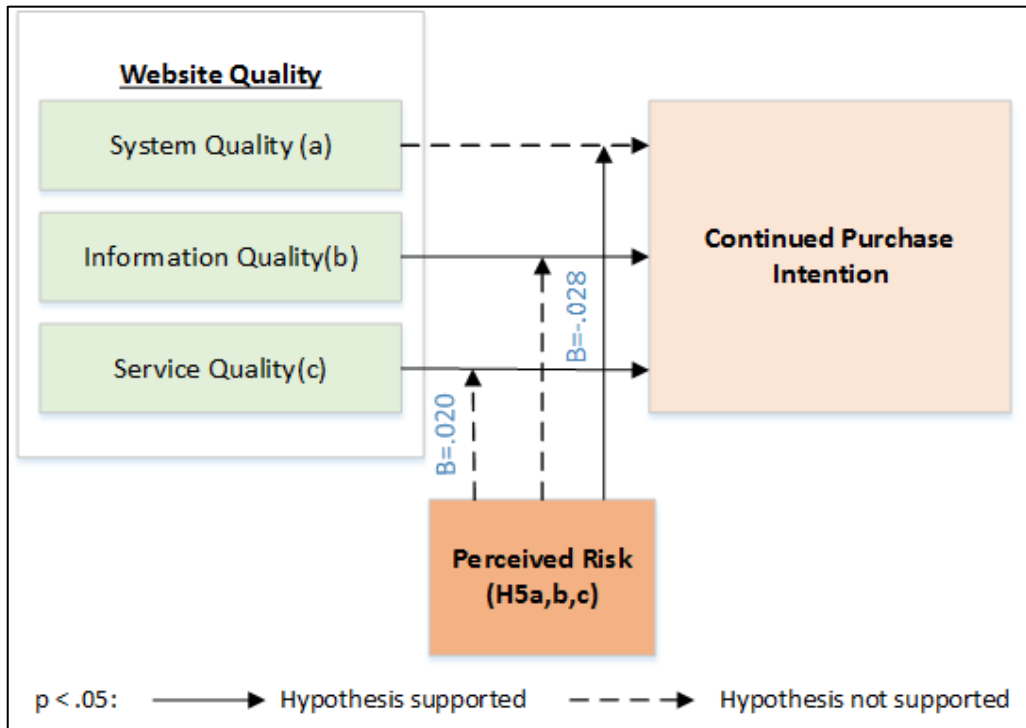


Figure 6: H5 (a-c) results: website quality, perceived risk and continued purchase

Predictor \ Outcome	Initial purchase intention	Continued purchase intention
System quality*Perceived Risk	-.027***	-.028***
Information quality*Perceived Risk	n/s	n/s
Service Quality*Perceived Risk	.022	0.020*
F	7.137	6.089
Adj. R ²	0.067	0.182
Sig.	.000	.001
***p < .001, **p < .01, *p < .05, n/s: not significant		

Table 12: Multiple regression between website quality and perceived risk on purchase intentions

Chapter 6

DISCUSSION AND CONCLUSION

The proliferation of information technology is influencing how conventional business is conducted today. More importantly, customer perception of e-commerce websites plays a vital role in influencing customer's behavior, which in turn affects purchase intentions and business performance. The quality of the website, information, and service are important to the moderator of perceived risk. The quality of the website plays a major role in influencing the behavior of the consumer and the retention effect rate. This chapter summarizes the analytical findings of this study and draws conclusions based on those findings. Additionally, limitations of this study and further research are discussed.

6.1 Discussion and Implications

The following sections of this chapter discuss and justify the hypotheses, which postulate that the quality of a website is a vital aspect in influencing customers purchase intentions which can be used to determine and influence their perceived risk. Figure 7 summarizes these relationships and provides a comprehensive image of the research model. In addition, the results of testing these hypotheses are summarized in Table 13.

