

How Website Design Quality Affects Customers' Purchase Intention

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Abstract

E-commerce is rapidly growing in today's technology-driven world. In order to increase purchase intention in new online visitors and retain current customers, companies must ensure their e-commerce website is designed to maximize customer satisfaction and trust. However, there are several elements of website design quality that influence purchase intentions more strongly than others. This research attempts to synthesize the recent literature on the main determinants of website design quality that increase purchase intention. Consequently, the most significant determinants are transaction ease, visual design, information quality, social-cue, ease of navigation, service quality and security; their importance varying across industries. Among research conducted on e-commerce websites selling products, visual design has a more significant effect on customer satisfaction than information quality and service quality. The opposite is found to be true among empirical studies of e-commerce websites selling services. Transaction ease, social-cue, ease of navigation and security have a substantial impact on customer satisfaction and trust, regardless of whether the e-commerce website is offering products or services.



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1. Introduction

Global e-commerce sales have risen to \$26.7 trillion in 2019 (UNCTAD, 2021). During the pandemic, online retail sales increased in Australia, Canada, China, Singapore, South Korea, the U. K. and the U. S. (UNCTAD, 2021). Furthermore, the total online retail sales of these economies had risen from \$2 trillion in 2019 to over \$2.4 trillion in 2020 (UNCTAD, 2021). Despite all of this progress, achieving success in e-commerce is more difficult in certain aspects than in traditional commerce. Customer loyalty is more challenging in an online environment because comparing alternatives is easier online than when shopping at a physical store (Pilelienė & Grigaliūnaitė, 2016). Competing offers can be reached with only a few clicks on the Internet, usually at very competitive prices with regular discounts and other promotions (Pilelienė & Grigaliūnaitė, 2016; Wilson, Keni & Tan, 2019). Yet, across most industries, the cost of acquiring new customers can range from five to twenty-five times more than the cost of retaining customers (Gallo, 2014; Rosenberg & Czepiel, 1984). Therefore, despite the challenges, organizations should implement retention strategies. Attracting users, converting them into customers and finally enticing them to repurchase from the same e-commerce website is a key indicator of success (Barrera, Garcia & Moreno, 2014; Hsu, Chang & Chuang, 2015; Manaf, Rachmawati, Witanto & Nugroho, 2018; Rashwan, Mansi & Hassan, 2019).

Most studies consider customer satisfaction as the prerequisite for customer loyalty (Chen, 2012; Manaf et al., 2018; Pilelienė & Grigaliūnaitė, 2016; Rashwan et al., 2019; Wilson et al., 2019), where customer satisfaction is treated as the mediator variable between perceived website quality and customer loyalty (Hsu, 2008; Manaf et al., 2018; Pilelienė & Grigaliūnaitė, 2016; Rashwan et al., 2019; Wilson et al., 2019). Therefore, it is crucial to achieve well-perceived website quality and highly satisfy online customers to promote long-term loyalty (Bai et al., 2008; Chen, 2012; Hsu, 2008; Manaf et al., 2018). It is imperative that companies apply a substantial share of efforts into the optimization of their websites' design, in order to enrich the quality of customers' virtual experiences and to provide a superior service quality, as these are the main determinants of success in the e-commerce industry (Al-Qeisi, Dennis, Alamanos & Jayawardhena, 2014; Barrera et al., 2014; Hsu et al., 2015; Manaf et al., 2018; Rashwan et al., 2019; Wilson et al., 2019).

However, not all of the investments into developing website design are similarly impactful (Al-Qeisi et al., 2014; Bai, Law & Wen, 2008; Barrera et al., 2014; Chen, 2012; Hsu, 2008; Hsu et al., 2015). This is because of the differentiation of website design determinants and their respective impact on customer satisfaction, in relation to differing customer segments and the nature of the product being sold (Al-Qeisi et al., 2014; Barrera et al., 2014; Hafsa, 2020; Hsu, 2008; Hsu et al., 2015). Numerous studies have identified which determinants of design have the most effect on customer satisfaction, trust and purchase intention. The results of such studies will be synthesized to provide a holistic understanding of the current literature.

2. Theoretical Background

2.1. Purchase Intention

2.1.1. Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB)

Purchase intention has been measured in numerous salient literature within the fields of consumer behavior and social psychology (Khialani, 2018), such studies have developed several intention based theories (Oliveira, Alhinho, Rita & Dhillon, 2017). Ajzen and Fishbein (1980), established the theory of reasoned action (TRA), which proposes that an individual's performance is determined by their behavioral intentions. These behavioral intentions, in turn, are subjected to the individual's subjective norms and attitude (Ajzen & Fishbein, 1980). An evolution of the TRA by Ajzen, (1991), is the theory of planned behavior (TPB) that focuses on

cases where individuals do not possess absolute control over the choice, but are instead conditioned by non-motivational factors which are in relation to the availability of particular resources and requirements. Similar to its predecessor, under the TPB, intention is considered as being the most accurate indicator of behavior, due to its ability to capture the motivational factors which influence a specific behavior (Ajzen, 1991). Whereby, intention to perform a specific behavior is regarded as the proximal causal of such behavior under the TPB (Chen & Dhillon, 2003).

2.1.2. TPB and the E-Commerce Industry

Within the context of e-commerce, purchase intention has been described as a type of personal action tendency (Bagozzi, Tybout, Craig, & Sternthal, 1979; Ostrom, 1969), in essence, it is an individual's conscious plan to buy a product or service (Spears & Singh, 2004). While purchase intention is not the same as the actual purchase behavior, it has been verified to be a consistent predictor of a customer's purchase behavior (Jamieson & Bass, 1989; Stapel, 1971). Furthermore, the likelihood of customers purchasing a product is significantly higher when that website has certain features such as product catalogs, product comparison features, a search option and shopping carts (Liang & Lai, 2002). Richard, (2005), and Vijayasathy, (2004), found a causal link between similar website design factors and purchase intention. In a related study, Bono (2012) identified thirty-six website aesthetics that contributed considerably to the perceived ease of use and perceived usefulness, which in turn promoted a higher purchase intention.

