

SERVICE QUALITY MEASUREMENT IN THE INTERNET CONTEXT: A PROPOSED MODEL

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Abstract

The survival of any organisation in a highly competitive environment depends on its ability to provide the best service quality to its existing customers as the quality of service is a key factor in the success of any organisation. It is well established that the measurement of service quality is an important procedure for the improvement of the success and performance of any organisation. Facts indicate that more attention is needed toward developing an industry-specific scale for measuring customer service quality within the still-developing sector of Internet-based self-service technologies. The main objectives of this research paper are two-fold; firstly, to review comprehensively previous and contemporary literature on service quality measurement and to discuss the key issues on the development of an industry-specific scale for measuring customer service quality in the specific context of Internet-based self-service technologies, secondly, to propose a conceptual model for service quality perceptions of Internet-based self-service technologies through identifying its key antecedents and consequences. The findings of this study will be significant for both scholars and practitioners in this area as it provides a deep understanding of the way customers evaluate services provided via self-service technologies.

Keywords: Customer Satisfaction, Internet-Based Self-Service Technologies, Service Quality.

1 RESEARCH BACKGROUND

Nowadays, in a severe competitive environment, the most central factor to sustainable competitive advantage is to provide the best possible service quality which will result in improved customer satisfaction, customer retention, and profitability (Sureshchandar et al., 2002; Buttle 1996). The significance of the service quality concept derives researchers and scholars to address this issue and to investigate it further across different service sectors. Thus, throughout the past two decades, service quality has become an established area in the marketing literature. There have been many research studies that have studied, examined, and investigated its nature in the traditional face-to-face service environment (see, for example, Rust and Oliver, 1994; Hallowell, 1996; Sureshchanar et al., 2002, etc.). Moreover, numerous traditional service quality models have been developed to assess and evaluate service quality performance in the traditional service environment such as the Technical-Functional Quality Model (Gronroos, 1984) and the SERVQUAL Model (Parasuraman et al., 1985). Internet services were introduced for public use back in the 1990s; as a result, business-to-customer electronic commercial communications began over the Internet (Al-Adwani and Palvia, 2002; Swaid and Wigand, 2007). This technology development is changing the way business is carried out and changing the way companies interact with their customers. With this development, it is logical that organisations are required to offer customers with a high quality of service as the quality of service is a key factor in the success of any profitable organisation. Therefore, researchers and scholars have

shifted in recent years to investigate the service quality concept within the still-developing sector of self-service technologies, where the communication channel between employees and customers is an electronic environment (see, for example, Santos, 2003; Lee and Lin, 2005; Swaid and Wigand, 2007, etc.).

It appears that service quality is not a new concept; however, measuring and managing service quality from the consumers' point of view is still a developing and a challenging issue. Both from the academic community point of view, and in business practice, it is well established that measurement of service quality is an important procedure for improving the performance of the overall service quality (Jayawardhena et al., 2004; Tih, 2004). Thus, there has been an abundance of research on the measurement issues of service quality, which have contributed to the development of a solid research foundation.

In current service literature, there are a number of key instruments available for measuring service quality performance. Though, the SERVQUAL model has been the major generic model used to measure and manage service quality across different service settings and various cultural backgrounds (Buttle, 1996). However, apart from its wide use, a number of theoretical and empirical criticisms of the measurement model have been pointed out (Ladhari, 2008). First of all, the validity of the SERVQUAL model as a generic instrument for measuring service quality across different service sectors has been raised. Also, there has been an argument that a simple revision of the SERVQUAL items is not enough for measuring service quality across different service settings.

As a result, Ladhari (2008, p. 68) stated that "It has been suggested that industry-specific measures of service quality might be more appropriate than a single generic scale". This argument was supported by Dabholkar et al. (1996, p. 14) who stated that "It appears that a measure of service quality across industries is not feasible; therefore, future research on service quality should involve the development of industry-specific measures of service quality". Ladhari (2008) reported that in recent years, more attention was paid by researchers and scholars toward the development of an alternative industry-specific research instruments for measuring service quality. Consequently, a number of industry-specific research instruments have been developed in the past several years in different service settings and various countries and cultural backgrounds.