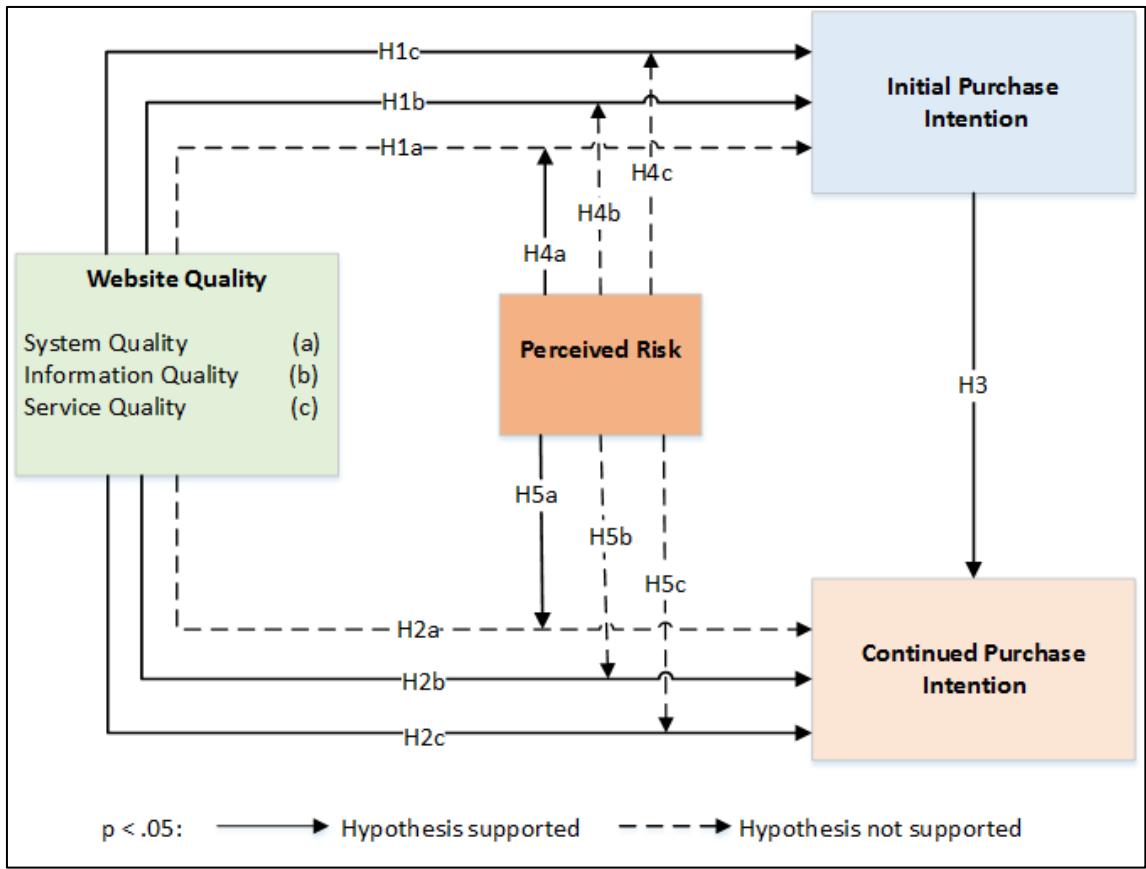


Figure 7: Consequent relationships of the proposed research model

Summary of Hypotheses	
H1a: System quality has a significant positive influence on initial purchase intention on e-tailing websites	Not Supported
H1b: Information quality has a significant positive influence on initial purchase intention on e-tailing websites	Supported
H1c: Service quality has a significant positive influence on initial purchase intention on e-tailing websites	Supported
H2a: System quality has a significant positive influence on continued purchase intention on e-tailing websites	Not Supported
H2b: Information quality has a significant positive influence on continued purchase intention on e-tailing websites	Supported
H2c: Service quality has a significant positive influence on continued purchase intention on e-tailing websites	Supported
H3: Initial purchase intention is influenced by safety and guarantee from website quality which stimulates continued purchase intention	Supported
H4a: The relationship between system quality and initial purchase intention is weaker when customers perceive higher risk levels	Supported
H4b: The relationship between information quality and initial purchase intention is weaker when customers perceive higher risk levels	Not Supported
H4c: The relationship between service quality and initial purchase intention is weaker when customers perceive higher risk levels	Not Supported
H5a: The relationship between system quality and continued purchase intention is weaker when customers perceive higher risk levels	Supported
H5b: The relationship between information quality and continued purchase intention is weaker when customers perceive higher risk levels	Not Supported
H5c: The relationship between service quality and continued purchase intention is weaker when customers perceive higher risk levels	Not Supported

Table 13: Summary of the research model hypotheses

6.1.1 System Quality

The system quality of a website greatly influences the success of the e-commerce web page. Factors such website responsiveness, system utility, suitability, reliability, and availability are important aspects that should be considered during the design phase of a system in order to deliver optimum system quality to the customer. Considering these

aspects promotes customer purchase intentions from the website (Kuan, Bock, & Vathanophas, 2008). Therefore, this study hypothesized that the system quality of a website positively influences initial and continued purchase intention (H1a, H2a). Conversely, this hypothesis was not supported by the experiment because the obtained results did not demonstrate statistical significance.

This study did, however, support the hypothesis that system quality negatively influences the purchase intentions through the moderator, thus, promoting brand awareness and value captured (H4a, H5a). System design that meets the aforementioned aspects of utility, suitability, reliability, and availability influence customers initial and continued purchase intention in addition to minimizing the perceived risk to deliver customers needs and satisfaction.

6.1.2 Information Quality

The information quality of website contents influence the risk perceived by the customers as well as their intention and belief. A good display of the content in the interface of the website enhances the security perception of its customers, which positively influences their purchase intentions. Therefore, this study provides support for the research model hypothesis that information of a website positively influences initial and continued purchase intention (H1b, H2b). Consequently, to maintain a competitive advantage and raise customer purchase intention, e-tailing websites must continuously improve the information quality of their websites to attract new customers and retain existing ones.

Alternatively, if the content of the website lacks relevant information, making it hard to use and understand or make purchase decisions, then the perceived risk of the website is higher, and subsequently negatively influencing the purchase intentions of the customer. Thus, this study hypothesized that the information quality of a website negatively influences initial and continued purchase intention of the customer if the customer perceives high risk (H4b, H5b). However, this hypothesis was not supported, as the relationship among the above factors was statically insignificant.

6.1.3 Service Quality

The advent of e-commerce services was initially gauged in terms of low prices and web page presentation, which was conceived to be the main success factors. Conversely, these factors, in the long run, cannot guarantee e-commerce success, particularly with poor service quality. The quality of service influences the perceived value the customer receives during the purchase process (Chang, Kuo, Hsu, & Cheng, 2014). Customer satisfaction is important in determining the quality of services, especially for continued purchase intention. In compliance with the results of prior research, this study shows that the relationship between website service quality and purchase intentions (initial and continued) was statistically significant. Thus, this study results supported the relationships between the website service quality and purchase intentions (initial and continued) (H1c, H2c).

Additionally, this study hypothesized that the service quality of a website negatively influences initial and continued purchase intention of the customer with perceived high risk (H4c, H5c). However, results did not support that negative relationship. This study found that the perceived risk positively moderates the effects of website service quality on purchase intentions. This finding differs from those of previous studies (Hsieh & Tsao, 2014), which suggested that perceived risk and website service quality negatively interact with each other in driving purchase intentions. Maybe the moderating effect of perceived risk on the service quality–purchase intentions link is affected by market competition and structure. If the market that provides the product or service is limited to a single or overwhelmingly large provider resulting in high-perceived risk, then service quality may have lesser effect on purchase intentions. That is, a dissatisfied customer with the service quality of the website is unlikely to perceive risk when there are only a few alternate options. So, even though the service quality of the website was not efficient, effective, responsive, available, private, and have a contact page to influence perceived risk, the customer likely to make a purchase due to the limited availability of other providers. Therefore, perceived risk might positively moderate the effect of service quality on purchase decisions.

Likewise, if the market is highly competitive and there are plenty of website providers that offers similar services or products, customers will likely to be sensitive to their perception of perceived risk; a dissatisfied customer will be more likely to not make initial nor continued purchases. In the context of e-commerce, the market is often highly competitive, so customers have a minimum tolerance to perceived risk. Therefore, if the

e-tailing website provides poor services such as customer delivery, customer interaction and purchase experience, initial and continued purchase intentions will be negatively influence, since the customer will be likely to switch to another service provider due to the abundance of providers. Hence, a negative interaction of perceived risk and website information quality on purchase intentions is likely.

6.1.4 Purchase Intentions

The results of this study supported the hypothesis that the initial purchase is influenced by the safety and guarantees provided by the website. Additionally, these factors stimulate continued purchase intention (H3). This implies that gaining customer satisfaction in the initial purchase could improve customer intention to return. Therefore, factors such as safety and guarantee measures that the website has in place, and features like slide of product pictures, reviews/feedback for the product and rating it, product customization and disclosure on how user information is handled and used, will contribute extremely in increasing user retention level. This is because users are not likely to make an initial purchase when there is a possibility that the goods or services offered are below quality and they have no access to safety or guarantee measures in the website.