2.1.3. Repurchase Intention

Repurchase intention can be defined as a customer's conscious plan to buy a product or service from a specific company from whom they have previously conducted a transaction with (Kim, Ferrin & Rao, 2009). Repurchase intention is often regarded as one of the significant factors through which customer's loyalty can be measured, therefore, it is crucial to implement several retention strategies to encourage repurchase behavior in most customers (Chinomona & Dubihlela, 2014). Furthermore, as Internet technologies have been widely adopted by customers, more and more companies have entered the market, intensifying competition within the e-commerce industry, thus, driving many organizations into encouraging repurchase behavior, in favor of attracting new customers, as this is costlier (Cronin, Brady & Hult, 2000; Fornell, 1992; Kitchathorn, 2009). Specifically, Rosenberg and Czepiel, (1984), found that in an organization's efforts to acquire a new customer, it would incur approximately six times higher cost than it would by retaining an existing customer. Even in more recent times, the cost of acquiring new customers is five to twenty-five times more than the cost of inducing repurchase behavior in current customers (Gallo, 2014).

2.2. Online Trust

2.2.1. Definitions of Trust

Trust has been studied in diverse disciplines such as economic, social/institutional, managerial/organizational, behavioral/psychological and technological (Kim, Ferrin & Rao, 2008). However, a recurring issue of presenting trust as a concept is that a universally accepted definition does not exist and there is no single, unified method of measuring the value of trust (Chang, Diaz & Hung, 2014), although many authors have attempted this (Grabner-Krauter & Kaluscha, 2003). From a relational perspective, trust is the main element in initiating a relationship and in forming different contexts suitable for exchange (Harris & Goode, 2004). In a commercial setting, trust is often regarded as a result of the ability of a firm or a brand to meet a specific set of obligations (Harris & Goode, 2004). When considering the online context specifically, trust is presented as a confidence belief that can increase a customer's willingness

to enter into an online transaction (Beldad, Jong & Steehouder, 2010; Dinev & Hart, 2006; McKnight et al., 2002). Jarvenpaa, Tractinsky and Vitale, (2000), measured trust as the expectation that an online seller will keep in mind the best interests of its customers.

2.2.2. Dimensions of Trust

Chen and Dhillon (2003) proposed that the dimensions of trust in the e-commerce industry are competence, integrity and benevolence. Competence is the firm's ability to fulfil the promises it has made to customers, similar to the definition of trust by Harris and Goode (2004). Integrity refers to how an organization behaves in a consistent, dependable and authentic manner (Chen & Dhillon, 2003). Benevolence is an organization's ability to go beyond their own self-interest in order to serve the welfare of its customers (Chen & Dhillon, 2003). While all of these dimensions of trust vary independently, they are all interrelated and together they contribute to the overall trust level of a customer (Chen & Dhillon, 2003).

Prior research has linked TPB with online trust and e-commerce, such as Hsu, Yen, Chiu and Chang, (2006), Kim et al., (2008) and Lin, (2007), where sources, such as website design, organization and consumer characteristics and interactions, were considered for their influence on trust. Likeability of a website design was found to influence trust (Lin, 2007; Vijayasarathy, 2004). Similarly, security features (Kim et al., 2008; Vijayasarathy, 2004) and service quality (Hsu et al., 2006) played a key role in developing trust.

Moreover, a distinction between traditional purchases and e-commerce is that a significant precursor to online transactions is trust (Jarvenpaa et al., 2000). Empirical evidence shows that a website's brand can impact online consumers' trust and subsequently, purchase intention (Chang & Chen, 2008). Similarly, Hong and Cha (2013) have shown that the determinants of website design can reduce the perceived risk of entering into an online transaction, improving customer trust and subsequently, strengthening purchase intention. Therefore, it is crucial to promote trust, as it encourages a potential customer from being a curious observer to transforming into one who is willing to transact (McKnight et al., 2002) and does not cease before confirming their online purchase (Chau, Hu, Lee & Au, 2007).

2.3. Customer Satisfaction

2.3.1. Expectation and Disconfirmation Theory

Oliver, (1980), created the expectation and disconfirmation theory (EDT), where consumer satisfaction is considered as a function of expectation and expectancy disconfirmation. Customer satisfaction is assumed to significantly affect attitude change and purchase intention (Oliver, 1980). This is the reason customer satisfaction has been studied as an antecedent of customer loyalty, including in the context of e-commerce (Bai et al., 2008; Chen, 2012; Hsu, 2008). Hansemark and Albinsson (2004) defines customer satisfaction as the overall attitude of customers regarding a particular product or service. In traditional commerce, firms gain customer satisfaction using several factors, including service quality, the speed at which the service is being delivered, competitive pricing and billing information must be clear, accurate and timely; finally the customer-facing employees should be helpful, courteous and possess in-depth knowledge (Mohsan, Nawaz, Khan, Shaukat & Aslam, 2011). In e-commerce, the lack of face-to-face contact leads to the need of a website design that plays the many of these roles (Wilson et al., 2019). Thus, the importance of website design as a driver of customer satisfaction. Furthermore, customer satisfaction is often considered as the antecedent of customer loyalty (Cassel & Eklöf, 2001; Hsu, 2008; Lee & Bellman, 2008; Manaf et al., 2018; Pilelienė & Grigaliūnaitė, 2016; Rashwan et al., 2019), which is one of the main determinants

of success in the e-commerce industry (Bai et al., 2008; Chen, 2012; Hsu, 2008; Pilelienė & Grigaliūnaitė, 2016).

2.3.2. Customer Satisfaction and Website Design

Customer satisfaction is a highly significant metric for firms to measure their success, thus, when the level of customer satisfaction is measured and understood, firms can assess the efficiency and effectiveness of their activities, set suitable future goals and take all necessary actions to achieve such goals (Bai et al., 2008; Pilelienė & Grigaliūnaitė, 2016; Wilson et al., 2019). In recent years, various authors have identified several main determinants of customer satisfaction (Pilelienė & Grigaliūnaitė, 2016; Wilson et al., 2019). Many of such determinants fall under the scope of website design quality, consequently, website design quality is an important driver of high customer satisfaction (Pilelienė & Grigaliūnaitė, 2016; Wilson et al., 2019).