Self-service technologies (SSTs) are defined as "technological interfaces that enable customers to produce a service independent of direct service employee involvement" (Shamdasani et al., 2008, p. 117). Types of SSTs may include, for example, Automated Teller Machine (ATM), automated hotel checkout, electronic airplane ticketing, and Internet banking (Shamdasani et al., 2008). Shamdasani et al. (2008) emphasized some potential benefits derived from SSTs employment such as, ease of access, improvement in efficiencies and competitiveness, savings in time, and improvement in the performance of customer satisfaction and customer loyalty. With a noticeable growing rate of the users of self-service technologies all over the world, more attention is needed to present more understanding about the service evaluation process in terms of exploring the key determinants and consequences of service quality which represents an important factor for the success of any organization (Shamdasani et al., 2008).

2 PROBLEM DEFINITION

Today's world of technology advancement along with increasing labour costs made it essential for service organisations to discover self-service delivery options. Successful implementation of self-service technologies derived a number of potential benefits for service organisations including reaching new customer segments. This, in turn, resulted in a noticeable growing rate of the users of self-service technologies all over the world. However, as organisations compete to offer self-service technologies, a number of difficulties and challenges arise. One of these is the providing of excellent

and superior service through self-service technologies. Customers still require high-quality service standards even when interacting with technology. Thus, managers and Internet service providers need to be aware of the key determinants used by consumers in evaluating service quality for services delivered over the Internet in order to improve their overall performance.

Research facts indicate that more attention is needed to provide more understanding of the service evaluation process in terms of exploring and identifying the key determinants of service quality in the Internet context (Bitner et al., 2002; Chen, 2005; Shamdasani et al., 2008). On the other hand, additional concentration is required upon the development of alternative industry-specific instruments for measuring and assessing service quality from the customer's perspective (Dabholkar et al., 1996; Ladhari, 2008). This can be accomplished by developing a refined research framework that can be adopted by service providers as a guideline for measuring and assessing their service quality as perceived by customers within the specific context of Internet-based self-service technologies. This study aims to contribute in filling this research gap through providing a deep understanding of the way customers evaluate services provided via self-service technologies by developing a comprehensive model that analyses the antecedents and consequences of service quality.

3 RESEARCH SIGNIFICANCE

This research study is going to be essential and valuable for both researchers and practitioners for a number of important reasons. From the academic community point of view, it is generally established that service quality assessment depends on the consumers' evaluation of the service (Tih, 2004). Therefore, Internet service providers need to be aware of the key determinants used by consumers in evaluating Internet service quality in order to improve the overall performance of Internet service quality (Tih, 2004). From the practitioner's point of view, the survival of any company in a highly competitive environment depends on its ability to provide the best service quality to its existing customers as the quality of service is a key factor in the success of any organisation (Tih, 2004). In business practice, measurement of service quality is considered as an important process for improving the quality of the service (Jayawardhena et al., 2004). For the purpose of services delivered electronically, this can be accomplished by developing a comprehensive conceptual model for customer service quality perceptions in the web-based services. So the findings of this study will be significant for both scholars and practitioners in this area.

4 LITERATURE REVIEW

4.1 Formal Models of Service Quality

There are a number of conceptual models that have been developed by various researchers and scholars world-wide to investigate the service quality concept. At the same time, these models have been aimed to be adopted by service organisations as a tool to assist in quality improvement programs. In a literature review study, Seth et al. (2005) presented a list of key service quality models including, for example, Technical-Functional Quality Model (Gronroos, 1984), Gap Model and SERVQUAL Model (Parasuraman et al., 1985, 1988), Service-Profit Chain Model (Heskett et al., 1994), and Satisfaction-Service Quality Model (Spreng and Mackoy, 1996). These conceptual models along with other models have contributed to the development of various schools of thought of service quality. Generally, in the current service marketing literature there are three key schools of service quality modelling, namely the Nordic School, the Holistic School, and the North American School (Gap Analysis School).

4.2 Measurement of Service Quality

Apparently, service quality is an old concept. It was initiated in the late 1970s, grown in the 1980s, and progressed in the 1990s. However, measuring and managing service quality from the consumer's point of view is still rather a debatable issue. In the literature, there are a number of key instruments available for measuring service quality. Nevertheless, the SERVQUAL instrument has been the major technique used to measure service quality and has been extensively implemented and valued by academics and practitioners (see, figure 1).