6.2 Conclusion

Crafting an efficient and effective high-quality information and service of an e-commerce website have the most potential to influence initial and continued purchase intentions of customers. Website quality factors (system, information, and service) and market structure/strategy can influence customer perceived risk in making purchase decisions. Our study examined the influence of website quality factors and the moderator of perceived risk on purchase intentions (initial and continued) based on the presented research model. Our empirical results confirmed that website quality positively impacts initial intentions, and consequently continued purchase intention. While building and boosting customer retention in the e-business sectors is difficult. (Jiang & Rosenbloom, 2005). An e-retailing is required to put lots of effort to distinguish itself from its competitors through the website quality features. Based on our findings, e-tailing websites should consider focusing more on website quality factors as a marketing strategy, responsiveness, utility, reliability, availability, and the content of the website as well as the service provided such as customization, users feedback and rating, and good tracking of user complaints.

6.3 Limitations and Future Research

There are several limitations in this study that need to be addressed. The limitations propose directions for future research. First, as mentioned above in the literature review, website quality is a multi-faceted construct. This study involved only three dimensions to

measure website quality (information, system, and service quality). However, there are other factors such as usability, security, reliability, performance, portability, accessibility, and conformance to web standards regarding the measurement of website quality that may suggest other findings. Future studies might include some of the other website quality attributes that were not included in this study.

Second, the study only adopted perceived risk as a moderator. Further studies may be needed to examine other moderating variables that may impact the relationship among website quality and purchase intentions. Thus, in addition to perceived risk, future research could use and explore a wide range of moderating variables such as: switching costs and reputation. Moreover, the current study presented perceived risk in terms of lack of website quality factors (information, system, and service quality), while further studies may study perceived risk from different perspectives such as payment methods or after-sale risk to develop a more comprehensive research model that would apply to a variety of business sectors.

Additionally, as a part of this study participants were requested to complete navigation tasks on one of the three levels of website quality (high, medium, and low), then they were asked to respond to the survey questions based on their experience navigating the website. The purpose of creating three levels of website was to ensure accuracy and precision in the validation of the proposed model, rather than evaluate the detailed relationships effects of these three samples. While studying the interaction effects

individually among each website level would be interesting, it was beyond the scope of this study and was left for further analysis and investigation in future research.

Finally, this study employed a sample of college students at a mid-sized public university in the Southeastern United States. Even though there is racial and ethnic diversity in this sample study, the sampling of only college students does not yield a representative sample of the general population of online shoppers. There is opportunity to conduct further studies with larger populations of students from various universities across the U.S. as well as other groups throughout the U.S. and the world. In addition, since this study only considered office furniture, it is not possible to generalize the outcomes to other e-commerce websites. Further research can be conducted to examine a variety of online retailers, products, and services. Furthermore, this study was applied using an e-commerce platform and a traditional website, future researches may consider broadening this perspective and employing a mobile platform that can be launched from participant's phone or tablet.

REFERENCES

Print Publications:

- Ahn, H., Kim, J., Choi, I., & Cho, Y. (2004). A Personalised Recommendation Procedure Based on Dimensionality Reduction and Web Mining. *International Journal of Internet & Enterprise Management* , 2 (3), 280–298.
- Bai, B., Law, R., & I., W. (2008). The impact of website quality on customer satisfaction and purchase intentions: Evidence from Chinese online visitors. *International Journal of Hospitality Management* , 27 (3), 391–402.
- Barnes, S. J., & Vidgen, R. T. (2001). An evaluation of cyber-bookshops: The WebQual method. *International Journal of Electronic Commerce* , 6 (1), 11-30.
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. Gainesville, USA: Thousand Oaks: Sage Publications.
- Chang, H., & Chen, S. (2008a). The impact of customer interface quality, satisfaction and switching costs on e-loyalty: Internet experience as a moderator. *Computers in Human Behavior* , 24 (6), 2927–2944.
- Chang, H., & Chen, S. (2008b). The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator. *Online Information Review* , 32 (6), 818-841.
- Chang, K. C., Kuo, N. T., Hsu, C. L., & Cheng, Y. S. (2014). The impact of website quality and perceived trust on customer purchase intention in the hotel sector: Website brand and perceived value as moderators. *International Journal of Innovation, Management and Technology* . , 5 (4), 255.
- Chen, Y., & Barnes, S. (2007). Initial trust and online buyer behavior. *Industrial Management & Data Systems* , 107 (1), 21-36.

- Cyr, D., Hassanein, K., Head, M., & Ivanov, A. (2007). The role of social presence in establishing loyalty in e-service environments. *interacting with computers* , 19 (1), 43-56.
- DeLone, W. H., & McLean, E. R. (2004). Measuring E-Commerce Success: Applying the Delone & Mclean Information Systems Success Model. *International Journal of Electronic Commerce* , 9 (1), 31–47.
- Fung, R., & Lee, M. (1999). EC-Trust (Trust in Electronic Commerce): Exploring the Antecedent Factors. *Proceedings of the fifth Americas conference on information systems* (pp. 517-519). Milwaukee, WI: AMCIS 1999 Proceedings.
- Garver, M. S., & Mentzer, J. T. (2009). Logistics research methods: employing structural equation modeling to test for construct validity. *Journal of business logistics* , 20 (1), 30.
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Inexperience and experience with online stores: the importance of TAM and trust. *IEEE Transactions on Engineering Management* , 50 (3), 307 – 321.
- Gregg, D., & Walczak, S. (2010). The relationship between website quality, trust and price premiums at online auctions. *Electronic Commerce Research* , 10 (1), 1-25.
- Hair, J., F., J., Wolfinbarger, M., Money, A. H., Samouel, P., & J., M. (2015). *Essentials of business research methods*. Routledge. London, USA: John Wiley & Sons, inc,.
- Harper, B. D., Slaughter, L. A., & Norman, K. L. (1997). Questionnaire Administration Via the WWW: A Validation & Reliability Study for a User Satisfaction Questionnaire. *WebNet 97 World Conference of the WWW, Internat & Intranet* (pp. 808-810). Toronto, Canada: Association for the Advancement of Computing in Education.
- He, Y., Chan, L., & Tse, S. (2008). From consumer satisfaction to repurchase intention: The role of price tolerance in a competitive service market. *Total Quality Management* , 19 (9), 949 –961.