2.4. Loyalty

2.4.1. Definitions of Loyalty

Customer loyalty is often defined as a favorable attitude towards an organization, resulting in repurchasing a product or service from that organization, despite marketing efforts and situational influences having the potential to cause brand-switching behavior (Andreassen, 1999; Oliver, 1997; Khan & Islam, 2017; Rahi & Ghani, 2016). According to Horppu, Kuivalainen, Tarkiainen and Ellonen, (2008), online customer loyalty is associated with a broader range of behaviors than in traditional commerce, such as consistently revisiting a website is considered as a display of loyalty (Khan & Islam, 2017); such as online banking users that frequently revisit a banking website to acquire financial information (Rahi & Ghani, 2016). Thus, online customer loyalty is defined as a commitment to consistently revisit a website for the purpose of shopping, but not making a purchase on every visit and without switching to other competing websites (Cyr, 2008; Khan & Islam, 2017; Rahi & Ghani, 2016; Qiu & Li, 2008).

2.4.2. Dimensions of Loyalty

Loyalty is often divided into three dimensions: attitudinal loyalty, which is the intention to recommend an organization's products and/or services to others; behavioral loyalty, which is the intention to repurchase from the same organization; finally composite loyalty which is when a customer develops both attitudinal and behavioral loyalty (Zhang, Fu, Cai & Lu, 2014). Interestingly, empirical evidence has shown that trust does not create composite loyalty, or, more precisely, does not influence repurchase intentions, instead trust only influences a customer's attitudinal loyalty (Eid, 2011; Hsu & Wang, 2008; Kassim & Abdullah, 2010). Consequently, it could be hypothesized that trust has influence on a customer's intention to spread positive word-of-mouth while higher customer satisfaction leads to behavioral loyalty.

2.5. Website Design Quality

The design quality of a website has been defined as a value of the website assessed in terms of its visual appearance and its navigational system (Cyr, Kindra & Dash, 2008; McKnight, Choudhury & Kacmar, 2002; Zhou, Lu & Wang, 2009). The design of a website can play several integral roles, including the establishment of satisfaction on the part of customers (Corbitt, Thanasankit & Yi, 2003) and serving as an important communication tool, because a website acts as the "bridge" between the seller and the buyer in the virtual environment (Prashar, Vijay & Parsad, 2017; Wilson et al., 2019). Numerous elements have been identified and empirically tested as part of website design (Bono, 2012; Liang & Lai, 2002). However, several of these factors correspond to each other, for instance, quick and easy payment, product and service information, lower transaction times altogether manifest the variable transaction ease.

Likewise, visual design corresponds to the variable engagement, which is defined as an overall personality of a firm projected through inputs such as text, style, logos, graphics, themes and slogans (Anderson & Swaminathan, 2011).

3. Methodology

Research papers published after 2014 have been selected to acquire an overview of the current literature as the e-commerce industry is part of a fast-changing environment. Studies that measured the influence of website design on either online customer satisfaction, loyalty, trust or purchase intention are chosen for further elaboration. A total of seventeen journal articles have been selected for this review (please see Table 1).

Table 1: selected articles for this review

Research Article Reference	Variables	Performance Measures	Industry Context	Sample Size
Abbaspour & Hashim, 2015	System Quality; Information Quality; Service Quality	Customer Satisfaction; Trust	Travel Website Malaysia	190
Sharma & Lijuan, 2015	Online service Quality; Information Quality; Usefulness	Customer Satisfaction; Trust	Online Telecom Services Nepal	506
Pilelienė & Grigaliūnaitė, 2016	Assortment; Adaptation; Nurturing; Interactivity; Network; Commitment; Transaction Ease; Engagement	Customer Satisfaction; Customer Loyalty	Various Product Categories Lithuania	300
Hahn, Sparks, Wilkins & Jin, 2017	Process Quality; Environment Quality	Customer Satisfaction	Hotel Websites Australia and South Korea	843
Liu, Xiao, Lim & Tan, 2017	Product Appeal; Website Appeal	Purchase Intention; Trust	Various Product Categories Not Specified	293
Noronha & Rao, 2017	Information Quality; Service Quality; System Quality; Website Design	Purchase Intention; Customer Satisfaction	Online Ticket Booking Websites India	109
Oliveira, Alinho, Rita & Dhillon, 2017	Consumer Characteristics; Firm Characteristics; Website Infrastructure; Interactions with Consumers	Purchase Intention; Trust	Various Product Categories Portugal	365
Prashar, Vijay & Parsad, 2017	Information Quality; Web Entertainment; Effectiveness of Information Content	Purchase Intention; Customer Satisfaction	Various Product Categories India	318
Rahi, Yasin & Alnaser, 2017	Website Design; Assurance; Customer Service; Brand Image	Consumer Loyalty; Purchase Intention	Online Banking Services Malaysia	500
Khialani, 2018	Visual Design; Social-Cue Design; Content Design	Purchase Intention; Trust	Various Product Categories U.S.A.	502
Manaf, Rachmawati, Witanto & Nugroho, 2018	Digital Marketing; Service Quality	Customer Loyalty; Customer Satisfaction	Various Product Categories Indonesia	100

Sullivan & Kim, 2018	Perceived Product Value; Website Reputation; Competitive Price	Repurchase Intention; Trust	Various Product Categories South Korea	312
Hamid, Cheun, Abdullah, Ahmad & Ngadiman, 2019	Primary Task Support; Dialogue Support; System Credibility Support; Social Support	Intention To Use; Online Buying Behaviour	Fashion Products Malaysia	200
Rashwan, Mansi & Hassan, 2019	Online Security; Convenience of Website Design	Customer Loyalty; Repurchase Intention	Online Banking Services Egypt	370
Wilson, Keni & Tan, 2019	Website Design Quality; Service Quality	Repurchase Intention; Customer Satisfaction	Various Product Categories All continents except Africa.	869
Fimberg & Sousa, 2020	Visual; Content; Social-Cue	Trust; Purchase Intention	Furniture Producers Estonia	50
Wong, Leung & Law, 2020	Reservation Information; Customer Contact; Facilities Information; Surrounding Information; Ease Of Use; Feedback; Content Personalization	Customer Satisfaction	Hotel Websites Hong Kong	456

4. Discussion

Majority of the chosen literature conducted research in developing nations. From the references to prior research in these studies, it can be deduced that similar research had already been carried out in developed countries in the late 1990s and early 2000s, while most of the research conducted recently are replications of such studies in developing nations. The main determinants of website design in these studies are ease of navigation, transaction ease, visual design, information quality, social-cue, service quality and security.

