WEBSITE QUALITY FACTORS INFLUENCING ONLINE SHOPPING: A SOUTH AFRICAN PERSPECTIVE

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DECLARATION

I declare that "*Website quality factors influencing online shopping: A South African perspective*", submitted in fulfilment of the requirements for the degree of Master of Commerce in the subject of Business Management with specialisation in Marketing at the University of South Africa (Unisa), is my own work and that all sources utilised in this research study have been acknowledged by means of complete references.

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Yu-ting Hung
August 2016

DEDICATION

To my parents who provided me with the opportunities to excel in my professional career and personal development. To my fiancé, Johan, for always inspiring me and motivating me to do my best.

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"The best way to not feel hopeless is to get up and do something. Don't wait for good things to happen to you. If you go out and make some good things happen, you will fill the world with hope, you will fill yourself with hope."
Barack Obama

"Desire is the key to motivation, but it's determination and commitment to an unrelenting pursuit of your goal - a commitment to excellence - that will enable you to attain the success you seek."
Mario Andretti

ABSTRACT

Since the development of the Internet, the amount of individuals and organisations making use of the World Wide Web (or Web) has grown significantly, and it is likely to continue increasing as the world continues to become intertwined. With the Internet, users are able to conduct various activities online, one being online shopping which has changed the retailing sector. Online shoppers are able to purchase goods and services over the Web in the comfort of their own homes without having to set foot into a physical store. Due to the fact that greater numbers of South African consumers are becoming accustomed to online shopping and the number of online retailers is growing, there is a need to determine which quality factors of websites influence these consumers when shopping online, which is the primary purpose of this study.

A broad and in-depth literature review was provided on online shopping as well as the website quality factors influencing online shopping. An empirical study was conducted, where the data were collected from South Africans who met the requirements by means of an Internet-based self-administered questionnaire. The study followed a quantitative approach in order to satisfy the research objectives of the study.

Based on the research results, it was found that all system, information and service quality factors influence respondents when shopping online and therefore need to be taken into consideration by online retailers when developing shopping sites.

<u>Key terms</u>

Quality factors; website; online shopping; system quality; information quality; service quality; South Africa

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DEFINITION OF KEY TERMS

E-commerce: E-commerce is transacting or facilitating business over the Web and consists of different facets namely, online shopping, electronic payments and online banking (Khurana, 2013).

Information system (IS): An IS is … "the collection of technical and human resources that provides the storage, computing, distribution, and communication for the information required by all or some parts of an enterprise" (Rouse, 2015).

Information quality: Information quality captures the content of the online system which should be personalised, complete, relevant, easy to understand and secure. Information quality is made up of the following factors: personalisation; completeness; relevance; ease of understanding; and secureness (Delone & McLean, 2004).

Internet: The Internet is the delivery mechanism for almost all online activities. Originally the Internet was used by laboratories engaging in government research to communicate with each other, however, since its commercialisation in 1994, it has grown exponentially to serve millions of users for various purposes (Internet World Stats, 2012).

Online shopping: Online shopping is the act of searching, browsing and buying products and services over the Web via websites. It is broadly defined as … "an activity that includes searching for product information, buying products or services, and communication with retailers and other consumers over the Internet" (Cai & Cude, 2012:466). Or simply as … "the act of buying products and services over the Internet" (Business Dictionary, 2015).

Online shopper: An online shopper is an individual who conducts online shopping and for the purpose of this study, is categorised into one of the following types: searcher; browsers; wanderer; price hunter; and first timer.

Service quality: Service quality is the ability to satisfy users by meeting their expectations in the time promised, building confidence in the ability to provide service and being courteous with service requests (Gorla, Somers & Wong, 2010). Service quality is made

up of the following factors: responsiveness; assurance; empathy; reliability; and follow up service (DeLone & McLean, 2004).

System quality: System quality measures the desired characteristics of an online system therefore it must provide security, accessibility, speed and convenience that support the consumer's buying activity. System quality is made up of the following factors: usability; availability; reliability; adaptability; and response time (DeLone & McLean, 2004).

World Wide Web (or Web): The Web is the most commonly used aspect of the Internet and is described as an information-sharing system that allows users to easily access, send or receive information in various formats over the Internet (Gil, 2010; Beal, 2015). In essence, it is a way of accessing and disseminating the information over the Internet through websites (Beal, 2010).

Website (or Site): A website is as a place on the Web that contains information (text, colour, graphics, animation and sound) about a person, organisation, educational institution or government, in order to gather information or complete a task (Merriam-Webster, 2016; United Online Web Service, 2016).

LIST OF ABBREVIATIONS

ANOVA	Analysis of variance
ARPA	Advanced research projects agency
ARPANET	ARPA Network
BMR	Bureau of Marketing Research
B2B	Business-to-business
B2C	Business-to-consumer
DeLone and McLean	D&M
IPTO	Information Processing Techniques Office
IS	Information system
QFD	Quality function deployment
SiS	Shopping and Information Service
SSL	Secure Sockets Layer
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
UNISA	University of South Africa

CHAPTER 1

INTRODUCTION TO THE STUDY

1.1   INTRODUCTION

The focus of this study is to investigate website quality factors that influence South African consumers when shopping online in order to improve retailers' websites. Firstly, a background to the study is provided, which includes the growth of the Internet, as well as the significance of website quality factors influencing consumers when shopping online. Next the reason for the study is examined and the research problems are clarified. This is then followed by an explanation of the research methodology to be used to reach the objectives set out for the study. To conclude, a summary of the chapters that follow ends the chapter.

1.2   BACKGROUND SKETCH

1.2.1   An overview of the Internet

According to Beal (2010) the terms Internet and World Wide Web (or Web) are used interchangeably by many people, however, they are different. The Internet is the delivery mechanism for almost all online activities. Originally the Internet was used by laboratories engaging in government research to communicate with each other, however since its commercialisation in 1994, the Internet has grown exponentially to serve millions of users for various purposes (Internet World Stats, 2012). Stoyanov (2012:10) states that the Internet has become a prevailing and ubiquitous tool used to facilitate and process business transactions. The Web, on the other hand, is a way of accessing and disseminating the information over the Internet through websites (Beal, 2010).

Table 1 summarises the latest world Internet usage statistics and clearly indicates the increasing number of Internet users worldwide, while Table 2 specifically points out the rapid increase of Internet users in South Africa.

Table 1: World Internet usage

World regions	Internet users 31 December 2000	Internet users Latest data	Internet Penetration	Growth rate 2000-2015
World Internet usage 31 December 2014				
Africa	4 514 000	318 633 889	27.5%	6 958.2%
Asia	114 304 000	1 405 121 036	34.8%	1 129.3%
Europe	105 096 093	582 441 059	70.4%	454.2%
Middle East	3 284 800	113 609 510	48.1%	3 358.6%
North America	108 096 800	310 322 257	86.9%	187.1%
Latin America / Caribbean	18 068 919	322 422 164	52.4%	1 684.4%
Oceania / Australia	7 620 480	26 789 942	72.1%	251.6%
World total	**360 985 492**	**3 079 339 857**	**42.4%**	**753.0%**

Source: Adapted from Internet World Stats (2012)

From the above statistics it is clear that Internet usage has increased globally. For developed regions such as Europe, North America and Australia, the growth rate is significantly lower than that of the other regions such as Africa, Asia, the Middle East and the Caribbean. Meeker in Smartling (2012) states that even though developed countries were the first to make use of the Internet, developing countries are currently driving the growth worldwide.

Table 2: South African Internet usage

	Internet users 31 December 2000	Internet users latest data	Penetration	Growth rate 2000-2015
South African Internet usage 31 December 2014				
South Africa	2 400 000	24 909 854	51.5%	937.9%

Source: Adapted from Internet World Stats (2012)

Internet World Stats (2012) defines an Internet user as anyone who has the capacity to use the Internet thereby satisfying two requirements. Firstly the individual must have access to the Internet; and secondly, he or she must have basic knowledge of using Web technology. On the other hand, the Internet penetration rate describes the percentage of the total population of a specified region that uses the Internet (Internet World Stats, 2012). The Internet growth rate is the ratio between the latest Internet usages with a

predetermined baseline (December 2000) that is expressed as a percentage (Internet World Stats, 2012).

From Table 2 it is clear that currently only 51.5% of South Africans make use or have access to the Internet. This number is likely to grow significantly as the growth rate of new Internet users stands at 937.9%. Nylander, Lundquist, Brännström and Karlson (2009:354) point out that as technology continues to advance it allows for easier access to the Internet whereby users can use other portable devices beside computers, such as tablets and cellphones. In addition, improved navigation software and search engines have made it easier and more convenient for people to participate online (Rieger, 2009).

Not only has the Internet changed the way in which communication takes place and the way that business is conducted (Internet World Stats, 2012), but also the way in which shopping takes place. Rotem-Mindali (2010:312) states that consumers can extensively search, evaluate and gather information for products or services without having to step foot into an actual shop. Before the above mentioned technological advancements, consumers would physically have to go to stores and look up information from other sources on products and services. Due to the benefits that online shopping offers, it will continue to grow rapidly (Rigby, 2011:1) and according to Kim and Forsythe (2010:190) shopping for goods and services over the Internet is becoming widely accepted and is considered an important medium for shopping.

Online shopping is broadly defined as … "an activity that includes searching for product information, buying products or services, and communication with retailers and other consumers over the Web" (Cai & Cude, 2012:466). It can also simply be referred to as … "the act of buying products and services over the Web" (Business Dictionary, 2015). For the purpose of this study online shopping is defined as the act of searching, browsing and buying products and services over the Web via websites. A website or a site can be defined as a place on the Web that contains information (text, colour, graphics, animation and sound) about a person, organisation, educational institution or government, in order to gather information or complete a task (Merriam-Webster, 2016; United Online Web Service, 2016). For the purpose of this study, a website contains various types of information regarding the organisation as well as the products and services which it offers and allows users to shop online.

1.2.2 Online shopping in South Africa

Flores-Araoz (2011) states that South Africans are not only becoming more familiar with online shopping but also feeling more positive towards it. This may be attributed to a variety of factors, namely, the growth of local Internet users, the increased use of cellphones and smart phones, an enabling legal framework that protects the parties involved and the various developments in Internet-based payment methods and in the web-based experience (Flores-Araoz, 2011).

It is estimated that 51% of South African consumers that have access to the Internet are currently shopping online (wwwMetrics.com, n.d.). South Africans spent about R2.6 billion online in 2011, 30% more than in 2010, and are slowly moving away from low-value item purchases such as CDs and books to more costly items such as electronic equipment and appliances (Vallie, 2012). According to a recent Visa eCommerce Tracker Survey in Carstens (2012) the top searched for categories in South Africa are illustrated in Table 3.

Table 3: South African most browsed categories

Product category	Percentage
Books, CDs and DVDs	37%
Holiday and travel	36%
Bill payment	35%
Electronics	34%
Event or concert tickets	32%

Source: Adapted from Carstens (2012)

Even though books, CDs and DVDs (37%) are still the most purchased category, South Africans are increasingly purchasing more expensive products such as holiday and travel (36%), electronics (34%) and event or concert tickets (32%).

The latest statistics show that online shopping grew significantly during 2012 and was expected to increase further during 2013, as Internet connectivity rose by 35% (Ujuh, 2013). According to the World Wide Worx in Flores-Araoz (2011) there are more than 800 South African retail websites. These websites offer a wider variety of products securely, in an easy and convenient manner and provide adequate information in an attempt to minimise the drawbacks of online shopping. The website quality factors that influence consumers to shop online are discussed in the next section.

1.2.3 Website quality factors influencing online shopping

DeLone and McLean (2003) proposed that for any information system (IS) to be successful it needs to not only ensure the satisfaction of its users but also their intention of use and repeated use, which are dependent on proficient information, system and service qualities. An IS is defined as … "the collection of technical and human resources that provide the storage, computing, distribution, and communication for the information required by all or some part of an enterprise" (Rouse, 2015). It is argued that the Internet in general is a communication and IS phenomenon and therefore electronic commerce (E-commerce) systems and more specifically websites are seen as a form of IS (Sharkey, Scott & Acton, 2010:2). Khurana (2013) defines E-commerce as … "transacting or facilitating business on the Internet". Online shopping, electronic payments and Internet banking are different facets of E-commerce (Khurana, 2013).

The aim of this study is to explore which of the factors in each quality dimension in the DeLone and McLean (D&M) model influence South African consumers in shopping online. These are discussed next.

1.2.3.1 System quality

System quality depends on various factors, namely usability, availability, reliability, adaptability and the response time of a system (DeLone & McLean, 2003). Therefore, system quality can be described as … "the level of user satisfaction with the technical and functional aspects of an Internet shopping website" (Schaupp, Belanger & Fan, 2009:42). DeLone and McLean (2003:24) state that system quality measures the desired characteristics of an online system and therefore it must provide security, accessibility, speed and convenience that support the consumer's buying activities. System quality factors are crucial for an online store because if shoppers are unable to shop or are unwilling to go through an unsecured site that has a lengthy ordering process, the site is of no use (Fekete, 2011).

1.2.3.2 Information quality

One of the main advantages of online shopping is that consumers can conveniently and efficiently obtain information that is current, accurate and useful in order to compare products or services (Lin, 2007:363; Katawetawaraks & Wang, 2011:66). DeLone and

McLean (2004:25) state that information quality captures the content of the online system which should be personalised, complete, relevant, easy to understand and secure. In order to ensure that prospective buyers purchase online and return on a regular basis, the above mentioned characteristics of the content need to be met (DeLone & McLean, 2003:25). Websites should provide information that assists users to compare products, enhance the pleasure of shopping, and aids in better purchase choices (Hong, 2013:3). In South Africa 54% of online shoppers tend to conduct research before making a purchase (Flores-Araoz, 2011).

1.2.3.3 Service quality

Service quality is described as the ability to satisfy users by meeting their expectations in the time promised, building confidence in their ability to provide the service and being courteous with service requests (Gorla et al., 2010:208). The level of quality of services is determined by the seller repeatedly providing what the customer wants (Pearson, Tadisina & Griffin, 2012:201). Service quality provided by an Internet shopping site, can be both online and offline (Kim, Galliers, Shin, Ryoo & Kim, 2012:377). Khalifa and Liu (2007:780) state that ease of ordering and feedback to consumers' complaints are online factors, whereas deliveries of products or services and returns or exchanges are offline factors. Service quality therefore includes the outcome of service provided and the process of delivering the service (Kassim & Abdullah, 2010:352). DeLone and McLean (2003:25) state that the importance of service quality has grown as users are now customers and poor user support leads to the loss of customers and sales. Due to the fact that online shopping lacks face-to-face contact, service quality plays a fundamental role (Kim et al., 2012:377).

1.3 REASONS FOR THE STUDY AND FORMULATION OF THE PROBLEM

1.3.1 Reason for the study

As discussed earlier in the background sketch in section two of this chapter, online shopping is not only growing globally but also within South Africa, which will not only lead to an increased number of consumers shopping online but also to an increase in competition amongst the various online retailers. Previous research in the South African

context has mainly focused on online shopping behaviour, online shopping orientation, and the determinants of online shopping satisfaction (De Swardt & Wagner, 2008:6; Tapson, 2009:1; Botha, 2014:3; Kempen, Kasambala and Toerien, 2015:23). This study focusses on which system, information and service qualities of a website influences online shoppers in the South African context, which is a developing country where online shopping is becoming more relevant, and on consumers that may have different consumption patterns. Having an understanding of the website quality factors that influence consumers when shopping online is critical to the success of companies and can help them develop successful online shopping websites. Nowadays consumers have an abundance of websites to shop from and can easily switch without costs or with low costs (Chen & Cheng, 2009:338). The aim of the study is to explore the various website quality factors that influence online shopping within the South African market. This study is expected to contribute to the literature regarding online shopping in developing countries. The results could assist retailers in improving their website designs and marketing and communication strategies, targeting consumers by understanding the factors of system, information and service website qualities that influence these consumers to shop online.

1.3.2   Research question and aim

A recent study conducted by World Wide Worx (2016) found that online retailing in South Africa will reach 1% of overall retailing during 2016, and the number is likely to double by 2020. Moorad (2012) states that as consumers are beginning to recognise the benefits of online shopping, this provides opportunities for online businesses. Yellowwood Future Architects (2012) point out that South African retailers are currently not investing enough in exploring what will make online shopping easier and more interesting for consumers, and this is further supported by Word Wide Worx study which describe online retail in South Africa as undeveloped and lagging behind (World Wide Worx, 2016). The growth of online shopping in South Africa has given rise to the question of how consumers are influenced by the quality of a website of an online retailer. The aim of this study is to explore which factors of system, information and service qualities influence South African consumers when shopping online.

1.3.3   Objectives of the study

The research objectives as set out below were set for the proposed study.

The primary objective of this study is to explore website quality factors influencing online shopping in the South Africa context in order to improve retailers' websites.

The secondary objectives of this study are to investigate:

- The system quality factors influencing online shopping in the South African context.
- The information quality factors influencing online shopping in the South African context.
- The service quality factors influencing online shopping in the South African context.
- Future areas of research for online shopping in the South African context.

1.4 RESEARCH METHODOLOGY

The sample, sampling method, procedures followed and measurements used in this study are discussed in this section. A comprehensive discussion can be found in chapter 4.

1.4.1 Research design

This research followed an exploratory research design with a quantitative approach in order to meet the objectives of the study. The quantitative method allowed the researcher to quantify data in order to address research objectives through numerical measurement and statistical analysis (Zikmund & Babin, 2010:133; Malhotra, 2012:171). This study was exploratory in nature as it aims to explore an issue (Zikmund & Babin, 2010:51; McGivern, 2013:46). The exploratory approach was used because the information obtained from the proposed study of South African consumers regarding their view on website quality factors influencing online shopping can provide South African retailers with a better understanding of how to better utilise online shopping sites to ensure their success.

1.4.2 Sample and sample size

A previous study conducted by Effective Measure and IAB South Africa (2013:4) found that South Africans between the ages of 15 to 60 years and older shop online. Individuals younger than 18 years and those older 65 years were however excluded from the sample as they were deemed as vulnerable according to ethical clearance procedures followed for the purpose of this study. Therefore, the target population of this study consisted of people between the ages of 18 to 65, who have access to the Internet and currently reside in South Africa. The units of analysis for this study were people who have access to the

Internet (via computer, laptop, tablet or cellphone). Therefore, for the purpose of this study, anyone who met the above mentioned criteria could complete the survey. In order for the study to be measureable, a minimum of 130 responses of respondents that met the above mentioned requirements which were deemed adequate by the Bureau for Market Research (BMR). A total of 144 responses of respondents were received, of which 123 indicated that they shop online. Since the focus of this study was specifically on online shopping, chapter 5 provided a detailed analysis of the 123 respondents and their responses.

1.4.3   Sampling method

Convenience, non-probability sampling was used for the study. Norwood (2010:230) states that non-probability sampling is when the elements used are drawn from a set that is accessible. Therefore, respondents were those who meet a set eligibility criteria and who were easily and conveniently available to the researcher (Bradley, 2010:166). Also known as purposive sampling, non-probability sampling means that there is not an equal opportunity for each element in the population of being included (Norwood, 2010:230; McGivern, 2013:234). Therefore, the results cannot be generalised to the larger population which is the main disadvantage of non-probability sampling (Iacobucci & Churchill, 2010:285). However, convenience sampling was used for the purpose of this study because it has the benefits of time and cost savings (Bradley, 2010:166). Furthermore, according to Wiid and Diggines (2013:189), there is no evidence that non-probability sampling is unable to produce valuable results.

1.4.4   Data collection method

For the purpose of this study, survey research through a self-completion questionnaire was used to collect the necessary data to achieve the stated objectives. An online survey questionnaire which is described as an instrument that delivers and collects data via the Internet was used (Cooper & Schindler, 2011:228). The researcher made use of an online survey to collect the data over a period of roughly one month during 2015. LimeSurvey is an online survey software development tool which was used to develop and host the questionnaire which was distributed to the sample via an e-mail or posted on various social media sites and an online forum containing a link to the collection instrument.

All of the constructs in this study were measured by a 5 point Likert scale measuring the extent to which respondents strongly disagreed (1) or strongly agreed (5). The scales to measure the website quality factors influencing online shopping were adapted from the D&M model. Low scores (1 or 2) revealed strong disagreement and disagreement where the score 3 represented neither/nor answers and high scores (4 or 5) revealed strong agreement and agreement with each statement presented.

1.4.5   Pre-testing of data collection instrument

The questionnaire used for the online survey was pre-tested a month before the actual data collection. Thirty respondents completed the survey during the piloting in order to look for possible aspects of the research instrument that could be problematic when conducting the actual data collection. The purpose of the pre-test was to minimise possible errors which could arise and to also fix any questions that respondents had difficulty responding to.

1.4.6   Reliability and validity assessment

The internal consistency or reliability of all the scales and sub-scales was tested with Cronbach's alphas values. The reliability of a scale was measured by calculating a Cronbach's alpha value for the scale to determine how reliable the scale is. The minimum Cronbach's value that is needed in order to consider a scale reliable is 0.7 (Wiid & Diggines, 2013:238). Validity, on the other hand, determines whether a scale measures and truthfully represents the concept (Zikmund, Babin, Carr & Griffin, 2013:303). Content and face validity were used for this study

1.4.7   Data analysis

Data analysis is the process of inspecting, cleaning and transforming data into useful and relevant information (Boundless, 2016). Data from the questionnaires was firstly coded by allocating numerical figures to each answer. Secondly the data was captured on Microsoft Excel to be edited and cleaned before being imported to the statistical package SPSS to undergo further editing, estimation and analysis.

1.4.8   Ethical implications

The necessary application form for the ethical clearance was obtained from the Department of Marketing and Retail Management's Research Ethics Committee. Participants were informed that their participation was voluntary before they completed the questionnaire.

1.5   ORIENTATION OF THE STUDY

Chapter 1: Introduction

The first chapter covers the introduction of the study, the theoretical foundation, and a brief overview of the research methodology. The research problem, objectives of the study and aim of the study are also outlined in chapter 1.

Chapter 2: An overview of the online shopping

The second chapter of the study discusses the development of the Internet and the significance of online shopping globally and in South Africa. The chapter also discusses the different types of online shoppers as well as the online shopping process.

Chapter 3: An overview of website quality factors influencing online shopping

The third chapter of this study deals with the different website quality factors that influence consumers when shopping online. The focus is on the multidimensional constructs of system, information and service qualities, and how each of the dimensions influences the consumer when shopping online.

Chapter 4: Research methodology

A description of the research methodology used in this study is outlined in chapter 4. This chapter reveals amongst others the research design, sampling method and sample as well as the measurements used in the study.

Chapter 5: Research results

The research findings of the study are presented in chapter 5. These findings are presented for each question in the research instrument followed by inferential statistical analysis.

Chapter 6: Conclusion and recommendations

In the last chapter of the study the conclusions and recommendations are presented. The study's contribution to the South African online shopping industry is highlighted and the study concludes with a discussion of theoretical and managerial implications and directions for future research.

1.6 SUMMARY

This chapter provided an introduction to the research study by firstly providing an overview of the purpose and the aim of the study. The research problem, objectives and methodology were then discussed, followed by the orientation of the study. In the next chapter, an overview of online shopping is examined in more detail in the form of a comprehensive literature study.

CHAPTER 2

AN OVERVIEW OF ONLINE SHOPPING

2.1   INTRODUCTION

As the Internet becomes more entrenched in society with greater numbers of people using it regularly, online shopping is becoming more relevant (Hadfield, 2013). This chapter provides an overview of how the Internet and more specifically, online shopping, have progressed over the years, globally and in South Africa.

2.2   A BRIEF HISTORY OF THE INTERNET

Gil (2015) describes the Internet as … "a vast interconnection of computer networks that spans the globe". A network is simply a system that sends and receives data (Harbeck, 2015). The Internet is based on a number of key ideas developed by the Advanced Research Projects Agency (ARPA) (Barry, Cerf, Clark, Kahn, Kleinrock, Lynch, Postel, Roberts & Wolff, 2013). The development of the Internet started in the early 1960s, when the United States Department of Defence, established ARPA with the aim of creating new research ideas that would result in significant technological advances that the government could use (Cohen-Almagor, 2011:46). A branch of the ARPA was the Information Processing Techniques Office (IPTO). The IPTO assisted in building a strategic communication network between American universities and research laboratories so that researchers could share their resources amongst themselves on the ARPA Network (ARPANET) (Cohen-Almagor, 2011:47). The ARPANET was the beginning of the Internet and it had one key characteristic: Innovation (Cohen-Almagor, 2011:49). Continuous development of the ARPANET lead to accelerated development which eventually became the foundation for the Internet (Cohen-Almagor, 2011:49).

The Internet, as we know it today, is made up of different protocols (Gil, 2010). Each protocol has its own set of computer rules that stipulate how an Internet document gets transmitted (Gil, 2010). ARPANET developed and made use of various protocols that facilitated communication between two computers based on the client-server design (Cohen-Almagor, 2011:48; Bourgeois, 2014). A computer at one end could search for,

send, create or receive text, graphic images, and audio and video files from another computer (Cohen-Almagor, 2011:48). A computer on the Internet is both a client and a server whereby a client requests information or action whereas a server supplies information or takes action (King's College London, 2007; Bourgeois, 2014). The most commonly used protocol today is the Web (Gil, 2013). The Web, developed in 1989, is described as an information-sharing system that allows users to easily access, send or receive information in various formats over the Internet (Gil, 2010; Beal, 2015). The Web played a crucial role that led to the increased familiarity and use of the Internet (Wang, n.d.).

During the 1990s, the Internet became a global phenomenon when more people in various countries started using it because it was user-friendly, multi-functional and decentralised in nature (Cohen-Almagor, 2011:53). The Internet revolutionised many aspects of the world, from how information and knowledge is shared and created to how society communicates and how business is conducted (Castells, 2014). Numerous businesses started recognising the benefits that the Internet had to offer and began investing in it, which led to it being the focal point for communication, information and a place to conduct business (Cohen-Almagor, 2011:54).

2.2.1   A brief overview of the internet in South Africa

In 1993, South Africa saw the emergence of the first Internet Service Provider (ISP) which only provided services to corporate clients. However, after the first democratic elections in 1994, the telecommunications landscape changed as a number of smaller ISPs started to offer their services to private consumers that year (De Swardt, 2008:15; Senatore, 2010:56). Even though the Internet has been available in South Africa since 1994, the country still has a long way to go when it comes to ensuring that the Internet is widely available and affordable to all its citizens (Bid or Buy, 2015). This may be attributed to high Internet costs and poor infrastructure in the country (Mail & Guardian, 2012; Department of Communications, 2013:21). The majority of South Africans only have access to the Internet from their workplace, schools or colleges or on their mobile phones or smartphones (Goldstuck, 2012:38; Bid or Buy, 2015).

Since 1993, the number of Internet users has been gradually increasing annually. There are currently an estimated 11.3 million South Africans that access the Internet on a

monthly basis and roughly 93% prefer to use their mobile or smartphones rather than a computer (Nevill, 2013; Rizzo, 2013). A study conducted by Beger and Sinha (2012:3-5) states that South Africans are some of the biggest users of mobile technology in Africa, with a 100.48 percent penetration. This may be attributed to increased competition among mobile network providers which has led to the lower costs of SIM cards and the increased availability of cheaper mobile devices and prepaid subscriptions (Beger & Sinha, 2012:5).

A study conducted by De Lanerolle (2013) states that the majority of Internet users in South Africa are young Africans, in the lower income bracket. The main reasons for going onto the Internet are to gather information, to socialise, for studies, work or business and for job-hunting (De Lanerolle, 2013). Internet usage in the country almost doubled from 2008 to 2012 during which time roughly 22% of Internet users used it every day (De Lanerolle, 2013). The study by De Lanerolle (2013) divides the population of Internet users into five categories based on their characteristics. Each category is discussed in Table 4.

Table 4: South African Internet users

Internet user	Description
Cafe connected	Cafe connected individuals are the least connected and least frequent users. Cafe connected individuals are mostly young Africans, with low incomes, that started using the Internet recently and only have access via Internet cafes. The cafe connected make up 15% of the Internet users in South Africa.
Mobi's	Mobi's are described as new Internet users that only have access via mobile phones. Mobi's are mainly young Africans, with low incomes, that connect to the Internet on a daily basis, however they were only introduced to it in the last two years. Mobi's make up 20% of Internet users in South Africa.
Wired and wireless	Wired and wireless Internet users have access via mobile phones or at school or college. The wired and wireless are also young individuals, however they are more well-off and have more experience with the Internet compared to the cafe connected and Mobi's. Only half of the wired and wireless use the Internet daily and they make up 23% of Internet users in South Africa.
Connected at home	Connected at home Internet users have access at home or at work. Connected at home users are generally tertiary education individuals in their thirties. They first used the Internet on a computer at least five years ago and more recently started connecting via their mobile phones. Connected at home users make up 37% of the Internet users in South Africa.

Internet user	Description
Super connected	Super connected individuals have access to the Internet via computers, at home or at work, mobile phones and mobile devices such as tablets or laptops. They have been using the Internet for less than five years. The super connected are generally in their twenties and are not as well off as the connected at home. Super connected users make up 5% of the Internet users in South Africa.

Source: Adapted from De Lanerolle (2013)

Table 4 divides the Internet user population based on how experienced they are, how often they make use of the Internet and how they access the Internet. The cafe connected (15%) are the least frequent users as they only have access at local Internet cafes (De Lanerolle, 2013). Mobi's (20%) and the wired and wireless (23%) are relatively new users and only have access predominantly via mobile phones (De Lanerolle, 2013). The connected at home (37%) are familiar with the Internet and typically access it via computers at home or at work (De Lanerolle, 2013). The super connected (5%) are relatively familiar with the Internet, however they are more accustomed to newer technologies and therefore access the Internet via different devices (De Lanerolle, 2013).

The history of the Internet and its development in South Africa has been briefly discussed in the above section, however the focus of the chapter will be on online shopping which is discussed below.

2.3   AN OVERVIEW OF ONLINE SHOPPING

2.3.1   Defining online shopping

Online shopping is the most popular aspect of electronic commerce (E-commerce) and is described as the process that a customer goes through to purchase a product or service over the Web (Jusoh & Ling, 2012:223; Khurana, 2013). Kuan (n.d.) simply defines online shopping as buying products and services on the Web. In essence, organisations create websites that are equivalents of physical stores where buyers can browse or buy products or services on the Internet (De Swardt, 2008:9; Khurana, 2013). The focus of the study is online shopping; however the different facets of E-commerce have been fundamental in its development as illustrated in the next section. The evolution of online shopping is discussed next.

2.3.2 The development of online shopping

Even though the concept of online shopping has been around since the late 1970s, it developed gradually over the years and only became commercialised in 1996 (Charlie, 2011). Table 5 illustrates the major developments that contributed to what online shopping is today. Oxford Dictionaries (2015) define online, as being connected to a computer network or the Internet, to perform an activity or service.

Table 5: The key developments of online shopping

Year	Development
1979	Michael Aldrich invents the online transaction process
1981	Thomson Holidays, performs the first online business-to-business (B2B) transaction
1982	Minitel, becomes the first online ordering system
1984	Tesco, performs the first B2C transaction
	Compuserve, becomes the first electronic mall
1987	Swreg, the first electronic merchant account is set up
1990	Nexus, becomes the first Web browser
1992	Book Stacks Unlimited, is the first online bookstore
1994	Netscape, becomes the first encryption standard for secure data transfer
	Standfor Federal Credit Union offers the first online banking services
1995	Amazon becomes the largest online retailer
	eBay is the first auction website
1997	Netbot, becomes the first commercial price comparison website
1998	PayPal is the most popular online payment service
	Ritmoteca is the first online music retailer
2000	Mercata becomes the first 'group buying' website
	The dot com bust starts
2001	Amazon launches its mobile service
2005	Social commerce emerges
2007	Adidas becomes the first virtual mirror
2011	Home Plus is the first virtual store
2012	Ikea launches a 3D furniture app

Source: Adapted from Instant Shift (2010) and Banks (2011)

In 1979, Michael Aldrich invented the process of real-time online transactions where people could shop from home (The Michael Aldrich Archive, 2011). Aldrich thought of a way to connect a television set to a computer that could be linked to a specific network that sold products (The Michael Aldrich Archive, 2011). As there was no market for the invention at the time, Aldrich and his team came up with a marketing plan to sell the concept of connecting agents, distributors and customers to a network that enabled direct shopping and sales to corporations (The Michael Aldrich Archive, 2011).

Thomson Holidays was one of the corporations they approached and in 1981 the company was the first to conduct a business-to-business (B2B) online transaction (Instant Shift, 2010). B2B is when a business markets its products and services to another business (Jensen, 2013). Thomson Holidays linked sixty-six of its travel agents around England by connecting them to the network where they could extract data and serve customers immediately by informing them about products that were available (Instant Shift, 2010).