- Hsieh, M. T., & Tsao, W. C. (2014). Reducing perceived online shopping risk to enhance loyalty: a website quality perspective. *Journal of Risk Research* , 17 (2), 241-261.
- Hsu, C., Chang, K., & Chen, M. (2012). The impact of website quality on customer satisfaction and purchase intention: perceived playfulness and perceived flow as mediators. *Information Systems and e-Business Management* , 10 (4), 549–570.
- Ittner, C. D., & Larcker, D. F. (1998). Are nonfinancial measures leading indicators of financial performance? An analysis of customer satisfaction. *Journal of Accounting Research* , , 36, 1 – 35.
- Jiang, P., & Rosenbloom, B. (2005). Customer intention to return online: price perception, attribute-level performance, and satisfaction unfolding over time. *European Journal Of Marketing* , 39 (1/2), 150-174.
- Kim, J., & Lennon, S. (2013). Effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention . *Research in Interactive Marketing* , 7 (1), 33-56.
- Kirakowski, J., Claridge, N., & Whitehand, R. (1998). Human Centered Measures of Success in Web Site Design. *the 4th Conference on Human Factors and the Web* (pp. 40-44). Basking Ridge, NJ: Our Global Community.
- Kuan, H., Bock, G., & Vathanophas, V. (2008). Comparing the effects of website quality on customer initial purchase and continued purchase at e-commerce websites. *Behaviour & Information Technology* , 27 (1), 3-16.
- Liang, C., & Chen, H. (2009). A study of the impacts of website quality on customer relationship performance. *Total Quality Management & Business Excellence* , 20 (9), 971-988.
- Lin, H. (2007). The Impact of Website Quality Dimensions on Customer Satisfaction in the B2C E-commerce Context. *Total Quality Management & Business Excellence* , 18 (4), 363-378.
- Loiacono, E., Watson, R., & Goodhue, D. (2002). WEBQUAL: A MEASURE OF WEBSITE QUALITY. *American Marketing Association* , 432-438.

- Masoud, E. (2013). The Effect of Perceived Risk on Online Shopping in Jordan. *European Journal of Business and Management* , 5 (6), 76-87.
- Maxwell, J. (2002). Understanding and validity in qualitative research. *Harvard educational review* , 62 (3), 279-301.
- Mcknight, D., Choudhury, V., & Kacmarc, C. (2002). The impact of initial consumer trust on intentions to transact with a web site: a trust building model. *Journal of Strategic Information Systems* , 11 (3), 297–323.
- Palmer, J. W. (2002). Website usability, design and performance metrics. *Information System Research* , 13 (2), 151 – 167.
- Rai, A., Lang, S. S., & Welker, R. B. (2002). Assessing the validity of IS success models: an empirical test and theoretical analysis. *Information Systems Research* , 13 (1), 50 – 69.
- Schefter, P., & Reichheld, F. (2000). E-loyalty: your secret weapon on the web. *Harvard Business Review* , 78 (4), 105 – 113.
- Shen, J. (2012). Social comparison, social presence, and enjoyment in the acceptance of social shopping websites. *Journal of Electronic Commerce Research* , 13 (3), 198-212.
- Straub, D., & Watson, R. (2001). Research Commentary: Transformational Issues in Researching IS and Net-Enabled Organizations. *Information Systems Research* , 12 (4), 337 - 345.
- Swaid, S. I., & Wigand, R. T. (2009). Measuring the quality of e-service: Scale development and initial validation. *Journal of Electronic Commerce Research* , 10 (1), 13-28.
- Winnie, P. M. (2014). The Effects of Website Quality on Customer e-Loyalty: The Mediating Effect of Trustworthiness. *International Journal of Academic Research in Business and Social Sciences* , 4 (3), 19-41.
- Zeithaml, V. (2002). Service Excellence in Electronic Channels. *Managing Service Quality* , 12 (13), 135–139.

Electronic Sources:

Laja, P. (2015, 09 10). *39 Factors: Website Credibility Checklist*. Retrieved from conversionxl: <http://conversionxl.com/website-credibility-checklist-factors/>

Qualtrics. (2015). Qualtrics. <http://www.qualtrics.com> . Utah, Provo, USA. Retrieved from <http://www.qualtrics.com>

APPENDIX A: THE SURVEY INSTRUMENT

Construct	Items	Source
Website Quality		
System Quality	The website makes it easy to get anywhere on the site.	(Hsu, Chang, & Chen, 2012)
	In terms of system quality, I would rate this website highly.	
	The overall page layout is consistent throughout the website.	
	The user interface of the website has a well-organized appearance.	(Lin, 2007)
Information Quality	The website provides complete information.	(Hsu, Chang, & Chen, 2012)
	The website provides me with all the information I need.	
	The information provided accurate information	
	In general, the website provides me with high-quality information.	
Service Quality	The website is prompt in responding to my queries.	(Hsu, Chang, & Chen, 2012)
	The website understands the needs of their customers	
	The website provides the user feedback about the products and services	(Lin, 2007)
	I believe that this website takes good care of its customers.	(Liang & Chen, 2009)
Perceived risk		
	I do not trust that my credit card number will be secure at this web site	(Kim & Lennon, 2013)
	It is difficult to judge quality of a product/service on this web site	
	I do not trust that my personal information will be kept private	
Purchase intention		
Initial Purchase Intention	I will buy an item from this web site if I find something that I like	(Kim & Lennon, 2013)
	I will probably buy the item I saw at this web site for myself in near future	
	I will consider this site to be the first choice for future shopping.	

Construct	Items	Source
	I am likely to actually purchase products I found on this site.	
Continued Purchase Intention	I will revisit this site to discover new products and get shopping ideas in the future.	(Shen, 2012)
	I will revisit this site when I need the type of products it offers.	
	I consider this site to be primary source when I need the type of product or service it offers.	
	I will revisit this site first in preference the others	