Navigation is an important part of website design that has a significant effect on customer satisfaction (Oliveira et al., 2017; Prashar et al., 2017; Wilson et al., 2019). It is the road-map of an e-commerce website through which the customer continues the buyer's journey to the final destination of conversion, or conduct an online transaction. The satisfaction of customers towards the e-commerce website will increase if they are able to reach every information or content they desire with only a few clicks (Oliveira et al., 2017; Prashar et al., 2017; Wilson et al., 2019). Moreover, ease of navigation through an intuitive structure and organized manner will bring the feeling of control within customers, thus building trust and encouraging the notion that credit card details and other personal information can be shared on this e-commerce website, thereby facilitating the growth of purchase intention among new customers (Janda, Trocchia & Gwinner, 2002; Oliveira et al., 2017). Additionally, simple and fast checkout systems, efficient shopping cart functions and fast webpage loading serve to increase transaction ease, further driving conversions through higher customer satisfaction (Khialani, 2018; Manaf et al., 2018; Oliveira et al., 2017; Rashwan et al., 2019).

Prior research had shown that product appeal is crucial to the success of an e-commerce website (Liu et al., 2017). However, Liu et al., (2017), analyzed the effects of product appeal on purchase intentions and found that it alone cannot increase purchase intentions. A strategy focused solely on developing the appeal of products will not drive sales if the process of

purchasing the product is not optimized for quick and convenient use, in other words, without navigation ease and transaction ease, high-quality customer-centric products will not experience a rise in sales (Liu et al., 2017). Similar results were replicated in a study conducted in Lithuania, where purchase ease and product assortment were found to have the most effect on customer satisfaction and composite loyalty (Pilelienė & Grigaliūnaitė, 2016). Thus, the importance and effectiveness of website design in enhancing the purchase intention of customers. Alongside convenience in website design, the visual aspects of design also play a key role in the success of a business engaged in e-commerce. Wilson et al., (2019) found that in the continents of North and South America, website design quality strongly influences a customer's repurchase intention, more so than service quality. This particular study included respondents from all continents except Africa, where a recent study for e-commerce adoption among users in Uganda, found that website quality had no effect on purchase intentions (Namakula, Isoh, Benard & Ziraba, 2020). Perhaps cultural factors have led to this difference in behavioral intentions, however, that is beyond the scope of this article.

Website design can be used to create an overall consistent brand image that the organization wishes to project to customers through effective use of design elements such as font style, logos, colors, themes and slogans; all of which contribute to the satisfaction and trust level of a customer (Manaf et al., 2018; Pilelienė & Grigaliūnaitė, 2016). This is in line with prior research where the appearance of a website increased both satisfaction and purchase intention. For instance, over 60% of a customer's decision to discontinue browsing a specific e-commerce website is due to the color of each webpage (Papapanou, 2015) and blue has a stronger impact on trust and purchase intention than red (Lalomia & Happ, 1987) and green (Maheshwari & Dhanesh, 2010). Content design can enhance comprehension (Pilelienė & Grigaliūnaitė, 2016) and in prior research it was found that the distribution of accessible, relevant information throughout the e-commerce website will drive customer satisfaction and purchase intention (Thongpapanl & Ashraf, 2011). Manaf et al., (2018) conducted a study in Indonesia and found that placing important product information in a highly visible area of the webpage, in eye-soothing colors and a font size that is not too small (increased legibility), prevented customers from making purchases based on incorrect and incomplete knowledge, thereby reducing customer dissatisfaction and increasing satisfaction. Ample and highly relevant visual content increased both customer satisfaction and loyalty through repurchase intention (Manaf et al., 2018).

Moreover, at the post-purchase stage, trust and perceived value of the product bought determines the repurchase intention (Sullivan & Kim, 2018). When South Korean customers have had an actual experience using the product, they tend to evaluate the e-commerce website based on that experience and assign a level of trust (Sullivan & Kim, 2018). Website design creates expectations of the product's value for first-time customers while the product's value after using affects the overall trust a customer places on a particular e-commerce website (Sullivan & Kim, 2018). Similarly, Liu et al., (2017), found that website design, in particular visual content about the product, had a stronger influence on inexperienced customers with low trust, this group of customers relied more heavily on website appeal to alleviate their concerns regarding product risk. Conversely, customers who had already purchased from a particular e-commerce website had already formed a level of trust based on their experience using the product, hence they assessed product-oriented content less than first-time buyers (Liu et al., 2017). Furthermore, a novel observation by Liu et al., (2017), is that when a website's design builds trust, the positive influence of product appeal on purchase intention is simultaneously diminished. This is possibly because of the tendency of experienced online customers to refrain from intensive evaluation of product quality before making a purchase

(Liu et al., 2017). Hence, website design must match the quality of the product it is promoting, in order to prevent cognitive dissonance and to increase customer satisfaction, trust and repurchase intention. Additionally, Manaf et al., (2018), concluded from their research that service quality had a lower impact on customer loyalty than marketing related efforts, including product information quality. Therefore, organizations should include, accurate, relevant and updated product information as part of their efforts to increase customer loyalty. High information quality available in easy-to-locate areas of the website will increase customer satisfaction as well, hence the need to regularly update the information presented on an e-commerce website (Manaf et al., 2018; Rahi, Yasin & Alnaser, 2017). Khialani, (2018), also found similar results among American respondents. In this study, website design was measured by the three following sub-constructs: content design, visual design and social-cue design; all of which played a crucial role in building online trust. However, among the sub-constructs, content design had the most influence on online trust (Khialani, 2018), which could be symptomatic of the rising sophistication of online customers (Rutter, 2014), as they begin to consider beyond the aesthetic elements of a website and base their decisions on the core content of the e-commerce website, such as product, service and organization information, hence, the greater significance of information quality (Manaf et al., 2018; Khialani, 2018; Rahi et al., 2017).