In 1982, Minitel went online in France and became the first online ordering system. Minitel was a nationwide communications network that included numerous services, ranging from a telephone directory to news, gaming, banking, text messaging, to theatre and train bookings (Lavergne, 2012; Hager, 2012). Minitel became a part of the French way of life as it was commonly used by the majority of customers and the number of companies that joined the network to offer their services increased each year (Crumley, 2012; Lavergne, 2012). Users of Minitel could obtain information or get tasks done through the system instead of going to the actual store or having to make phone calls (Crumley, 2012). Minitel stopped operations in 2012, but at one point it had twenty-six thousand different services available and roughly twenty-five million users (Garling, 2012). Schofield (2012) points out that Minitel ceased to exist because it failed to innovate and was therefore replaced by the Internet.

In 1984, Tesco launched the first business-to-consumer (B2C) Internet shopping system that used the Shopping and Information Service (SiS) (Instant Shift, 2010; The Michael Aldrich Archive, 2011). The SiS was initially designed for the elderly, and socially and physically challenged people so that they could buy groceries through a modified television set that was installed in their homes (The Michael Aldrich Archive, 2011; Mallon, 2013). Tesco had 1350 products that customers could choose from and would deliver the product purchases to their homes (Mallon, 2013). In addition, Tesco was the first to introduce the concept of an 'Internet shopping cart' (Instant Shift, 2010). An Internet shopping cart is a software program, similar to the traditional shopping cart, which allows users to select and put items which they are interested in into the shopping cart (Close & Kukar-Kinney, 2009:240). This tool allows users to place various items into a single space to be further evaluated (Close & Kukar-Kinney, 2009:240). Spencer (2010) points out that even though organisations can sell products without having a shopping cart system, having a system increases the likelihood of consumers purchasing from a website.

Further, in 1984, CompuServe, the first electronic mall with more than sixty different retailers and manufacturers on the network, was launched (Random News, 2010). Users of CompuServe could get comprehensive information about products that were available, contact the organisation via email if they had further queries and order items online that they wanted to purchase (Random News, 2010). CompuServe also used an Internet shopping cart-like system where ordered items would be stored in a user's file and they could either continue shopping or exit and pay the merchant (Random News, 2010).

In 1987, the first merchant account was set up by Swreg to help software developers sell their products over the Internet (Instant Shift, 2010; Bach, 2012). A merchant account can be described as a bank account created by a business to accept payments from customers via credit or debit cards (Peavler, 2013). An Internet merchant account allows businesses to conduct transactions on the Internet in real time and is considered to be fundamental to the success of any Internet-based seller (TransFirst, 2013).

In 1990, the first Web browser, 'Nexus' was launched (Instant Shift, 2010). Rouse (2007a) and Jain (2011) describe a Web browser as an application program which allows the user to view and interact with information on the Web. An application program or an 'app', is described as any software program designed to perform specific functions (Rouse, 2007b; Campbell, 2011). With browsers, users request which website they would like to view over the Internet (Orgera, 2013). The dawn of browsers made it easier to view information in various formats on the Web.

In 1992, Book Stacks Unlimited was the first bookstore to go online (Robin, 2011). Initially Book Stacks Unlimited was a bulletin board, which is described as a virtual place where users meet to post and respond to messages about a general interest (Roeder, 2013). Book Stacks Unlimited created this network for book lovers to share and discuss information and opinions, and later became an online book store which aimed to make all published books easily accessible for its users (Rouse, 2011; Robin, 2011).

In 1994, Netscape, an Internet browser, was the first to introduce an encryption standard for secure data transfer (Banks, 2011). Encryption is described as the process of altering important data so that only the person with the secret code can read it (Bolton, 2013). Netscape used the Secure Sockets Layer (SSL) protocol that managed the security of a

message communicated on the Internet (Cobb & Cusack, 2007). The SSL protocol made online transactions more secure (Banks, 2011).

Moreover, in 1994, Standard Federal Credit Union, a financial institution, introduced the first online banking services (Scholasticus, 2013). Even though systems such as Minitel mentioned above existed during the 1980s, they only allowed users to view their bank statements, transactions and transfers (Sia Partners, 2013). It was only after the development of the Web and secure Web browsers that online banking became more prevalent offering other functions for users (Sia Partners, 2013). The increased number of Internet users and online banking usage contributed to the expansion of Internet shopping (Kujundzic, Jadric & Cukusic 2011:16).

In 1995, Amazon was launched. At first it was an online bookstore. However, the website expanded over time to offer a wide range of other products due to high demands (Robin, 2011). Amazon is the largest and one of the most recognised and successful online shopping websites today (Business Dictionary, 2013a). eBay was also launched the same year and it was the first auction website (Banks, 2011). eBay created a network of buyers and sellers wanting to buy or sell products (Hsiao, 2013). Amazon and eBay are the two largest online websites that facilitate millions of transactions on a daily basis (Hsiao, 2013; Dixon, 2012).

In 1997, Netbot, the first commercial price comparison website was launched (Banks, 2011). A comparison website collects information about a specific product and compares the information gathered based on users' preferences (Hayes, 2012). Users can, for example compare retailers, brands, prices, quality or shipping costs. Katawetawaraks and Wang (2011:66) point out that one of the reasons why Internet shopping has increased is because it is easier for consumers to compare products online.

In 1998, PayPal, the most popular online payment service, was launched (Banks, 2011). PayPal acts as a middleman during an online transaction between the user and the organisation selling products or services (Gil, 2015). When users sign up with PayPal, they link it to either their debit, credit or bank account (First National Bank, n.d.). PayPal offers an alternative secure payment method as there are guarantees in place to ensure the card and bank information are protected (Gil, 2013; First National Bank, 2013). In essence,

PayPal allows users to do online transactions without sharing any financial information (PayPal, 2013).

Moreover, in 1998, Ritmoteca, the first online music retailer of the 'song by song' business model, was launched (Banks, 2011; Webber, 2011). Rimoteca arranged with large recording companies to distribute their songs or albums online (Barnett, 2011). Even though Rimoteca did not survive the dot com bust that occurred in 2000, the same business model is currently used by iTunes Music Store, which is the leading seller of online music in the world (Webber, 2011; Harris, 2013).

In 2000, Mercata was the first commercial 'group buying' website launched (Banks, 2011). 'Group buying' occurs when organisations agree to selling goods at the discounted price if there are enough buyers (Unity Global Net, 2012). In essence, 'group buying' websites provide users with discounted products from various organisations by leveraging the power of collective buying (La Barbera, 2015). Mercata is another example of a website that did not survive the dot com bust, however the same business model is currently used by Groupon which was launched in 2008. Groupon has over one hundred and ninety thousand organisations in one hundred and ninety different product categories across the world (Forbes, 2013).

As the Internet became increasingly commercialised, more businesses and investors went online which lead to the start of the dot com bubble in 1995 (Colombo, 2012). Harvey (2011) describes an economic bubble as a market phenomenon where the prices of an asset are significantly higher than the actual value of that asset. Jiménez (2011:2) describes an economic bubble as an economic cycle that expands rapidly because the prices of assets rise above their real value, until they eventually drop and the bubble bursts resulting in a contraction. In 2000, the Internet industry experienced the dot com bust. The majority of these Internet businesses were overvalued and operating at a loss (Smith, 2015; Catchpole, 2007). Internet companies that had viable business models survived the dot com bust, but incurred enormous losses, including companies such as Amazon and eBay (Econtrader, 2012; Heiney, 2011). The dot com bust had a significant effect on society and the online industry (Wray, 2010). Different trends emerged, namely increased accessibility to the Internet, the mobile Web and social networking (Wray, 2010).

In 2001, Amazon launched its range of mobile services which indicated the growing trend of the mobile Web because of new mobile technology and smartphones (Banks, 2011). Mobile commerce started in 1997 when modified Coca-Cola vending machines accepted payments via SMS text messages (Sahota, 2011). Since then, users have been able to purchase various items from their mobile devices which has significantly influenced online shopping (Wiebke, 2012; Bosomworth, 2015). Even though most users prefer making online payments via a computer, mobile devices are used for pre- and post-sales research, tracking the delivery of products or the sharing of online shopping experiences (Dreyer, 2014).

In 2005, social commerce emerged as a new form of online shopping (Banks, 2011). Cohen (2011) describes social commerce as the convergence of social media and shopping. Nguyen (2012), on the other hand, defines social commerce as providing customers with a platform to discuss, criticise or promote products online. In essence, social commerce consists of tools that organisations have in order to allow Internet shopping to be a social activity by utilising social networks and user-driven content (Taylor, 2013). Eighty-one percent of consumers obtain advice from friends and family via social networking sites and seventy-four percent use social networks to guide their purchases (Ogince, 2012).

In 2007, Adidas launched the first virtual mirror on websites (Banks, 2011). Virtual mirrors allow users to view themselves wearing the products by using 3D image processing techniques (Fraunhofer, 2013). Users take a digital photo of themselves and then select the products they are interested in purchasing, allowing them to view themselves 'trying' different product variations (IBM, 2009; Adams, 2011). Various organisations in different product categories, ranging from apparel to accessories and hair and makeup have implemented virtual mirrors on websites.

In 2011, Home Plus launched the first virtual store in South Korea (Adams, 2012). Users with smart phones download an application that allows them to order products by taking a photo of the barcodes of products displayed (Adams, 2012). The virtual store displays products as they are in actual stores and once users have scanned the barcode, the product is added to their online shopping cart and delivered to their homes (Cavanaugh, 2013). During the campaign, Homeplus had a seventy-six percent increase in new registered users and their online sales increased by one hundred and thirty percent (Al

Saeed, 2011). Cavanaugh (2013) states that the popularity of virtual stores is increasing as a number of organisations around the world have implemented the concept.

In 2012, Ikea introduced its 3D furniture app which provides users with augmented realities of products (Fitzpatrick, 2013). The app allows users to view the product in 3D in their actual homes (Summerson, 2012). Rath, Bay, Gill and Petrizzi (2014:317) state that one disadvantage of online shopping is that consumers cannot physically examine products. This app allows users to view products at their true scale and therefore decreases the likelihood of consumers purchasing products that are the incorrect size, colour or design (Fitzpatrick, 2013).

Two examples of the virtual mirrors discussed above are provided in Figures 1 and 2.
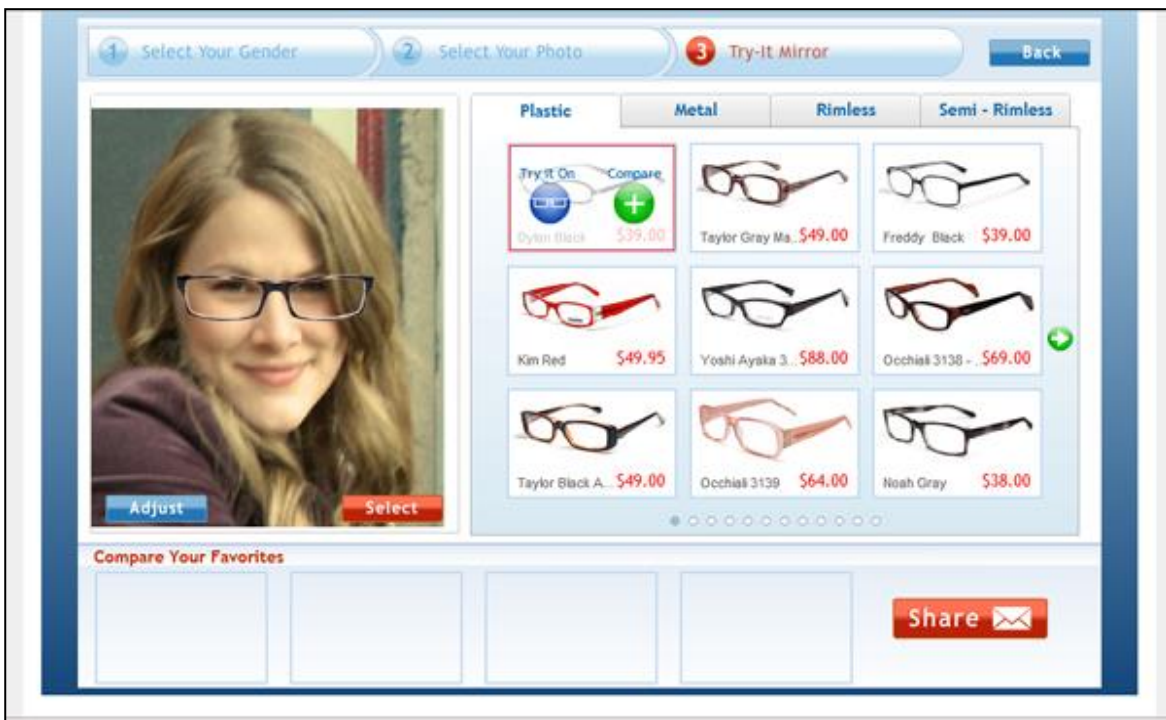
Figure 1:   Virtual mirror for glasses

Source: Blue collar catwalk (2011)

Figure 2:   Virtual mirror for makeup
Source: EZFace (n.d.)

Figures 3 and 4 illustrate an example of a virtual store set up by Homeplus in Korean subways and the Ikea 3D furniture app displayed on various mobile devices, respectively.

Figure 3:   Virtual store in Korean subways
Source: Adams (2011)

Figure 4:   Ikea 3D furniture app

Source: Fitzpatrick (2013)

2.3.3   The online shopper

The previous section gave an overview of online shopping by discussing key developments throughout the years. This section clearly defines the online shopper. Previous researchers have categorised online shoppers according to their motivations, psychographics (personality, attitudes, values, behaviours, lifestyles), as well as, other factors such as the importance of online store attributes and purchasing orientation (Brengman, Geuens, Weijters, Smith, Swinyard, 2005; Jayawardhena, Wright & Dennis, 2007; Ganesh, Reynolds, Luckett & Pomirleanu, 2010; Rose, Clark, Samouel & Hair, 2012). Broadly speaking, according to Soopramanien and Robertson (2007:73), there are three groups of potential online shoppers:

- **Buyers** who buy over the Internet.
- **Browsers** who search for information on the Internet however purchase in stores.
- **Non-shoppers** who do not buy or search for information over the Internet.

Six groups of online shoppers have been classified in theory based on various classifying variables.

Firstly, according to Angell, Megicks, Memery, Heffernan and Howell (2012:260) people have diverse wants and have different opinions on what they consider is important from a retail offering. Consequently, online shopping motivations refer to the reasons why users shop online. Rohm and Swaminathan (2004:748) identified four types of shoppers based on motivation:

- **Convenience shoppers** are shoppers that are motivated by the convenience of buying online at any given time in the comfort of their own home or at work.
- **Variety seekers** are shoppers that are motivated by the ease of searching, comparing and accessing information. These shoppers usually plan their purchases.
- **Balanced buyers** are shoppers motivated by both the convenience and variety aspect of online shopping.
- **Store-orientated shoppers** are shoppers that are motivated by offline store characteristics of direct social interaction and the immediate possession of goods. These shoppers do not see the convenience of online shopping and therefore are the least likely to shop online.

Secondly, Ganesh, Reynolds, Luckett and Pomirleanu (2010:111), identified seven types of online shoppers based on their motivation. Online shopping motivation includes the ease of searching and shopping convenience, the increased product selection and availability, the ability to shop for entertainment and to share purchases on social media platforms (social shopping), to keep up to date with the latest trends and to avoid regular shopping hours (Ganesh, 2010:108).

- **Shopping enthusiasts** are shoppers that are highly motivated on all aspects listed above.
- **Apathetic shoppers** are shoppers that are not motivated by any of the aspects listed above.
- **Basic shoppers** are task-orientated shoppers who are motivated by convenience.
- **Bargain seekers** are price-orientated shoppers who enjoy searching for goods at a cheaper price and finding bargains.
- **Destination shoppers** are shoppers that are motivated by new trends and the need to create new images of themselves. These shoppers look for the variety of goods available.

- **Interactive shoppers** are online shoppers that are considered as independent and prefer websites that offer personalised services and online bidding or bargaining capabilities.

- **E-window shoppers** are online shoppers that simply browse websites and prefer those that are interesting. These online shoppers are interested to see what is available.

Thirdly, Ganesh et al. (2010:110) acknowledged other online shoppers based on the online store attributes. Online store attributes include product selection and prices and website convenience and features such as entertainment, security and customer service (Ganesh et al*.,* 2010:108).

- **Shopping enthusiasts** are shoppers that assign high values to all online store attributes listed above.

- **Basic shoppers** are task-orientated shoppers who want simple websites that fulfil the necessary requirements. These shoppers are not interested in the varieties offered.

- **Bargain seekers** are online shoppers who enjoy searching for goods at a cheaper price. These shoppers are proactive and search for these products instead of waiting to be informed about the alternatives.

- **Destination shoppers** are shoppers that are motivated by new trends and the need to create new images of themselves. These shoppers look for the variety of the goods available and the attractiveness of the website.

- **Risk adverse shoppers** are online shoppers that prefer physical stores as they are concerned with the security of online websites and are also not interested in the lower prices that online stores offer.

- **Apathetic shoppers** are shoppers that have low ratings for the importance of online store attributes. These shoppers are likely to be active traditional shoppers as they do not appreciate the convenience that online stores offer.

Fourthly, Barnes, Bauer, Neumann and Huber (2007:80), identified three types of online shoppers based on their psychographic variables and behaviour:

- **Risk-adverse doubters** are users that are careful, reserved and sceptical about new experiences and therefore view online shopping as risky and are less willing to buy online.

- **Open-minded online shoppers** are users that are open to new experiences and perceive little risk associated with online shopping and therefore are the most willing to buy and even enjoy online shopping.
- **Reserved information seekers** are users that are careful and reserved, and even though they are willing to buy online, they still perceive high risks and therefore only search and evaluate products online.

Fifthly, Jayawardhena et al. (2007:516) differentiate five online shoppers based on their purchasing orientation, which refers to their general predisposition to purchasing.

- **Active shoppers** are online shoppers that actively shop online and appreciate the amount of control that they have in their purchases.
- **Price sensitives** are online shoppers that are economically orientated and shop based on the price of goods.
- **Brand loyals** are referred to as loyal shoppers who tend to purchase specific brands they prefer.
- **Convenience-orientated** are online shoppers who seek the most convenient way of shopping.
- **Discerning shoppers** are a combination of the above mentioned types. These shoppers are active, brand loyal and look for bargains however, they also prefer making purchases in a convenient manner.

Lastly, Perc (2013) states that there are five basic types of online shoppers based on their shopping experience:

- **Searchers** are shoppers that know what they would like to purchase and therefore search online for that specific product (Delk, 2012).
- **Browsers** are shoppers that have a goal which they are shopping for but do not know the specific product they would like to purchase and therefore browse online for products related to the goal (Delk, 2012).
- **Wanderers** or window shoppers are individuals that do not have a specific product or goal they would like to purchase and therefore go online without the intention to purchase (Delk, 2012).
- **Price hunters** are shoppers that look for deals and therefore go online to look for products that are sold at a discounted rate (Delk, 2012).

- **First timers** are online shoppers that are new to process (Perc, 2013).

Having examined the various types of online shoppers, the classification of online shoppers made by Perc (2013) will be used for this study. The reason being that this classification of online shoppers is the most simple and easy to understand, to avoid ambiguity and confusion for the respondents when completing the questionnaire.

2.3.4   The online shopping process

Having defined the various types of online shoppers, this section provides an overview of the different types of E-commerce websites and the online shopping process that the majority of online users follow. According to Heape (2009) there are three main types of E-commerce websites that organisations can use as a platform for online shopping:

- **An information site** is a website set up for users to gather more information about the products sold by the organisation (Heape, 2009). These websites provide detailed information about the organisation's products with the primary aim of selling products to users offline (Heape, 2009).
- **A virtual storefront** is a transactional website representing a single store whereby users can browse through the organisation's products, read information, place orders and buy products (Heape, 2009; Farlex Financial Dictionary, 2012).
- **An E-marketplace** acts as a middleman and can be described as a market space whereby a number of buyers and sellers conduct online activities. (Heape, 2009; Werts & Kingyens, 2015:6).

While the primary purpose of an information site is to provide users with detailed information about the organisation's products, these products cannot be purchased online (Heape, 2009). It is only virtual storefronts and E-marketplaces that offer an online sales presence and allow users to make online purchase transactions. In this case, users may follow an online shopping process as demonstrated in Figure 5. The online shopping process can be divided into three sections (A, B and C). As can be seen in Figure 5, section A refers to the browsing and selection of item(s), section B refers to the registering and login process of a website and section C refers to the confirmation and payment process.

Section A, illustrated in Figure 5 is the initial stage of the online shopping process. During this stage, users browse through the organisation's website and select the item(s) they wish to purchase. These items are then added to the users shopping carts, whereby they can either checkout or continue shopping by browsing for other products available on the website. In some instances, section A may be the only stages in the online shopping process that users go through. The reason being that even though they search and browse for information on products and services online, they do not make online purchases because they prefer buying offline.

Section B, illustrated in Figure 5 is when a user registers or logs into the organisation's website. When users register they provide basic personal information such as title, name, address, email, contact number and date of birth. During registration, users also generate usernames and passwords which are used for login purposes. Online registrations provide benefits for both users and the organisation (Active Network, 2012). Registering online saves time as users are only required to submit their information once because websites save their information and therefore only have to login with their username and password in future (Active Network, 2012). For the organisation, online registrations allow for improved data management and marketing (Active Network, 2012). Organisations are able to easily access details of their users and track their behaviour in order to specifically target them (Active Network, 2012). Organisations websites generally have a 'remember me', 'login automatically' or 'keep me logged in' option which users can select. These options enable users to skip the stages in section B in future if they access a specific website with the same device.

Section C illustrated in Figure 5 refers to the final stages of the online shopping process. When users purchase from an organisations website, they provide shipping and billing information such as the address for delivery and payment details. The organisations securely save this information alongside the user's personal details. Once the seller has received the payment, they send the requested products to the users.
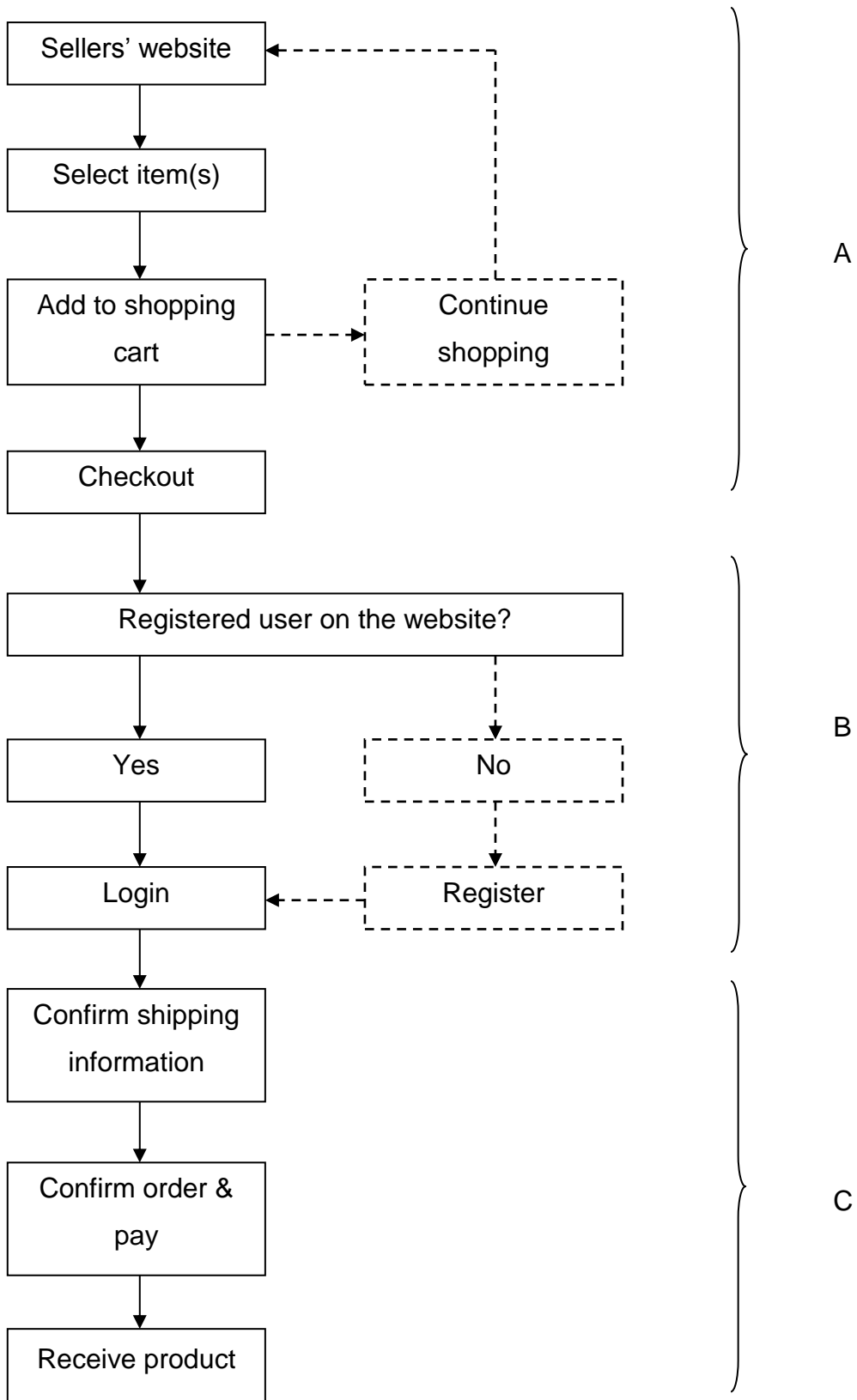
Figure 5: Online shopping process

Source: Adapted from Beijing Universal Trade (UIEWT) Customer Service Information Public Center (2009)

An overview of the development of online shopping and its processes were discussed in the sections above. However, the focus of this study is on the South African market, therefore an overview of online shopping in South Africa is now given.

2.4   OVERVIEW OF ONLINE SHOPPING IN SOUTH AFRICA

Even though online shopping and the E-commerce industry in South Africa are small compared to global standards, they have grown rapidly since 2012 and will continue to do so as the market is far from maturation (Mochiko, 2013; Novotny, 2013). A study conducted by TNS Infratest (2011) found that the majority of South African Internet users prefer shopping offline in a number different retail categories. Table 6 illustrates respondents' shopping preferences in percentages.

Table 6:   Offline vs online purchases during 2011

Product category	Offline	Online
Consumer electronics	83%	10%
Apparel	88%	7%
Entertainment	77%	18%
Gifts	83%	9%
Home and garden	86%	7%

Source: Adapted from TNS Infratest (2011)

It is clear that South Africans would rather shop at an actual store as opposed to using the Internet. South African consumers prefer shopping offline for consumer electronics (83%), apparel (88%), entertainment (77%), gifts (83%) and home and garden (86%) (TNS Infratest, 2011). There are a significantly lower number of consumers that prefer shopping online for consumer electronics (10%), apparel (7%), entertainment (18%), gifts (9%) and home and garden (7%) (TNS Infratest, 2011). The main reasons why South Africans do not shop online are: they want to see or touch the product; they appreciate personal recommendations and expertise of sales people; and they have general security concerns about shopping online (TNS Infratest, 2011). On the other hand, Galatis (2013) points out that a key reason why South Africans are not shopping online is because there are not enough large retailers creating online platforms for shopping.

According to Pananino and Goldstruck in eCommerce News (2013), even though statistics show a slight decline in online shopping at the end of 2012, this is attributed to the overall slowdown of the economy due to inflation and the increased number of new active Internet

users. These new active Internet users have increased the total population of Internet users, however they are still becoming accustomed to online shopping (eCommerce News, 2013). It is estimated that 50% of Internet users are more likely to shop online only after five years of Internet use (My Broadband, 2013). Nevertheless, online shopping is becoming more prevalent in South Africa, and growing at a rate of 30% a year (Novotny, 2013). World Wide Worx found that 57% percent of South African online users are shopping online (Novotny, 2013). A recent study conducted by MasterCard found that 91% of South Africans that shopped online were satisfied with their shopping experiences and 54% percent shop online on a regular basis (Business Tech, 2013). The MasterCard study also established the main factors that influence South Africans when shopping online. These factors are summarised in Table 7. Further, the main product categories purchased online by South Africans are listed in Table 8.

Table 7:   Factors influencing online shopping

Factor	Percentage
Secure and convenient payment facilities	90%
The price of the product or service	89%
Low or no extra delivery or shopping charges	86%
Promotional offers, discounts or free gifts	65%

Source: Adapted from Business Tech (2013)

Table 8:   Product categories purchased online

Product category	Percentage
Books, CDs and DVDs	42%
Home appliances and electronics	35%
Personal or professional education	33%
Travel	32%
Coupon or deal websites	31%

Source: Adapted from Business Tech (2013)

The main factors influencing South Africans when shopping online are secure and convenient payment facilities (90%), the price of the product or service (89%), low or no extra delivery or shopping charges (86%) and promotional offers, discounts or free gifts (65%) (Business Tech, 2013). On the other hand, the most purchased product categories by South Africans are books, CDS and DVDs (42%), followed by home appliances and electronics (35%), personal or professional education (32%), travel (32%) and lastly, coupon or deal websites (31%) (Business Tech, 2013).

Another study conducted by Jana, an emerging markets research firm, established the key benefits and obstacles of online shopping for South African consumers. These are summarised in tables 9 and 10.

Table 9: Benefits of online shopping

Benefits	Percentage
Convenience	33%
Ease of use	21%
Price	19%
Shopping experience	14%
Selection	12%

Source: Adapted from CP-Africa (2013)

Table 10: Obstacles to online shopping

Obstacles	Percentage
Delivery time	38%
Internet connection	30%
Lack of security	14%
Cost	12%
Lack of options	6%

Source: Adapted from CP-Africa (2013)

South Africans finds that convenience (33%), ease of use (21%) and price are the top benefits of online shopping (CP-Africa, 2013). However, delivery time (38%), Internet connection (30%) and lack of security (14%) are perceived as the main obstacles to online shopping (CP-Africa, 2013).

A large number of South Africans connect to the Internet via their mobile or smartphones and therefore these devices are seen as key in growing the E-commerce industry and significantly influence online shopping (Moorad, 2013; World Wide Worx, 2013). In developed countries where online shopping is reaching maturity, mobile or smartphones are slowly exceeding computers in terms of online shopping use (Peppetta, 2013). However, in developing countries such as South Africa, mobile or smartphones are just as significant as computers, if not more so (Peppetta, 2013). Further, unlike in developed countries, it is highly unlikely that local physical stores will become redundant (Matlhaga, 2013). Instead there will be an increase in local organisations creating online platforms that facilitate online shopping (Matlhaga, 2013). On the other hand, similar to online shoppers in developed countries, South Africans are increasingly using reviews and social

commerce to assist with purchases which will also ensure that local organisations become more active online (Hadfield, 2013).

2.5   CONCLUSION

E-commerce and online shopping are changing the South African market (Muller, 2013). This chapter has provided a brief discussion on the history of the Internet as well as an overview of the development of online shopping in general. The number of people using the Internet has grown exponentially. In South Africa, mobile or smartphones are seen as one of the major reason fuelling Internet usage. The discussion revealed that online shopping in South Africa is becoming more significant as more consumers partake in it. In addition, the number of local organisations creating online platforms to offer services and products is increasing. The next chapter discusses the website quality factors that influence online shopping.

CHAPTER 3

AN OVERVIEW OF WEBSITE QUALITY FACTORS INFLUENCING ONLINE SHOPPING

3.1   INTRODUCTION

E-commerce and online shopping have grown significantly over the years and it is predicted that the trend will continue to increase globally (Chen & Cheng, 2007:335; Meyer, 2013:3). As discussed in chapter 2, online shopping, electronic payments and Internet banking are the different facets of E-commerce (Khurana, 2013). However, online shopping is the most widely used aspect of E-commerce and is therefore the focus of this study. In order for online retailers to succeed in a highly competitive environment, it is crucial to understand what influences consumers to shop online. According to Bai, Law and Wen (2008:391) and Chris (2015) website quality is not only the first step for driving an online business but is also a success factor that ensures a business's longevity. Kuo and Chen (2011:253) further state that the quality of a website is considered as a key factor influencing the behaviour of online shoppers. This is supported by Al-Farsi and Basahel (2014:10) who argue that websites that are of high quality attract more browsers and customers, which in turn influence them to shop online. As stated in chapter 1, for the purpose of this study, a website contains various types of information regarding the organisation as well as the products and services which it offers and allows users to shop online.

3.2   WEBSITE QUALITY

Quality is an intangible concept that is difficult to define, however it can simply be defined as … "how good or bad something is" (Mebrate, 2010:5; Merriam-Webster, 2015). Websites are created for various reasons and therefore need to be judged within the context of their purpose (Trio Training, 2011). As stated in chapter 2, there are three main types of seller websites, namely: information sites; virtual store fronts; and E-marketplace sites (Heape, 2009). Due to the fact that the information site is created for the purpose of providing detailed information, it is primarily judged on the quality of the information it provides. Alternatively, a virtual storefront and an E-marketplace site are transactional

websites which are consequently judged on other aspects such as their viewing, browsing, ordering and purchasing capabilities.