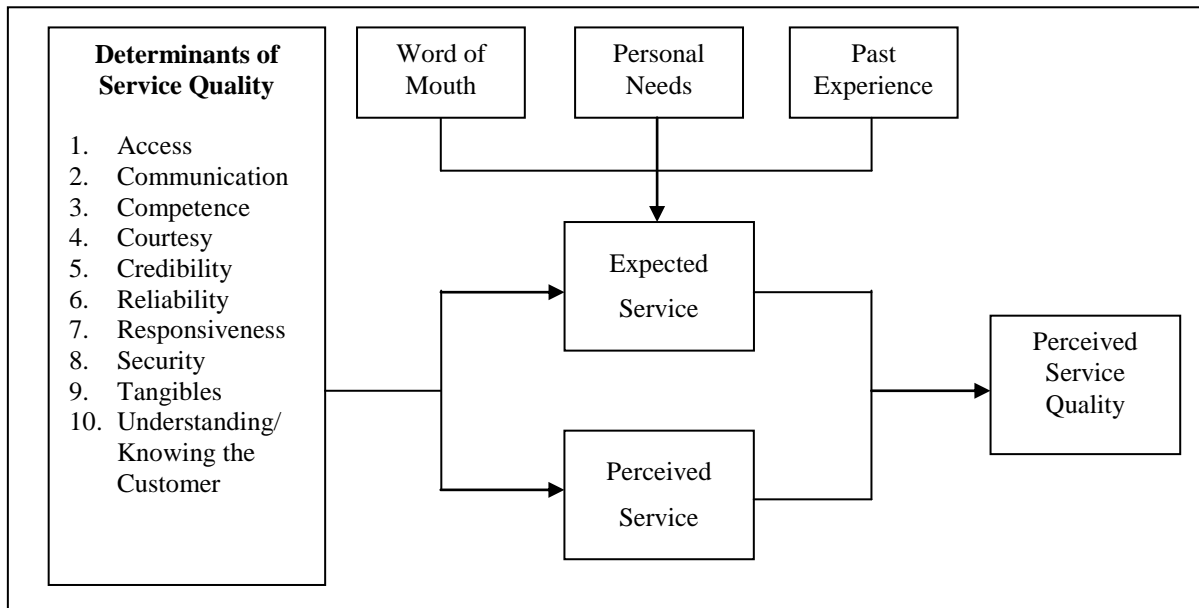


Figure 1. Determinants of Perceived Service Quality

Source: Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985), "A conceptual model of service quality and its implications for future research", *Journal of Marketing*, 49 (Fall): 41-50

4.3 Potential Applications of SERVQUAL

Parasuraman et al. (1988) identified a number of potential applications for the SERVQUAL model. It can be used on a regular basis to track customer perceptions of service quality of a particular firm compared to its competitors. It provides the opportunity for a firm to assess its service quality performance on the basis of each dimension individually as well as the overall dimensions. It allows the firm to classify its customers into different segments based on their individual SERVQUAL scores. It allows multi-unit retail companies to assess the level of service quality offered by individual stores and to group them into different sectors with different quality images. However, the main aim of the model is to be employed as a generic instrument for measuring service quality across different service sectors. It has been proposed that the SERVQUAL instrument is developed for use in various service settings and provides a basic skeleton that can be adapted to fit the specific attributes of a particular organisation.

4.4 A Generic Measure of Service Quality: the SERVQUAL Scale

The SERVQUAL model was theoretically and empirically studied, examined, and discussed in several academic studies. In addition, it has been implemented to measure and assess service quality across different service, industrial, commercial, and non-profit settings (Buttle, 1996, p. 8; Ladhari, 2008, pp. 66-67), including, for example, health-care sector (Carman, 1990; Headley and Miller, 1993; Lam, 1997; Kilbourne et al., 2004); banking (Lam, 2002; Zhou et al., 2002; Kwon and Lee, 1994; Wong and Perry, 1991); fast food (Lee and Ulgado, 1997); telecommunications (Van der Wal et al., 2002); retail chain (Parasuraman et al., 1994); information systems (Jiang et al., 2000); library services (Cook and Thompson, 2001); hotels (Saleh and Ryan, 1991); travel and tourism (Fick and Ritchie, 1991); car servicing (Bouman and van der Wiele, 1992); higher education (Ford et al., 1993; McElwee and Redman, 1993); hospitality (Johns, 1993), business-to-business channel partners (Kong and Mayo, 1993); accounting firms (Freeman and Dart, 1993); architectural services (Baker and Lamb, 1993); recreational services (Taylor et al., 1993); hospitals (Babakus and Mangold, 1992; Mangold and Babakus, 1991; Reidenbach and Sandifer-Smallwood, 1990; Soliman, 1992; Vandamme and Leunis, 1993; Walbridge and Delene, 1993); airline catering (Babakus et al., 1993a); apparel retailing (Gagliano and Hathcote, 1994); and local government (Scott and Shieff, 1993).