Thus, building online trust through information quality should be the focus of e-commerce strategies as online customers have become more informed in recent times. Website design can be used to build trust by conveying reassurance, through current and detailed product information (Manaf et al., 2018; Khialani, 2018; Rahi et al., 2017), company information (Manaf et al., 2018; Khialani, 2018; Rahi et al., 2017), service policy terms and brand or organization logo (Khialani, 2018; Rahi et al., 2017). Interestingly, Oliveira et al., (2017), found differences in the preferences of website design between genders. Empirical evidence suggests male customers respond more favorably (that is, they have higher purchase intention) when targeted with more summary content and appealing visual elements within the e-commerce website (Oliveira et al., 2017). On the other hand, female customers, who tend to consider more detailed information, were better targeted with the use of text-heavy content and verbal advertisements (Oliveira et al., 2017; Shaouf et al., 2016). With the rise of social media, social-cues are gaining growing importance on influencing customers' trust and purchase intentions (Fimberg & Sousa, 2020; Khialani, 2018; Pilelienė & Grigaliūnaitė, 2016; Rahi et al., 2017; Sullivan & Kim, 2018). Empirical evidence show that online customers are more likely to use price perceptions (Pilelienė & Grigaliūnaitė, 2016; Sullivan & Kim, 2018) and website reputation (Khialani, 2018; Rahi et al., 2017; Sullivan & Kim, 2018) as indications of quality of the products.

As online customers cannot physically observe, touch and evaluate the products prior to purchasing them, they rely more on detailed and complete product information (Manaf et al., 2018; Khialani, 2018; Rahi et al., 2017), website reputation (Fimberg & Sousa, 2020; Khialani, 2018), perceived competitive price (Sullivan & Kim, 2018), externally provided assurance factors such as third-party seals (Khialani, 2018) and online reviews and testimonials of the products purchased by other customers (Fimberg & Sousa, 2020; Khialani, 2018; Sullivan & Kim, 2018). All of these elements will further heighten reassurances, thereby, creating an online environment that is favorable for the formation of online trust among the targeted customers and also driving their repurchase intentions (Fimberg & Sousa, 2020; Khialani, 2018; Pilelienė & Grigaliūnaitė, 2016; Rahi et al., 2017; Sullivan & Kim, 2018).

While many studies indicate that visual design is more impactful on customer satisfaction, trust and purchase intentions, it should be noted that majority of these studies concentrated on customers shopping for online products. In studies focused on e-commerce websites selling services, service quality, information quality and security play a more crucial role in promoting trust and enhancing purchase intentions (Abbaspour & Hashim, 2015; Hafsa, 2020; Hahn et al., 2017; Noronha & Rao, 2017; Rahi et al., 2017; Rashwan et al., 2019; Sharma & Lijuan, 2015; Wong, Leung & Law, 2020). In this context, understanding the type and extent of services provided, that is information quality, is a more significant goal of online customers when visiting an e-commerce website (Abbaspour & Hashim, 2015; Hafsa, 2020; Hahn et al., 2017; Noronha & Rao, 2017; Sharma & Lijuan, 2015; Wong et al., 2020). Similarly, the reliability, promptness and polite, approachable manner of customer service will impact purchase intentions as customers will prefer that the particular organization will be the best source of help when needed (Abbaspour & Hashim, 2015; Rahi et al., 2017; Sharma & Lijuan, 2015; Wong et al., 2020). Likewise, service quality is an important measurement of customer satisfaction, it is an assessment of the service provided, in terms of whether the actual quality of the service performed or presented is less than, matches, or exceeds a customer's expectations regarding that particular service (Rahi et al., 2017; Sharma & Lijuan, 2015).

Security is also of greater concern among customers due to the involvement of greater volume and detailed personal information required to buy online services compared to products, especially in the online banking context (Abbaspour & Hashim, 2015; Rahi et al., 2017; Rashwan et al., 2019; Sharma & Lijuan, 2015). Thus, incorporating secured elements in a website design will raise behavioral loyalty by raising satisfaction levels (Abbaspour & Hashim, 2015; Rahi et al., 2017; Rashwan et al., 2019; Sharma & Lijuan, 2015) and attitudinal loyalty via the development of trust (Abbaspour & Hashim, 2015; Sharma & Lijuan, 2015). However, e-commerce websites providing services should, by no means, overlook the significance of the other determinants of website design quality. Rahi et al., (2017), discovered in their research conducted in Malaysia, that website design, assurance and customer service had a collective 23% impact on online customer's intention to adopt internet banking. Rashwan et al., (2019), conducted a study among online banking consumers in Egypt and found that greater perception of security enhanced attitudinal loyalty while convenience in website design encouraged behavioral loyalty. Interestingly, Wilson et al., (2019), found that in Asia, Australia and Europe service quality affected online customers' repurchase intentions more significantly than website design elements. This result matches prior research conducted in Asia, such as Zhou et al., (2009), where it was found that service quality determined a customers' repurchase intention more considerably. However, the results indicate that, across all five continents, both website design quality and service quality play a significant and non-exchangeable role in the development of loyalty and repurchase intention among customers (Wilson et al., 2019).