In attempting to determine the quality of websites, a number of authors have adapted and used IS research as a basis (Loiacono, Watson & Goodhue, 2002; Barnes & Vidgen, 2002; Webb & Webb, 2004). Websites are considered as a form of IS as they require the user to use computer hardware and software to store, display, process and transfer information (Loiacono, et al., 2002:7). According to DeLone and McLean (2003) and Sharkey et al., (2010:2), accepted and tested IS models can be adapted to measure an E-commerce website because the Internet in general is a communication and IS phenomenon which fits into the measurement framework. As stated in chapter 2, online shopping is the most widely used section of E-commerce.

However, even with numerous authors confirming that IS models can be used within an E-commerce environment, it is important to note that IS and E-commerce are different in certain aspects. Chen and Cheng (2009:336) highlight three differences, namely:

- **Usage purpose.** An IS is work-orientated where users primarily use it for work purposes and E-commerce system users primarily use it to satisfy their shopping needs.
- **Constancy.** IS users make use of it regularly and E-commerce system users have unstable visits and may not return once they have left.
- **Contextual.** ISs are developed specifically for each business and E-commerce systems are similar in that they attract and retain users by providing similar products, services and interfaces.

This being said, an IS model can be validated if the relevant subjects are used within the correct context (Chen & Cheng, 2009:336). A number of website quality models based on IS research have been developed, namely WebQual™, eQual 4.0 and SiteQual (Loiacono, et al., 2002; Barnes & Vidgen, 2002; Webb & Webb, 2004) to measure the quality of a website from the online shoppers' point of view and these are discussed in the next section. The section that follows discusses the D&M model which was adapted for the purpose of this study.

3.2.1 WebQual™

According to Loiacono et al. (2002:3), measurement of the quality of a website is a concern for both IS and marketing researchers. Illustrated in Figure 6, the model developed aims to determine whether consumers' reactions to a website can predict their likelihood of revisiting the website or making a future purchase (Loiacono, et al., 2002:4). The model is based on the theoretical frameworks of the theory of reasoned action (TRA) and the technology acceptance model (TAM) which are two commonly used models in IS research. The TRA model proposes that the intention to perform a behaviour is based on the attitudinal and normative beliefs of an individual (Southey, 2011:44). On the other hand, the TAM focuses on how external variables influence two internal beliefs: the perceived ease of use; and the perceived usefulness of technology (Davis, 1989:333; Zaied, 2012:814). These two beliefs influence the attitude towards using IS and consequently, the intention to use and the actual use of the system (Zaied, 2012:814). Not only is the TAM used to predict the acceptance of the new technology, but it is also used to help explain why it is accepted or not (Godoe & Johansen, 2012:39).
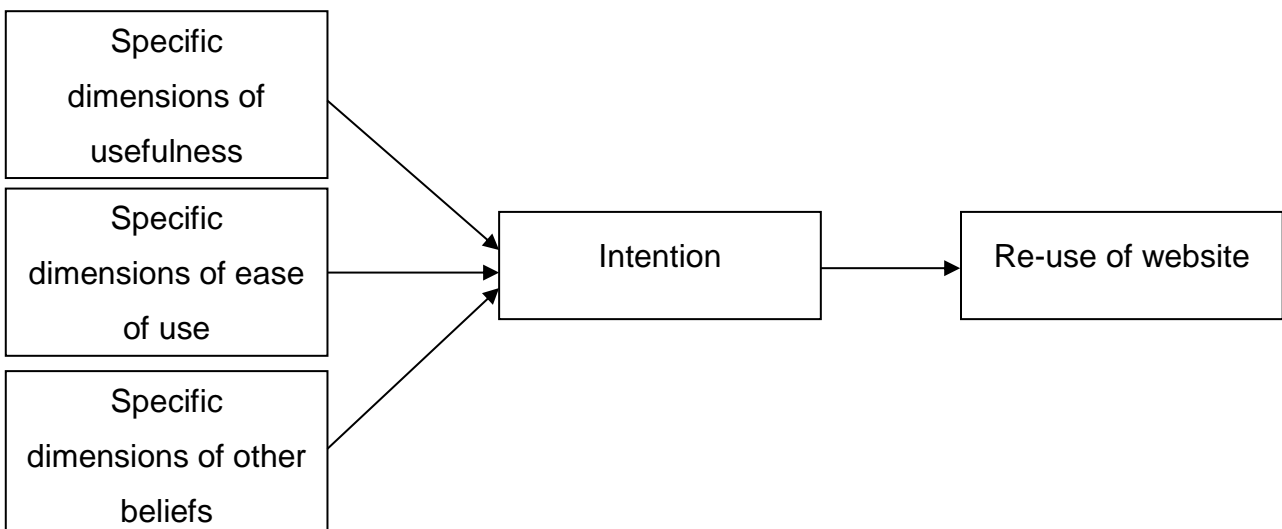
Figure 6:   WebQual^{TM}

Source: Adapted from Loiacono et al. (2002)

Specific dimensions of usefulness refers to the user's belief regarding the usefulness of the website which measures the following factors (Loiacono et al., 2002:64):

- **Informational fit-to-task** refers to how effective the information and website are for the user to complete tasks.

- **Tailored communications** refer to how the website allows users to use interactive features and tailor information to complete tasks.
- **Trust** refers to how the website ensures that users' transactions and information are safe.
- **Response time** refers to how efficient the website is at reducing the waiting time for users.

Specific dimensions of ease of use refers to the users' belief about the ease of use of the website which measures the following factors (Loiacono et al., 2002:64):

- **Ease of understanding** refers to how easy the website is for the user to read and understand.
- **Intuitive operations** refer to how easy the website is for the user to use or learn how to use.

Other beliefs refers to other relevant categories of beliefs namely (Loiacono, *et al.,* 2002:65):

- **Entertainment** refers to how the website is visually appealing, innovative and creative, and how it makes the user feel.
- **Complementary relationship** refers to how the websites portray a consistent image for the company, allows the user to complete all transaction online, and provides the user with an alternative communication medium with the business.

A major criticism of the WebQual™ model is its lack of attention to service delivery which is seen as a fundamental aspect of any business (Boshoff, 2007:103; Kajan, Dorloff & Bedinin, 2012:550). Further, the instrument was developed based on the responses of undergraduate students on selected websites and not actual customers of those websites (Zarei, 2010:9)

3.2.2   eQual 4.0

eQual 4.0 was developed by Barnes and Vidgen (2002:114) and follows the quality function deployment (QFD) which focuses on the identification and prioritisation of the needs and expectations of customers. The three components identified for eQual 4.0 draw from human-computer interaction (usability), IS (information quality) and marketing and E-

commerce (service interaction) research (Barnes & Vidgen, 2002:115). As illustrated in Figure 7, the three components are as follows (Barnes & Vidgen, 2002:122):

- **Usability** refers to the design of the website and how easy it is for the user to utilise. It looks at factors such as the appearance of the website, ease of use, navigation and the image conveyed.
- **Information quality** refers to the content on the website and how accurate and relevant the information is for the user.
- **Service interaction quality** refers to the interaction experienced by the user with the website and addresses factors relating to the security of the transaction and the user's personal information, product delivery, personalisation and communication with the website.
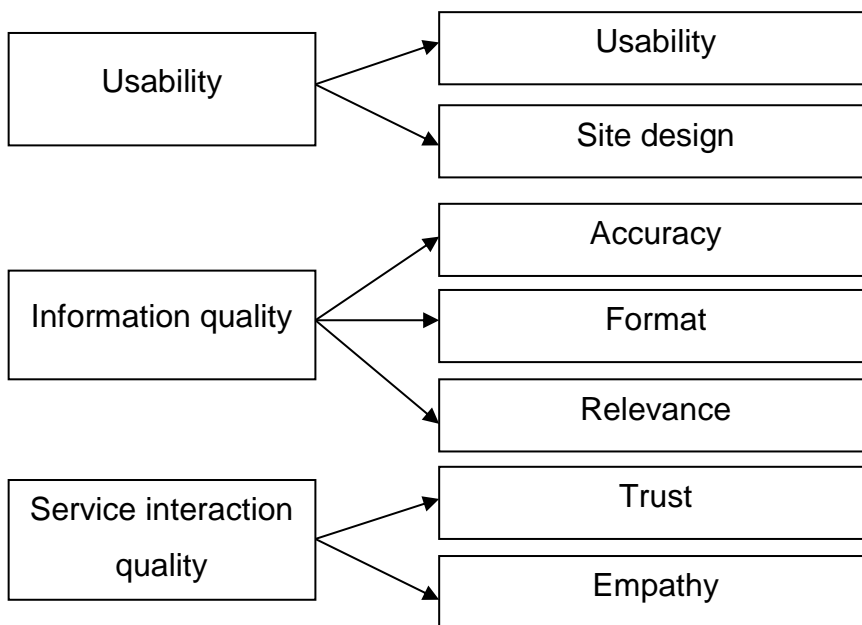
Figure 7:   eQual 4.0

Source: Adapted from Barnes and Vidgen (2002)

A criticism of the eQual instrument is that it is designed in such a way that all questions could be answered by users who have not completed the entire purchasing process. Therefore, it does not take into consideration the lifecycle aspect of service quality (Suh, 2005:177).

3.2.3   SiteQual

SiteQual developed by Webb and Webb (2004:430) integrates two models from marketing and IS research. Webb and Webb (2004:432) argue that due to mixed research findings, the two dimensions which frequently overlap are information quality and service quality which then form the basis of the SiteQual model (see Figure 8). The service quality component is based on the widely recognised SERVQUAL model developed by Parasuraman, Zeithaml, and Berry (2005), which determines the expectations and perceptions of the buyer process which the website must support by examining the following factors (Webb & Webb, 2004:434):

- **Reliability** refers to providing goods or service within the promised time frame and dependability in handling problems.
- **Responsiveness** refers to providing prompt services, keeping customers informed and willingness to assist.
- **Assurance** refers to ensuring trust and minimising distractions and interruptions.
- **Empathy** refers to providing customers with individualised attention in a caring manner.
- **Tangibility** refers to the design of the website, its availability and the ability to support the latest technology.

On the other hand, the information quality component is based on the model developed by Wang and Strong (1996) and examines the information component of the website by determining (Webb & Webb, 2004:435):

- **Accessibility quality**, which refers to making information easy to find and providing adequate levels of security for personal information.
- **Contextual quality** refers to providing the correct and necessary amount of information.
- **Representational quality** refers to providing information in a presentable and well organised manner so that it is easy to interpret and understand.
- **Intrinsic quality** refers to providing accurate, believable and unbiased information.

The reason why the SiteQual model is not used for the purpose of this study is because it does not take into account the processes of developing and maintaining a website that is of high quality which is essential in ensuring user satisfaction (Chen & Cheng, 2009:338).

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                              ┌─────────────────────────┐
                          ┌──▶│       Reliability       │
                          │   └─────────────────────────┘
                          │   ┌─────────────────────────┐
                          │   │     Responsiveness      │
                       ┌──┘   └─────────────────────────┘
┌──────────────────┐   │      ┌─────────────────────────┐
│  Service quality │───┼─────▶│        Assurance        │
└──────────────────┘   │      └─────────────────────────┘
                       │      ┌─────────────────────────┐
                       │      │         Empathy         │
                       └──┐   └─────────────────────────┘
                          │   ┌─────────────────────────┐
                          └──▶│       Tangibility       │
                              └─────────────────────────┘

                              ┌─────────────────────────┐
                          ┌──▶│   Accessibility quality │
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┌──────────────────┐   ┌──┘   │    Contextual quality   │
│   Information    │───┤      └─────────────────────────┘
│     quality      │   │      ┌─────────────────────────┐
└──────────────────┘   └──┐   │ Representational quality │
                          │   └─────────────────────────┘
                          │   ┌─────────────────────────┐
                          └──▶│     Intrinsic quality   │
                              └─────────────────────────┘
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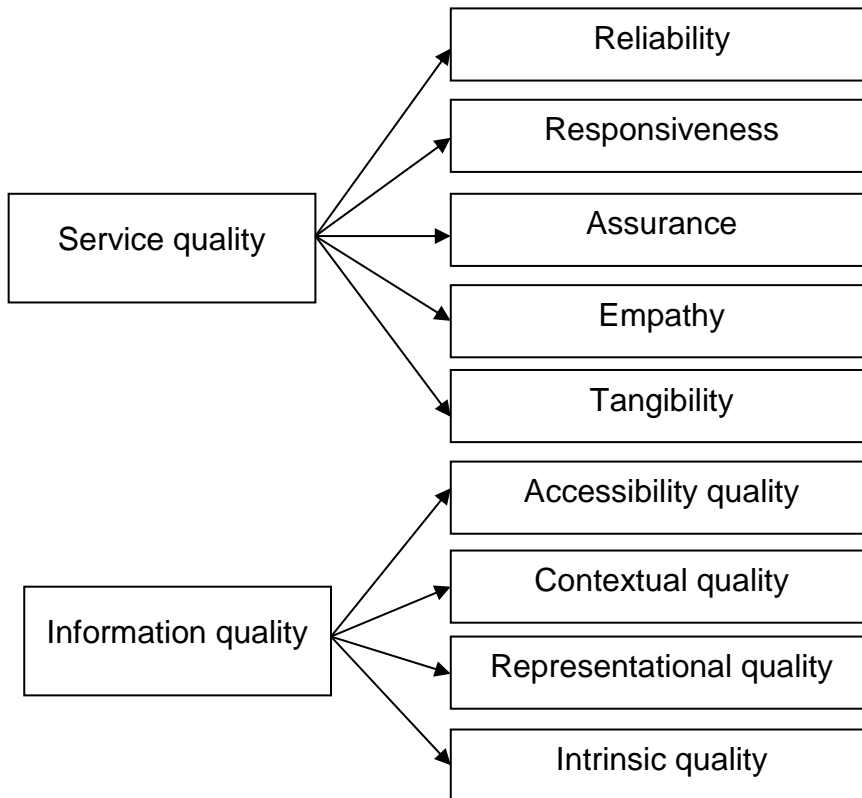
Figure 8:   SiteQual

Source: Adapted from Webb and Webb (2004)

The next section discusses the model which was adapted for the purpose of this study.

3.3   DELONE AND MCLEAN (D&M) MODEL

According to Maditinos and Theodoridis (2008:312) many scholars regard the D&M model as a major breakthrough in the field of IS. DeLone and McLean (2003) proposed that for any IS to be successful it needs to not only ensure the satisfaction of its users but also their intention of use and repeated use, which are dependent on proficient information, system and service qualities. Based on DeLone and McLean's research, information, system and service quality factors play a vital role in determining the satisfaction of users and their intention to use a website as illustrated in Figure 9.
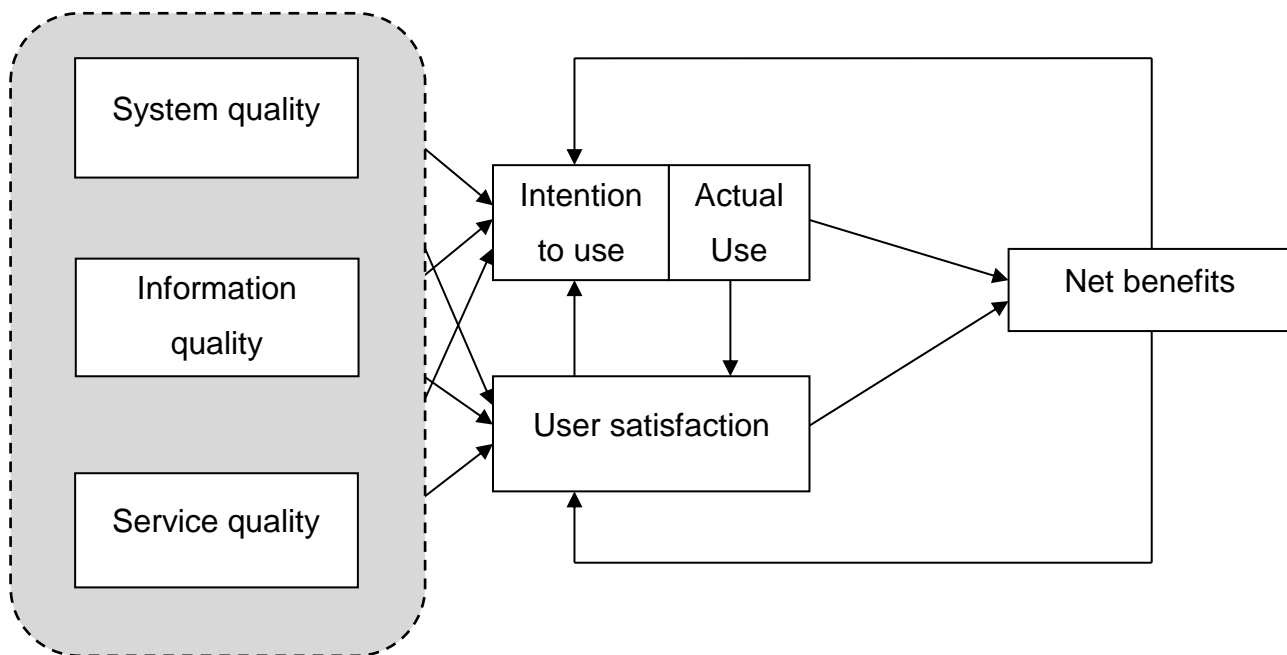
Figure 9:   The updated DeLone and McLean IS success model

Source: Adapted from DeLone and Mclean (2003)

As stated in the previous section, an IS model can be validated if the relevant subjects (online shoppers) are used within the correct context (shopping websites). Further, previous research has attempted to validate the D&M model within the E-commerce and online shopping environment by adopting, challenging and enhancing the model (Brown & Jayakody, 2008; Wang, 2008; Chen & Cheng, 2009). The various authors have highlighted the importance of system, information and service quality which have a direct and indirect impact on users' satisfaction and their intention to use a website within the E-commerce and online shopping context (Brown & Jayakody, 2008167; Wang, 2008:529; Chen & Cheng, 2009:341; Ziaullah, Feng, Akhter & Ahmad, 2015:70). In addition, the D&M model addresses the weaknesses of the WebQual™, eQual 4.0 and SiteQual models by comprehensively examining the system quality and service quality dimensions.

For these reasons, the study adapted the D&M model by focusing on system, information and service quality as website quality factors influencing online shopping as highlighted in Figure 9. As the purpose of this study was to explore quality factors influencing South African online shoppers, only examining these three quality factors (expanded in Figure 10) was deemed sufficient. These factors are discussed in the next section.
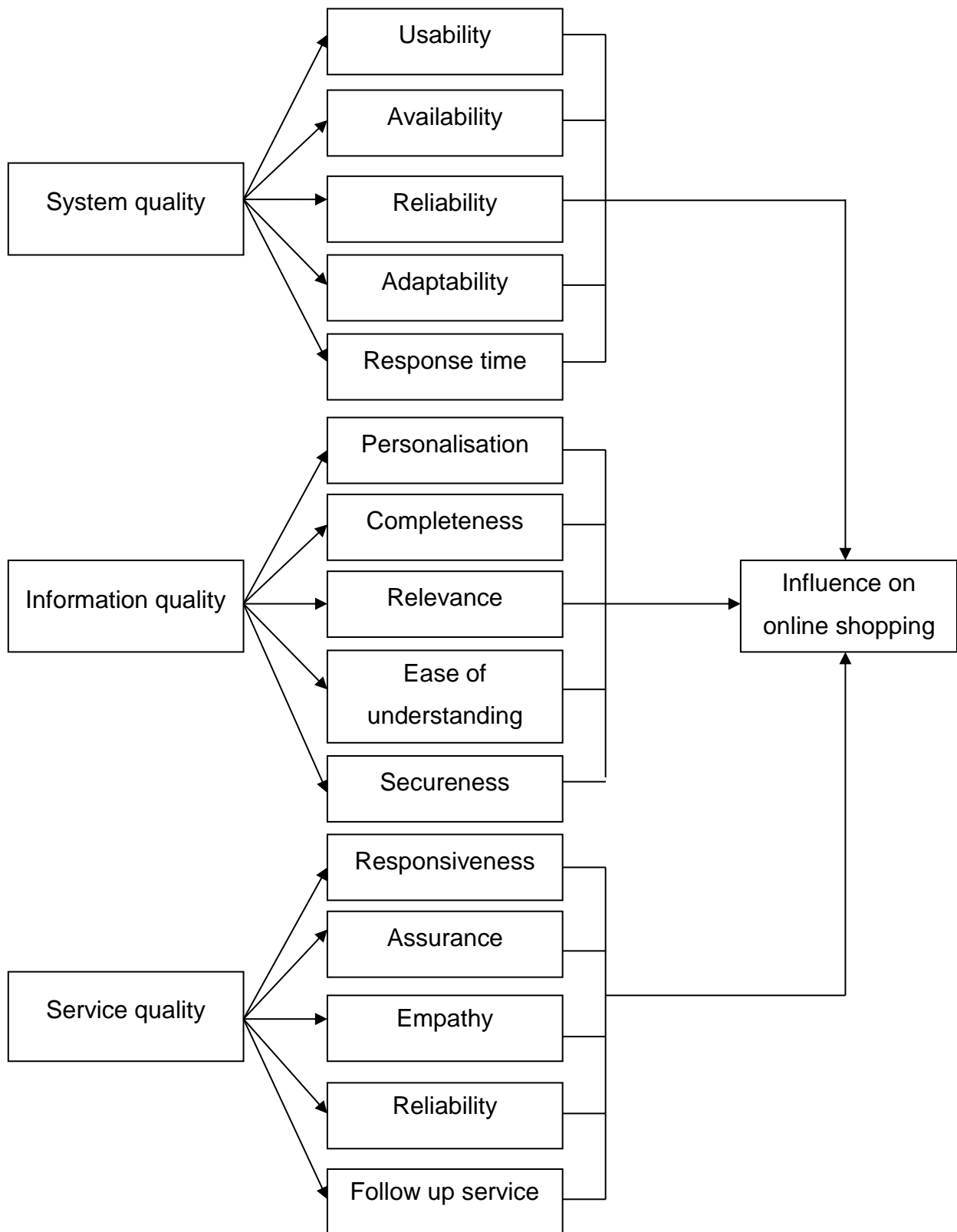
Figure 10: Website quality factors influencing online shopping

Source: Adapted from DeLone & Mclean (2003)

3.4   WEBSITE QUALITY FACTORS INFLUENCING ONLINE SHOPPING

3.4.1   System quality

System quality can be described as … "the level of user satisfaction with the technical and functional aspects of an Internet shopping website" (Schaupp et al., 2009:42). DeLone and McLean (2003:24) state that system quality measures the desired characteristics of an online system and therefore it must provide security, accessibility, speed and convenience that support the consumer's buying activity. System quality factors are crucial for an online website because if shoppers cannot shop or are unwilling to shop through an unsecured site or one that requires a long ordering process, the site is of no use (Fekete, 2011). Most businesses can achieve lower costs, increased revenues or improved efficiency if the system used is well designed, however a system that is poorly designed is likely to not perform efficiently which will result in lost revenue and increased operational costs (Gorla et al., 2010:214). As illustrated in Figure 10 and 11, the system quality dimension depends on the following factors, namely: usability; availability; reliability; adaptability; and the response time of a system (DeLone & McLean, 2003). The various factors of system quality are now discussed.

Figure 11: System quality factors influencing online shopping
Source: Adapted from DeLone & Mclean (2003)

3.4.1.1   Usability

The first factor of the system quality dimension is usability (see Figure 11), which refers to the design and functionality of a website or simply the amount of effort required to use a

particular system (Casalo, Flavian & Guinaliu, 2007:585; Chen, Hsu & Lin, 2010:1007). Usability describes the extent of the satisfaction that users receive from a product or service in terms of effectiveness and efficiency, and it basically determines the users' perception of how easy it is to use the website and to navigate it (Sam & Tahir, 2009:4). Granic, Mitrovic and Marangunic (2011:339) state that usability describes the relationship between a task performed, the user and the purpose of a system which therefore, ensure the ease-of-use of a system by a user to perform a task. Usability is fundamental in online shopping because if users cannot find a product or service, then they will simply not buy it (Wong, n.d.). A website that is easy to use has a direct influence on user satisfaction, and it influences sceptical users to overcome their fear of online shopping and have a favourable opinion of using the site (Belanche, Casalo & Guinalıu, 2012:130). Thus, online shopping sites that are usable not only ensure that users have a positive attitude towards the retailer but warrant online purchases from users (Lee & Kozar, 2012:450).

3.4.1.2 *Availability*

The second factor of the system quality dimension is availability (see Figure 11), which is defined as … "the state of being able to be obtained or used" (Macmillan Dictionary, 2015). A website that is available therefore, means that users can access or make use of it at any given time. Unlike your traditional stores that operate during working hours, one of the advantages of online shopping is that consumers can shop at any time and as a result, users expect websites to be available for them to access 24 hours a day (Boswell, 2014). Websites that are not available because they are either under maintenance or facing technical difficulties show an error message to users which prohibits them access to the website and its use. Avoiding downtime is the primary goal for website developers and for the business as it results in loss of sales (Charlton, 2010; Prestipino, 2012).

3.4.1.3 *Reliability*

The third factor of the system quality dimension is reliability (see Figure 11), which refers to the ability of a website to consistently perform according to its requirements and intended functions (Hwang, Preiser-Houy & Shang, 2012:340; Rouse, 2014). Shopping sites allow users to choose products which they would like to purchase and provide a platform whereby interactive communication is used to complete a business transaction (Sun & Lin, 2009:11764). Arkontaky (n.d.) states that even reputable businesses come

across sceptical users with various fears of online shopping, which implies that it is crucial for online shopping websites to provide a safe environment for users to make purchases and provide personal information. Online shopping sites therefore need to include encryption protection software to protect users and their information and to have transparent contact information available to build trust with the user (Arktontaky, n.d.). Further, according to Hanai and Oguchi (2009:1), a user of an online shopping site determines its reliability based on information that the site communicates. In essence, in order for the user to trust the shopping site, it needs to perform as intended, create a good impression, ensure the authenticity of products and ensure trouble-free purchasing (Hanai & Oguchi, 2009:1).

3.4.1.4 Adaptability

The fourth factor of the system quality dimension is adaptability (see Figure 11), which refers to the ability of a website to change in order address new or different circumstances, at any given time (Engel & Browning, 2006:3; Akazue, Ogini & Ojeme, 2010:148). The needs and demands of online shoppers are constantly evolving which results in the shopping site needing to be replaced or updated in order to satisfy the changes (Engel & Browning, 2006:1). Currently, mobile devices only make up 15% of E-commerce, however the number is estimated to increase significantly as the number of smartphone and tablet users continues to rise (Moses, 2013). Therefore, websites need to be able to adapt their shopping sites to the device which the users are using and to the various screen sizes, the orientation of the screen and the operating system being used (see Figure 12) (Boudreaux, 2013; Singh, Giri & Mathew, 2015:185). Further, Rababah and Masoud (2010:3) add that websites should be accessible to users making use of different browsers, such as Internet Explorer, Chrome, Mozilla, Firefox and Safari.

Figure 12 illustrates the different standard screen sizes that websites should be available on. The website therefore needs to be able to adapt its content and website functionality for different screen sizes and browsers.
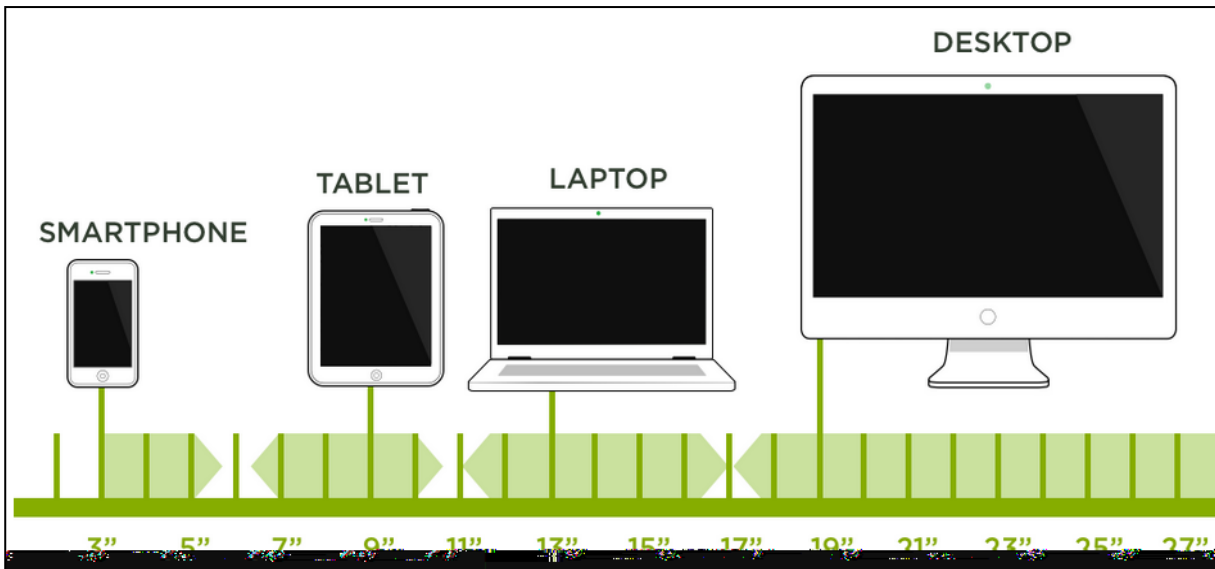
Figure 12: Different screen sizes
Source: Wrobewski (2013)

3.4.1.5   Response time

The last factor of the system quality dimension is response time (see Figure 11), which is described as the time taken between the end of an inquiry and the beginning of a response (Rouse, 2007c) or the time it takes for each website page to load (Visual Studio, 2012). Work (2014) states that slow response time is one of the major contributing factors of website abandonment because today's consumers are time pressed and are not willing to wait for a website to react to their request. Further, Lohr (2012) highlights that users subconsciously do not enjoy waiting therefore are less likely to visit websites that are slow. It is estimated that roughly 60% of online shoppers leave a website that is slow and search for a competing one and that frequent online shoppers are less tolerant of slow response times (Prestipino, 2012). According to Nielson (2010) the three crucial response time limits are:

- **0.1 seconds**, this ensures the feeling of an instantaneous response which has a direct influence on users' engagement and control levels.
- **1 seconds**, this ensures that users' train of thought remains seamless which is required for ease of navigation of the website and their shopping experience.
- **10 seconds**, this ensures that users remain attentive however a delay this long usually results in users leaving a website.

The section to follow discusses the various factors in the second dimension of website quality.