In addition, it has been employed to measure service quality across different countries and various cultural backgrounds (Ladhari, 2008) including, for example, the United States of America (Babakus and Boller, 1992; Pitt et al., 1995; Jiang et al., 2000; Kilbourne et al., 2004); China (Lam, 2002; Zhou et al., 2002); Australia (Baldwin and Sohal, 2003); Cyprus (Arasli et al., 2005); Hong Kong (Kettinger et al., 1995; Lam, 1997); Korea (Kettinger et al., 1995); South Africa (Pitt et al., 1995; Van der Wal et al., 2002); The Netherlands (Kettinger et al., 1995); and the United Kingdom (Pitt et al., 1995; Kilbourne et al., 2004). Moreover, there are a number of other unpublished SERVQUAL studies apart from the above-mentioned examples of empirical and cultural contexts. Additionally, a number of well-known international organisations have implemented it, such as the Midland and Abbey National Banks.

4.5 SERVQUAL – Criticisms and Discussion

Clearly, the SERVQUAL instrument has been extensively adopted by several academic researchers and practitioners worldwide to measure service quality. The previously mentioned academic research studies are examples of this. However, regardless of its extensive use, numerous theoretical, operational, conceptual, and empirical criticisms of the measurement instrument have been identified and mentioned.

Buttle (1996) identified several theoretical and operational criticisms of SERVQUAL. He argued that theoretically SERVQUAL is founded on the basis of an expectation-disconfirmation model instead of an attitudinal model. Moreover, it is not based on a well-known established economic, statistical, psychological theory or background. In terms of the gap analysis, there are a few supports that customers evaluate service quality on the basis of perception-minus-expectation scores. Furthermore, SERVQUAL stress and emphasise the process of service delivery rather than the endings and the outcomes of the service encounter. From an operational perspective, he stated that consumers evaluate service quality on the basis of standards other than expectations. Also, he argued that it is not possible to capture the changeability of each service quality dimension by four or five items.

Van Dyke et al. (1997, 1999) recognised a number of conceptual and empirical criticisms of SERVQUAL. Conceptually, they criticised using two different instruments for measuring two different concepts (perceptions and expectations) to measure a third concept (perceived service quality). Instead, they argued that direct measurement of perceived service quality is more reliable. Moreover, they argued on the uncertainty of the expectations construct as different definitions and views of the concept resulted from uncertainly defined concept. Empirically, they argued that

SERVQUAL has a number of empirical problems including low reliability and unstable dimensionality.

Ladhari (2008) summarised a list of theoretical and empirical criticisms of the model. First, he argued that the use of gap scores is not the right method because of the lack of the support in literature to consumers evaluating service quality in terms of perception-minus-expectation. He stated that it has been recommended that service quality is more precisely and correctly evaluated by measuring only perceptions of quality. On the other hand, he mentioned that the concept expectation is not well defined and can be interpreted from different perspectives; as a result, the operationalisation of SERVQUAL may have different interpretations as well. In addition, he pointed out that previous research suggested using perception-only scores rather than gap scores for the overall assessment of service quality. Last but not least, he emphasised that previous research studies criticise SERVQUAL for its focus on the process of service delivery instead of the result and the outcome of service encounters.

It appears that regardless of the extensive acceptance and adoption of SERVQUAL, there has been a severe hesitation concerning its future use as a tool for measuring service quality. This argument is supported by Robinson (1999, p. 21) who stated that “although it has probably been the best, and most popular approach available during the 1990s, it is becoming apparent that it has some significant shortcomings. It can be argued that SERVQUAL is applicable to contexts close to its original setting.” In view of the criticisms mentioned, researchers have argued that there is a doubt about the applicability of a single generic scale for measuring service quality across a range of service settings (see, for example, Babakus and Boller, 1992; Van Dyke et al., 1997, Jabnoun and Khalifa, 2005; Akbaba, 2006; Caro and Garcia, 2007). Moreover, there is a general agreement among researchers that a simple adaptation of the SERVQUAL dimensions is unsatisfactory for measuring service quality across a variety of service settings (see, for example, Carman, 1990; Babakus and Boller, 1992; Brown et al., 1993; Van Dyke et al., 1997).