Conclusion

An effective website design in terms of highly satisfying online customers and thereby increasing purchase intention, is simple and easy to use with a clear, memorable navigation system; simple, quick checkout system; accurate payment information; contains a shopping cart; overall scoring high in ease of transaction. In addition to these factors, for e-commerce websites selling products, a quality website design is one that can closely replicate the in-store experiences of touching and feeling a product via ample, large-sized product photographs and product demonstration videos. Specifically for e-commerce websites dedicated to selling services, a good website design is one that has clear, readable content, high information quality and facilitates the direct communication between customers and employees; providing access to prompt, courteous and helpful customer service. In other words, a quality website design is

efficient, easy to use and provides to customers a clear, detailed and holistic overview of the quality and functions of a product and/or service to be purchased. On the other hand, a good website design in terms of its ability to increase repurchase intention in customers, is one that additionally must include several more key factors to promote online trust and loyalty in customers. These include a design that incorporates strong branding, such as clearly visible company logos, prominently featuring brand colors and an inspiring company "About Us" webpage; provides relevant social-cues, for instance, customer reviews, testimonials and user generated content on social media and finally incorporates appropriate security features, such as password protection for customer accounts, trust badges and certifications from relevant authorities, in order to increase repurchase intention. By relying on this literature, e-commerce managers will be able to focus on the most effective aspects when optimizing website designs.

References

- Abbaspour, B., & Hashim, N. H. (2015). The influence of website quality Dimensions on customer satisfaction in travel website. *International Journal of Science Commerce and Humanities*, 3(5), 6-17.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. doi: 10.1016/0749-5978(91)90020-T
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. New Jersey, United States; Prentice-Hall.
- Al-Qeisi, K., Dennis, C., Alamanos, E., and Jayawardhena, C., (2014). Website design quality and usage behavior: Unified Theory of Acceptance and Use of Technology. *Journal of Business Research*, 67(11), 2282-2290. doi: 10.1016/j.jbusres.2014.06.016
- Anderson, R. E., and Swaminathan, S. (2011). Customer satisfaction and loyalty in e-markets: A PLS path modeling approach. *Journal of Marketing Theory and Practice*, 19(2), 221-234.
- Andreassen, T.W. (1999). What drives customer loyalty with complaint resolution. *Journal of Service Research*, 1, 324-332.
- Bagozzi, R. P., Tybout, A. M., Craig, C. S., & Sternthal, B. (1979). The construct validity of the tripartite classification of attitudes. *Journal of Marketing Research*, 16(1), 88-95.
- Bai, B., Law, R., and Wen, I., (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. doi: 10.1016/j.ijhm.2007.10.008
- Barrera, R. B., Garcia, A. N., and Moreno, M. R., (2014). Evaluation of the e-service quality in service encounters with incidents: Differences according to the socio-demographic profile of the online consumer. *Revista Europea de Dirección y Economía de la Empresa*, 23(4), 184-193.
- Beldad, A., Jong, M. D., & Steehouder, M. (2010). How shall I trust the faceless and the intangible? A literature review on antecedents of online trust. *Computers in Human Behavior*, 26, 857-869.
- Bono, J. (2012). *The influence of web site aesthetics on impulse purchase behavior within online retailing environments* (Ph.D.). Nova Southeastern University, Florida, United States.
- Cassel, C., and Eklöf, J. A. (2001). Modelling customer satisfaction and loyalty on aggregate levels: Experience from the ECSI pilot study. *Total Quality Management*, 12(7-8), 834-841.
- Chang, H. H., & Chen, S. W. (2008). 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, W. L., Diaz, A. N., & Hung, P. C. K. (2014). *Estimating trust value: A social network perspective*. New York, United States: Springer Science + Media Mass.
- Chau, P. Y. K., Hu, P. J. H., Lee, B. L. P., & Au, A. K. K. (2007). Examining customers' trust in online vendors and their dropout decisions: An empirical study. *Electronic Commerce Research and Applications*, 6, 171-182.
- Chen, S. C., (2012). The customer satisfaction-loyalty relation in an interactive e-service setting: The mediators. *Journal of Retailing and Consumer Services*, 19(2), 202-210.
- Chen, S. C., & Dhillon, G. (2003). Interpreting dimensions of consumer trust in e-commerce. *Information Technology and Management*, 4, 303-318.
- Chinomona, R., and D. Dubihlela. (2014). Does customer satisfaction lead to customer trust, loyalty and repurchase intention of local store brands? The case of Gauteng Province of South Africa. *Mediterranean Journal of Social Sciences* 5(9): 23-32.
- Corbitt, B., T. Thanasankit, and H. Yi. (2003). Trust and e-commerce: A study of consumer perceptions. *Electronic Commerce Research and Applications* 2(3): 203-215.
- Cronin, J. J., M. K. Brady, and G. T. M. Hult. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing* 76(2): 193-218.