3.4.2　Information quality

As illustrated in Figure 10, the information quality dimension is the second dimension of website quality factors which plays a critical role in online purchases (DeLone & McLean, 2003; Sam & Tahir, 2009:5). As stated in chapter 1, a key advantage of online shopping is that consumers can conveniently and efficiently receive current, accurate and useful information to compare products or services which significantly reduces the costs of searching (Lin, 2007:363; Hwang et al*.,* 2012:338). The Internet has changed the buying environment by having an abundance of information available to consumers (Mazaheri, Richard & Laroche, 2010:957). The availability of information not only significantly reduces consumers' cost of search, but also influences their intentions to shop online (Hwang, 2013). According to Bai et al*.* (2008:391) information quality is important because it ensures user satisfaction, business profitability, improved decision making and use of the system. DeLone and McLean (2004:25) state that information quality captures the content of the online system which should be personalised, complete, relevant, and easy to understand and secure, and in order to ensure that prospective buyers purchase online and return on a regular basis, the above mentioned characteristics of the information provided by the site need to be met (DeLone & McLean, 2003:25). Information quality can therefore be seen as a marketing tool that ensures the smooth execution of online shopping transactions by providing users with accurate, informative and relevant information in a timely manner (Kim & Niehm, 2009:223). As illustrated in Figure 10 and 13, the information quality dimension depends on the following factors, namely: personalisation, completeness, relevance, ease of understanding and secureness (DeLone & McLean, 2003). The various factors of information quality are now discussed.
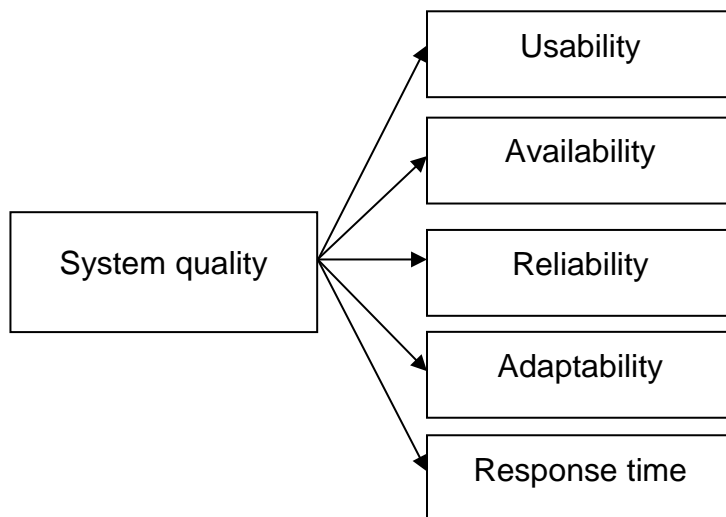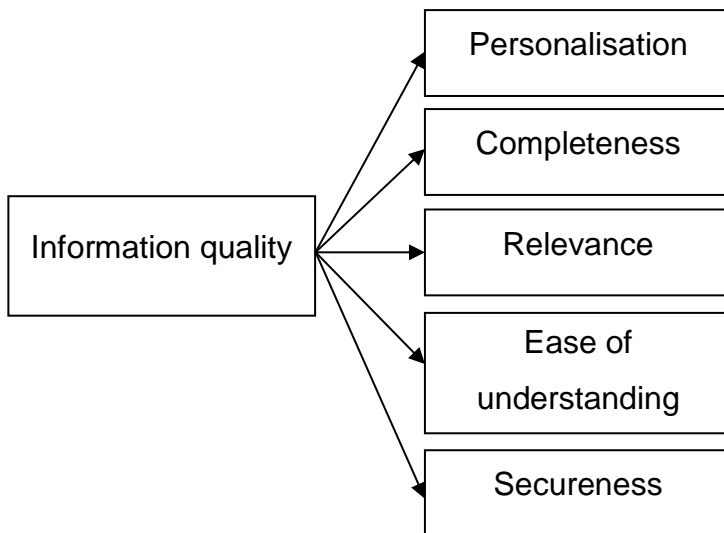
Figure 13: Information quality factors influencing online shopping
Source: Adapted from DeLone & Mclean (2003)

3.4.2.1 Personalisation

The first factor of the information quality dimension is personalisation, (see Figure 13) which refers to the most suitable response for an individual user's needs (Lawless, O'Connor & Mulwa, 2010:1). Personalisation refers to a website providing recommendations based on the users' preferences and interests (Sharma, Alexander, Ho & Arasu, 2013:38). Personalisation assists in three ways, namely it reduces information overload making consumer choices easier, it conveys more convincing messages to the consumer and it builds customer relationships (Liang, Li & Turban, 2009:2). A growing trend for online retailers is to display certain products to a user based on their preferences which are identified with a software algorithm (Harker & Riccio, 2012:10). Rudolph (2013) points out that online shoppers believe it is easier to find products on a site that is personalised and therefore are more likely to return to a site that recommends products they may be interested in.

Figure 14 demonstrates an example of personalisation which online retailers can use on social media sites such as Facebook where advertisements are targeted at individual users based on their preference and search history. Figure 15 depicts an example of personalisation where the website offers the user recommendations of similar products which they viewed and also lists products purchased by other users who have viewed the same item.
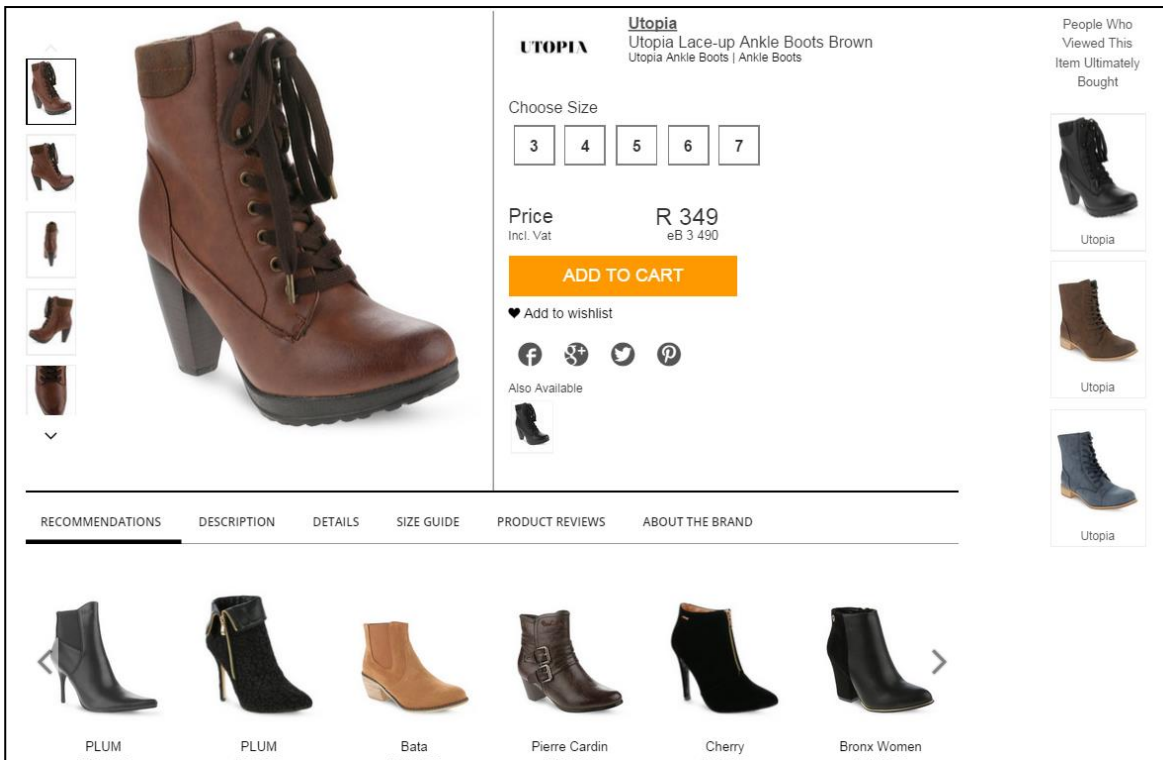
Figure 14: Personalisation example

Source: www.zando.com
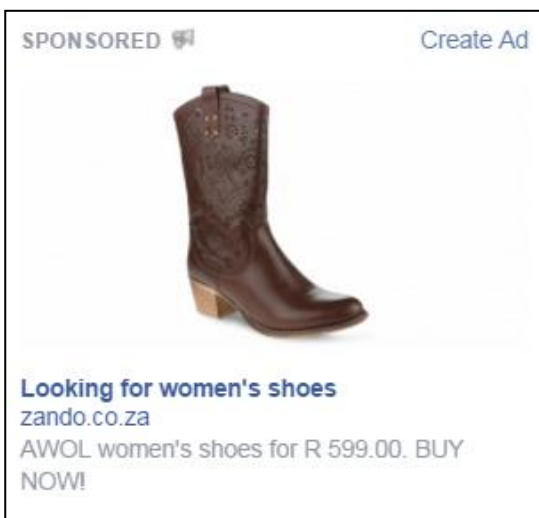
Figure 15: Personalisation example on Facebook

Source: www.facebook.com

3.4.2.2   *Completeness*

The second factor of the information quality dimension is completeness (see Figure 13) which refers to whether all of the data or information is present (Gorla et al., 2010:213). Al-Mamary, Shamsuddin and Aziati (2014:9) state that completeness is the extent to which

information is available and sufficient in depth and breadth for the task at hand. It is crucial for online businesses to provide users with complete information throughout the purchasing process in order to attract and retain their attention (Kim et al., 2012:377). The availability of information is crucial as it influences the attitudes and buying intentions of online shoppers because completeness of information ensures that users are able to make competent and informed decisions about their online purchases (Hwang, 2013). Figure 16 is an example of an online store that provides complete and adequate information.

Figure 16: Example of complete and adequate information

Source: www.takealot.com

As illustrated in Figure 16, the user is not only provided with a description of the product, but also product information and reviews from other buyers. Further, a standard requirement of shopping sites is having an 'About us', 'Contact us', 'Terms and conditions' and 'Frequently asked questions' (FAQ) page which provides users with an overview of the business and the buying process which address the basic needs of the online shopper (Roy & Sinha, 2012; Lacoussiere, 2012).

3.4.2.3 Relevance

The third factor of information quality dimension is relevance, (see Figure 13) which refers to the extent to which information is applicable and helpful (Al-Mamary et al., 2014:7). Providing relevant information to online shoppers not only decreases uncertainties they may have and influences their evaluation of the website and purchasing decisions, but also leads to increased reach and engagement (Cheung & Lee, 2005:8; Think with Google, 2014). Kuo and Chen (2011:255) state that people are more likely to purchase from websites that provide adequate and relevant information. Further, people who do not purchase online, still search for product information on the Web and use it as a reference for traditional brick-by-mortar shopping which emphasises the importance of providing relevant information (Kuo & Chen, 2011:255). Ultimately, the purpose of a shopping website is to inform and reinforce users to buy the product by providing relevant in-depth information (Cerejo, 2011). Relevant information relating to a product should include a product name that helps users find and identify the right product, and having clear images of the product from different angles, the pricing and availability of the product, customer ratings and reviews and suggestions of related products (Cerejo, 2011).

Figure 16 also demonstrates an example of an online website providing relevant information. The user is given information pertaining to the specific product chosen such as its description, the price and availability of the product, and other information such as 'Free delivery and exchanges and returns for 30 days' and the company selling the product, all of which are specific to that product. Other products indicate information relevant to that product.

3.4.2.4 Easy to understand

The fourth factor of the information quality dimension is ease of understanding (see Figure 13) which refers to the extent to which information is clear and easily comprehended (Huang & Benyoucef, 2013:249). Hwang (2013) emphasises that structuring information effectively and in an easy to understand manner is crucial as it is not only easier for consumers to find what they are looking for, but it will likely result in consumers having a positive association with the website. Further, information that is easy to understand assists people to make better decisions and leads to more sales because people that are confused are less likely to make any purchases (Department of Health, 2010:1; Morgan,

2014). Therefore, it is crucial for online retailers to present information that is simple, clear and straight to the point (Patel, 2011).

Figure 17: Easy to understand check out process example
Source: www.ticketpros.co.za

Figure 17 demonstrates a shopping process which is easy to understand. The user is required to select and insert the relevant information by completing each subsequent step in order to complete the online purchase. The user therefore cannot go to the next step without having completed the current step correctly.

3.4.2.5   *Secureness*

The fifth factor of the information quality dimension is secureness (see Figure 13) which refers to a shopping site ensuring the security of payments and ensuring the privacy of any information that is shared (Kim & Lennon, 2013:34). Online shoppers are required to provide personal information in order to complete an online purchase (Kim et al., 2012:377, Dai, Forsythe & Kwon, 2014:15). In order to build trust and long-term relationships with online shoppers, it is crucial to ensure that privacy and security measures are in place (Safari, 2012:60-61). Privacy refers to commitment from an online site to shoppers to not share their personal information with any third party (Chui, n.d.:1).

Security refers to making online transactions safe by using the SSL protocol which protects the shopper's credit data from being misused (Chi, n.d.:2). The SSL protocol is a process of encrypting and decrypting information during the online purchasing process to ensure that only the intended recipient can view the information (Top 10 eCommcerce Site Builders, 2015). As highlighted in chapter 2, one of the main obstacles to online shopping is the lack of security (CP-Africa, 2013) and according to Papageogiou (2015) up to 58% of online shoppers do not check out due to payment security issues. In essence, consumers are not only more likely to shop with online retailers who protect their privacy better but are willing to pay a premium to purchase from online shopping with more protective sites (Hwang et al., 2012:341).

3.4.3   Service quality

As depicted in Figure 10, service quality is the third dimension of website quality factors. As stated previously, service quality is the service level provided by an online retailer, both online and offline (Kim et al., 2012:377). Service quality therefore refers to the accessibility to various communication mediums for consumer complaints, the timely resolution of complaints, consumer support to ensure the effective use of the product, providing suggestions of complementary products or services and allowing opportunities for joint problem solving (Ahn, Ryu & Han, 2007:264; Ziaullah et al., 2015:70). Initially online presence and lower prices were thought to be the key determinants of online success, however service quality now plays a crucial role in order for an online retailer to differentiate itself (Alshibly, 2015:22). According to Chang and Wang (2011:333) high online service quality leads to satisfied customers. DeLone and McLean (2003) state that service quality is made up of the following factors: responsiveness; assurance; empathy; reliability; and follow up services (see Figure 10 and 18). The various factors of service quality are now discussed.
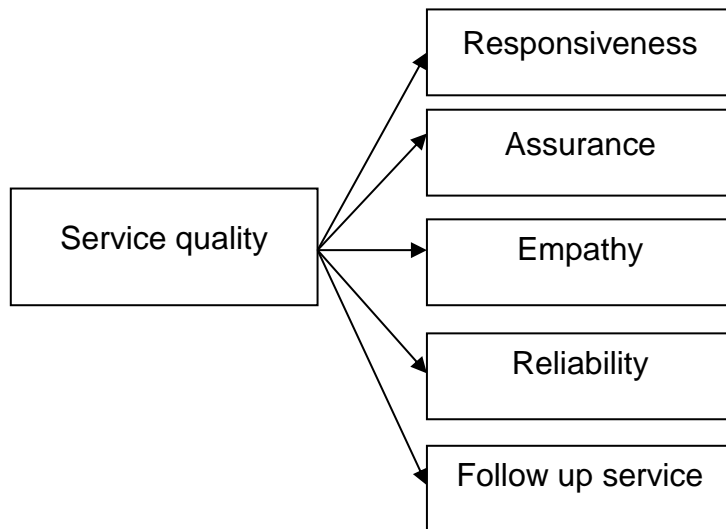
Figure 18: Service quality factors influencing online shopping

Source: Adapted from DeLone & Mclean (2003)

3.4.3.1 *Responsiveness*

The first factor of service quality is responsiveness (see Figure 18) which refers to the extent of prompt service and the willingness to help online shoppers that need assistance (Udo, Bagchi & Kirs, 2010:483). Responsiveness entails providing timely assistance that is helpful to online shoppers in a predicament or giving accurate information when responding to queries regarding the product or service (Al-Nasser, Islam, Abidin, Azam & Prabhakar, 2015:425). Online sites either provide a customer support telephone number or email, or even a live chat function with one of their employees. Live chat enables users to respond in real time and is appropriate for low to moderately complex product support (Pellerin, 2011). Klimczak (n.d.) states that sites using live chat are more efficient than call centre agents as they are able to handle multiple conversations at once. Furthermore, Prestipino (2012) states that over half of regular online shoppers have cancelled orders due to slow responses. Therefore, prompt responses to online shoppers' inquiries not only increases the perceived convenience and decreases uncertainty, but also illustrates customer-orientation and significantly influences customers' overall satisfaction and their repurchase and recommendation intention (Zhang & Tang, 2006:15; Gera, 2013:760). Further, Hwang (2013) emphasises that consumers are more likely to be dissatisfied with online stores that are not responsive.
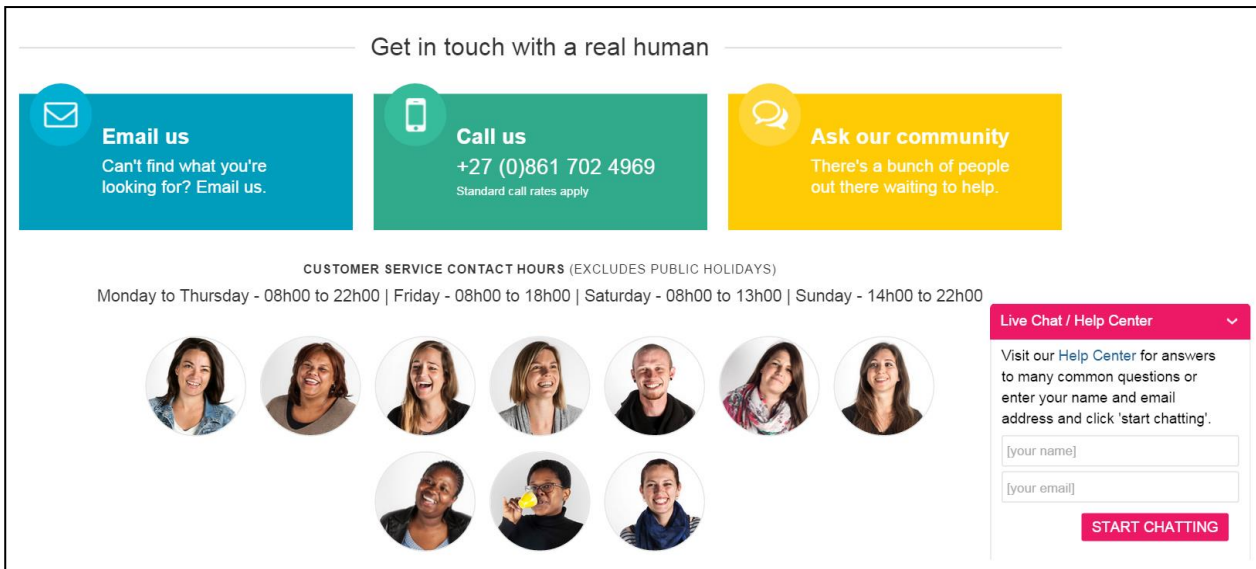
Figure 19: Customer support example

Source: www.yuppiechef.com

As depicted in Figure 19, the online store offers users various forms of customer support: email; call centre; 'ask our community'; and live chat. The 'ask our community' option allows users to ask other users of the website for assistance. The website offers different forms which allow users to use a medium which they prefer and the call centre and live chat options ensure an immediate response from the online store.

3.4.3.2 *Assurance*

The second factor of service quality is assurance (see Figure 18) which refers to the ability to convey trust and confidence with knowledge and courtesy to online shoppers (Udo et al., 2010:483). Assurance encourages customer trust and confidence in an online retailer by having knowledgeable employees (Gera, 2013:755). Arnold, Landry and Reynolds (2007:299) and Karim (2013:16) emphasise that one of the major inhibitors for online shopping growth is consumer distrust. Shopping sites can build trust by having a good reputation and quality website, providing unbiased information, responding promptly to consumer queries, establishing relationships with well-known businesses and using reputable assurance providers (Arnold et al., 2007:299, Mao, 2010:5-6). Assurance providers ensure privacy and security measures are in place and that product or service guarantees are honoured (Chui, n.d.:2).

Figure 20 illustrates an example of an online store establishing relationships with well-known businesses and using a reputable assurance provider. Most online stores have various logos of brands that they have relationships with at the bottom of the page. For example, Visa, Mastercard, Diners Club, American Express, eBucks, Discovery Miles and EFT are commonly known brands. Thawte provides SSL protocols discussed under the 'secureness' factor (section 3.4.2.5).

Figure 20: Example of assurance

Source: www.yuppiechef.com

3.4.3.3   Empathy

The third factor of service quality is empathy (see Figure 18) which refers to the extent to which employees are caring towards online shoppers (Daniel & Berinyuy, 2010:11). Sam and Tahir (2009:6) state that empathy is a non-direct human element interaction that ensures caring and individualised attention to consumers. People make decisions based on emotions (Maldonado, 2013). Therefore, when online shoppers are dissatisfied with the site, the transaction process or the actual product or service, they want to address the matter with a real person who is empathetic towards their situation (Luthi, 2014). Online shoppers prefer individualised attention instead of a generic auto-reply (Sam & Tahir, 2009:6). However, online consumers' emotional nature is generally ignored which results in the shopping experience being a negative and frustrating one (Maldonado, 2013). Shopping sites need to enhance empathy as it influences online shopping intentions (Sam & Tahir, 2009:8).

3.4.3.4   Reliability

The fourth factor of service quality is reliability (see Figure 18) which refers to the ability to provide dependable and accurate service as promised such as having the relevant items in stock and delivering the ordered goods when promised (Parasuraman et al., 2005:218; Udo et al., 2010:483). Ladhari (2010:465) simply refers to reliability as providing accurate and dependable services on time and as promised. According to Pegnfei, Yanhong and Lvbo (2012:12), reliability positively influences customer satisfaction as well as customer

loyalty. Further, Chang and Wang (2011:352) state that reliability is an important dimension for improving consumers' perceived value because it is related to their benefits or losses achieved during a transaction. This is further supported by Lee and Lin (2005:161) who stress that reliability directly influences the perceived quality of an online site as well as customer satisfaction of online shoppers.

3.4.3.5 Follow up service

The fifth factor of service quality is the follow up service (see Figure 18) an online retailer provides. Online retailers should not consider their job complete once the products or services have been delivered to online shoppers (Retail Minded, 2012). Follow up services are crucial as they encourage customers' reviews which provide valuable feedback and also encourage customers to return to the site (Levin, 2013). Further, certain online retailers also target online shoppers that abandoned purchases by sending follow up e-mails to encourage them to resume or complete the order (Optivo, 2014). Figure 21 illustrates an example of a follow up service, whereby the online retailer follows up whether the buyer is satisfied with the product and to determine if the user has any recommendations for improvement.

How'd we do?

Hi Yu-ting,

According to our files you received your purchase (Order 149334) from us a few days ago.

We're just checking in to:

A) Make sure you're completely happy with your purchase and
B) See if you feel there's anything we could do to make shopping with us a little less traumatic.

If everything was dandy and you enjoyed your experience with us, please let your friends know about it: the more people join OneDayOnly, the better our deals will get!

In case you feel we could have done a bit better, please contact us at customerservice@onedayonly.co.za to share your constructive criticism or thinly-veiled compliments with us.

Figure 21:   Example of follow up
Source: www.onedayonly.co.za

The literature review has shown that system quality, information quality and service quality have an influence on customers shopping online. Therefore, the researcher decided to

focus on these dimensions as the main constructs of this study in order to determine which factors influence South African customers when shopping online.

3.5 CONCLUSION

This chapter provided a theoretical discussion on the importance of website quality and theories proposed by other researchers were highlighted. The discussion revealed that in order for online retailers to be successful, they should develop a website that is of high quality. The chapter demonstrates that the quality factors of the D&M model, namely system quality, information quality and service quality have an influence on customers shopping online. They were therefore chosen as the focus of this study. The next chapter discusses the methodology that was employed for the purpose of this study.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

The literature discussed in the previous two chapters indicates the importance of online shopping and understanding the quality factors influencing online shopping. Due to constant changes in the global environment and technological innovation, organisations need to continuously adapt in order to remain competitive. In order to adapt, businesses need to understand how these technological advances influence them. To gain such an understanding, research needs to be conducted. Research can be described as a scientific investigation and the systematic analysis of data collection and reporting (Kapoor & Kulshrestha, 2010:4). The focus of this chapter is on the marketing research process and the various concepts relating to marketing research. The chapter begins with an overview of the marketing research process, followed by in-depth discussions on the methods, designs, and sampling techniques that were utilised for the current study. It concludes with a discussion of the data analysis methods that were used.

4.2 MARKETING RESEARCH PROCESS

According to Kapoor and Kulshrestha (2010:9) marketing research aims to firstly, provide information to make short-term and long-term decisions and secondly, contributes towards current literature and knowledge. Marketing research revolves around the planning, collection and analysis of data which is communicated to management who use it to make marketing-related decisions effectively and efficiently (Kapoor & Kulshrestha, 2010:9; McDaniel & Gates, 2013:4). Marketing research is often confused with market research which is conducted to understand the marketing processes within an organisation (Piercy & Lane, 2009:94). Marketing research, on the other hand, incorporates the various data collection techniques and the reports to solve a problem (Piercy & Lane, 2009:94). According to McDaniel and Gates (2013:4) and Wiid and Diggines (2013:6), marketing research plays three functional roles namely:

- **The descriptive role**, which gathers and presents facts usually describing current customer, industry and environmental data.
- **The diagnostic role**, which explains the data or actions by identifying the responses of the implementation of a marketing strategy.
- **The predictive role**, which specifies how to use descriptive and diagnostic research to forecast the results of a planned marketing decision.

Marketing research allows organisations to understand the trends in the marketplace and to take advantage of opportunities (McDaniel & Gates, 2013:6). Even though each marketing research problem is unique, there are common steps to be followed when conducting any research project (Iacobucci & Churchill, 2010:29). The marketing research process is a sequence of inter-related activities that serve as a systematic, planned procedure to follow in order to make sure that all aspects of the research project are aligned (Aaker, Kumar & Day, 2007:48; Zikmund & Babin, 2010:57). Although there is not a universally agreed upon marketing research process, the different perspectives are similar in the sense that they provide consecutive guidelines on what should be done in order to complete a study (Gill & Johnson, 2010:8). Depending on the study, certain steps can be removed, implemented out of sequence or simultaneously coordinated with others (Cooper & Schindler, 2011:80).

For the purpose of this study, the marketing research process is illustrated in Figure 22. The marketing research process adapted for this study consists of ten steps, each of which is discussed in detail in the sections below. Each section provides a theoretical background followed by an application relevant to the current study.

Step 1: Define the research problem

↓

Step 2: Determine the research objectives

↓

Step 3: Identify information types and sources

↓

Step 4: Determine the research design

↓

Step 5: Prepare the research design

↓

Step 6: Design the questionnaire

↓

Step 8: Conduct the investigation (Fieldwork)

↓

Step 9: Process and analyse data

↓

Step 10: Interpret the results and compile the research report

Figure 22: Marketing research process

Source: Adapted from Wiid and Diggines (2013:30) and Cant (2010: 64)

Each of these steps is now discussed and applied to the study at hand.

4.2.1 Step 1: Define the research problem

As illustrated in Figure 22, step 1 in the marketing research process is to define the research problem which was discussed in chapter 1. McDaniel and Gates (2013:64) states that a research problem … "specifies what information is needed to solve the problem and how that information can be obtained efficiently and effectively". Correctly defining the research problem is fundamental to the research process as it influences the remaining steps. The research problem has to be identified so that the research can be designed and conducted properly (Malhotra, Birks & Wills, 2012:41). Therefore, the research problem is considered as the key aspect to the marketing research process because clearly defined

research problems increase the probability of providing relevant information (Iacobucci & Churchill, 2010:29; Wiid & Diggines, 2013:33).

As stated in chapter 1, previous research in the South African context has mainly focused on online shopping behaviour, online shopping orientation, determinants of online shopping satisfaction, perceived benefits and barriers of online shopping and products or service purchased online (De Swardt & Wagner, 2008:6; Tapson, 2009:1; The MasterCard study in Business Tech, 2013; Jana in CP-Africa, 2013; Botha, 2014:3; Kempen, Kasambala and Toerien, 2015:23). This study focused on the influence of website quality factors on online shopping. Online shopping is growing in South Africa however the market is described as underdeveloped (World Wide Worx, 2016). By gaining a better understanding of the influence of website quality on online shoppers, it could assist retailers in improving their website designs and marketing and communication strategies targeting consumers, as well as assist in developing the online retailing market in South Africa.

Having established the importance and need for a study focused on the quality factors influencing online shopping, the proposed research question for this study was framed as: "Which website quality factors influence online shopping in the South African context?"

Having established the research problem and question, the next step was to determine specific research objectives (see Figure 22), which are discussed in the next section.

4.2.2   Step 2: Determine the research objectives

As illustrated in Figure 22, step 2 of the marketing research process is to determine the research objectives. The aim of marketing research objectives is to indicate what the study hopes to achieve and justifies why the study should be conducted (Hair, Bush & Ortinau, 2006:62; Wiid & Diggines, 2013:33). The research objectives are based on the research question stated in the previous step. Research objectives are broadly grouped into two categories, namely primary and secondary objectives (Berndt & Petzer, 2011:29). The primary objective specifies the focus of the study and represents the main outcome that the researcher aims to achieve, whereas the secondary objectives are the specific facets that contribute directly or indirectly to the primary objective (Cant, 2010:10; Berndt & Petzer, 2011:29).

As indicated in chapter 1, the primary objective of this study is to explore website quality factors influencing online shopping in the South Africa context in order to improve retailers' websites.

The secondary objectives that were based on the primary objectives are to investigate:

- The system quality factors influencing online shopping in the South African context.
- The information quality factors influencing online shopping in the South African context.
- The service quality factors influencing online shopping in the South African context.
- Future areas of research for online shopping in the South African context.

Having identified the research objectives, the subsequent step was to determine whether or not the research question and objectives could be answered via secondary data or if primary data were required. The next section discusses the two types of information (primary and secondary data) and their sources.

4.2.3   Step 3: Identify information types and sources

The third step of the marketing research process is to identify information types and sources (see Figure 22). Primary data refer to new information gathered for a specific study whereas secondary data refer to all information that is already available (Burns & Bush, 2010:174). According to McDaniel and Gates (2013:90) it is highly unlikely that a marketing research problem has never been addressed before. Primary data are only considered when there insufficient secondary data are available (Hair et al., 2006:117; Bradley, 2010:41).

4.2.3.1   Secondary data

Secondary data consist of data previously collected by other researchers for the purpose of their own studies that were published and currently exist in the marketplace (Burns & Bush, 2010:174). Secondary data therefore refer to any information that can be reused, and a distinction is made between internal and external secondary data (McQuarrie, 2012:43; Wiid & Diggines, 2013:76). Internal secondary data consist of data that were captured within a company such as sales data and annual reports, whereas external secondary data are data that were collected from outside sources such as marketing research literature, libraries and websites (Cant, 2010:130; McQuarrie, 2012:43-44).

Making use of secondary data is an efficient and cost-effective manner of gathering information and has the following advantages (McDaniel &Gates, 2013:90-92), namely it may:

- Redefine the research problem;
- Provide solutions to the research problem;
- Provide primary data research method alternatives;
- Highlight potential problems in the research process;
- Provide background information and build credibility; and
- Provide the sample frame for research.

However, McDaniel and Gates (2013:92-93) point out that secondary data also have a number of disadvantages, namely that:

- The data may be unavailable;
- The available data might be irrelevant;
- The results may be inaccurate; and
- The data might be insufficient to solve the research problem.

For the purpose of this study, secondary data were examined before determining the primary research method. Secondary data sources used are external (academic articles, textbooks, previous studies and the Internet) sources. A literature review is described as a comprehensive investigation of information that is made available from various sources relating to the study and is used to clarify and define the research problem (Hair et al.*,* 2006:118). The literature review discussed in chapter 2 provided the researcher with a better understanding of what online shopping entails, how it has developed over the years and its relevance in today's market. Further, the quality factors influencing online shopping were identified from the literature review as discussed in chapter 3.

Even though secondary data form a vital foundation and are essential to the study (Malhotra et al.*,* 2012:10), the secondary data discussed in the literature review of this study did not answer the research question presented in step 1, therefore primary data were needed.

4.2.3.2 Primary data

Primary data are described as data that originate from the specific purpose that a researcher aims to address and could possibly address the shortfalls of secondary data (Masterson & Pickton, 2010:175; Malhotra et al., 2012:115). They are new data collected from participants in order to solve a marketing problem or opportunity (Kolb, 2008:24; Iacobucci & Churchill, 2010:142). Primary data can be collected through the communication or observation techniques. The communication technique makes use of a questionnaire (oral or written), whereas the observation technique records facts or behaviours (Iacobucci & Churchill, 2010:186). These techniques are discussed in detail later in the chapter. Even though primary data are more expensive and time consuming, they were more applicable to the research objectives for this study (Strydom, 2011:82).

As stated previously, primary data were needed in order to meet the objectives of this study. The next step in the research process was to determine the research design to be utilised.

4.2.4 Step 4: Determine the research design

As illustrated in Figure 22, step 4 of the marketing research process is to determine the research design. The research design is described as a framework for conducting marketing research by specifying the procedures necessary in order to obtain the necessary information needed to address the research question (Malhotra et al., 2012:1015; Wiid & Diggines, 2013:54). The purpose of the research design is to establish the manner in which the hypotheses is tested or to determine possible answers to the research questions set by collecting and analysing the necessary data (Malhotra et al., 2012:9). A research design can therefore simply be described as the "blueprint" on how to achieve the set of objectives of a study (Blumberg, Cooper & Schindler, 2011:57).

Establishing which research approach to use is the first step in determining the research design. The next section differentiates between the two different research approaches, namely qualitative and quantitative.

4.2.4.1 *Qualitative and quantitative research*

According to Blumberg et al. (2011:144), the main difference between the qualitative and quantitative approach is the type of information used to investigate the phenomenon. Qualitative research aims to provide in-depth insight and understanding (Malhotra et al., 2012:187). It addresses marketing research objectives by interpreting market phenomena without numerical measurement (Zikmund & Babin, 2010:131). According to Zikmund and Babin (2010:131-132) the qualitative research method is used when:

- It is difficult to develop specific and actionable research objectives;
- The research aims to develop a deeper understanding of phenomenon or learn how consumers make use of a product in a natural setting;
- When the study is context-dependent; and
- When a new approach to studying a problem is needed.

However, qualitative research ignores representative sampling by basing its findings on one or a few cases (Malhotra et al., 2012:187). Further, McDaniel and Gates (2013:119) state that one of the major setbacks of qualitative research is that it does not distinguish the small differences as well as quantitative research does.