For these reasons, it has been suggested that developing industry-specific scales for measuring service quality can be more suitable than a single generic scale (see, for example, Babakus and Boller, 1992; Van Dyke et al., 1997; Caro and Garcia, 2007; Ekiz and Bavik, 2008). This argument is supported by Dabholkar et al. (1996, p. 14) who stated that “It appears that a measure of service quality across industries is not feasible; therefore, future research on service quality should involve the development of industry-specific measures of service quality.”

Subsequently, a number of specific-industry measures have been developed to measure service quality (Ladhari, 2008, p. 78), including, for example, restaurants (Stevens et al., 1995); retail banks (Aldaign and Buttle, 2002; Sureshchandar et al., 2002); career centres (Engelland et al., 2000); Internet retailing (Janda et al., 2002); hotels (Ekinici and Riley, 1998; Akbaba, 2006; Wilkins et al., 2007); hospitals (Sower et al., 2001); and higher education (Markovic, 2006). In addition, the scales have been developed in different countries and cultural backgrounds, for example Turkey (Akbaba, 2006); Australia (Wilkins et al., 2007); Canada (Saleh and Rayan, 1991); Croatia (Markovic, 2006); India (Sureshchandar et al., 2002); the United States of America (Dabholkar et al., 1996); Korea (Kang and James, 2004); Hong Kong (Lam and Zhang, 1999); Belgium (Vandamme and Leunis, 1993); the United Arab Emirates (Jabnoun and Khalifa, 2005); and Spain (Caro and Garcia).

Ladhari (2008) stated that all of the research studies mentioned described service quality as multidimensional construct. However, the number and nature of dimensions change on the bases of the service contexts. It is clear that evaluating and assessing service quality differs from one customer group to another and from one circumstance to another.

Therefore, the review of previous literature has documented a need for a future work to be done in order to discover additional appropriate and suitable specific-industry measures for service quality in

further service industries and sectors. Researchers are advised to describe the empirical context in which the specific model was developed and the contexts in which it can be applied. This guidance is followed in the subsequent development of the conceptual model of service quality for this research paper.

5 CONCEPTUAL MODEL

The proposed conceptual model of this research paper is based on the expectancy-value theory (EVT). This theory was originally introduced by psychologist Professor Martin Fishbein from the Annenberg Public Policy Center of the University of Pennsylvania in the United States of America in the mid 1970's. This theory suggests a relationship between consumers' perception of an object and the overall feeling towards the object (Tih, 2004). This research paper proposed that service quality in the Internet context consists of two main elements: Internet service quality and web-site service quality. This in turn influence the overall customer satisfaction (see, figure 2).

5.1 Service Quality

In service literature, service quality is usually defined based on consumers' assessment. Parasuraman et al. (1985, p. 42) defined service quality as "a measure of how well the service level delivered matches customer expectations; delivering quality service means confirming to customer expectations on a consistent basis". Parasuraman et al. (1988, p. 16) defined perceived service quality as "a global judgement, or attitude, relating to the superiority of the service". Zeithaml (1988, p. 3) defined service quality as "the consumer's judgement about a product's overall excellence or superiority". It is clear that defining service quality is an important step toward the development of a solid foundation for this study. Therefore, being in line with the service literature, this study looks into service quality as the standard of excellence toward fulfilling customers' requirements, which contributes toward achieving customers' ultimate satisfaction. This, in turn, entails organisations and firms to investigate, explore, and identify customers' requirements and to try to meet them in order to provide a high standard of service quality. Service organisations are competing to achieve sustainable competitive advantage through providing a high-quality service to their existing customers in a severely competitive environment. This has led to a continued focus on service quality. Organisations have recognised a number of potential benefits derived from service quality, including increasing customer satisfaction, customer retention, customer loyalty and positive word-of-mouth, increasing opportunities for cross-selling, employee benefits, improved corporate image, profit gains, and financial performance.

Internet service quality is defined as "the degree of excellence in the service level that matches customer requirements in interaction between the customer and organisation's online systems mediated via the Internet infrastructure" (Tih, 2004, p.69). Reliability is defined as "the ability to perform the promised services dependably and accurately" (Swaid and Wigand, 2007, p.5). Responsiveness is defined as "the ability of the service provider to deliver the service in the shortest time" (Tih, 2004, p.89). Researchers have examined and emphasised the significance of reliability and responsiveness dimensions on perceived service quality (see, for example, Yang and Jun, 2002; Cai and Jun, 2003; Shamdasani et al., 2008). On the other hand, Website service quality is defined as "the degree of excellence in the service level that focuses on the presence of the technical web" (Tih, 2004, p.107). Web content is defined as "the presentation and layout of factual information and functions on a website" (Santos, 2003, p.240). Ease of use is defined as "how easy the website is for customers to conduct external search in cyberspace and internal navigation and search within the website" (Santos, 2003, p.239). Researchers have examined and emphasised the significance of web content and ease of use dimensions on perceived service quality (see, for example, Lee and Lin, 2005; Shamdasani et al., 2008).