- Cyr, D. (2008). Modeling web site design across cultures: relationships to trust, satisfaction, and e-loyalty. *Journal of Management Information Systems* 24: 47- 72.
- Cyr, D., G. S. Kindra, and S. Dash. (2008). Web site design, trust, satisfaction and e loyalty: The Indian experience. *Online Information Review* 32(6): 773-790.
- Dinev, T., & Hart, P. (2006). An extended privacy calculus model for e-commerce transactions. *Information Systems Research*, 17(1), 61-80.
- Eid, M. I., 2011. Determinants of e-commerce customer satisfaction, trust, and loyalty in Saudi Arabia. *Journal of Electronic Commerce Research*, 12(1), 78-93.
- Fimberg, K., & Sousa, S. (2020) The Impact of Website Design on Users' Trust Perceptions. *Advances in Creativity, Innovation, Entrepreneurship and Communication of Design*, 267-274.
- Fornell, C. (1992). A National customer satisfaction barometer: The Swedish experience. *Journal of Marketing* 56: 6-21.
- Gallo, A. (2014). The Value of Keeping the Right Customers. *Harvard Business Review*. Retrieved from <https://hbr.org/2014/10/the-value-of-keeping-the-right-customers>
- Grabner-Krauter, S., & Kaluscha, E. A. (2003). Empirical research in online trust: A review and critical assessment. *International Journal of Human-Computer Studies*, 58, 783-812.
- Hafsa, S. (2020). An empirical study on smartphone based e-tourism service factors in Bangladesh. *International Journal of Science and Business*, 4(1), 185-199. doi: 10.5281/zenodo.3665349
- Hahn, S., Sparks, B., Wilkins, H., & Jin, X. (2017). E-service Quality Management of a Hotel Website: A Scale and Implications for Management, *Journal of Hospitality Marketing & Management*, 26(7), 694-716, doi: 10.1080/19368623.2017.1309612
- Hamid, N. A. A., Cheun, C. H., Abdullah, N. H., Ahmad, M. F., & Ngadiman, Y. (2019). Does Persuasive E-commerce Website Influence Users' Acceptance and Online Buying Behaviour? The Findings of the Largest E-commerce Website in Malaysia. *Lecture Notes in Information Systems and Organisation*, 30, 263-279. doi: 10.1007/978-3-030-10737-6_17
- Hansemark, O. C., & M. Albinson. (2004). Customer satisfaction and retention: The experiences of individual employees. *Managing Service Quality* 14(1): 40- 57.
- Harris, L. C., & Goode, M. M. H. (2004). The four levels of loyalty and pivotal role of trust: A study of online service dynamics. *Journal of Retailing*, 80, 139-158.
- Hong, I. B., & Cha, H. S. (2013). The mediating role of consumer trust in an online merchant in predicting purchase intention. *International Journal of Information Management*, 33(6), 927-939. <https://doi.org/10.1016/j.ijinfomgt.2013.08.007>
- Horppe, M., Kuivalainen, O., Tarkiainen, A., & Ellonen, H. K. (2008). Online satisfaction, trust and loyalty, and the impact of the offline parent brand. *Journal of Product and Brand Management* 17: 403-413.
- Hsu, L. C., and Wang, C. H., (2008). A study of e-trust in online auctions. *Journal of Electronic Commerce Research*, 9(4), 310-321.
- Hsu, M. H., Chang, C. M., and Chuang, L. W., (2015). Understanding the determinants of online repeat purchase intention and moderating role of habit: The case of online group-buying in Taiwan. *International Journal of Information Management*, 35(1), 45-56.
- Hsu, M. H., Yen, C. H., Chiu, C. M., & Chang, C. M. (2006). A longitudinal investigation of continued online shopping behavior: An extension of the theory of planned behavior. *International Journal Human-Computer Studies*, 64, 889-904.
- Hsu, S. H., (2008). Developing an index for online customer satisfaction: Adaptation of American Customer Satisfaction Index. *Expert Systems with Applications*, 34(4), 3033-3042.
- Jamieson, L. F., & Bass, F. M. (1989). Adjusting stated intention measures to predict trial purchase of new products. *Journal of Marketing Research*, 26(3), 336-345.
- Janda, S., Trocchia, P. J., & Gwinner, K. P. (2002). Consumer perceptions of Internet retail service quality. *International Journal of Service Industry Management*, 13(5), 412-431.
- Jarvenpaa, S. L., Tractinsky, N., & Vitale, M. (2000). Consumer trust in an internet store. *Information Technology and Management*, 1(1-2), 45-71.
- Kassim, N., and Abdullah, N. A., (2010). The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in e-commerce settings: A cross cultural analysis. *Asia Pacific Journal of Marketing and Logistics*, 22(3), 351-371.
- Khan, A. & Islam, M.A. (2017). The Impact of digital marketing on increasing customer loyalty: a study on Dhaka City, Bangladesh, *International Journal of Economics, Commerce and Management*, 5(4), 521-528.
- Khialani, D., (2018). *The Influence of Website Design on Online Trust in Electronic Commerce Retailing Environments*. (Doctoral dissertation, Nova Southeastern University, Florida, United States) Retrieved from https://nsuworks.nova.edu/gscis_etd/1061.
- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk and their antecedents. *Decision Support Systems*, 44, 544-564.

- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2009). Trust and satisfaction, two stepping stones for successful e-commerce relationships. *Information Systems Research*, 20(2), 237-257.
- Kitchathorn, P. (2009). *Factor Influencing Customer Repurchase Intention: An Investigation of Switching Barriers that Influence the Relationship between Satisfaction and Repurchase Intention in the Low Cost airlines Industry in Thailand*. University of South Australia.
- Lalomia, M. J., & Happ, A. J. (1987). The Effective Use of Color for Text on the IBM 5153 Color Display. *Proceedings of the Human Factors Society Annual Meeting*, 31(10), 1091-1095.
- Lee, Y. W., and Bellman, S. (2008). An Augmented Model of Customer Loyalty for Organizational Purchasing of Financial Services. *Journal of Business-To-Business Marketing*, 15(3), 290-322.
- Liang, T. P., & Lai, H. J. (2002). Effect of store design on consumer purchases: An empirical study of online bookstores. *Information & Management*, 39(6), 431- 444.
- Liu, A. F., Xiao, B. S., Lim, E. T. K., & Tan, C. W. (2017). The Art of Appeal in Electronic Commerce: Understanding the Impact of Product and Website Quality on Online Purchases. *Internet Research*, 27(4), 752- 771.
- Lin, H. F. (2007). Predicting consumer intentions to shop online: An empirical test of competing theories. *Electronic Commerce Research and Applications*, 6, 433-442.
- Maheshwari, S. K., & Dhanesh, G. (2010) The Impact of Website Design on B2C E- Commerce Trust. *Technology Review*, 6(2), 48-55.
- Manaf, A., Rachmawati, P., Witanto, I. M. & Nugroho, A. (2018). E-Satisfaction as A Reflection of E-Marketing and E-Seqal in Influencing E-Loyalty on E-Commerce. *International Journal Of Engineering & Technology*, 7(4.44), 94. doi: 10.14419/ijet.v7i4.44.26870
- McKnight, D. H., V. Choudhury, and C. Kacmar. (2002). Developing and validating trust measures for ecommerce: an integrative typology. *Information Systems Research*, 13(3): 334-359.
- Mohsan, F., M. M. Nawaz, M. S. Khan, Z. Shaukat, and N. Aslam. (2011). Impact of customer satisfaction on customer loyalty and intentions to switch: Evidence from banking sector of Pakistan. *International Journal of Business and Social Science* 2(16): 263-270.
- Namakula, S. J., Isoh, A. V. N., Benard, E., & Ziraba, A. (2020). Determinants of Online Purchase Intention in Uganda. *International Journal of Science and Business*, 4(3), 132-146. doi: 10.5281/zenodo.3714817
- Noronha, A. K., & Rao, P. S. (2017). Effect of Website Quality on Customer Satisfaction and Purchase Intention in Online Travel Ticket Booking Websites. *Management*, 7(5), 168-173. doi: 10.5923/j.mm.20170705.02
- Oliveira, T., Alinho, M., Rita, P., & Dhillon, G. (2017). Modelling and testing consumer trust dimensions in e-commerce. *Computers in Human Behavior*, 71, 153-164. doi: 10.1016/j.chb.2017.01.050 0747-5632
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17, 460-469.
- Oliver, R. L. (1993). A conceptual model of service quality and service satisfaction: Compatible goals, different concepts. In T. A. Swartz, D. E. Bowen, and S. W. Brown (Ed.), *Advances in Services Marketing and Management* 2: 65-85.
- Oliver, R. L. (1997). *Satisfaction: a behavioral perspective on the consumer*. Boston, MA: McGraw-Hill Irwin.
- Ostrom, T. M. (1969). The relationship between the affective, behavioral, and cognitive components of attitude. *Journal of Experimental Social Psychology*, 5(1), 12-30.
- Papapanou, M. (2015). *How Web Design Characteristics affect Consumer Online Behaviour* (Masters Thesis, International Hellenic University, Thessaloniki, Greece)
- Pilelienė, L., & Grigaliūnaitė, V. (2016). A Model of Website Quality-Based E-Commerce Satisfaction Index. *Scientific Annals Of Economics And Business*, 63(1), 29-46. doi: 10.1515/saeb-2016-0103
- Qiu, L., & Li, D. (2008) Applying TAM in B2C E-commerce research: An extended model. *Tsinghua Science and Technology* 13: 265-272.
- Rahi S., Ghani, M.A. (2016). Customer's perception of public relation in e-commerce and its impact on e-loyalty with brand image and switching cost. *Journal of Internet Banking and Commerce*, 21(3), 2-20.
- Rahi, S., Yasin, N. D., and Alnaser F. M. (2017). Measuring The Role Of Website Design, Assurance, Customer Service And Brand Image Towards Customer Loyalty And Intention To Adopt Internet Banking. *Journal of Internet Banking and Commerce*, 22(8), 2-18.
- Rashwan, H., M. Mansi, A., & Hassan, H. (2019). The impact of the E- CRM (expected security and convenience of website design) on E- loyalty field study on commercial banks. *Journal Of Business & Retail Management Research*, 14(01), 106-122. doi.org/10.24052/jbrmr/v14is01/art-10
- Richard, M. O. (2005). Modeling the impact of internet atmospherics on surfer behavior. *Journal of Business Research*, 58(12), 1632-1642.
- Rosenberg, L. J., and J. A. Czepiel. (1984). A marketing approach for customer retention. *Journal of Consumer Marketing* 1(2): 45-51.
- Rutter, R. N. (2014). A retailer perspective of e-commerce brand management. In *Ecommerce Platform Acceptance* (pp. 101-128). Norwich, United Kingdom: Springer.

- Sharma, G., & Lijuan, W. (2015). The effects of online service quality of e-commerce Websites on user satisfaction. *The Electronic Library*, 33(3), 468-485. doi: 10.1108/el-10-2013-0193
- Shaof, A. Lü, K. & Li, X. (2016). The effect of web advertising visual design on online purchase intention: An examination across gender. *Computers in Human Behavior*, 60, 622-634.
- Spears, N., & Singh, S. N. (2004). Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues & Research in Advertising (CTC Press)*, 26(2), 53-66.
- Sullivan, Y. W., & Kim, D. J. (2018). Assessing the effects of consumers' product evaluations and trust on repurchase intention in e-commerce environments. *International Journal of Information Management*, 39, 199-219. doi: 10.1016/j.ijinfomgt.2017.12.008
- Stapel, J. (1971). Sales effect of print ads. *Journal of Advertising Research*, 1(3), 32-36.
- Thongpapanl, N., & Ashraf, A. R. (2011). Enhancing Online Performance through Website Content and Personalization *Journal of Computer Information Systems*, 52(1), 3-13.
- UNCTAD (2021). Global E-Commerce Jumps to \$26.7 Trillion, Covid-19 Boosts Online Retail Sales. *United Nations Conference on Trade and Development*. Retrieved from <https://unctad.org/press-material/global-e-commerce-jumps-267-trillion-covid-19-boosts-online-retail-sales>
- Wang, M. S., Chen, C. C., & Chang, S. C. (2007). Effects of online shopping attitudes, subjective norms and control beliefs on online shopping intentions: A test of the theory of planned behaviour. *International Journal of Management*, 24(2), 296-302.
- Wilson, N., Keni, K., & Tan, P. (2019). The Effect of Website Design Quality and Service Quality toward Repurchase Intention in the E-commerce Industry: A Cross-Continental Analysis. *Gadjah Mada International Journal of Business*, 21(2), 187. doi:10.22146/gamaijb.33665
- Wong, E., Leung, R., & Law, R. (2020). Significance of the dimensions and attributes of hotel mobile website from the perceptions of users, *International Journal of Hospitality & Tourism Administration*, 21(1), 15-37, doi: 10.1080/15256480.2018.1429338
- Vijayasathya, L. R. (2004). Predicting consumer intentions to use on-line shopping: The case for an augmented technology acceptance model. *Information & Management*, 41(6), 747-762.
- Yousapronpaiboon, K. 2014. SERVQUAL: Measuring higher education service quality in Thailand. *Procedia - Social and Behavioral Sciences*, 116, 1088-1095.
- Zhang, H., Fu, X., Cai, L. A., and Lu, L., (2014). Destination image and tourist loyalty: A metaanalysis. *Tourism Management*, 40, 213-223. doi: 10.1016/j.tourman.2013.06.006
- Zhou, T., Y. Lu, and B. Wang. 2009. The relative importance of website design quality and service quality in determining consumers' online repurchase behavior. *Information Systems Management*, 26, 327-337.

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