APPENDIX B: EXPERIMENTAL WEBSITE

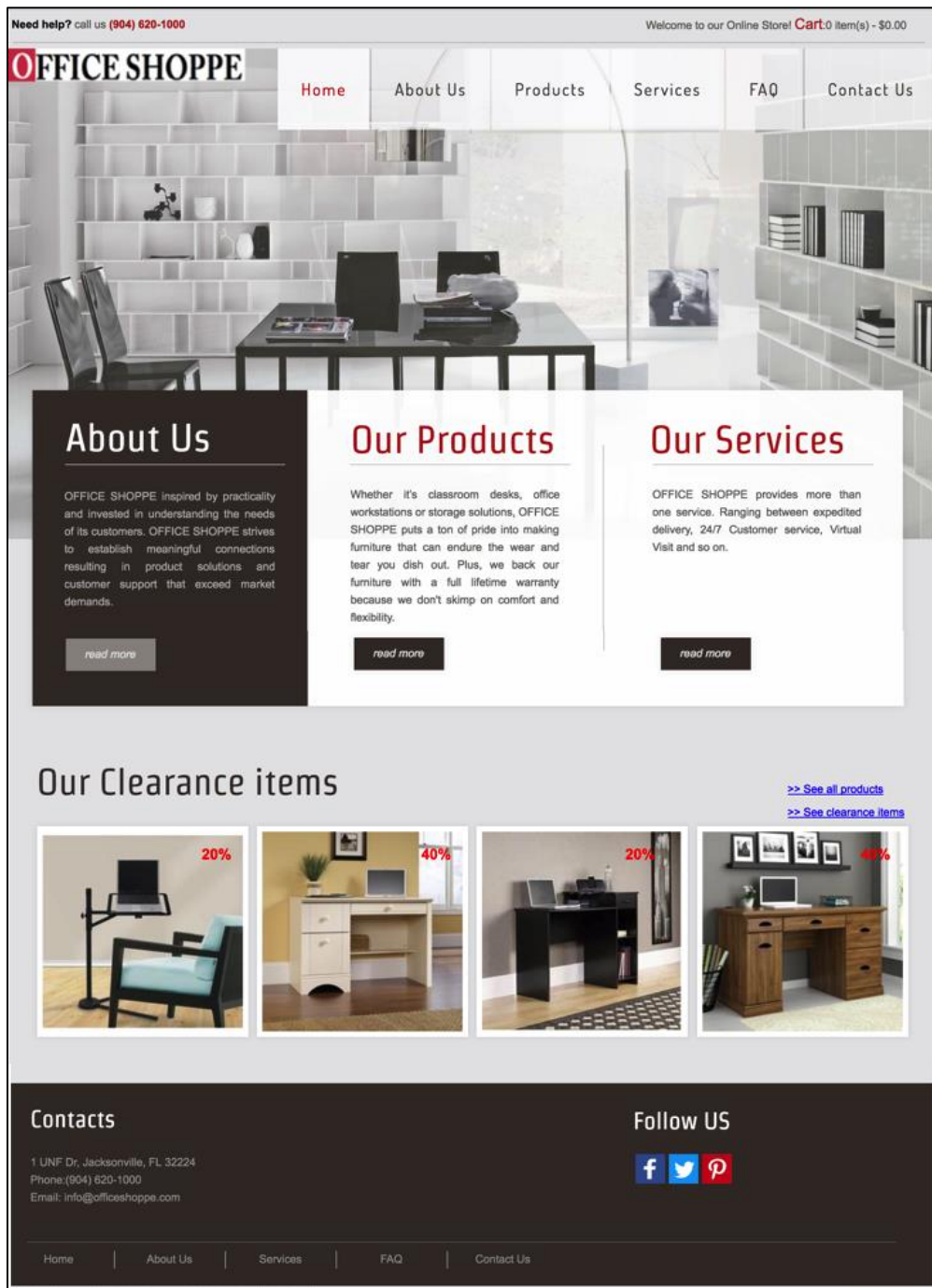


Figure 8: High-website quality

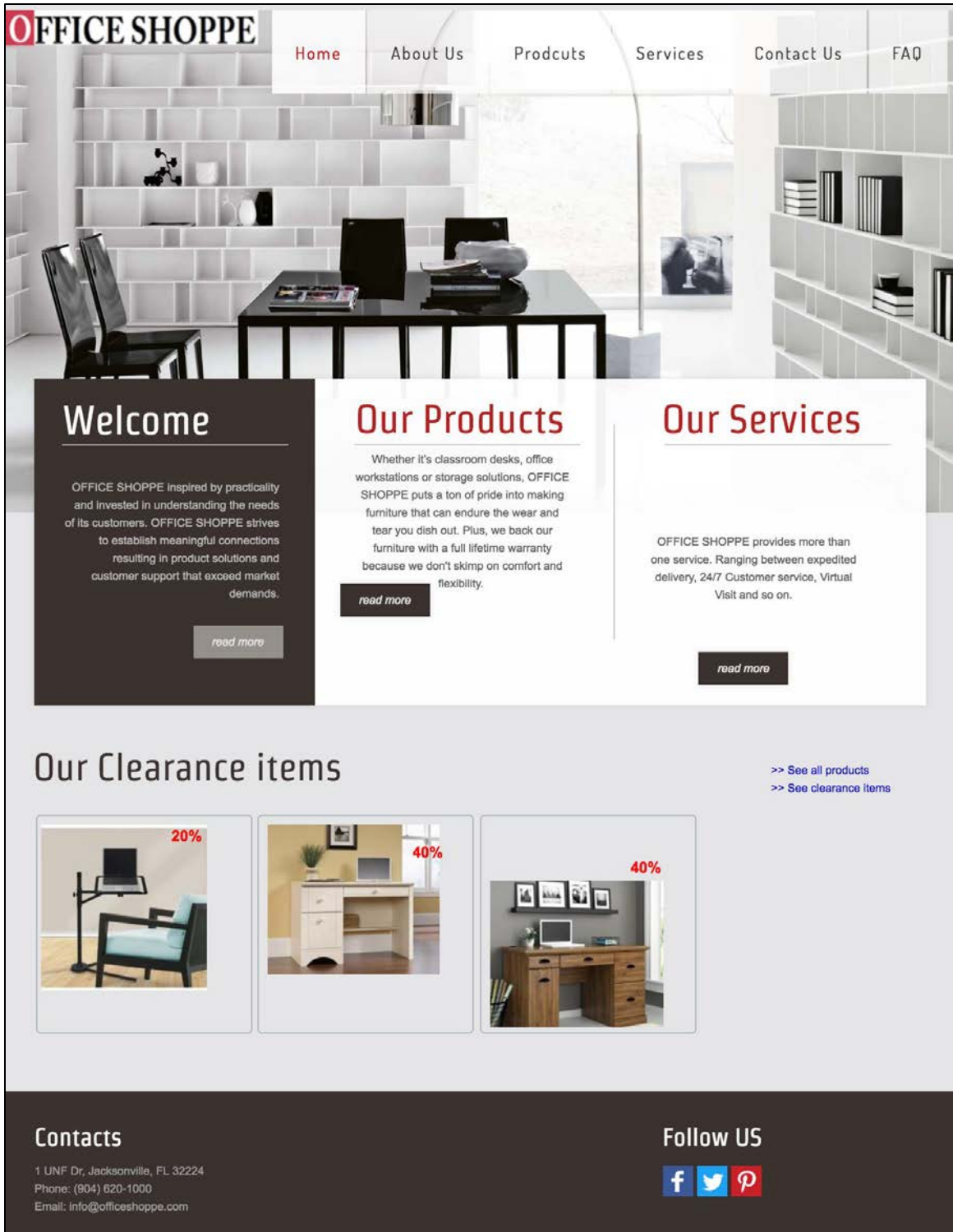


Figure 9: Medium-quality website

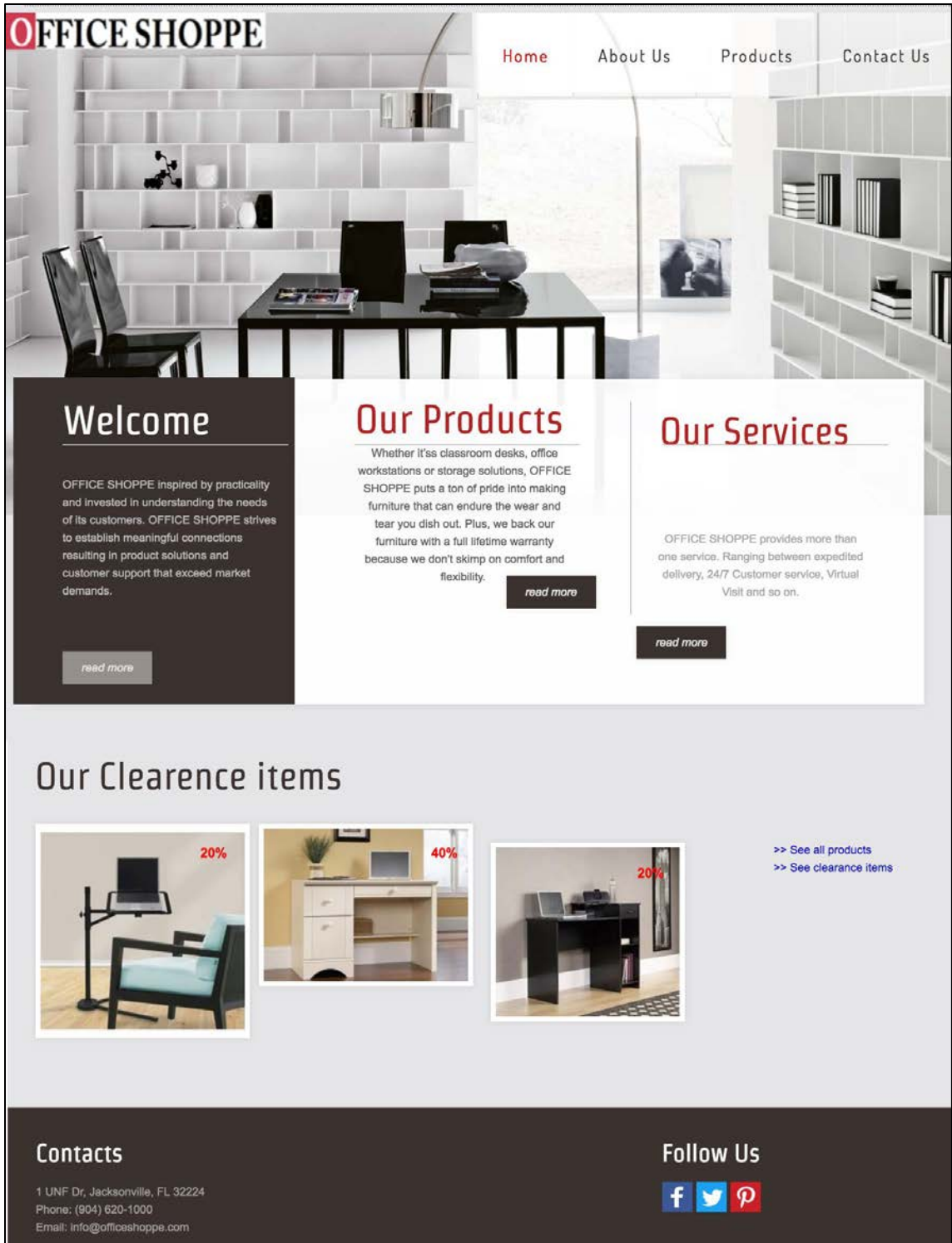


Figure 10: Low-quality website

APPENDIX C: SAMPLES OF WEBSITE QUALITY-PRODUCT PAGE

The screenshot shows a product page for a desk. At the top, there is a navigation bar with the logo 'OFFICE SHOPPE' and links for Home, About Us, Products, Services, FAQ, and Contact Us. A breadcrumb trail reads 'Products >> Computer Desks >> South Shore Smart Basics Small Desk, Multiple Finishes'. Below this, a 'Our Categories' sidebar lists 'Computer Desks', 'Writing Desks', 'L-shape Desks', and 'Laptop Stands'. The main content area features a product image of a white desk with a lamp and a laptop. To the right of the image, the product title is 'South Shore Smart Basics Small Desk, Multiple Finishes'. The description states: 'The Kid's Parker Desk offers a fun and ideal style perfect for any kid or teen's room. The Parker Desk has a finished back and offers four drawers that provide much needed storage and organization. The desk top is 1-1/4 inch thick. Drawers come complete with metal runners...'. The price is listed as '\$99'. There is an 'Add to Cart' button. Below the price, 'Available Options' are shown: Color (Silver), Size (Large), and Quantity (1). There are also social media share icons for Facebook, Twitter, and YouTube, and buttons for 'Add to Waitlist' and 'Add to Compare'. At the bottom of the page, there is a 'Product Tags' section with a heading 'Add Your Tags:', a text input field, and an 'Add Tags' button. The text above the input field explains that users can submit keywords related to the product, which can then be used by other users to search for relevant products.