Quantitative research, on the other hand, aims to quantify data through statistical analysis and some form of measurement (Malhotra et al*.,* 2012:187). Quantitative research makes use of numerical measurement and analysis by assigning numbers in an ordered and meaningful way (Zikmund & Babin, 2010:693). According to Warwick Equest (n.d.) the quantitative research method is well suited for determining the satisfaction, attitudes and opinions of users, as well as their usage and preferences.

Table 11 summarises the differences between the two methods based on purpose, type of research, questions and analysis, sample size, information needed from each respondent, requirements of administrators, degree of replicability, generalisability and the time frame of the research.

Table 11: Qualitative versus quantitative research

Research aspect	Qualitative research	Quantitative research
Main purpose	To identify new ideas with general research objectives	To test hypotheses or answer specific research questions
Types of research	Exploratory	Descriptive and casual
Types of questions	Probing, open-ended, unstructured	Limited probing, mostly structured and close-ended
Types of analysis	Subjective and interpretative	Statistical and summation
Sample size	Small	Large
Respondent information	Substantial	Varies
Researcher skills	Interpretive, interpersonal communications, observation	Scientific, statistical procedure, translation
Degree of replicability	Low	High
Generalisability	Limited	Generally quite good
Time frame	Relatively short	Significantly longer

Source: Adapted from McDaniel and Gates (2013:117) and Zikmund and Babin (2010:133)

Given the differences between the two research methods, the key is to determine which method is best suited to a specified study (Zikmund & Babin, 2010:132). Qualitative research aims to determine "why?" and "what if?" whereas quantitative is focused on "how many?" and "what?" (Kolb, 2008:29). Therefore, for the purpose of this study, a quantitative approach was followed to achieve the research objectives specified in step 2 by quantifying the data through statistical analysis.

After distinguishing between the research approaches a researcher can utilise, the next step is to determine the specific research design.