5.2 Customer Satisfaction

Customer satisfaction is defined as "the degree to which there is a match between customer's expectations of a good or a service and the actual performance of that good or service, including customer service" (Evans and Berman, 1997, p.A-34). Researchers have examined and emphasised the significance of overall service quality on customer satisfaction (see, for example, Lee and Lin, 2005; Swaid and Wigand, 2007; Shamdasani et al., 2008).

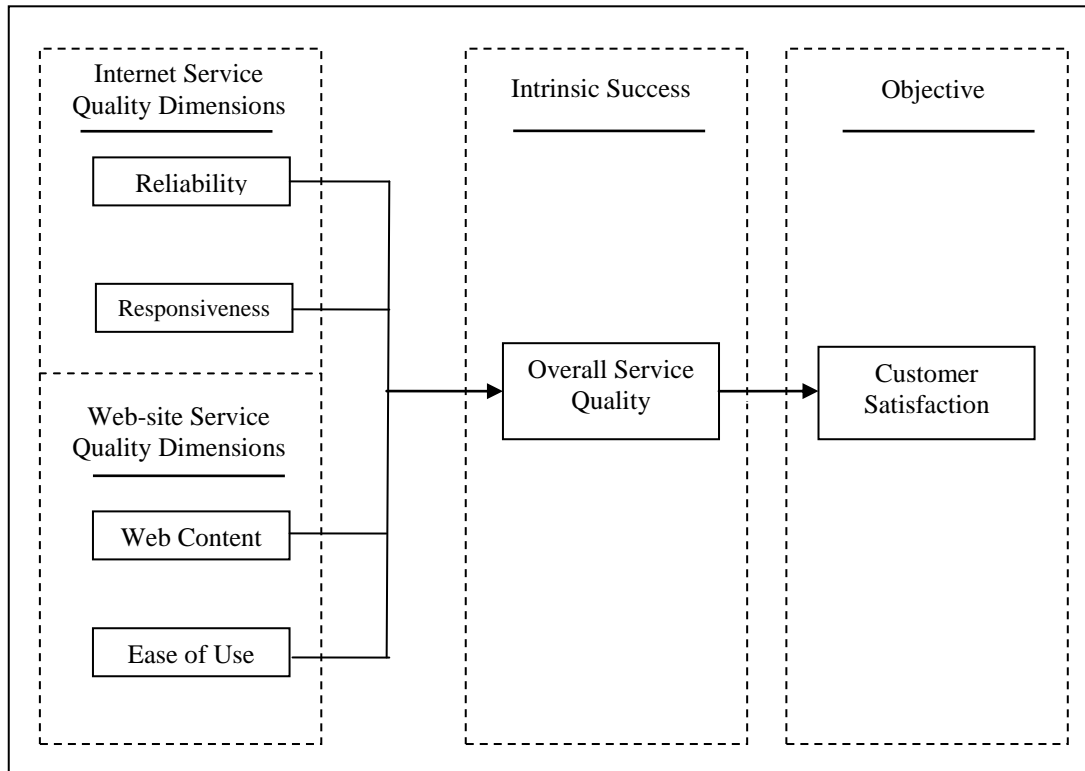


Figure 2. Conceptual Model of Service Quality in the Internet Context

Source: Developed by the researchers

6 CONCLUSION

In this research paper, a comprehensive review of the literature on service quality has been explored and covered. Initially, the formal models of service quality were listed. The SERVQUAL model was discussed in detail including its evolution, potential applications, contexts of adoption, criticisms, and discussion. The literature review concludes with a discussion of the current research gap aimed to be filled through this research paper. This has led to a proposed conceptual model for service quality perceptions of Internet-based self-service technologies through identifying its key antecedents and consequences. In future research, an empirical primary research will be conducted to discover and validate the inter-relationships between the constructs of the proposed conceptual model in order to offer possible explanations and comparisons that would assist to build research assumptions from the obtained primary data.

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