Figure 11: High website Quality – product Tags

Product Details	Product Tags	Product Reviews
<p>The Kid's Parker Desk offers a fun and ideal style perfect for any kid or teen's room. The Parker Desk has a finished back and offers four drawers that provide much needed storage and organization. The desk top is 1-1/4 inch thick. Drawers come complete with metal runners.</p> <ul style="list-style-type: none"> • White laminate finish on engineered wood • Drawers with metal runners • Straight desk with finished back • Superior storage • 1-1/4" thick desktop • Available online only • Made in Denmark • Certified by the Danish Indoor Climate Label, promoting a healthy indoor environment • Shipped in protective packaging that helps ensure delivery arrives damage-free • Assembly required • Assembled dimensions: 43.25" x 23.75" x 30" • Model: 80120-49 <p>Specifications:</p> <ul style="list-style-type: none"> • Gender: Boys , Girls • Age Group: Kids Teen • Is Assembly Required: Y • Condition: New • Material: Wood Composite • Color: White • Finish: White • Features: No Keyboard Tray • Assembled Product Dimensions (L x W x H): 43.25 x 23.75 x 30.00 Inches <p>Features:</p> <p>File Storage , Keyboard Tray , Drawer , Closed Storage , Cable Management , Keyboard Trays Assembled Product Dimensions (L x W x H): 23.56 x 53.50 x 30.31 Inches</p>		

Figure 12: High website quality- Product Details

Product Details Product Tags **Product Reviews**

869 reviews [Review by office shore](#)

- Price: ★★★★★
- Value: ★★★★★
- Quality: ★★★★★

Great for a little room
4/14/2013
★★★★☆ by "Mimi83"

I got this desk for my 8 year old daughter. She loved. Is very steady and have a lot the space for her books and draws. Fits nice under her loft bed and still extra space.