4.2.4.2 Types of research designs

As illustrated in Figure 23, there are three main types of research designs, namely exploratory, descriptive and casual research (Iacobucci & Churchill, 2010:68; Zikmund & Babin, 2010:50). Each of these designs is discussed below.

```
                        ┌─────────────────────────┐
                        │  Research design types  │
                        └─────────────────────────┘
              ┌──────────────────┼──────────────────┐
   ┌─────────────────────┐ ┌─────────────────────┐ ┌─────────────────────┐
   │ Exploratory research│ │ Descriptive research│ │   Causal research   │
   └─────────────────────┘ └─────────────────────┘ └─────────────────────┘
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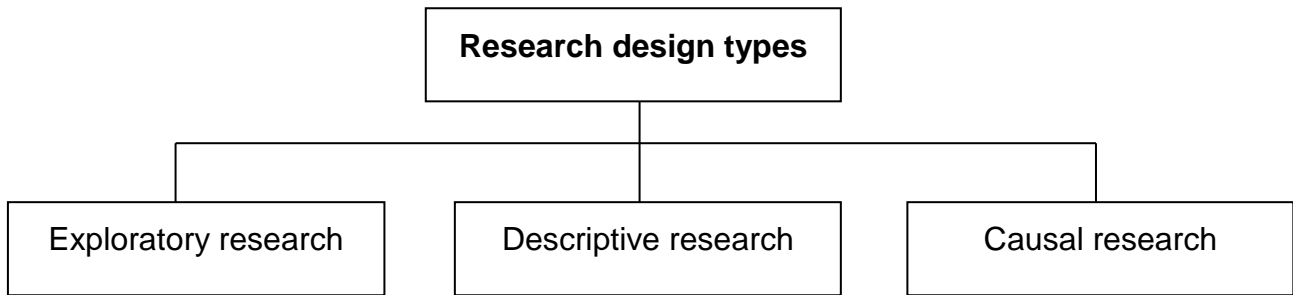
Figure 23: Types of research designs

Source: Adapted from Wiid and Diggines (2013:56) and Cant (2010:64)

The first research design type is exploratory research which explores an issue or a topic and is useful for identifying a problem, clarifying the nature of the problem and defining the issues involved (McGivern, 2013:46). The aim of exploratory research is to acquire insight and develop understanding instead of collecting replicable data (Wiid & Diggines, 2013:56). This research type is particularly useful when there is no specific problem to investigate and but when there is a need to look at trends or changes in consumer behaviour (Kolb, 2008:26). Exploratory research can narrow the scope and turn ambiguous problems into well-defined ones (Zikmund & Babin, 2010:60).

The second type of research design is descriptive research which collects data with scientific methods and procedures in order to describe the characteristics of a defined target population (Hair, et al., 2006:63; McGivern, 2013:47). It is mainly used to examine key issues faced by researchers (Hair, et al., 2006:63; McGivern, 2013:47). The aim of descriptive research is to identify trends or patterns in a situation when the current knowledge available is vague and unclear in order to reveal links between variables (Wiid & Diggines, 2013:57-58).

The third type of research design is causal research which collects data with scientific methods and procedures to determine the cause-and-effect relationships between two or more variables (Hair et al., 2006:64; McGivern, 2013:47). The purpose of causal research is to confirm or describe cause-and-effect relationship (Wiid & Diggines, 2013:58). This research type is conducted when there is a good understanding of the phenomena being investigated and the researcher is able to make educated predictions of the cause-and-effect relationship to be tested (Zikmund & Babin 2010:53).

Table 12 summarises the key differences between the three research design types according to objectives, characteristics, uses and methods.

Table 12: The difference between research designs

	Exploratory	Descriptive	Causal
Objective	To discover new ideas and insights	To describe market characteristics	To determine cause-and-effect relationships
Characteristics	Flexible, versatile	Planned, structured	Controlled
Uses	To formulate problems, develop hypotheses, research priorities, clarify concepts	To describe characteristics, make predictions, estimate behaviour of the population	To determine causal relationship
Methods	Secondary data, expert survey, pilot studies, case studies	Secondary data, surveys, panels, cross-sectional, longitudinal	Laboratory, field experiments

Source: Adapted from Wiid and Diggines (2013:58-59)

It has been argued that there is no method that is the best, however it is crucial that the design be based on the research problem and objectives (Zikmund & Babin, 2010:65; McDaniel & Gates, 2013:66). The purpose of this study was to explore which website quality factors influence online shopping with the aim of discovering new insights. The information gathered could provide online retailers with a better understanding of what online shoppers look for when shopping on websites in South Africa. Therefore, the study was exploratory in nature.

4.2.5   Step 5: Prepare the research design

Having gained a thorough understanding of the research design, this section discusses how to prepare the research design by explaining the different data collection processes of quantitative research (see Figure 22).

4.2.5.1   *Data collection approach and instrument*

As illustrated in Figure 24, there are three methods of collecting data, namely observation, experiments and survey research. Each of these are briefly discussed below.
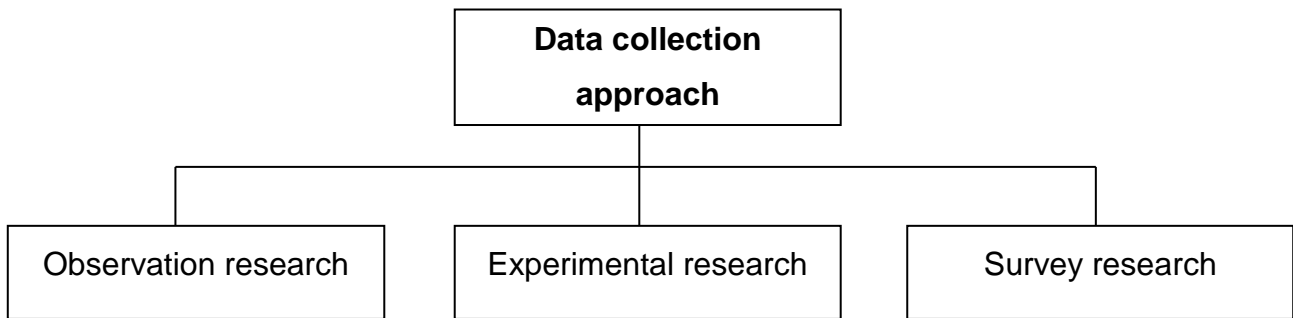
Figure 24: Data collection approaches

Source: Adapted from Wiid & Diggines (2013:111) and McDaniel and Gates (2013:68-69)

The first data collection approach is observation, which aims to gather data by observing people and/or phenomena and recording the relevant data (Wiid & Diggines, 2013:131). This method gathers data unobtrusively without the direct participation of the respondent by examining patterns of behaviour (McDaniel & Gates, 2013:68). Observational research allows researchers to see behaviours that consumers are not aware of and are unable to express verbally (Iacobucci & Churchill, 2010:74).

The second data collection approach is experimental research, which gathers data to determine cause-and-effect relationships by investigating variables influenced by other variables in isolation (McGivern, 2013:68). The researcher changes a variable to observe the effect on another (McDaniel & Gates, 2013:243). This method is either carried out in a natural setting or in an artificial setting such as a laboratory (Wiid & Diggines, 2013:138).

The third data collection approach is survey research which gathers data using a questionnaire with predetermined questions, usually from a large number of participants (Kolb, 2008:29; Malhotra et al., 2012:133). This method is the most commonly used approach for collecting data from respondents in order to achieve research objectives (Berndt & Petzer, 2011:132).

For the purpose of this study, the survey research approach was used to gather the necessary data to meet the objectives stipulated in step 2 of the marketing research process. According to Burns and Bush (2010:267), the advantages of survey research are standardisation, ease of administration and analysis as well as revealing subgroup differences. Figure 25 illustrates the various survey methods, namely personal interviews, telephone interviews, postal surveys and Internet-based surveys. Each is then discussed in more detail.
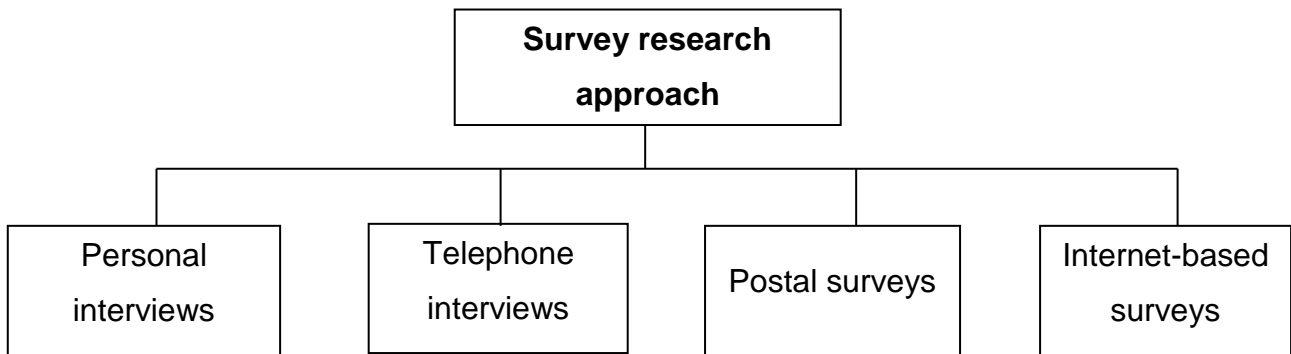
Figure 25: Survey research methods

Source: Adapted from Wiid and Diggines (2013:116)

Personal interviews occur when the researcher asks the respondent, face-to-face, specific questions whereas telephone interviews occur when the interviewer asks the respondent questions over the phone (Wiid & Diggines, 2013:115-118). Postal surveys, on the other hand, occur when researchers post structured questionnaires to respondents who return them once they have been completed (Bradley, 2010:120). Internet-based surveys refer to computer-aided data collection which is either researcher administered or self-administered (Wiid & Diggines, 2013:122-125). Researcher administered questionnaires are when the researcher sits with the respondents and guides them through the questionnaire. Self-administered questionnaires are used when the researcher sends the respondents the questionnaires to complete on their own (Wiid & Diggines, 2013:125-126).

For the purpose of this study, self-administered Internet-based surveys were used to gather data from individuals using the Web as a platform (Tuten, 2010:179). According to Malhotra et al. (2010:333-334) and Blumberg et al. (2011:213) Internet-based surveys have the following advantages, namely:

- Faster data collection process compared to other collection methods;
- Cheaper administration and data collection as there is no printing or postage required and data do not require a person to capture them;
- Design features allowing for higher quality of responses through appealing and interesting design;
- Interviewer bias is removed as the researcher is not present during the completion of the survey;
- Improved data quality as logic and validity checks can be built in;

- Contacting certain target groups who would normally refuse other survey methods; and
- Perceived as more anonymous preventing interview bias.

However, there are a number of disadvantages associated with Internet-based surveys (Blumberg et al., 2011:213; Malhotra et al., 2012:333-334) such as:

- Inaccurate sampling frames as access panels only provide access to certain participants;
- Lack of access to the Internet from those in rural or poor communities;
- Technical issues affecting the survey may arise;
- Low response rates;
- Lack of interviewer intervention for further probing or explanations; and
- Possible skewed responses as respondents who complete the surveys tend to represent extremes of the population.

Even with the number of disadvantages present, self-administered Internet-based surveys are justified because the target population consists of online shoppers who are familiar with the Internet and how to use it. The next section discusses the sample plan which is the final phase of preparing the research design.

4.2.5.2 The sample plan

As illustrated in Figure 26, the sampling process consists of seven steps, each of which are discussed in the sections to follow. Sampling is the process of identifying a group that is representative of the target population (Wiid & Diggines, 2013:183). According to McDaniel and Gates (2013:380) sampling is used because the researcher is able to make accurate estimations more quickly and at a lower cost compared to other methods such as a census. As it is considered impractical to involve everyone in the target population, selecting who participates in the study is a crucial aspect (Gill & Johnson, 2010:127).

Step 1: Defining the target population

↓

Step 2: Determining the sampling frame

↓

Step 3: Specifying the sampling unit

↓

Step 4: Selecting the sampling method

↓

Step 5: Determining the sampling size

↓

Step 6: Specifying the sampling frame

↓

Step 7: Selecting the sample
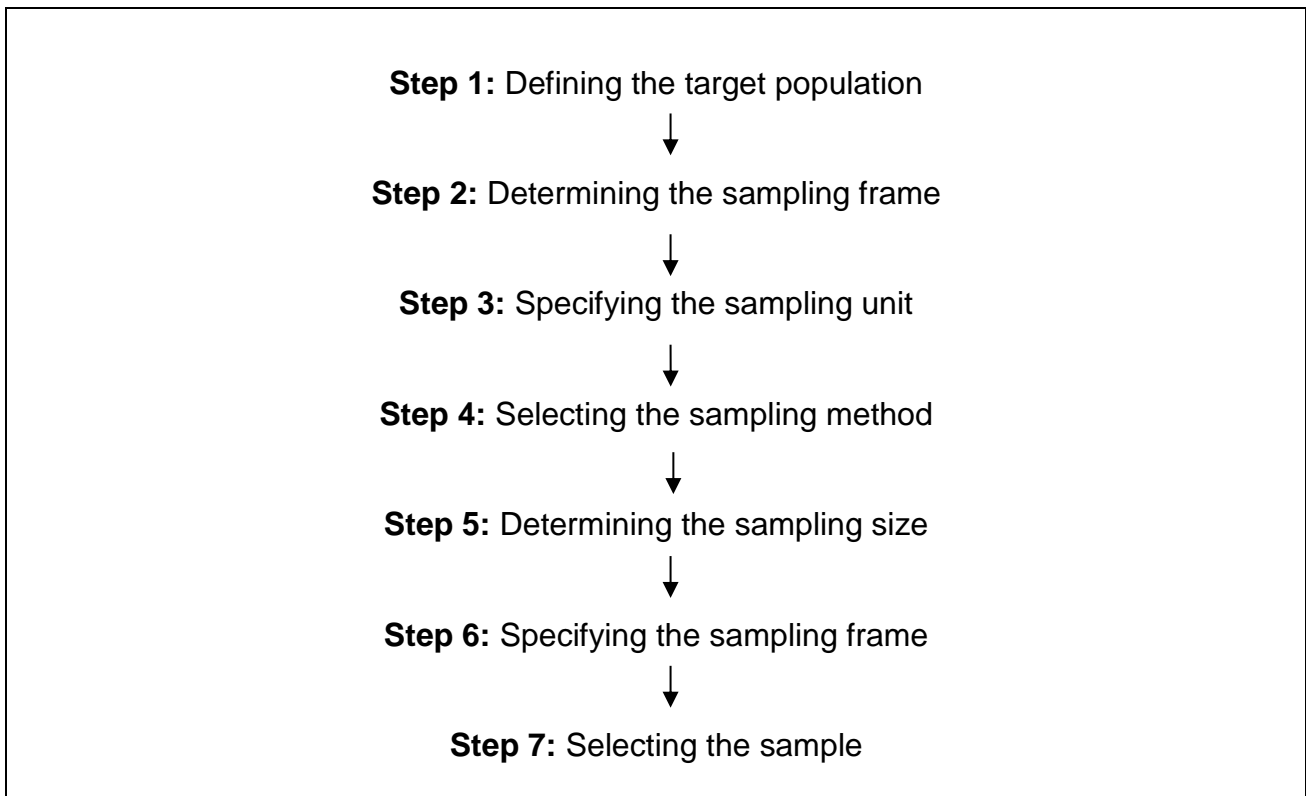
Figure 26: Sampling design process

Source: Adapted from Kapoor and Kulshrestha (2010:153) and Zikmund and Babin (2010:415)

The first step in the sampling design process is to define the target population (see Figure 26). The term 'target population' refers to the group of people that the researcher aims to gather data from in order to meet the objectives of the study (Hair et al., 2006:326; McDaniel & Gates, 2013:380). The target population for the purpose of this study was the general South African population who had access to the Internet. The target population was selected as access was readily available to the researcher.

The second step in the sampling process is to determine the sampling frame (see Figure 26). The sampling frame refers to the list used to identify the target population (Malhotra et al., 2012:497). Due to the fact that the proposed study made use of non-probability sampling (discussed shortly in step 4 of the sampling design process), it was not necessary to specify the sampling frame as it is only essential for probability sampling (Gill & Johnson, 2010:127).

The third step in the sampling design process is to specify the sampling unit, also referred to as the unit of analysis, which is an element that is suited for the selection via the specified sampling process (Zikmund & Babin, 2010:418). The unit of analysis for the

current study was anyone between the ages of 18 to 65 years, who had access to the Internet and was residing in South Africa.

The fourth step in the sampling design process was to select the sampling method (see Figure 26). As illustrated in Figure 27, the two main categories of sampling methods are probability and non-probability sampling. Probability sampling occurs when each sample has the same probabilistic chance of selection (Malhotra et al., 2010:501; McDaniel & Gates, 2013:386). Non-probability sampling, on the other hand, occurs when each sample is selected in a non-random way or based on the judgement of the researcher (Malhotra et al., 2012:501; McDaniel & Gates, 2013:386).
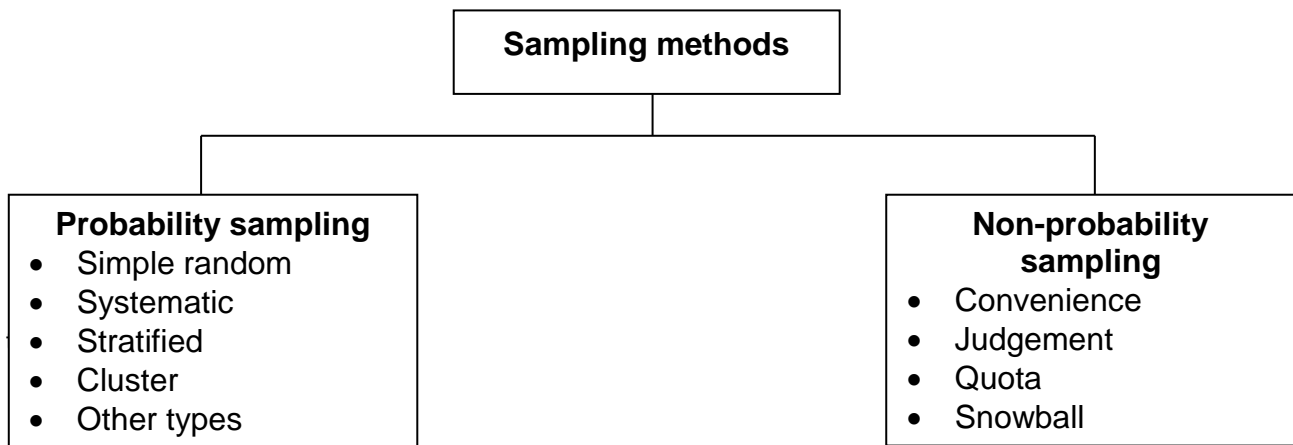
Figure 27: Sampling methods
Source: Adapted from Malhotra et al. (2012:501)

For the purpose of this study, non-probability sampling was conducted by means of convenience sampling. As stated in chapter 1, convenience sampling is based on the ease and practicality of accessing the sample population, making it the most commonly used sampling technique (Kumar, 2011:207). Convenience sampling is comprised of individuals that meet established eligibility criteria and are readily available for inclusion in the study (Norwood, 2010:234; Gravetter & Frozano, 2012:151).

The fifth step in the sampling process is to determine the sample size (see Figure 26). The sample size is the number of elements or individuals included in the final analysis for a specific study (Malhotra et al., 2012:374). Determining the correct sample size is important because if the sample is too small, it could lead to inaccurate results whereas if a sample is larger than necessary, it could waste time and resources (Kapoor & Kulshrestha,

2010:145). Based on the research instrument, in order to be able to make statistical inferences, a minimum sample of 130 respondents is needed (Hair, Black, Babin & Anderson, 2010:102). As stated in chapter 1, this was deemed an adequate sample size by the BMR. For this study, a total of 144 responses of respondents were received of which 123 indicated that they shop online. Since the focus of this study was specifically on online shopping, chapter 5 provided a detailed analysis of the 123 respondents and their responses. The remainder of the responses (21) were that of non-online shoppers, a summary which can be found in appendix B.

The sixth step in the sampling process is to specify the sampling frame (see Figure 26). The sampling frame is an important aspect of sampling because it determines which individuals will be selected (Bradley, 2010:154). However, as stated previously, due to the nature of the study being non-probability convenience sampling, the sampling frame is not necessary (Gill & Johnson, 2010:127).

The seventh and last step of the sampling process is to select the sample (see Figure 26). According to the sampling method chosen, the respondents who met the set criteria, who were readily accessible and available to the researcher were chosen for this study.

4.2.6   Step 6: Design the questionnaire

For the purpose of this study, in order to gather the necessary data, a questionnaire was used. Questionnaires are the most commonly used data collection instrument for primary data (Wiid & Diggines, 2013:35). A questionnaire is a research instrument that consists of a set of specifically designed questions to collect the necessary data in order to answer the research question, therefore the researcher must ensure that it is accurate and applicable to the study at hand (Zikmund & Babin, 2010:432). As illustrated in Figure 28, there are ten steps involved in designing a questionnaire.

Step 1: Identifying the objectives and type of information needed
↓
Step 2: Selecting the data collection method
↓
Step 3: Determining the question response format
↓
Step 4: Deciding on the question wording
↓
Step 5: Establishing the flow and layout
↓
Step 6: Evaluating the questionnaire
↓
Step 7: Obtaining approval
↓
Step 8: Pre-testing and revising
↓
Step 9: Preparing the final copy
↓
Step 10: Implementing the survey

Figure 28: Questionnaire design process

Source: Adapted from McDaniel and Gates (2013:341-362)

The first step in the questionnaire design process was to identify the objectives and type of information needed (see Figure 28). The purpose and the objectives of this study as stipulated in sections 4.2.1 and 4.2.2 allowed the researcher to clearly identify the questions that needed to be included in order to satisfy the needs of the study. Table 13 illustrates the link between the objectives and the questions formulated (see the questionnaire used for this study in appendix A)

Table 13: The link between the objectives and questions formulated

Secondary objectives	To achieve each objective	Type of question
To determine the system quality factors influencing online shopping in the South African context.	Question 11	Scaled-response
To determine the information quality factors influencing online shopping in the South African context.	Question 12	Scaled-response
To determine the service quality factors influencing online shopping in the South African context.	Question 13	Scaled-response
To identify future areas of research for online shopping in the South African context.	Questions 1-10, 14-19	Close-ended and open-ended

The second step in the questionnaire design process was to select the data collection method (see Figure 28). As indicated in section 4.2.5.1, self-administered Internet-based questionnaires were used for this study.

The third step in the questionnaire design process was to determine the questionnaire response format (see Figure 28). According to McDaniel and Gates (2013:341), there are closed-ended questions where the respondent has to choose from a list of options, open-ended questions where the respondents answer in their own words, or scaled-response questions where the respondents have to indicate a point within a scale. For the purpose of this study, all three types of questions were asked. Refer to Table 13 and appendix A.

The fourth step in the questionnaire design process was to decide on the wording of the questions in the questionnaire (see Figure 28). As indicated previously, a disadvantage of self-administered questions is that respondents could misunderstand the questions (Malhotra et al., 2012:333-334). Therefore, the researcher needed to ensure that the questions were clear and unambiguous and would not bias the respondents' responses (McDaniel & Gates, 2013:341).

The fifth step in the questionnaire design process was to establish the flow and layout of the questionnaire (see Figure 28). The questionnaire consisted of five main sections. For

the first section, the researcher determined whether respondents shopped online or not. Those who did not shop online were required to explain why and then complete the demographic questions. Those who did shop online were required to indicate the type of online shopping activity performed. Thirdly, the researcher aimed to differentiate the different types of online shoppers. This was then followed by questions pertaining to system, information and service quality, respectively and lastly demographics. Demographic questions were asked at the end of the questionnaire because some respondents might feel uneasy, which would result in them refusing to participate (McDaniel & Gates, 2013:341).

The sixth step in the questionnaire design process was to evaluate the questionnaire and ensure that the questions were relevant and achieved the stipulated objectives (see Figure 28). In order to ensure this, the researcher obtained the opinion of two qualified researchers who recommended minor changes.

The seventh step in the questionnaire design process was to obtain approval from all relevant parties (see Figure 28), namely the supervisors, the statistician associated with the BMR and the Ethical Clearance Committee of the Department of Marketing and Retail Management.

The eighth step in the questionnaire design process was to pre-test and revise the questionnaire in order to ensure that the questions were clear and easy to understand (see Figure 28). The pre-testing of a questionnaire aims to find and amend any possible difficulties that respondents may experience (Burns & Bush, 2010:354). The first draft of the questionnaire for the study was pre-tested among 30 individuals to receive feedback regarding the question clarity and ease of answering. The questionnaire was revised and adapted accordingly before being sent out.

The final step in the questionnaire design process was to prepare the final copy for implementation (see Figure 28) and once completed, the researcher could begin the data collection process which is discussed in the next section.

4.2.7   Step 7: Conduct the investigation (fieldwork)

Survey fieldwork generates useful data and therefore plays a critical role in the marketing research process (Malhotra et al., 2012:563). During this step, the researchers contact and

administer the questionnaire to potential participants (Malhotra et al., 2012:563). This is the only time that the researcher has direct contact with the sample (Wiid & Diggines, 2013:209). As stated previously, a self-administered Internet-based survey was used for the purpose of this study. The researcher sent emails to colleagues and friends, posted on various social media platforms such as Facebook, Twitter, LinkedIn and on an online forum MyBroadband, the link that redirected respondents to the LimeSurvey platform to complete the questionnaire.

4.2.8   Step 8: Process and analyse the data

Once the fieldwork had been conducted, the next step was to process and analyse the data. The researcher was required to convert the data into the form of meaningful information, therefore once the data had been collected, it needed to be captured, coded and tabulated before processing and analysing (Wiid & Diggines, 2013:36). The aim of this step was to obtain meaning from the data through statistical processes (Iacobucci & Churchill, 2010:350; Bradley, 2010:305). There are a number of computer programs available to process and analysis data (Wiid & Diggines, 2013:36). However, for the purpose of this study, SPSS was used in order to conduct descriptive and inferential statistics.

Descriptive statistics describe data from a sample by measuring the central tendency or dispersions (Hair et al., 2006:495). Measures of central tendency examine the mean, median and mode whereas the measures of dispersion include the standard deviation, variance and range (McDaniel & Gates, 2013:458). The mean calculates the arithmetic average by dividing the number of observations by the sum of all the values of a variable (Zikmund & Babin, 2010:443; McDaniel & Gates, 2013:458). The median refers to the midpoint of the distribution whereas the mode is the most frequently occurring value (Cooper & Schindler, 2011:425-426). On the other hand, the standard deviation is the square root of the variance which measures the degree to which the elements of the sample differ from the average (Aaker et al., 2007:686-687), whereas the range is the distance between the lowest and highest value of a frequency distribution (Zikmund & Babin, 2010:445). For the purpose of this study, the mean and standard deviations are presented numerically in the next chapter. The other descriptive analyses are presented as additional findings in annexure C.

Inferential statistics, on the other hand, further summarise and describe the data by making use of inferences to predict from a sample to an entire population (Zikmund et al., 2013:410). In essence, inferential statistics allow a researcher to make generalisations about the sample of a study and to draw conclusions about the population characteristics (Mendenhall, Beaver & Beaver, 2013:4). For the purpose of this study, the Chi-square test and non-metric analysis of variances (ANOVA) were used in order to determine inferences (Goodwin, 2010:515; Pagano, 2012:10). The Pearson Chi-Square test determines whether two categorical variables are related or not by producing a probability value (p-value) which is statistical significance if it < 0.05 (Peat, Barton & Elliott, 2008:1; Stat Trek, 2016). A non-metric ANOVA test examines the differences in the central tendencies of two or more groups with a dependant variable on an ordinal scale (Malhotra et al., 2012:686). The Kruskal-Wallis one-way ANOVA test also uses the p-value to determine statistical significance.

Further, the validity and reliability of the research instrument were tested. According to Zikmund and Babin (2010:251) any good research should be precise (reliable) and accurate (valid).

4.2.8.1 Validity

Validity refers to the degree to which the research measures what was actually measured and truthfully represents a concept (Zikmund & Babin, 2010:248; McDaniel & Gates, 2013:289). There are three aspects to validity, namely face (content) validity, criterion validity and construct validity (Zikmund & Babin, 2010:250). Face (content) validity is based on the researcher's judgment by determining whether the concept being measured is logically reflected in the scale (Iacobucci & Churchill, 2010:257; Zikmund & Babin, 2010:250). On the other hand, criterion validity refers to the ability of the scale to detect the presence or absence of a criterion which is considered to present the construct (McDaniel & Gates, 2013:292). Criterion validity determines whether the scale correlates with other measures of similar concepts (Zikmund & Babin, 2010:250). Finally construct validity refers to a scale reliably measuring what it intended to and truthfully representing a construct (Zikmund & Babin, 2010:251).

Content and face validity were used for this study, where the researcher used the content discussed in chapter 3 in order to develop the research instrument. Further, with regard to

face validity, two lecturers from UNISA in the field of E-commerce scrutinised the research instrument and provided feedback during the pre-test phase.

4.2.8.2 Reliability

Reliability refers to the internal consistency which provided consistent data (Zikmund & Babin, 2010:334; McDaniel & Gates, 2013:286). A reliable measurement provides similar measures under different conditions at different times (McDaniel & Gates, 2013:286). The reliability of the constructs was tested using item analysis. Item analysis is a statistical technique which measures the reliability of the tested construct by producing a Cronbach's Alpha value (Wiid & Diggines, 2013:238). According to Wiid and Diggines (2013:238) and Zikmund and Babin (2010:334) the following values of Cronbach's value are interpreted as:

- 0.8 - 0.96, reliability is very good;
- 0.7 - 0.8, reliability is good;
- 0.6 – 0.7, reliability is acceptable or fair; and
- < 0.6, reliability is unacceptable or poor.

However, according to Vogel, Maas and Gebauer (2011:344) and Andrew, Pederson and McEvoy (2011:202) it is not necessarily desirable to obtain very high reliabilities (>0.95) as they could indicate that the items are redundant or too narrow in focus. For the purpose of this study, in order to determine the internal consistency of the research instrument, Cronbach's values were calculated for each construct. These are presented numerically in the next chapter.

4.2.9   Step 9: Interpret the results and compile the research report

The last step in the marketing research process was to interpret the results and compile the research report. The researcher not only needs to interpret the results but also explain the significance of the study (Wiid & Diggines, 2013:36). Chapter 5 and 6 presents the findings, conclusion and recommendations for this study.

4.3   CONCLUSION

An overview of the research process and the types of research methodology that the study used for the study was discussed in this chapter. In order to satisfy the research objectives a quantitative approach was used. Convenience, non-probability sampling was used and the data were collected with self-administered Internet-based questionnaires from the general South African population who had access to the Internet. The next chapter presents the research findings of the study.

CHAPTER 5

DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

The purpose of this chapter is to present and interpret the research results of the empirical investigation in order to answer the research question. The study followed a quantitative approach to assess the primary and secondary objectives. The chapter begins by providing a summary of key terms used, followed by an overview of the research problem, research question as well as the primary and secondary objectives. This is followed by a discussion of results of the study.

5.2 DEFINITIONS OF KEY TERMS

The definitions of the key terms used in the discussion of this chapter are provided in Table 14.

Table 14: Definition of key terms

Online shopping	Online shopping is the process a customer goes through to purchase products or services over the web. These include searching and browsing for products and services as well as buying them (Cai & Cude, 2012:466; Business Dictionary, 2015).
Online searching	Online searching in the online shopping process is when consumers look for specific products or services over the Web that you want to buy online or offline (Kalia, Singh & Kaur, 2016: 354).
Online browsing	Online browsing in the online shopping process is when users casually look at products or services over the Web that they may or may not want to buy online and offline (Kalia et al., 2016:354).
Online buying	Online buying in the online shopping process is when users actually purchase products or services over the Web (Kalia et al., 2016:354).
Searcher	Searchers refer to online shoppers who go online to look for specific products or services that they wish to purchase (Perc, 2013; Delk, 2012).
Browser	A browser refers to an online shopper who has a shopping goal and browses for specific products related to the goal (Perc, 2013; Delk, 2012).
Wanderer (window shopper)	A wanderer refers to an online shopper who shops online without the intention of purchasing anything (Perc, 2013; Delk, 2012).

Online shopping	Online shopping is the process a customer goes through to purchase products or services over the web. These include searching and browsing for products and services as well as buying them (Cai & Cude, 2012:466; Business Dictionary, 2015).
Price hunter	A price hunter refers to an online shopper who looks for products or services on special/discounts (Perc, 2013; Delk, 2012).
First timer	A first timer refers to an online shopper who is new to the online shopping process (Perc, 2013).
System quality	System quality measures the desired characteristics of an online system therefore it must provide security, accessibility, speed and convenience that support the consumer's buying activity. System quality is made up of the following factors: usability; availability; reliability; adaptability; and response time (DeLone & McLean, 2004).
Information quality	Information quality captures the content of the online system which should be personalised, complete, relevant, easy to understand and secure. Information quality is made up of the following factors: personalisation; completeness; relevance; ease of understanding; and secureness (DeLone & McLean, 2004).
Service quality	Service quality is the ability to satisfy users by meeting their expectations in the time promised, building confidence in the ability to provide the service and being courteous with service requests (Gorla et al., 2010). Service quality is made up of the following factors: responsiveness; assurance; empathy; reliability; and follow up services (DeLone & McLean, 2004).

The next section provides an overview of the research question and the objectives of the study.

5.3 OVERVIEW OF THE RESEARCH QUESTION AND OBJECTIVES

The research question and the primary and secondary objectives were derived from the research problem regarding the issue of how website quality influences online shopping in South Africa, as stated in chapters 1 and 4. These are briefly repeated below.

5.3.1 Research question

The research problem for the current study was formulated after identifying the increased growth of online shopping, both globally and in South Africa. This significant growth led to the important research question being formulated: "Which website quality factors influence online shopping in the South African context?". The research problem that was identified from the literature, which was revealed to be sorely lacking in the literature review, was to determine which website quality factors influence South African consumers when shopping

online. Based on the research problem, the following research question was formulated: "Which website quality factors influence online shopping in the South African context?"

5.3.2   Research objectives

The primary objective of this study is to explore website quality factors influencing online shopping in the South Africa context in order to improve retailers' websites.

The secondary objectives of this study are to investigate:

- The system quality factors influencing online shopping in the South African context.
- The information quality factors influencing online shopping in the South African context.
- The service quality factors influencing online shopping in the South African context.
- Future areas of research for online shopping in the South African context.

In order to achieve the primary and secondary objectives listed above, research had to be conducted. In the subsequent sections, a detailed discussion on the analysis of the research findings for the study is provided.

5.4   ANALYSIS OF THE RESEARCH RESULTS

According to McDaniel and Gates (2013:457), descriptive statistics are the most efficient method of summarising the characteristics of large sets of data in order to reveal something about the characteristics of the data. In essence, descriptive statistics categorise, simplify, provide synopsises and exhibit regarding the data of important qualities of a set of measurements through numerical procedures (Gravetter & Wallnau, 2009:6; Mendenhall et al., 2013:4). The descriptive statistics obtained for the purpose of this study are discussed below by examining each question of the research instrument that was directed at the respondents.

5.4.1   Respondents who shop online

Respondents were asked to indicate if they shop online (see appendix A, question 1). The question posed in the research instrument provided an explanation stating that *online shopping is the process of searching, browsing and buying products or services over the web.* Table 15 indicates the results obtained from question 1 of the research instrument.

Table 15: Respondents who shop online (n=144)

		Frequency (n)	Percent (%)
Valid	Yes	123	85.42
	No	21	14.58
	Total	**144**	**100.00**

As can be seen from Table 15, 85.42% (123) of the respondents shop online and 14.58% (21) do not shop online. It is evident that the majority of the respondents are online shoppers who search, browse and/or buy products or services over the Web (85.42% or 123). For the purpose of this study, only the responses of online shoppers were used for this chapter. As a result, a total of 123 respondents and their responses to the various questions are discussed in this chapter. Additional results of non-online shoppers can be found in appendix B.

The next section provides an overview of the demographic profile of respondents who shop online.

5.4.2 Demographic profile of the respondents

The following sections aim to determine the demographic profile of the respondents which included their gender, age, residential location, highest qualification and employment status. These results provide an overview of the demographic characteristics of the respondents and identify possible links between the respondents' demographic variables and their online shopping behaviour (discussed in section 5.3.5 and appendix D).

The first demographic variable investigated was gender.

5.4.2.1 Gender

The respondents were asked to indicate their gender (see appendix A). Figure 29 indicates the results obtained from the questions posed in the research instrument.
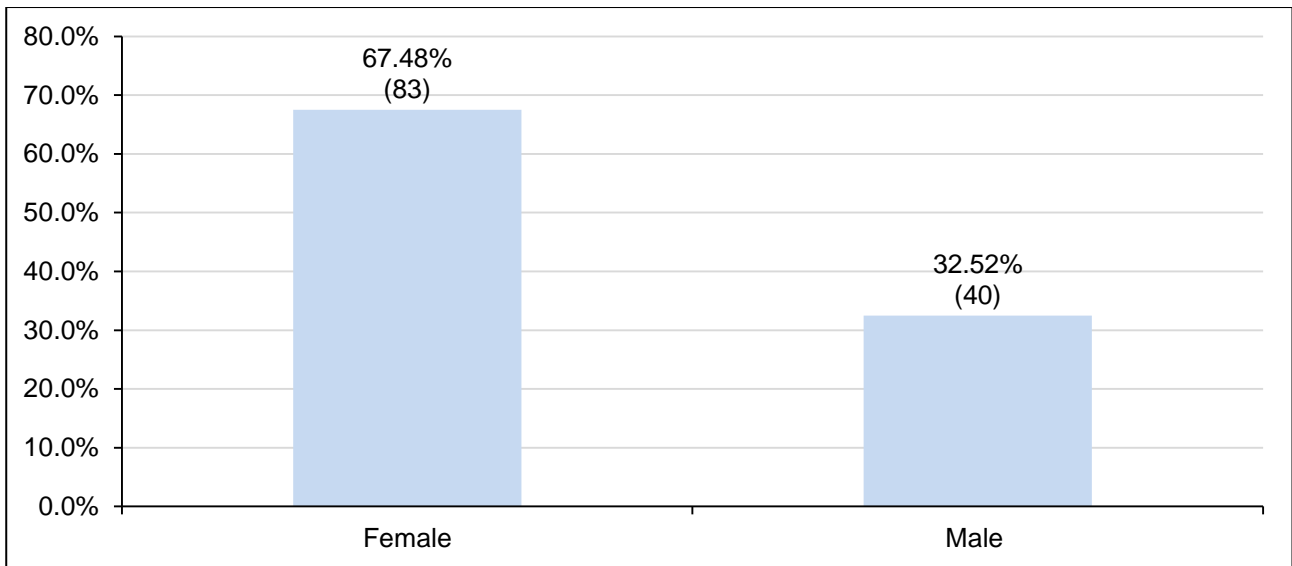
Figure 29: Gender of respondents (n=123)

As illustrated in Figure 29, 67.48% (83) of the respondents were female and 32.52% (40) were male. It is clear from the findings that the majority of the respondents are female. These results support previous research indicating that women tend to shop more than men because they are seen as primary care givers who not only shop for themselves, but also on behalf of others (Brennan, 2013). Furthermore, women in South Africa are more active online shoppers compared to men (Van Zyl, 2015). This would seem to imply that respondents who are females are more prone to shopping online, a factor that online retailers need to acknowledge when designing their online shopping sites.

The next demographic variable investigated was the age group of the respondents.

5.4.2.2 Age group

Respondents were asked in the research instrument to indicate their age group (see appendix A). Figure 30 illustrates the different age groups of the respondents.
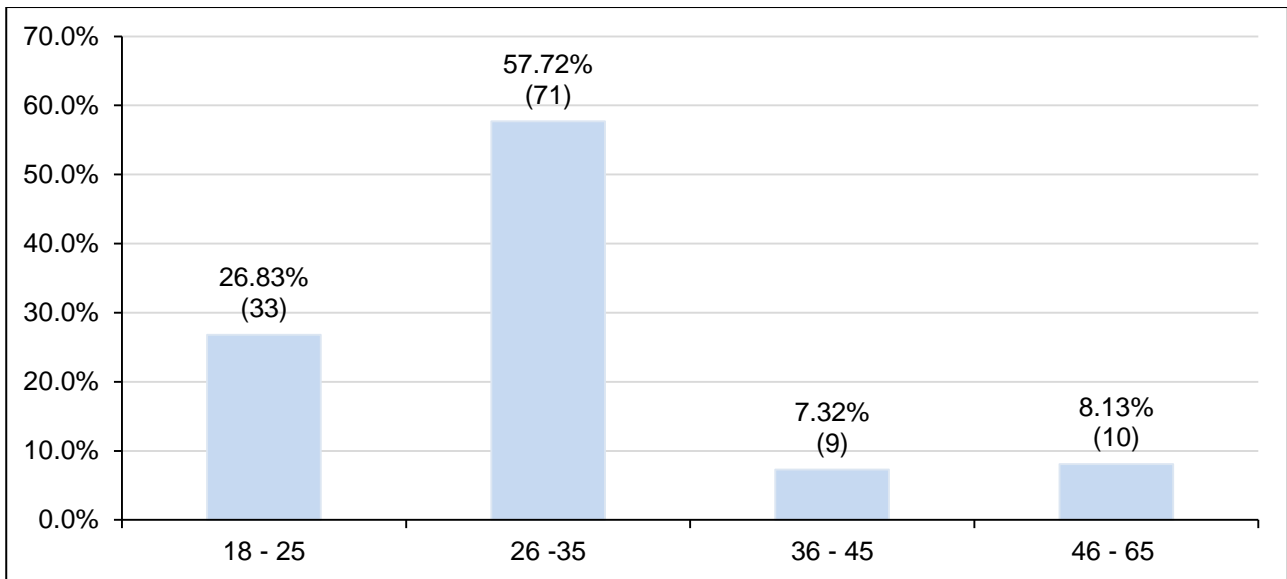
Figure 30: Age group (n=123)

As shown in Figure 30, more than half of the respondents were between the ages of 26 -
35 years old (57.72% or 71) and more than a quarter were between the ages of 18 – 25
years old (26.83% or 33). There were 8.13% (10) of the respondents between the ages of
46 – 65 years old and 7.32% (9) between the ages of 36 – 45 years old. The fact that the
researcher made use of convenience sampling could have contributed to the age groups
between 36 to 65 years being underrepresented in this sample and this has been listed as
a limitation of the study.

However, it is important to note that the majority of the respondents were between the
ages of 18 – 35 years old (84.55% or 104), most of whom are described as millennials.
Millennials are people who reached adulthood during the 21st century and grew up with
electronics and the Internet (Haughn, 2015). Millennials are therefore considered as 'tech-
savvy' and accustomed to online shopping (US Chamber of Commerce Foundation, 2016).
These results are in line with the findings of previous studies which stipulate that
millennials are the key age group for online shopping as they spend the most money
annually compared to other age groups (Smith, 2015). This would seem to imply that
respondents who are 18 – 35 year olds are more prone to shopping online, which online
retailers need to acknowledge when designing their online shopping sites.

The next demographic variable investigated was the current residential province of the
respondents.

5.4.2.3 Residential province

In the research instrument respondents were asked to indicate which South African province they were currently residing in (see appendix A). Figure 31 shows the number of respondents per residential province.
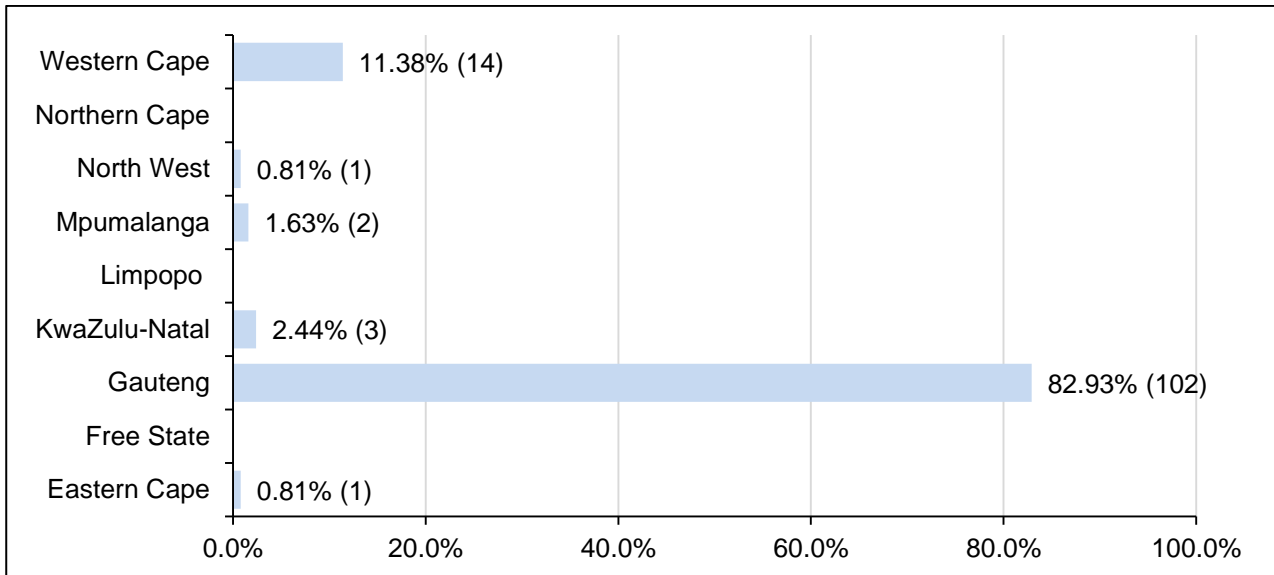
Figure 31: Residential province (n=123)

Figure 31 indicates that 82.93% (102) the respondents were residing in Gauteng at the time they took the questionnaire. The remaining respondents resided in the Western Cape (11.38% or 14), KwaZulu-Natal (2.44% or 3), Mpumalanga (1.63% or 2), Eastern Cape and North West (0.81% or 1), respectively. There were no respondents from the Free State, Limpopo and Northern Cape. Similar to the previous section, because the researcher made use of convenience sampling, this could have contributed to these provinces not being represented in this sample and this has been listed as a limitation of the study.

However, the findings of a previous study found that approximately two-thirds of South African online shoppers are from Gauteng (45.1%) and the Western Cape (22.6%) (Effective Measure and IAB South Africa, 2013:2). It is clear from the results of this study that most of the respondents currently reside in Gauteng and the Western Cape (94.31% or 116). The implication of this is that these two provinces are likely to have the highest concentration of online shoppers in South Africa which online retailers need to take into consideration.

The next demographic variable investigated was the highest qualification of the respondents.

5.4.2.4 Highest qualification

Respondents were asked to indicate their highest qualification (see appendix A). Figure 32 indicates the results obtained from question 18 of the research instrument.
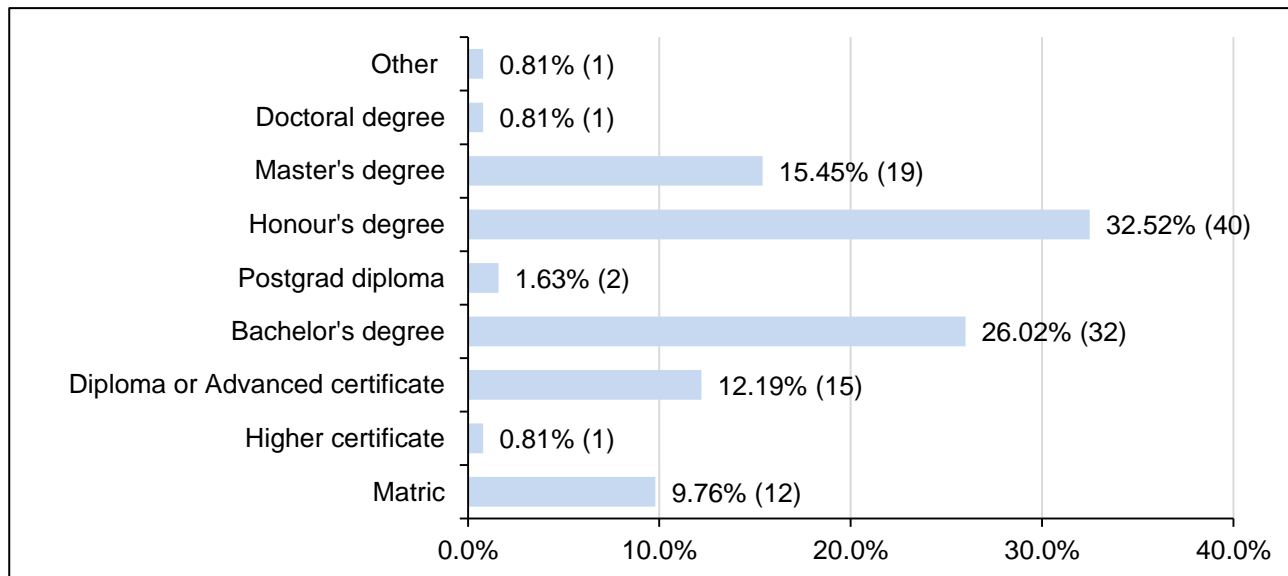
Figure 32: Highest qualification (n=123)

Figure 32 shows that 32.52% (40) of the respondents had an Honour's degree, 26.02% (32) a Bachelor's degree, 15.45% (19) a Master's degree, 12.19% (15) with a Diploma or Advanced certificate, 9.76% (12) Matric, 1.63% (2) a Postgrad Diploma, and 0.81% (1) a Doctoral degree, Higher certificate or an 'other' qualification respectively. For the 'other' option, the respondent indicated an airline transport licence.

The results indicate that the majority of the respondents had an Honours', Bachelors' or Masters' degree (73.99% or 91). The implication of this is that respondents who shop online tend to have some form of higher education qualification which online retailers need to acknowledge when designing their online shopping sites.

The last demographic variable investigated was the employment status of the respondents.

5.4.2.5 Employment status

Respondents were asked in the research instrument, what their current employment status was (see appendix A). Figure 33 illustrates the employment status of the respondents.
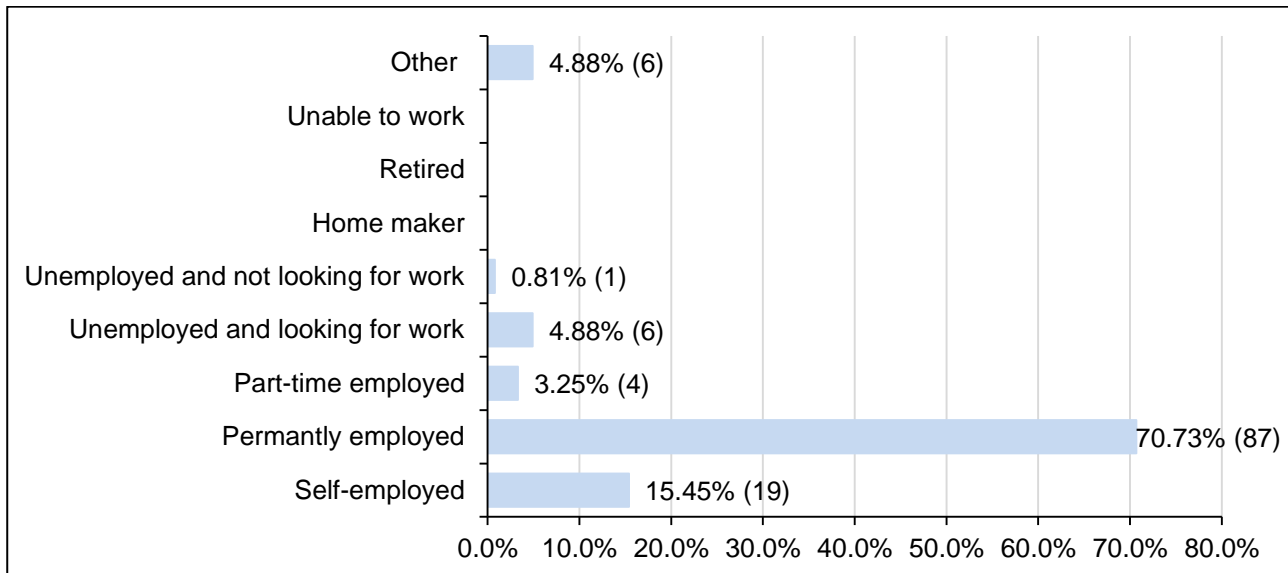
Figure 33: Employment status (n=123)

As depicted in Figure 33, 70.73% (87) of the respondents were permanently employed whereas 15.45% (19) were self-employed, 4.88% (6) unemployed and looking for work, 3.25% (4) part-time employed and 0.81% (1) unemployed and not looking for work. 4.88% (6) of the respondents who selected the 'other' option, specified that they were students (4.07% or 5) and a volunteer (0.81% or 1).

The results indicate that the majority of the respondents were either permanently- or self-employed (86.18% or 106). The findings of previous research found that employed people tend to shop online rather than offline (Burkotler & Kluge, 2015). The implication of this is that respondents who shop online tend to be employed in some form, which online retailers need to acknowledge when designing their online shopping sites.