Great student desk!
2/28/2014
★★★★☆ by "Michael Jone"

The desk arrived very promptly and was in good shape. One small ding on the top but hardly noticeable. The desk is sturdy and very easy to assemble. We opted to not install the pull out drawer since it wouldn't be needed. We used that piece of wood to create a hanging chalkboard. All in all the desks look great and provided more than ample room for homework, crafts, etc. I am very happy with them both.

Great Computer Desk for the Space
2/28/2014
★★★★☆ by "Creativeone79"

I always wanted a computer desk. This met my expectation - not to mention the way it looks. It matches my furniture - just the way I need it to. I only had a little space to work with and this does was more than plenty for me. Perfect storage space and book space.

How Do You Rate This Product?
Write Your Own Review?

Nickname*

Summary of Your Review*

Review*

Figure 13: High website quality- Product Reviews

Need help? call us (904) 620-1000 Welcome to our Online Store! Cart: 0 item(s) - \$0.00


OFFICE SHOPPE

Home About Us Prodcuts Services Contact Us FAQ

Products >> Computer Desks >> South Shore Smart Basics Small Desk, Multiple Finishes

Our Categories

- Computer Desks
- Writing Desks
- L-shape Desks
- Laptop Stance



South Shore Smart Basics Small Desk, Multiple Finishes

The South shore Desk offers a fun and ideal style perfect for teen's room. The Parker Desk has a finished back and offers four drawers that provide much needed storage and organization...

Price: **\$99** [Add to Cart](#)

Product Details Product Tags Product Reviews

- White laminate finish on engineered wood
- Drawers with metal runners
- Straight desk with finished back
- Superior storage
- 1-1/4" thick desktop
- Assembled dimensions: 43.25" x 23.75" x 30"
- Model: 80120-49

Figure 14: Medium website quality- Product Detail

Need help? call us (904) 620-1000 Welcome to our Online Store! Cart: 0 item(s) - \$0.00


OFFICE SHOPPE

Home About Us Products Services Contact Us FAQ

Products >> Computer Desks >> South Shore Smart Basics Small Desk, Multiple Finishes

Our Categories

- Computer Desks
- Writing Desks
- L-shape Desks
- Laptop Stands



South Shore Smart Basics Small Desk, Multiple Finishes


The South shore Desk offers a fun and ideal style perfect for teen's room. The Parker Desk has a finished back and offers four drawers that provide much needed storage and organization...

Price: **\$99** [Add to Cart](#)

Product Details
Product Tags
Product Reviews

Users are able to submit a series of keywords that's related to a product. When this word is submitted, the user is given the opportunity to associate tags, or a series of keywords, with their submission. Once tagged, other users can then search using these tags to find the product that has been deemed relevant by Internet users, rather than declared relevant by a publisher.

Add Your Tags:



[Add Tags](#)

Figure 15: Medium website quality- Product Tags

Product Details	Product Tags	Product Reviews
<p>869 reviews Review by office shore</p> <ul style="list-style-type: none">• <u>Price:</u> ★★★★★• <u>Value:</u> ★★★★★• <u>Quality:</u> ★★★★★		
<p>The quality is very poor 4/14/2013 ★★★★★ by "Mimi83"</p> <p>The quality is very poor. The surface is very cheap. I have 3 pieces damaged. The customer service are good though. They shipped the damaged pieces for free. But I don't recommend this to other people.</p>		
<p>Parker Student Desk 2/28/2014 ★★★★★ by "Michael Jone"</p> <p>I have a feeling that this desk would have been a good product. UNFORTUNATELY, there was considerable packing AND shipping damage. The packing damage came from someone who banded the pieces to tight which made indentations in the particle board finish. Also, each of the corners of the desk were damaged as though the package had been thrown around in shipping. (It came from Denmark - a long way to reach its destination in such poor shape) We returned it for a full refund.</p>		
<p>Worst Computer Desk for the Space 2/28/2014 ★★★★★ by "Creativeone79"</p> <p>Desk top arrived damaged. Poorly constructed, pieces were delaminating as they were taken out of the box.</p>		

Figure 16: Medium website quality- product Reviews

Need help? call us (904) 620-1000 Welcome to our Online Store! Cart:0 Item(s) - \$0.00


OFFICE SHOPPE

Home About Us Products Contact Us

Products >> Computer Desks >> South Shore Smart Basics Small Desk

Our Categories

- Computer Desks
- Writing Desks
- L-shape Desks
- Laptop Stands



**South Shore Smart Basics Small Desk,
Multiple Finishes**

Price: **\$99**

[Add to Cart](#)

Product Details Product Tags Product Reviews

South Shore Smart Basics Small Desk, Multiple :

- Whit laminate finish on engineered wood
- Drawer with metal runners
- Straight desk wwith finished back
- Model: 80120-49