The next section provides an overview of the online shopping behaviour of the respondents included in the sample of this study.

5.4.3 Online shopping behaviour of respondents

The next sub-sections discuss the online shopping frequency and different online shopping activities that respondents participate in. These results provide an overview of the

respondents' online shopping behaviour as well as identifying possible future areas of research.

5.4.3.1 Online shopping frequency (question 2)

Question 2 of the research instrument asked respondents to indicate how often they shop online (see appendix A). These responses are presented in Figure 34.
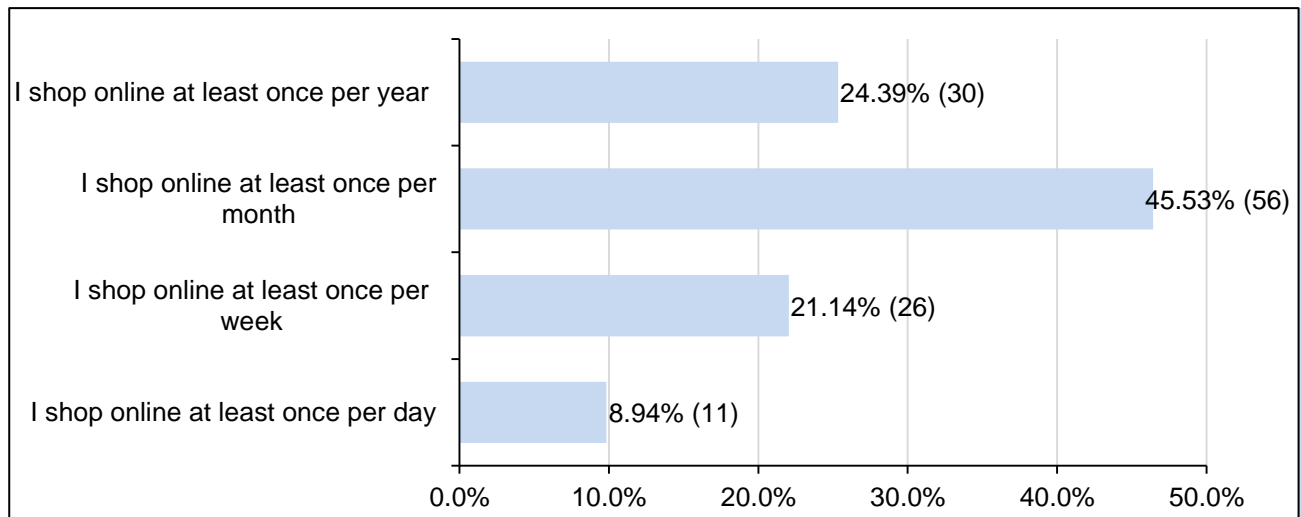
Figure 34: Online shopping frequency (n=123)

From Figure 34 it clear that almost half (45.53% or 56) of the respondents shop online at least once a month, while 24.39% (30) shop online at least once a year, 21.14% (26) shop online at least once a week and 8.94% (11) shop online at least once a day. This could imply that respondents tend to shop online when the need or desire arises, which is usually on a monthly basis. Therefore, online retailers should determine the reasons why online shoppers shop when they do and possibly identify strategies to encourage online shoppers to shop online more frequently.

The next sub-section examines the online shopping activities of the respondents. As stated in chapter 1, for the purpose of this study, online shopping is defined as *the act of searching, browsing and buying products or services over the web*. The responses of the respondents for each of these online shopping activities are discussed. Respondents who indicated 'no' for each of the online shopping activities were asked, in an open-ended question, to provide detailed reasons for not searching, browsing or buying online (see appendix A).

5.4.3.2 Searching online (questions 3 and 4)

As provided in the definition of online shopping for the purpose of this study, the first online shopping activity is *searching online which refers to looking for specific products or services over the Web that shoppers wish to purchase*. Questions 3 and 4 of the research instrument aimed at determining the portion of respondents who search online and discovering reasons as to why some of the respondents do not search online (see appendix A).

Table 16 provides the results of question 3 of the research instrument which asked the respondents to indicate if they search online.

Table 16: Respondents who search online (n=123)

		Frequency (n)	Percent (%)
Valid	Yes	122	99.19
	No	1	0.81
	Total	**123**	**100.00**

As shown in Table 16, 99.19% (122) of the respondents search online and 0.81% (1) do not search online. It is clear from Table 16, that almost all of the respondents search online (99.19% or 122) and this implies that online searching is an important aspect of the online shopping process that online retailers need to acknowledge. As stated in chapter 1, technological advances such as search engines and improved navigation software have made it easier and more convenient for people to participate online (Rieger, 2009). Online retailers should therefore ensure that online shoppers can easily find their websites and the products or services that they offer.

0.81% (1) of the respondents do not search online (see Table 16) and question 4 of the research instrument asked those respondents to provide detailed reasons why (see appendix A). The respondent indicated: "I don't usually purchase what I was browsing for because it's never really anything specific". Considering the reason provided, the respondent might have misunderstood this question asking whether he or she shops online instead of searching online.

As provided in the definition of online shopping for the purpose of this study, the second online shopping activity is *online browsing which refers to casually looking at products or*

services over the Web that people may or may not want to purchase. The responses to these questions relating to browsing online are discussed next.

5.4.3.3   Browsing online (questions 5 and 6)

Questions 5 and 6 of the research instrument were aimed at determining the portion of respondents who browse online and discovering reasons as to why respondents do not browse online (see appendix A). Table 17 summarises the results of question 5 of the research instrument asking respondents to indicate if they browse online.

Table 17: Respondents who browse online (n=123)

		Frequency (n)	Percent (%)
Valid	Yes	120	97.56
	No	3	2.44
	Total	**123**	**100.00**

As presented in Table 17, 97.56% (120) of the respondents browse online and 2.44% (3) of the respondents do not browse online. It is clear from Table 17 that the majority (97.56% or 120) of the respondents browse online and this implies that online retailers need to acknowledge browsing as an important aspect in the online shopping process. Online retailers should therefore make their websites attractive in order to catch the attention of online shoppers and get them to look through the different products or services offered. Further, online retailers should incorporate targeted advertising strategies on other websites and on social media platforms in order to get the attention of Internet users to go onto their shopping sites to browse.

2.44% (3) of the respondents do not browse online (see Table 17). For those respondents that indicated that they do not browse online, they were then asked in question 6 in the research instrument to provide detailed reasons why (see appendix A). The respondents indicated: "Browsing leads to wasteful spending of time and money" and "I only shop online when I want something specific". It would seem from the reasons provided that these respondents only shop online when they have a specific product or service that they wish to purchase and possibly do not view online shopping as a leisure activity but rather a task to be completed.

As provided in the definition of online shopping for the purpose of this study, the final online shopping activity is *online buying which refers to purchasing products or services over the web*, which is discussed next.

5.4.3.4   Buying online (questions 7 and 8)

Questions 7 and 8 of the research instrument were aimed at determining the portion of respondents who buy online and discovering why some of these respondents do not buy online (see appendix A). Table 18 presents the results of question 7 of the research instrument asking respondents to indicate if they buy online.

Table 18: Respondents who buy online (n=123)

		Frequency (n)	Percent (%)
Valid	Yes	111	90.24
	No	12	9.76
	Total	**123**	**100.00**

As presented in Table 18, 90.24% (111) of the respondents buy online and 9.76% (12) do not buy online. It is clear from Table 18, that most of the respondents buy online (90.24% or 111) and this implies that online retailers need to acknowledge buying as an important aspect of the online shopping process and ensure that users can progress through the checkout process in an effortless manner.

9.76% (12) of the respondents do not buy online (see Table 18). Question 8 of the research instrument then asked those respondents to provide detailed reasons as to why they do not buy online (see appendix A). Respondents stated that they are inexperienced with online shopping, and that they are sceptical about the actual product being as described on the website. They prefer being able to see the physical product before purchasing it, and that they are worried about the risks involved such as scams, credit card fraud and having to provide personal information. These reasons are similar to those provided by non-online shoppers as to why they do not shop online (see appendix B). The implications of this are that online retailers need to address these concerns by providing a safe shopping environment, ensuring that products are as described and illustrated on the website, and introducing new technologies such as the 3D augmented apps and virtual mirrors, as discussed in chapter 2, which allow shoppers to view 3D images of the products in their true scale or view themselves "trying" on the product.

The next section discusses the amount of time in percentages that respondents spend on each of the three online shopping activities discussed above.

5.4.3.5 *Time spent on each online shopping activity (question 9)*

Respondents were asked in question 9 of the research instrument to indicate approximately how much time they spend on each of the three online shopping activities, namely searching, browsing and buying (see appendix A). Figure 35 illustrates the average time spent on each online shopping activity.
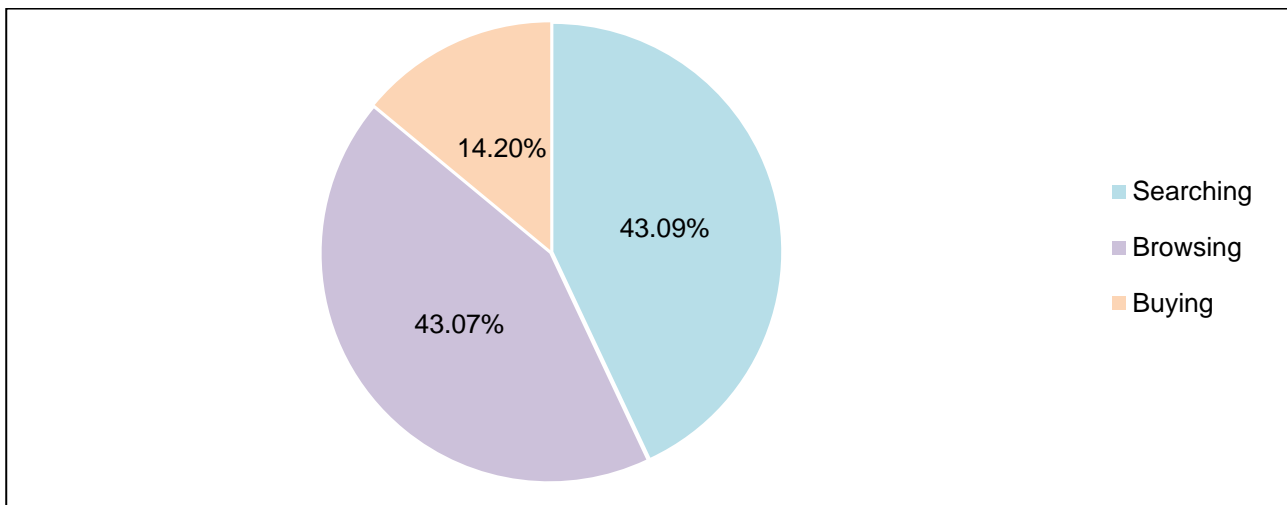
Figure 35: Time spent on each online shopping activity (n=123)*

*The mean percentage was calculated therefore the total time spent on each activity may not equal 100%

As shown in Figure 35, respondents generally spend 43.09% and 43.07% of their time searching and browsing respectively, and 14.20% of their time buying. From the results, it appears that respondents prefer to search and browse for more information on products or services and compare different options before making the final decision to purchase a product or service. Furthermore, these results seem to indicate that online shopping is used to search for specific products or services and as an activity to pass the time by browsing for available products or services over the web.

Online buying could have yielded a low mean score because once the online shopper has searched and browsed online, the only activity involved with online buying is the check-out process. As stated in chapter 2, the checkout process includes confirming the shipping information and order, and making payment. Online retailers generally provide users with

the option of saving their personal details so that they can simply select them for a speedier checkout process the next time they buy online. In addition, the results could also imply that there are respondents who still prefer to buy offline after having searched and browsed online to determine which store offers the best option of a product or service that they wish to purchase. As stated in chapter 2, findings of a previous study have found that South Africans would rather buy from an actual store (TNS Infratest, 2011). The implication of this is that online retailers should address the concerns discussed in section 5.4.3.4 in order to encourage more consumers to buy online such as by providing a safe shopping environment, ensuring that products are as described and illustrated on the website, and introducing new technologies such as 3D augmented apps and virtual mirrors.

Question 10 of the research instrument asked respondents to indicate which type of online shopper describes them best (see appendix A). This is discussed next.

5.4.3.6 *Type of online shopper (question 10)*

A definition of each type of shopper was given to the respondents in the research instrument in order to assist them in identifying which type of online shopper describes them best (see appendix A). Figure 36 illustrates the different types of shoppers identified among the respondents.
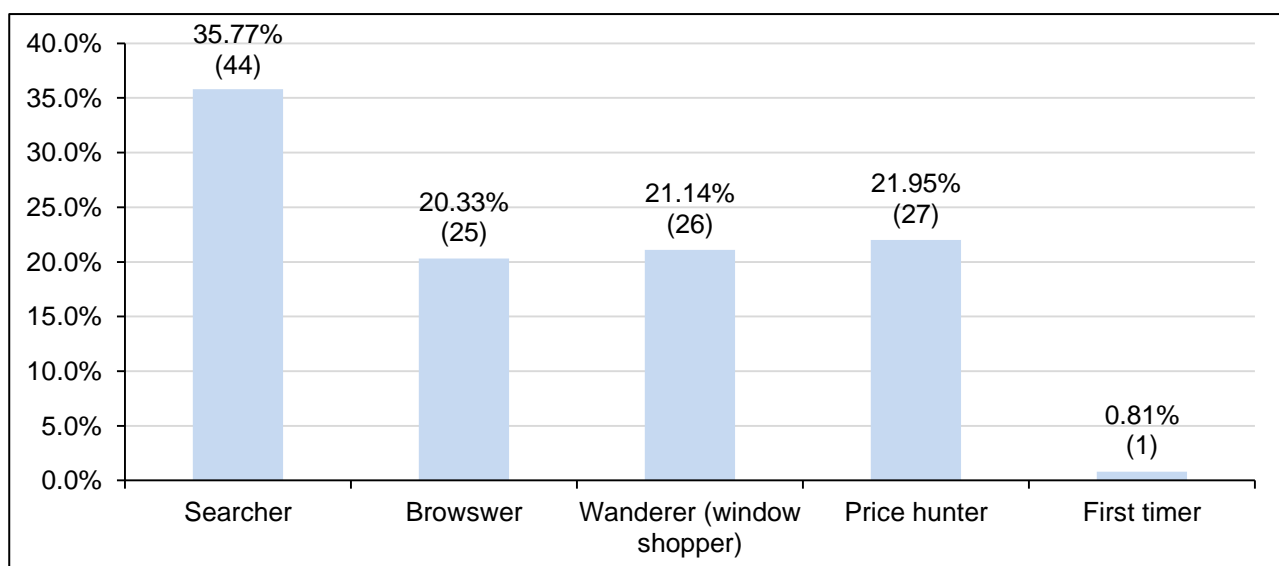
Figure 36: Type of online shopper (n=123)

As can be seen from Figure 36, 35.77% (44) of the respondents regard themselves as 'searchers' which are online shoppers who go online to look for specific products or services that they wish to purchase whereas, 21.95% (27) of the respondents regarded themselves as 'price hunters' which are online shoppers who look for products or services on special/discounts. 21.14% (26) of the respondents regarded themselves as 'wanderers or window shoppers' which are online shoppers who shop online without the intention of purchasing anything and 20.33% (25) classify themselves as 'browsers' which are online shoppers who have a shopping goal and browse for specific products related to the goal. Only 0.81% (1) of the respondents regarded themselves as 'first timers' which refers to online shoppers who are new to the online shopping process.

The implication of these results is that online retailers should recognise that there are different types of online shoppers among the respondents and they should therefore develop different strategies to target each type of shopper. Suggestions for possible strategies for each type are discussed later in chapter 6.

The next section examines the extent to which website quality factors influence online shopping and aims to achieve the secondary objectives of the study as stipulated in section 5.3.2.

5.4.4   Website quality factors

As stated in chapters 1 and 3, website quality consists of system, information and service quality. Questions 11, 12 and 13 were presented in the form of a 5-point Likert scale which measured the extent to which these quality factors influence respondents when shopping online (see appendix A). Respondents were asked to indicate the extent to which they strongly disagreed (1) or strongly agreed (5) with each of the statements regarding the quality factors (see appendix A). For simplification, strongly disagree (1) and disagree (2) were combined as they both indicate low influences on online shopping. Similarly, as agree (4) and strongly agree (5) both indicate high influences on online shopping, these scale columns were combined.

Cronbach's alpha which determines the reliability of the scales and the mean score which determines the average score of the scales were used for this study. As stated in chapter 4, the reliability of a scale refers to internal consistency which provides consistent data (Zikmund & Babin, 2010:248). According to Iacobucci and Churchill (2010:258) reliability

refers to the similarity of results provided by independent but comparable measures of the same construct. A common method used to measure the internal consistency of a research instrument is to calculate the Cronbach's alpha (Schmidt & Brown, 2011:233). If there is a lack of correlation of an item with other items of the construct, it does not belong in the scale and should be omitted (McDaniels & Gates, 2013:286). According to Wiid and Diggines (2013:238) and Zikmund and Babin (2013:249), the values of Cronbach's alpha are interpreted as:

- 0.8 - 0.96, reliability is very good;
- 0.7 - 0.8, reliability is good;
- 0.6 – 0.7, reliability is acceptable or fair; and
- < 0.6, reliability is unacceptable or poor.

The mean score refers to the arithmetic average which is calculated by adding up all the values and dividing by the number of responses (Hair, Bush & Ortinau, 2009:483). As stated previously, the factors were measured on a Likert scale ranging from (1) strong disagree, (2) disagree, (3) neither disagree or agree, (4) agree to (5) strongly agree. Therefore, the higher the mean score, the more the respondents agreed that the factor influences their online shopping.

Figure 37 illustrates the structure of the subsequent sections, discussing system, information and service quality.

| Reliability of the scales | → | Results of the scales | → | Overall mean score of the scales |
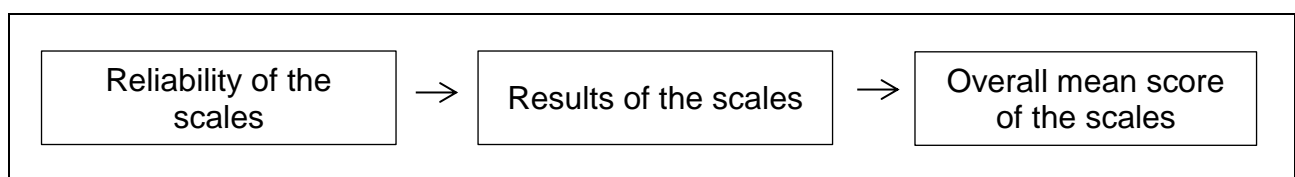
Figure 37: Structure for the discussion on system, information and service quality

As shown in Figure 37, for the discussion of system, information and service quality, the reliability of the scales are firstly presented with Cronbach's alpha values, followed by a discussion of the results and lastly the mean scores of the scales.

Secondary objective one addressing system quality factors, as stipulated in section 5.3.2, is addressed first.

5.4.4.1 System quality factors (question 11)

Question 11 of the research instrument aimed to determine the influence of each system quality factor influencing South African consumers when shopping online. As stated in chapters 1 and 3, system quality is comprised of the following factors, namely: usability; availability; reliability; adaptability; and response time.

As illustrated in Figure 38, the discussion on system quality commences with an overview of the reliability of the scales by providing the Cronbach's alpha values.
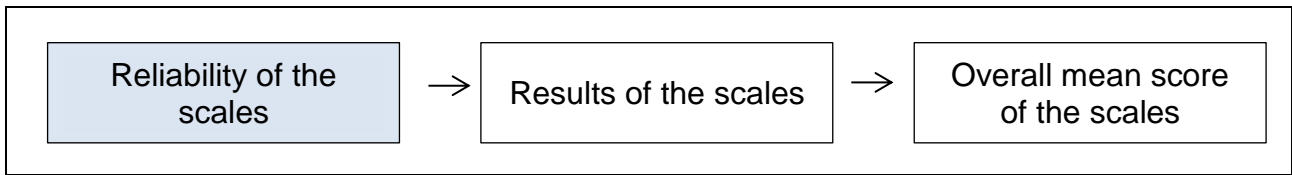
Figure 38: Structure for the discussion on system quality

Table 19 summarises the Cronbach's alpha values for each system quality factor.

Table 19: Cronbach's alpha values for system quality factors

	Factor construct	Items	Cronbach's alpha	Reliability
System quality	Usability	6	0.904	Very good
	Availability	3	0.723	Good
	Reliability	4	0.818	Very good
	Adaptability	4	0.827	Very good
	Response time	6	0.922	Very good

As indicated in section 5.4.4, it can be seen in Table 19 that the reliability of system quality factors is considered as good and very good with Cronbach's alpha values ranging from 0.723 to 0.922.

The discussion on system quality now focuses on the results of the scale, as illustrated in Figure 39.
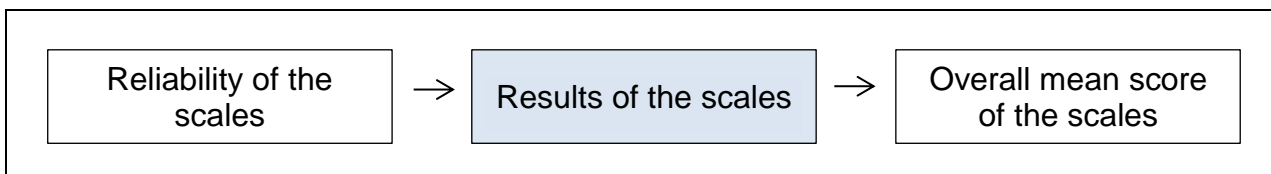
Figure 39: Structure for the discussion on system quality

The first factor of system quality is usability. As stated in chapter 3, usability refers to the design and functionality of a shopping site. Table 20 provides the results for the influence of the factor 'usability' on online shopping.

Table 20: The influence of usability on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that is easy to use influences me to shop online	3.25% (4)	6.50% (8)	90.24% (111)
A shopping site that is easy to navigate influences me to shop online	2.44% (3)	6.50% (8)	91.06% (112)
A shopping site that provides trouble-free shopping influences me to shop online	1.63% (2)	4.87% (6)	93.50% (115)
A shopping site that has a simple layout influences me to shop online	1.63% (2)	10.57% (13)	87.80% (108)
A shopping site that is well presented (easy on the eye) influences me to shop online	1.63% (2)	13.00% (16)	85.37% (105)
A shopping site that is well organised influences me to shop online	0.81% (1)	7.32% (9)	91.87% (113)

As shown in Table 20, for all the statements, responses are overwhelmingly positive as the majority of the respondents agree or strongly agree that the factor 'usability' influences their online shopping. The most agreed (93.49% or 115) upon statement of usability influencing online shopping is a retailer that provides trouble-free shopping. These results indicate that respondents expect online retailers to effectively design a shopping site that is not only well presented, but also one that functions well and is easy to use. Ultimately, the goal for online retailers should be to provide online shoppers with trouble-free shopping therefore making it easy for them to search, browse and buy products or service in an effortless manner.

It is interesting to note that 13.00% (16) of the respondents neither disagree nor agree that a shopping site that is well presented (easy on the eye) influences them to shop online. Similarly, 10.57% (13) of the respondents neither disagree nor agree that a shopping site that has a simple layout influences them to shop online. These results could imply that there may be respondents who are avid online shoppers who generally know where to find the necessary information that they are looking for during the online shopping process and therefore having a simple layout that is well presented may not influence their online shopping.

The next system quality factor is 'availability' which refers to a shopping site that shoppers can access at any given time (see chapter 3). Table 21 provides the results for the influence of the factor 'availability' on online shopping.

Table 21: The influence of availability on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that is available 24/7 influences me to shop online	2.44% (3)	15.45% (19)	82.11% (101)
A shopping site that avoids downtime due to maintenance influences me to shop online	5.69% (7)	26.83% (33)	67.48% (83)
A shopping site that helps with error recovery influences me to shop online (e.g. when you need to refresh a page and your details are saved)	3.25% (4)	16.26% (20)	80.49% (99)

As shown in Table 21, for all the statements, responses are positive with most of the respondents agreeing or strongly agreeing that the factor 'availability' influences their online shopping. The most agreed (82.11% or 101) upon statement of availability is "a shopping site that is available 24/7". The results indicate that online retailers should ensure that online shoppers can access their shopping site at any given time. If online retailers are to implement new features or updates, they should do so by working on an offline site while the current site is live. Once the necessary changes have been made, the new features can be integrated into the live site. Further, shopping sites should have error recovery mechanisms in place so that online shoppers do not have to re-enter any information that could have been lost during the online shopping process due to technical issues.

It is interesting to note that 26.83% (33) of the respondents neither disagree nor agree that a shopping site avoiding downtime due to maintenance influences their online shopping. This could imply that these respondents exhibit an understanding attitude towards online retailers being unavailable to address technical issues in order to improve their shopping sites and this may or may not influence them to use the shopping site.

The next system quality factor is 'reliability' which refers to a shopping site consistently performing as required and according to its intended functions (see chapter 3). Table 22 provides the results for the influence of the factor 'reliability' on online shopping.

Table 22: The influence of reliability influence on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that performs reliably influences me to shop online	0.81% (1)	7.32% (9)	91.87% (113)
A shopping site that does what it is supposed to influences me to shop online	0.00% (0)	7.32% (9)	92.68% (114)
A shopping site that provides a safe shopping environment influences me to shop online	0.00% (0)	2.44% (3)	97.56% (120)
A shopping site that ensures the authenticity of the products/services influences me to shop online	0.00% (0)	3.25% (4)	96.75% (119)

Table 22 indicates that for all the statements, responses are overwhelmingly positive with the majority of the respondents agreeing or strongly agreeing that the factor 'reliability' influences their online shopping. The most agreed (97.56% or 120) upon statement was a shopping site providing a safe shopping environment. The results indicate that online shoppers expect shopping sites to work and to not experience any difficulty while they search and browse for and buy products or services. Online retailers should also ensure that they protect online shoppers by having the necessary security measures in place, ensure the genuineness of their products or services and have appropriate return policies in place to assist online shoppers' who are not satisfied with the products or services.

It is interesting to note that 7.32% (9) of the respondents neither disagree nor agree that a shopping site that performs reliably influences their online shopping and a shopping site that does what it is supposed to influences their online shopping. Similar to the previous section, this could imply that these respondents may empathise with online retailers and understand that with any business there is always a possibility of mistakes occurring and these mistakes may or may not necessarily deter them from using the shopping site.

The next system quality factor is 'adaptability' which refers to a shopping site changing to deal with new or different situations at any given time (see chapter 3). Table 23 provides the results for the influence of the factor 'adaptability' influences online shopping.

Table 23: The influence of adaptability on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that adapts to changing consumer needs influences me to shop online	0.81% (1)	23.58% (29)	75.61% (93)
A shopping site that adapts to different screen device sizes influences me to shop online	2.44% (3)	23.58% (29)	73.98% (91)
A shopping site that adapts to different operating systems influences me to shop online	4.07% (5)	30.08% (37)	65.85% (81)
A shopping site that adapts to different user system specifications influences me to shop online (e.g. portrait or landscape view)	6.50% (8)	34.15% (42)	59.35% (73)

As shown in Table 23, for all the statements, responses are positive where the respondents agree or strongly agree that the factor 'adaptability' influences their online shopping. The most agreed (75.61% or 93) upon statement influencing online shopping is a shopping site that adapts to changing consumer needs. The results indicate that online retailers should stay current with new technologies in order to address changing consumer needs and wants. Online retailers should not only offer products or services that consumers want, but also introduce new technologies that could improve the shopping experience of online shoppers. One of these new technologies that retailers should look into is developing shopping apps, as there is evidence indicating that there are more people accessing the Internet and shopping online via mobile devices. In addition, as there are a variety of different devices that an online shopper can make use of such as a desktop, laptop, tablet or mobile phone, shopping sites should be able to adapt and work seamlessly for all of them.

It is interesting to note that more than a third of the respondents (34.15% or 42) neither disagree nor agree that a shopping site adapting to different user specification influences their online shopping. The implication of this is that these respondents are likely only making use of desktops or laptops when shopping online which do not require them to change from portrait to landscape view. Furthermore, 30.08% (42) of the respondents neither disagree nor agree that a shopping site adapting to different operating systems influences their online shopping. This could imply that these respondents tend to make use of one type of operating system when shopping online or when accessing the web.

The last system quality factor, as stated in chapter 3, is 'response time' which refers to a shopping site that responds quickly to user requests. Table 24 provides the results for the influence of the factor 'response time' on online shopping.

Table 24: The influence of response time on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that has a fast response time influences me to shop online	0.00% (0)	8.13% (10)	91.87% (113)
A shopping site that operates at good constant speeds influences me to shop online	0.00% (0)	14.63% (18)	85.37% (105)
A shopping site that has pages that load quickly influences me to shop online	0.00% (0)	8.94% (11)	91.06% (112)
A shopping site that has images that load quickly influences me to shop online	0.00% (0)	9.76% (12)	90.24% (111)
A shopping site that has links that open quickly influences me to shop online	1.63% (2)	11.38% (14)	86.99% (107)
A shopping site that allows quick access to its services influences me to shop online	0.00% (0)	10.57% (13)	89.43% (110)

As shown in Table 24, for all the statements, responses are overwhelmingly positive with most of the respondents agreeing or strongly agreeing that the factor 'response time' influences their online shopping. The most agreed (91.87% or 113) upon statement is a shopping site that has a fast response time. Based on the results, it appears that online shopping sites should have a fast response time and ensure that online shoppers can quickly search, browse and buy products and services in the most efficient manner possible. Therefore, when developing or improving a shopping site, online retailers should incorporate software that ensures faster shopping sites.

It is interesting to note that 14.63% (18) of the respondents neither disagree nor agree that a shopping site that operates at good constant speeds influences them to shop online. While 11.38% (14) of the respondents neither disagree nor agree that a shopping site that has links that open quickly influences them to shop online. This could imply that these respondents could possibly be accustomed to slower connection speeds that they receive from their Internet service providers which may result in sites operating at slower speeds and links that take time to open. These respondents therefore do not perceive this as an issue of shopping site but rather connection speed of the service provider.

As illustrated in Figure 40, the overall mean scores of the scales for system quality are discussed below.
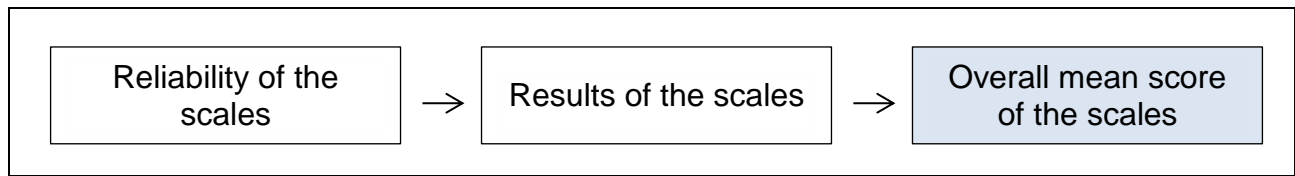
Figure 40: Structure for the discussion on system quality

To conclude the discussion of system quality, the mean scores for each system quality factor are provided in Table 25.

Table 25: Mean scores for system quality factors

	Factor construct	Items	Average mean score	Standard deviation
System quality	Usability	6	4.30	0.584
	Availability	3	4.08	0.681
	Reliability	4	4.49	0.475
	Adaptability	4	3.95	0.723
	Response time	6	4.35	0.572

It can be seen in Table 25 that the factor reliability has the highest score (M=4.49, SD=0.475). The high average mean scores indicate that a shopping site should address all system quality factors, however focus more specifically on *system quality reliability,* which ensures that it is consistently performing as required and as per intended functions.

The next section discusses the extent to which information quality factors influence online shopping. *The discussion provided deals with secondary objective number two as stipulated in section 5.3.2.*

5.4.4.2   Information quality factors (question 12)

Question 12 of the research instrument aimed to determine how each information quality factor influences South African consumers when shopping online. As stated in chapters 1 and 3, information quality is comprised of the following factors, namely: personalisation; completeness; relevancy; ease of understanding; and secureness.

Figure 41 illustrates that the discussion on information quality commences with an overview of the reliability of the scales by providing Cronbach's alpha values.
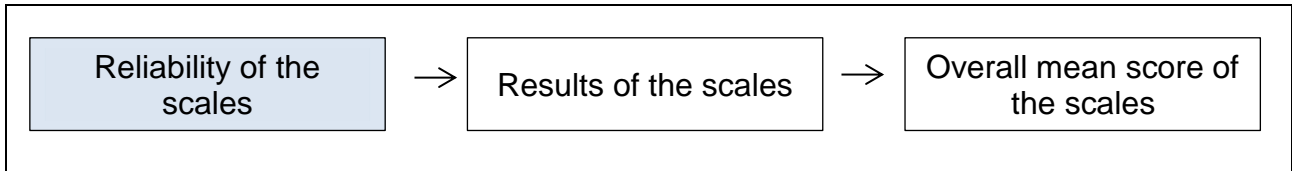
Figure 41: Structure for the discussion on information quality

Table 26 summarises the Cronbach's alpha value for each information quality factor.

Table 26: Cronbach's alpha values for information quality factors

	Factor construct	Items	Cronbach's alpha	Reliability
	Personalisation	4	0.888	Very good
	Completeness	3	0.709	Good
Information quality	Relevance	5	0.860	Very good
	Ease of understanding	6	0.935	Very good
	Secureness	5	0.877	Very good

As indicated in section 5.4.4 and as can be seen in Table 26 the reliability of information quality factors is considered as good and very good with Cronbach's alpha values ranging from 0.709 to 0.935.

The discussion on information quality covers the results of the scales, as illustrated in Figure 42.
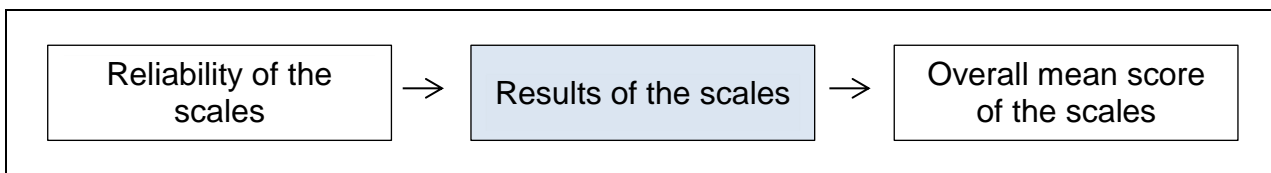
Figure 42: Structure for the discussion on information quality

The first factor of information quality is personalisation. As stated in chapter 3, 'personalisation' refers to a site providing suggestions and recommendations based on the users' preferences and interests. Table 27 provides the results for the influence of the factor 'personalisation' on online shopping.

Table 27: The influence of personalisation on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that suggests products/services based on my interests influences me to shop online	13.82% (17)	26.83% (33)	59.35% (73)
A shopping site that suggests products/services I am likely to buy influences me to shop online	14.63% (18)	26.83% (33)	58.54% (72)
A shopping site that suggests products/services based on my purchasing history influences me to shop online	21.14% (26)	25.20% (31)	53.66% (66)
A shopping site that provides accurate recommendations as to what I am looking for influences me to shop online	8.13% (10)	21.95% (27)	69.92% (86)

As shown in Table 27, for all the statements, responses are positive with the respondents agreeing or strongly agreeing that the factor 'personalisation' influences their online shopping. A shopping site providing accurate recommendations was seen as the most agreed upon statement (69.92% or 86). The results indicate that online retailers should be able to provide relevant suggestions to online shoppers. When accurate suggestions are provided, online shoppers tend to spend less time searching and browsing, and this could lead to a quicker check-out process.

It is interesting to note that roughly a quarter (26.83% or 33 and 25.20% or 31) of the respondents neither disagree nor agree that a shopping site that suggests products or services based on their interests is likely to induce them to buy. The same was found for sites that provide suggestions based on their purchasing history influencing them to shop online. These results could imply that currently online retailers are not making use of effective tracking software and are therefore providing irrelevant suggestions or that the respondents only shop online for specific products or services and therefore are not interested in suggestions given by shopping sites.

The next factor of information quality is 'completeness' which refers to a shopping site providing comprehensive information on the products or services offered, the shopping process and the company (see chapter 3). Table 28 provides the results for the influence of the factor 'completeness' on online shopping.

Table 28: The Influence of completeness on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that provides comprehensive information on their products/services influences me to shop online	0.00% (0)	6.50% (8)	93.50% (115)
A shopping site that provides comprehensive information on their shopping process influences me to shop online	3.25% (4)	22.76% (28)	73.99% (91)
A shopping site that provides comprehensive information about the company influences me to shop online	11.38% (14)	39.84% (49)	48.78% (60)

As shown in Table 28, for all the statements, responses are positive as most of the respondents agree or strongly agree that the factor 'completeness' influences their online shopping. Providing comprehensive information regarding products or services was considered as the most agreed upon statement (93.50% or 115). It appears from the results that online retailers should provide comprehensive information regarding all aspects of their business. Online shoppers could view this transparency as a sign that they can trust the retailer which could lead to increased sales and more specifically to encouraging non-online shoppers to shop online.

It is interesting to note that more than a third (39.84% or 49) of the respondents neither disagree nor agree that shopping sites providing comprehensive information about the company influences them to shop online. This would seem to imply that these respondents are not as concerned about the company history, values or recent developments in the company unless it may have an immediate effect on their online shopping, such as an online retailer being exposed by the media for having poor security measures in place.

The next factor of information quality is 'relevancy' which refers to information being applicable and helpful to users (see chapter 3). Table 29 provides the results for the influence of the factor 'relevancy' on online shopping.

Table 29: The influence of relevancy on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that provides all the relevant information I need influences me to shop online	0.00% (0)	13.82% (17)	86.18% (106)
A shopping site that provides enough information so that I spend less time searching for more information influences me to shop online	0.81% (1)	8.94% (11)	90.25% (111)
A shopping site that provides relevant information on their products/services influences me to shop online	0.00% (0)	8.13% (10)	91.87% (113)
A shopping site that provides up-to-date information on their products/services influences me to shop online	0.81% (1)	8.13% (10)	91.06% (112)
A shopping site that provides useful information on their products/services their influences me to shop online	2.44% (3)	9.76% (12)	87.80% (108)

As depicted in Table 29, for all the statements, responses are overwhelmingly positive with most of the respondents agreeing or strongly agreeing that the factor 'relevancy' influences their online shopping. A shopping site that provides relevant information is seen as the most agreed upon statement (91.87% or 113). It appears from the results that online retailers should provide all the necessary information regarding the products or services. Similar, to the previous sections discussed, with all the essential information readily available to online shoppers, they not only save time going through the online shopping process but are also more inclined to trust the online retailer.

It is interesting to note that 13.82% (17) of the respondents neither disagree nor agree that a shopping site that provides all the relevant information needed influences them to shop online. This could imply that these respondents are possibly overloaded with information and therefore do not find it necessary that online retailers provide additional valuable information as they only require the essential information needed to go through the online shopping process.

The next factor of information quality is 'ease of understanding' which refers to a shopping site structuring information effectively to ensure that it is easy for consumers to understand and is unambiguous (see chapter 3). Table 30 summarises the results for the influence of the factor 'ease of understanding' on online shopping.

Table 30: The influence of ease of understanding on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that provides information that is easy to understand influences me to shop online	0.81% (1)	11.38% (14)	87.81% (108)
A shopping site that provides clear instructions influences me to shop online	0.00% (0)	11.38% (14)	88.62% (109)
A shopping site that provides information that is simple influences me to shop online	0.00% (0)	21.14% (26)	78.86% (97)
A shopping site that provides information that is easy to read influences me to shop online	0.81% (1)	13.82% (17)	85.37% (105)
A shopping site that provides information that is straight to the point influences me to shop online	1.63% (2)	11.38% (14)	86.99% (107)
A shopping site that provides information that is clear in meaning influences me to shop online	1.63% (2)	9.75% (12)	88.62% (109)

It can be seen in Table 30 that for all the statements, responses are positive with most of the respondents agreeing or strongly agreeing that the factor 'easy to understand' influences their online shopping. Having clear instructions and providing information that is clear in meaning (unambiguous) are seen as the most agreed upon statements (88.62% or 109 respectively). The results indicate that online shopping sites should contain unambiguous language and instructions. Again, this could not only lead to increased sales but also encourage more non-online shoppers to participate as they fully understand the process of online shopping.

It is interesting to note that 21.14% (26) of the respondents neither disagree nor agree that a shopping site that provides information that is simple influences them to shop online and 13.82% (17) of the respondents neither disagree nor agree that a shopping site that provides information that is easy to read influences them to shop online. These could imply that respondents may have different literacy levels or expert knowledge regarding different fields and in these instances, they would prefer the correct language and terminology to be used, particularly for more complex products or services.

The last factor of information quality is 'secureness' which refers to online shopping sites securing the personal information of the user (see chapter 3). Table 31 provides the results for the influence of the factor 'secureness' on online shopping.

Table 31: The influence of secureness on online shopping (n=123)

Statement	Strongly disagree and Disagree	Neither disagree or agree	Agree and strongly agree
A shopping site that has secure methods of payment influences me to shop online	1.63% (2)	3.25% (4)	95.12% (117)
A shopping site that protects my credit/debit card details influences me to shop online	1.63% (2)	4.06% (5)	94.31% (116)
A shopping site that has privacy policies in place influences me to shop online	0.00% (0)	5.69% (7)	94.31% (116)
A shopping site that protects my personal information influences me to shop online	0.00% (0)	3.25% (4)	96.75% (119)
A shopping site that prevents unlawful use of my information influences me to shop online	1.63% (2)	2.44% (3)	95.93% (118)

As shown in Table 31, for all the statements, responses are overwhelmingly positive with the majority of the respondents agreeing or strongly agreeing that the factor 'secureness' influences their online shopping. The protection of personal information is considered as the most agreed upon statement (96.75% or 119). It appears from the results that online shoppers require online retailers to protect them during the online shopping process. As mentioned in section 5.4.3.4 and appendix B, security concerns were highlighted by the respondents as one of the main reasons for not shopping online and more specifically buying online. Therefore, online retailers should communicate to online shoppers the different measures that they have in place to protect them and provide suggestions on how they can avoid fraudulent activities and scams.