Figure 17: Low website quality- Product Details

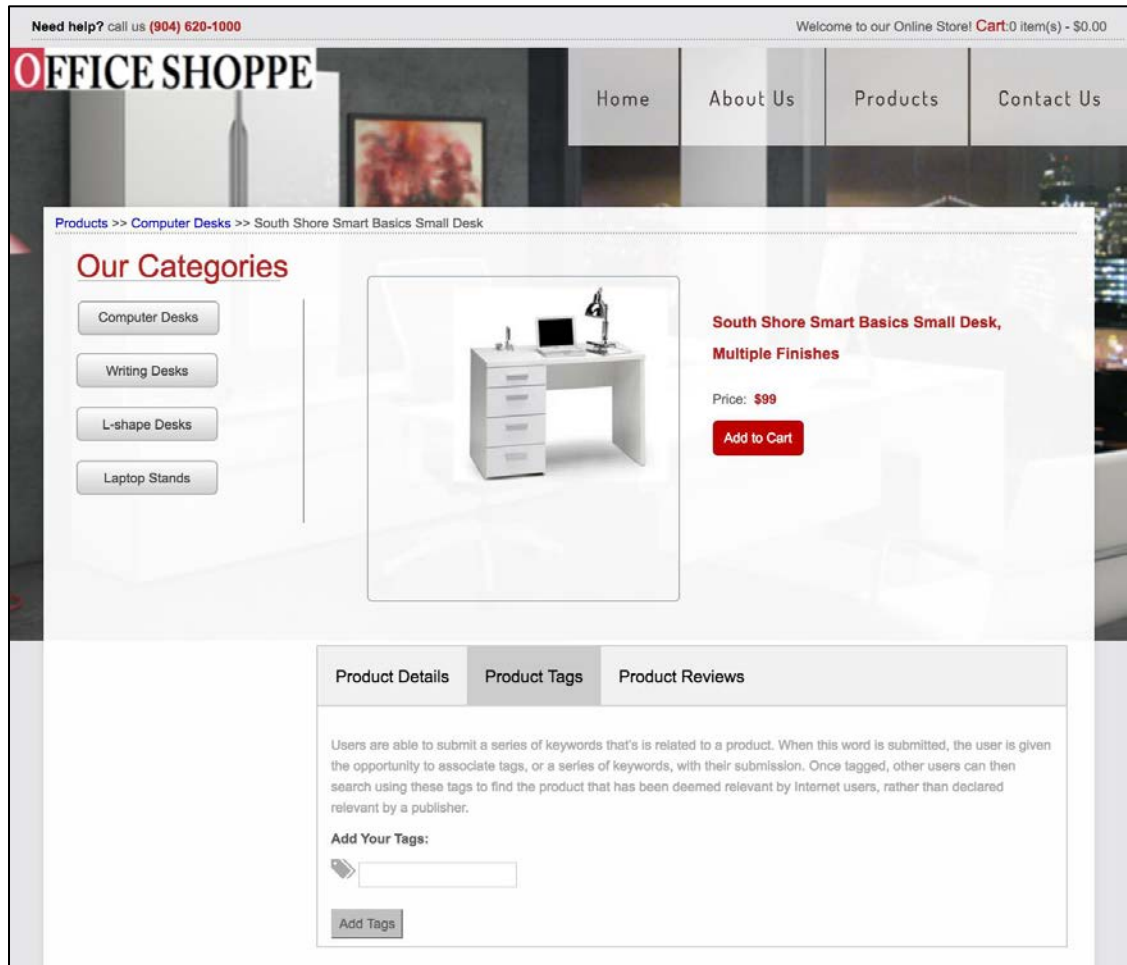


Figure 18: Low website quality- Product Tags

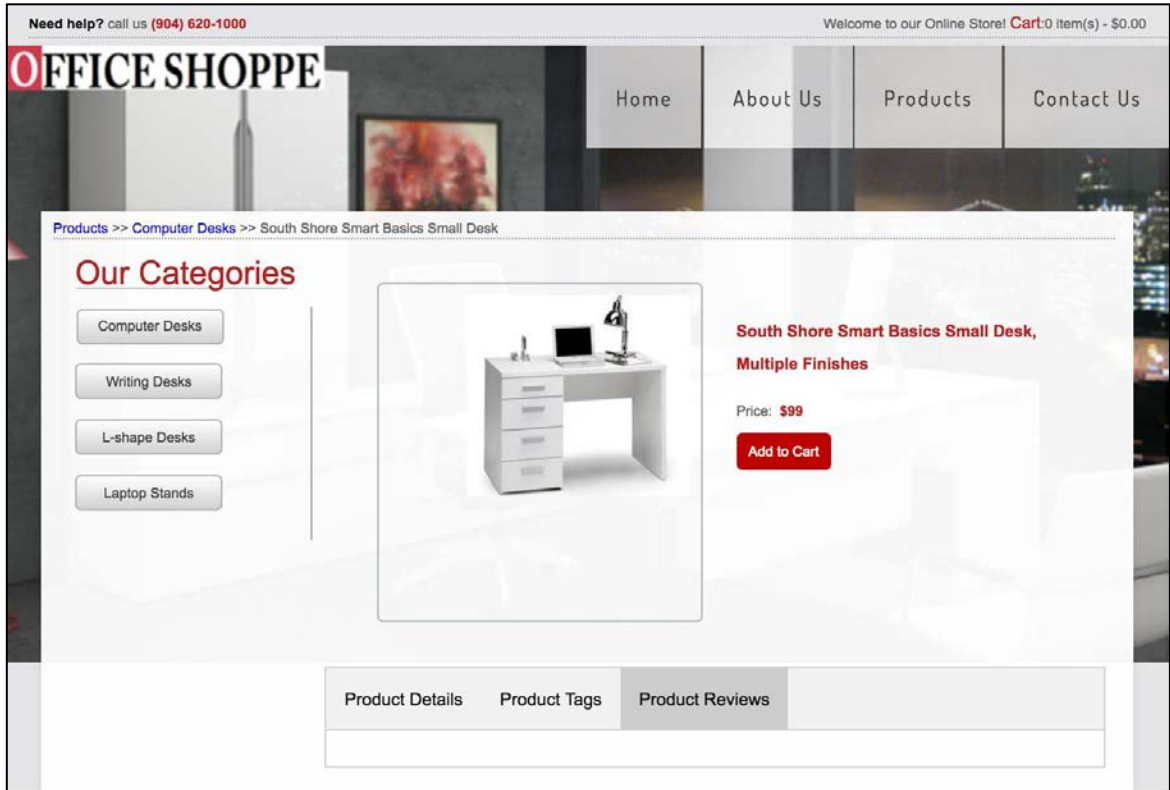


Figure 19: Low website quality- Product reviews

VITA

Hibah A. Khalil is originally from Saudi Arabia and currently lives in Jacksonville, Florida. She has a Bachelor's degree in Computing and Information Technology from Saudi Arabia and expects to receive a Master of Science in Computer and Information Sciences from the University of North Florida, April 2017. She has an experience in the IT industry, mostly in programming/scripting languages: C, C++, Java, SQL, and JavaScript as well as Web Portal Application. In 2015, she was part of a team that won an Honorable Mention in the University of North Florida's Computing symposium. In 2016, she received the Poster presentation Innovation Award at the University of North Florida's Computing symposium. She was Volunteer Teacher and Application developer for Expanding Your Horizons (EYH) North Florida. She is self-motivated, dedicated, and independent worker. She is always willing to learn and adapt new tools and technologies. She continues to be active in generating innovative ideas for improving continuous build integration processes. She aspires to pursue her PhD where she can utilize her knowledge and skill set to the best possible extent.