It is interesting to note that 5.69% (7) of the respondents neither disagree nor agree that a shopping site that has privacy policies in place influences them to shop online. This could imply that there are respondents who are not familiar or aware that there are such policies in place and therefore do not actively ensure that the shopping sites they make use of have privacy policies in place. Further, 4.07% (5) and 3.25% (4) of the respondents neither disagree nor agree that a shopping site that protects their credit/debit card details influences them to shop online and a shopping site that has secure methods of payment and protects their credit or debit card details influences them to shop online. This could imply that these respondents are familiar with other forms of payment such as EFT or cash-on-delivery, which do not require them to share their credit or debit card details.

As illustrated in Figure 43, the discussion on information quality now turns to the overall mean score of the scales.

| Reliability of the scales | → | Results of the scales | → | Overall mean score of the scales |
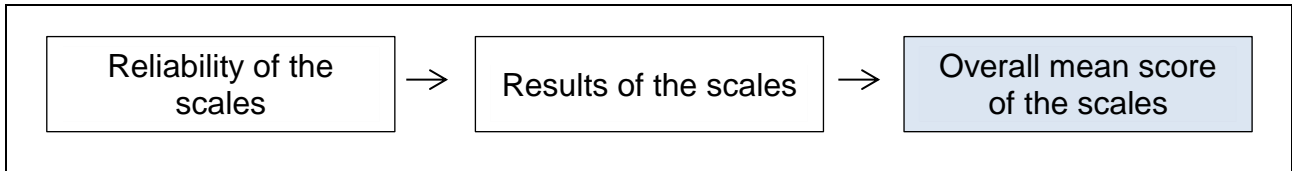
Figure 43: Structure for the discussion on information quality

To conclude the subsection, the mean scores for each information quality factor are provided in Table 32.

Table 32: Mean scores for information quality factors

	Factor construct	Items	Average mean score	Standard deviation
Information quality	Personalisation	4	3.64	0.844
	Completeness	3	4.00	0.647
	Relevance	5	4.27	0.532
	Ease of understanding	6	4.23	0.609
	Secureness	5	4.72	0.494

It can be seen that secureness in information quality scored the highest (M=4.72, SD=0.494). This indicates that a shopping site should address all information quality factors, however focusing on *the quality of secureness of information* which ensures securing users' personal information. These should be viewed as fundamental factors which online retailers need to address in order to ensure that shoppers make use of their shopping sites.

The next section examines the extent to which service quality factors influence online shopping. *The discussion provided addresses the third of the secondary objectives stipulated in section 5.3.2.*

5.4.4.3   Service quality factors (question 13)

Question 13 of the research instrument aimed to determine the influence of each service quality factor on South African consumers when shopping online. As stated in chapters 1 and 3, service quality is compromised of the following factors, namely: responsiveness; assurance; empathy; reliability; and follow up services.

As illustrated in Figure 44, the discussion on service quality factors commences with an overview of the reliability of the scales by providing the Cronbach's alpha values.
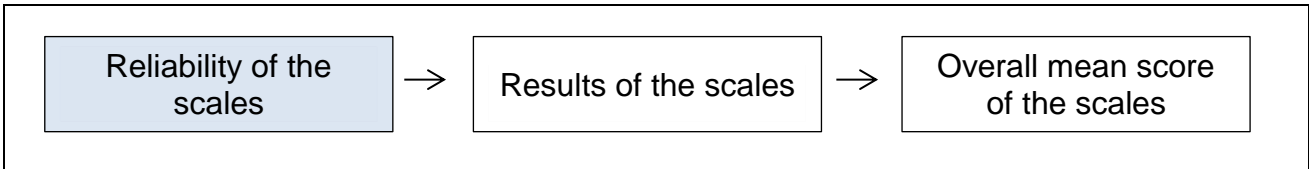
Figure 44: Structure for the discussion on service quality

As indicated in section 5.4.4, it can be seen in Table 33 that the reliability of the factors is considered to be very good with Cronbach's alpha values ranging from 0.799 to 0.930.

Table 33: Cronbach's alpha values for service quality factors

	Factor construct	Items	Cronbach's alpha	Reliability
Service quality	Responsiveness	5	0.877	Very good
	Assurance	6	0.808	Very good
	Empathy	4	0.825	Very good
	Reliability	6	0.930	Very good
	Follow up services	5	0.799	Very good

The discussion on service quality now turns to the results of the scales, as illustrated in Figure 45.
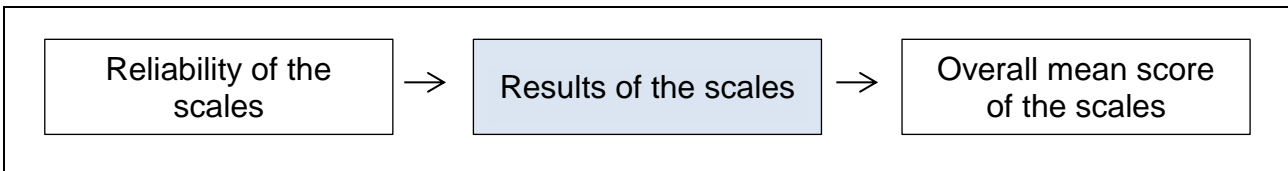
Figure 45: Structure for the discussion on service quality

Responsiveness is the first factor of service quality. As stated in chapter 3, responsiveness refers to an online retailer who is willing to provide prompt services, assistance and guidance, and accurate information to users when needed. Table 34 provides the results for the influence of the factor 'responsiveness' on online shopping.

Table 34: The influence of responsiveness on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
An online retailer that provides prompt services influences me to shop online	0.81% (1)	5.69% (7)	93.50% (115)
An online retailer that provides assistance when I need it influences me to shop online	0.81% (1)	8.13% (10)	91.06% (112)
An online retailer that provides guidance when I need it influences me to shop online	0.81% (1)	13.01% (16)	86.18% (106)
An online retailer that is willing to help when I need it influences me to shop online	0.00% (0)	8.94% (11)	91.06% (112)
An online retailer that provides accurate information when I need it influences me to shop online	0.00% (0)	10.57% (13)	89.43% (110)

From Table 34, for all the statements, responses are positive with most of the respondents agreeing or strongly agreeing that the factor 'responsiveness' influences their online shopping. An online retailer that provides prompt services influencing their online shopping is the most agreed upon statement (93.50% or 115). From the results, it seems that online shoppers expect online retailers to provide assistance when needed. As online shopping lacks face-to-face contact, providing prompt service ensures online shoppers' satisfaction and could possibly lead to increased sales because retailers ensure that online shoppers move through the shopping process without any hassles.

It is interesting to note that 13.00% (16) of the respondents neither disagree nor agree that an online retailer that provides guidance when needed influences their online shopping. This could imply that even though an online retailer is available to provide assistance, online shoppers only shop on its site if it has the specific product or service that they wish to purchase.

The next service quality factor is 'assurance' which refers to conveying trust and confidence by having a good reputation, being linked to reputable businesses, and being open and candid (see chapter 3). Table 35 provides the results for the influence of the factor 'assurance' on online shopping.

Table 35: The influence of assurance on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
An online retailer that is trustworthy influences me to shop online	0.00% (0)	7.32% (9)	92.68% (114)
An online retailer that goes out of their way to help me influences me to shop online	1.63% (2)	6.50% (8)	91.87% (113)
An online retailer that has a good reputation influences me to shop online	0.00% (0)	8.13% (10)	91.87% (113)
An online retailer that is linked to reputable businesses (e.g. eBucks and Discovery Miles) influences me to shop online	4.07% (5)	21.95% (27)	73.98% (91)
An online retailer that I am confident in influences me to shop online	0.00% (0)	9.76% (12)	90.24% (111)
An online retailer that is transparent (open and candid) influences me to shop online	0.00% (0)	12.20% (15)	87.80% (108)

As shown in Table 35, for all the statements, responses are positive with most of the respondents agreeing or strongly agreeing that the factor 'assurance' influences their online shopping. The most agreed (92.68% or 114) upon statement is that an online retailer that is trustworthy influences respondents to shop online. Based on the results, it appears that online retailers should have various strategies in place to convey that they are trustworthy such as having knowledgeable employees, having a good reputation and quality website, providing unbiased information, responding promptly to consumer queries, establishing relationships with well-known businesses and using reputable assurance providers (Arnold et al., 2007:299; Mao, 2010:5-6; Gera, 2013:755). Again, if online retailers are able to gain the trust of consumers, it could lead to increased sales and also encourage more non-online shoppers to shop online.

It is interesting to note that 21.95% (27) of the respondents neither disagree nor agree that an online retailer that is linked to reputable businesses influences them to shop online. Due to the fact that not all respondents make use of shopping sites that are linked to eBucks or Discovery Miles, or have accounts with these two loyalty programmes as examples given, this could sway the responses provided as they are unsure of other reputable businesses that shopping sites could be linked to.

The next factor of service quality is 'empathy', which refers to an online retailer who is caring and empathic to shoppers' circumstances and provides personalised solutions and

responses to the matter at hand (see chapter 3). Table 36 provides the results for the influence of the factor 'empathy' on online shopping.

Table 36: The influence of empathy on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
An online retailer that is empathetic towards my situation if something goes wrong during the shopping process, influences me to shop online	2.44% (3)	8.94% (11)	88.62% (109)
An online retailer that provides individualised solutions to my problems experienced during the shopping process, influences me to shop online	1.63% (2)	11.38% (14)	86.99% (107)
An online retailer that shows that they care about my situation if something goes wrong during the shopping process, influences me to shop online	1.63% (2)	8.94% (11)	89.43% (110)
An online retailer that gives personalised responses instead of generic auto-replies influences me to shop online	4.88% (6)	15.45% (19)	79.67% (98)

From Table 36, for all the statements, responses are positive with most of the respondents agreeing or strongly agreeing that the factor 'empathy' influences their online shopping. Online retailers showing that they care influencing respondents to shop online is the most agreed upon statement (89.94% or 110). From the results, it seems that online shoppers expect retailers to show that they care, especially when an issue arises during the online shopping process. Addressing grievances that online shoppers have ensures their satisfaction, which could in turn lead to their loyalty. Further, satisfied customers also spread positive word-of-mouth about the retailer.

It is interesting to note that 15.45% (19) of the respondents neither disagree nor agree that an online retailer that gives personalised responses instead of generic auto responses influences them to shop online. This could imply that these respondents are familiar with receiving auto responses that most online retailers tend to send out. Even though some online retailers attempt to personalise these messages by including the shopper's name and purchase details, the overall messages are generic.

As stated in chapter 3, reliability refers to online retailers providing dependable and accurate services as promised. Table 37 provides the results for the influence of the factor 'reliability' on online shopping.

Table 37: The influence of reliability on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
An online retailer that ensures accurate transactions influences me to shop online	0.81% (1)	5.69% (7)	93.50% (115)
An online retailer that keeps accurate records of purchases influences me to shop online	0.00% (0)	10.57% (13)	89.43% (110)
An online retailer that keeps to their fulfilment promises influences me to shop online	0.81% (1)	4.07% (5)	95.12% (117)
An online retailer that performs their services right the first time influences me to shop online	0.00% (0)	5.69% (7)	94.31% (116)
An online retailer that is effective in providing services influences me to shop online	1.63% (2)	4.87% (6)	93.50% (115)
An online retailer that is efficient in providing services influences me to shop online	0.81% (1)	6.51% (8)	92.68% (114)

Table 37 illustrates that for all the statements, responses are overwhelmingly positive with the majority of the respondents agreeing or strongly agreeing that the factor 'reliability' influences their online shopping. The most agreed (95.12% or 117) upon statement was an online retailer that fulfils its promises influences respondents to shop online. From the results, it appears that online retailers should provide reliable services and ensure that online shoppers go through the online shopping process without any barriers, and they should provide any assistance when needed. Therefore, online shoppers expect the correct product or service to be delivered at the promised time.

It is interesting to note that 10.57% (13) of the respondents neither disagree nor agree that an online retailer that keeps accurate records of purchases influences them to shop online. This could imply that these respondents likely do not review the details of their previous purchases when shopping with a particular online retailer, and this is not seen as an essential matter.

The last factor of service quality is 'follow up services' which refers to an online retailer following up on the customer after purchases or abandoned purchases, and encouraging customer reviews and ratings (see chapter 3). Table 38 provides the results for the influence of the factor 'follow up services' on online shopping.

Table 38: The influence of follow up services on online shopping (n=123)

Statement	Strongly disagree and disagree	Neither disagree or agree	Agree and strongly agree
An online retailer that follows up after purchases influences me to shop online	4.88% (6)	26.01% (32)	69.11% (85)
An online retailer that follows up on abandoned purchases influences me to shop online	16.26% (20)	27.64% (34)	56.10% (69)
An online retailer that encourages customer reviews influences me to shop online	10.57% (13)	36.58% (45)	52.85% (65)
An online retailer that encourages product/service ratings influences me to shop online	13.82% (17)	34.15% (42)	52.03% (64)
An online retailer that addresses issues if I am dissatisfied with the product/service, influences me to shop online	2.44% (3)	6.50% (8)	91.06% (112)

As shown in Table 38, for all the statements, responses are positive with the respondents agreeing or strongly agreeing that the factor 'follow up services' influences their online shopping. The most agreed upon statement (91.06% or 112) is that an online retailer addressing issues of dissatisfied users, influences respondents' online shopping. Based on the results, it appears that online retailers should provide the necessary after-sale services and not disregard online shoppers once they have purchased something, especially when the online shopper is dissatisfied. Further, if a consumer abandons a purchase, the online retailer should find out why in order to improve its products or services.

It is interesting to note that more than a third (36.59% or 45 and 34.15% or 42) of the respondents neither disagree nor agree that an online retailer that encourages customer reviews or encourages product or service ratings influences them to shop online. This could imply that these respondents do not tend to read the reviews or ratings given by other consumers or that they only read these for more complex products or services.

As illustrated in Figure 46, the discussion on service quality now turns to the overall mean scores of the scales.

Reliability of the scales	→	Results of the scales	→	Overall mean score of the scales
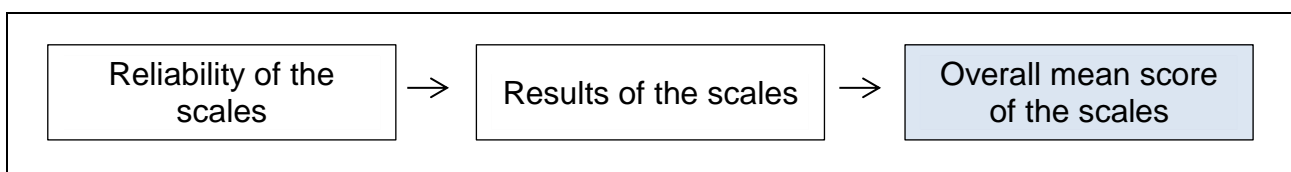
Figure 46: Structure for the discussion on service quality

To conclude the discussion of service quality, the mean scores for each service quality factor are provided in Table 39.

Table 39: Mean scores for service quality factors

	Factor construct	Items	Average mean score	Standard deviation
	Responsiveness	5	4.33	0.579
	Assurance	6	4.37	0.503
Service quality	Empathy	4	4.23	0.612
	Reliability	6	4.45	0.548
	Follow up services	5	3.76	0.685

It can be seen that reliability has the highest score for service quality (M=4.45, SD=0.548). This indicates that a shopping site should address all service quality factors, however focusing on *service quality* reliability, which refers to providing dependable and accurate services. These should be viewed as fundamental factors which online retailers need to address in order to ensure that shoppers make use of their shopping sites.

As stated in chapter 4, there are a number of inferential statistical tests that can be used in order to draw conclusions in relation to the target population (Kolb, 2008:257). For the purpose of this study, the Pearson chi-square and Kruskal-Wallis H tests were conducted (see appendix D, E). The results are discussed below.

5.4.5   Demographics vs online shopper or non-online shopper

The Pearson chi-square test of independence was performed to examine if there are significant relationships between whether respondents are online shoppers or non-online shoppers with demographic variables, namely gender, age group, province, highest qualification and employment status (see appendix D for detailed statistics of the tests done).

The tests did not find any significant relationships between whether respondents are online shoppers or not and their gender, residential province and highest qualification. However, significant relationships were found with age group (X^2 (3, N = 144) = 9.264, p =0.026) and employment status (X^2 (8, N = 144) = 20.159, p =0.01). Non-online shoppers consist of a bigger proportion of older people (age group 36-45) than online shoppers and a smaller proportion of younger people (age group 18-25) than online shoppers. Further, non-online shoppers consist of a bigger proportion of unemployed people than online shoppers.

The results seem to indicate that respondents who are older are still getting accustomed to online shopping and the use of technology for shopping. A possible reason as to why there are generally younger respondents shopping online is because they are already acquainted with technology and possibly online shopping. Further, a possible reason as to why employment status influences online shopping is because unemployed people do not have disposable income to shop. Moreover, it is likely that some respondents shop online with their work computer or laptop, therefore those who are unemployed may not have other means of accessing the Internet or shopping online (see appendix B).

5.4.6 Online shopper type vs system, information and service quality factors

The Kruskal-Wallis H test was used to test for differences between the online shopper types (searcher, browser, wanderer, price hunter and first timer) and the mean ranks of agreement with system, information and service quality factors (see appendix E for detailed statistics of the tests done).

The tests found no significant difference in the ratings of the influence of system, information and service quality factors by the different types of online shoppers. The results indicate that system, information and service quality factors influence any type of online shopper to shop online in a similar manner.

5.5 CONCLUSION

In this chapter, the results and interpretation of the results were presented with the aid of tables and figures. The research question and objectives were briefly discussed before providing in-depth discussions of the analysis of the results obtained from the questionnaire. The research data were analysed with SPSS version 22 in order to meet the objectives of the study.

Descriptive statics provided a profile of the respondents through frequency counts and mean scores. It was found that the respondents who participated in the study comprised mostly of online shoppers (85.42% or 123) of which, roughly half or 45.53% (56) shop online at least once a month. The respondents generally spend 43.09% and 43.07% of their online shopping time searching and browsing respectively, and only 14.20% of their time buying. Overall, respondents agree or strongly agree that system, information and service quality factors influence them to shop online

Subsequently, to test the reliability of the Likert scales used in the research instrument, Cronbach's alphas were calculated. The reliability of the research instrument was tested to determine the internal consistency of the Likert scale and the reliability was largely found to be very good with Cronbach's alpha values ranging from 0.723 to 0.935.

Lastly, inferential statistics identified relationships between different variables and a brief discussion on a series of inferential statistics was provided. The study found significant relationships with age group and employment status of the respondents and whether they are online shoppers or non-online shoppers (see appendix D). However, no significant relationships were found between the different types of online shoppers and the influence of the various quality factors on their online shopping (see appendix E).

In the next chapter, conclusions and recommendations based on the findings in this chapter are presented, as well as the outcomes of the different research objectives highlighted in chapters 1, 4 and 5.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The purpose of this chapter is to present the conclusions and recommendations of the study regarding website quality factors influencing online shopping in South Africa. The research results were discussed in chapter 5 and specific results from the research instrument were presented. In this chapter, the research objectives are revisited, a summary of the key findings of the literature review is given and the conclusions and recommendations are presented. The study's contribution to online shopping in South Africa is discussed, followed by the limitations of the study.

6.2 RESEARCH OBJECTIVES

The primary objective of this study is to explore website quality factors influencing online shopping in the South Africa context in order to improve retailers' websites.

The four secondary objectives of this study were to investigate:
- The system quality factors influencing online shopping in the South African context.
- The information quality factors influencing online shopping in the South African context.
- The service quality factors influencing online shopping in the South African context.
- Future areas of research for online shopping in the South African context.

Conclusions that can be drawn from this research study are discussed in the following sections.

6.3 CONCLUSION OF THE LITERATURE INVESTIGATION

As discussed in the literature review, people are growing more accustomed to the Internet becoming increasingly intertwined into their daily lives. This has inevitability led to the growth of E-commerce which refers to performing transactions over the Web (Khurana, 2013). Gradually as more people in South Africa have access to the Internet, more transactions are being performed online thus leading to the significant growth of online

shopping over the years (wwwMetrics.com, n.d.; Flores-Araoz, 2011). In order to ensure that retailers survive and grow in today's competitive environment, they need to adapt to the changing retailing environment and how that influences consumers.

Therefore, retailers should have a website to ensure that consumers can easily access the necessary information regarding the retailer and the products or services that it offers, as well as offer an online shopping facility. As consumers are moving towards finding products or services over the web, retailers have to make certain that they are easily found online and are accessible.

However, simply having a website is not sufficient. Retailers need to ensure that the website is of high quality in order to attract and retain consumers (Kuo & Chen, 2011:253; Al-Farsi & Basahel, 2014:10; Chris, 2015). Having a website that is of high quality allows users to easily search, browse and buy their products or services online. A high quality website is one that addresses three key aspects namely, system, information and service quality (DeLone & McLean, 2004; Brown & Jayakody, 2008; Wang, 2008; Chen & Cheng, 2009). System quality refers to the technical and functional aspects of a website, which ensures that the website is easy to use, accessible when needed, performs reliably, adapts to changing needs and that it loads quickly (DeLone & McLean, 2004). Information quality, on the other hand, refers to the content aspects of a website, which ensures that the website is personalised for specific users and protects their information, while providing complete, relevant and easy to understand information regarding the company and the products or services offered (DeLone & McLean, 2004). Lastly, service quality refers to the service aspects of a website, which ensure that online retailers respond to customer queries, that the retailer conveys trust and confidence, and provides follow up services as well as being reliable and empathic to online users (DeLone & McLean, 2004).

This study focused on website quality factors influencing online shopping in the South African context. By exploring the various website quality factors that influence consumers' online shopping, the study could assist retailers by improving their website designs in order to enhance marketing and communication strategies targeting consumers by having an understanding of online shoppers and the way in which quality factors influence them to shop online.

The next section provides an overview of the main research results of the study.

6.4   OVERVIEW OF THE RESEARCH RESULTS

As discussed in chapter 5, the research results presented the number of respondents who shop online and their demographic profiles. Further, results showed the profile of online shoppers by examining their online shopping frequency and activity. Important deductions made in chapter 5 are now discussed.

Most of the respondents who participated in the study shop online (85.42% or 123) and consider themselves to be searchers (35.77% or 44). Of these respondents who shop online, most are female (67.48% or 83), between the ages of 26 – 35 years old (57.72% or 71), currently residing in Gauteng (82.93 or 102), holding an Honour's degree (32.52% or 40) and permanently employed (70.73% or 87).

The research results as discussed in chapter 5, showed that respondents generally shop online on a monthly basis (45.53% or 56). This could imply that they tend to shop online when the need or desire arises, which is usually on a monthly basis.

Respondents indicated that they search (99.19% or 122), browse (97.56% or 120) and buy (90.24% or 111) online. This shows that online retailers need to acknowledge all three online shopping activities as important aspects in the online shopping process. Online retailers should therefore ensure online shoppers can easily find their websites and the products or services that they offer while searching, make their websites more attractive in order to catch the attention of online shoppers while browsing, and ensure that online shoppers can go through the checkout process in an effortless manner while buying.

Respondents also indicated that they spend most of their time searching (43.09%) and browsing (43.07%). This indicates that respondents tend to search and browse for more information on the products or services offered by the different online retailers, and compare the different options before making the final decision to purchase them.

Further, the study found a significant relationship between the age group of the respondents and whether they shop online or not (X^2 (3, N = 144) = 9.264, p =0.026). The results indicate that there is a larger portion of older people (age group 36 – 45) and a smaller portion of younger people (age group 18 – 25) who do not shop online. This indicates that older people are more predisposed to the adverse risks of online shopping, or prefer to shop at physical stores because that is what they are accustomed to and they

do not find the need to do it differently. Another significant relationship was established between the employment status of the respondents and whether they shop online or not (X^2 (8, N = 144) = 20.159, p =0.01). The research found that there is a larger portion of unemployed people who do not shop online. This indicates that unemployed people either do not have access to or the necessary funds to shop online or do not have the hardware to do so.

The next section addresses the research objectives of this research study.

6.5   ADDRESSING THE RESEARCH OBJECTIVES

The research objectives for this study are revisited below. For each objective, conclusions are made based on the research results discussed in chapter 5.

6.5.1   Primary research objective

The primary objective of this study was to explore the website quality factors influencing online shopping in the South Africa context in order to improve retailers' websites. By gaining a better understanding of the influence of website quality on online shoppers, it could assist online retailers in improving their website designs and marketing and communication strategies targeting consumers, as well as assist in developing the online retailing market in South Africa. In order to achieve the primary research objective, a number of secondary objectives were formulated and these are discussed in the section below.

6.5.2   Secondary research objectives

As stated previously, there are four secondary objectives based on the primary objective. Each objective is highlighted again with a conclusion supported by the results discussed in chapter 5.

6.5.2.1   *Secondary objective 1: To investigate the system quality factors influencing online shopping in the South African context*

The first secondary objective was to determine the influence of system quality factors on online shopping in the South African context (see section 5.3.4.1). As shown in Table 25, the research found that respondents generally agree or strongly agree that system quality

factors influence them to shop online with reliability (M=4.49, SD=0.475) as the most agreed upon factor, followed by response time (M=4.35, SD=0.572), usability (M=4.30, SD=4.30), availability (M=4.08, SD=4.08) and lastly adaptability (M=3.95, SD=0.723). It can therefore be concluded that all system quality factors have an influence on online shopping in the South African context.

6.5.2.2 Secondary objective 2: To investigate the information quality factors influencing online shopping in the South African context

The next secondary objective was to determine the influence of information quality factors on online shopping in the South African context (see section 5.3.4.2). As shown in Table 32, the research found that respondents agreed or strongly agreed that information quality factors influence them to shop online. The most agreed upon factor being secureness (M=4.72, SD=0.494), followed by relevance (M=4.27, SD=0.532), ease of understanding (M=4.23, SD=0.609), completeness (M=4.00, SD=0.647) and lastly personalisation (M=3.64, SD=0.844). It can therefore be concluded that information quality factors have an influence on online shopping in the South African context.

6.5.2.3 Secondary objective 3: To investigate the service quality factors influencing online shopping in the South African context

The third secondary objective was to determine the influence of service quality factors on online shopping in the South African context (see section 5.3.4.3). As summarised in Table 39, the research found that respondents agreed or strongly agreed that service quality factors influence them to shop online. The most agreed upon factor was reliability (M=4.45, SD=0.548), followed by assurance (M=4.37, SD=0.503), responsiveness (M=4.33, SD=0.579), empathy (M=4.23, SD=0.612) and lastly, follow-up services (M=3.76, SD=0.685). It can therefore be concluded that service quality factors have an influence on online shopping in the South African context.

6.5.2.4 Secondary objective 4: To investigate future areas of research for online shopping in the South African context

The final secondary objective was to identify future areas of research for online shopping in the South African context. These are listed below:

- Based on the additional results, testing the hypotheses on the relationship between being an online shopper or not with demographic variables, significant relationships were found between the age group and the employment status. Future areas of research could conduct qualitative research in order to explore different reasons for these results by identifying key factors influencing them.

- Future research could be conducted on a larger target population that is representative of South Africa where comparisons can be made between the different provinces. Increasing the sample size could possibly yield different results.

- Further, with an increased sample size, future research could further investigate the difference across demographic groups regarding website quality factors influencing online shopping.

- Future research could be conducted in other developing countries and comparisons could be made between the countries to determine whether there are similarities or differences in the influence of website quality factors on online shopping.

- As the study made used of a quantitative approach, future research should make use of focus groups in order to gain a more in-depth perspective of the respondents' views and opinions regarding website quality factors influencing online shopping.

- A training programme could be designed in order to assist new and current online retailers, especially small businesses, to provide guidance on developing and creating effective websites of high quality.

Based on the conclusions drawn from the research study it can be seen that the primary objective was achieved. The next section provides recommendations that online retailers in South Africa can make use of when developing or redesigning their websites and online shopping facilities.

6.6   RECOMMENDATIONS

Based on the results presented in chapter 5 and the conclusions drawn in the section above, a number of recommendations can be made for online retailers in South Africa. These are listed below:

- It is recommended that online retailers ensure that their shopping sites address all system quality factors influencing online shopping. However, paying more attention to the most agreed upon statements for each factor namely: providing a safe shopping

environment; having a fast response time; providing trouble-free shopping; being available 24/7; and adapting to changing consumer needs. As online shopping increases, so do the number of competing websites. Therefore, online retailers need to focus on their shopping sites working smoothly and ensuring that online shoppers experience minimal difficulty going through the online shopping process.

- It is further recommended that online retailers ensure that their shopping sites address all information quality factors influencing online shopping. However, paying more attention to the most agreed upon statements for each factor namely: protecting shoppers' personal information; and providing relevant information; clear instructions; comprehensive information regarding the products or services; and accurate recommendations. Further, measures need to be taken by online retailers to focus on the security aspects of online shopping as it was found to be one of the main reasons why respondents do not shop, or buy more online, as pointed out in section 6.4.

- It is recommended that online retailers ensure that their shopping sites address all service quality factors influencing online shopping by paying more attention to the most agreed upon statements for each factor namely: online retailers that fulfil their promises; being trustworthy; providing prompt services; showing that they care; and addressing issues of any disgruntled shopper. As stated in chapter 3 (section 3.4.3), due to the fact that online shoppers lack face-to-face contact with the service team, service quality is crucial in ensuring the continued support of current shoppers and encourages new shoppers to participate.

- Even though adaptability scored the lowest (see Table 25) for system quality factors, this is an aspect that online retailers should address as there is evidence indicating that consumers are increasingly accessing the Internet via mobile devices and therefore moving towards mobile commerce. A study conducted by We Are Social found that only 7% of the Web traffic of South African users accessing the Internet used a tablet compared to a desktop (32%) and mobile phone (61%) (Shezi, 2015). However, it is important to note that the growth rate of accessing the Internet using tablets was the highest at 33%, followed by mobile phones at 4% yet desktops saw a decrease of 11% (Shezi, 2015). Therefore, it is recommended that online retailers not only ensure that their shopping sites are mobile friendly, but also develop shopping apps making it easier for consumers to shop on mobile devices.

- As shoppers tend to spend more time browsing and searching online, it is highly recommended that online retailers ensure that system, information and service quality factors enable shoppers to do so in an effortless manner. Therefore, it is recommended that online retailers make certain that consumers can easily search and browse for their offerings and provide sufficient relevant information so that consumers can make informed decisions. For the latter reason, online retailers should have relevant search functions available, provide all the relevant information needed by online shoppers to make informed decisions, and provide any assistance needed by shoppers during the browsing and searching phase.

- In order to increase sales, it is important for online retailers to understand why people do not shop online, or why online shoppers browse and search online, however do not make purchases online. As stated in section 6.4, one of the main reasons identified was Internet fraud and scams. Online retailers therefore need to have various security mechanisms in place to protect their consumers and it is recommended that online retailers educate consumers on what they can do to avoid different Internet scams. Online retailers could make short video clips explaining the buying process which illustrate the various safety measures in place and what consumers can do in order to protect themselves.

- Another main reason found for not shopping or buying online was not being able to see the physical product. It is therefore recommended that online retailers introduce virtual mirrors and apps that allow consumers to see the product in 3D in their environment, as discussed in chapter 2.

- Another reason provided for not shopping or buying online was not having a credit card. Therefore, it is recommended that online retailers provide different forms of payment options such as cash deposits, electronic fund transfer (EFT), cash-on-delivery or eWallets such as PayPal, which avoid shoppers having to provide their credit or debit card details directly to the online retailer during the check-out process. eWallet is a software application that stores credit card and banking information as well as credentials which authenticates the users and providers in order to make online purchases (Machani, 2010).

- The demographic profile and different types of online shoppers are important as they provide online retailers with a greater understanding of their consumers and it is

therefore recommended that online retailers consider these factors when developing websites.

- With regard to the different types of online shoppers, retailers need to be aware of the differences and come up with different strategies in order to attract and retain the various shoppers, for example:

  o **Searchers.** Online retailers need to ensure that they provide all the relevant information regarding products or services so that this type of online shopper can easily find what he or she is looking for and make comparisons. Online retailers need to take advantage of search engine optimisation (SEO) in order to ensure that shoppers find their website and products or services as one of the top results. In order for online retailers to convert searchers into buyers, they need to convey trust and show that they are knowledgeable about the product or service (Schade, 2014). Further, it is recommended that online retailers provide user reviews to allow searchers to make informed decisions based on the experience of fellow consumers.

  o **Price hunters.** Online retailers need to ensure that they advertise different promotions that they have throughout the year and clearly indicate how much this type of online shopper is saving. Online retailers that clearly indicate that shoppers are saving "70%" or "R341" on the purchase ensure that price hunters are satisfied. Further, it is recommended that online retailers have a marketing strategy where they send coupons for consumers to redeem in order to stimulate sales. Online retailers should have coupon or functionalities in their check-out processes and ensure that users can easily redeem any coupon they are given.

  o **Wanderers** or window shoppers. Online retailers need to make use of various social networking and microblogging sites such as Facebook, Twitter, Pinterest and YouTube, to name a few. On average people spend roughly 6 hours online daily and 1.72 hours of their time on social networking and microblogging sites (Bennett, 2015). Typically, a person has five social media accounts (Davidson, 2015). Therefore, while consumers are on their social networking sites, online retailers should target them through advertisements in order to catch their attention with products or services that they might be interested in. Even though sales through social media are low, 36% of consumers indicate that interaction with brands has lead them to purchasing more from a certain brand (Brooks, 2015). Similar to physical stores, window shoppers are drawn into the store through display windows,

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therefore, the online retailers' home page should have the latest or most popular products or services on sale.

- o **Browsers.** Similar to wanderers, online retailers could use the same strategies through social networking and microblogging sites and having an enticing home page. However, as browsers have a goal and not a specific product, online retailers should provide recommendations to these shoppers firstly on the latest trends or most popular products or services. Thereafter, if a consumer does choose to view a product or service, the retailer should recommend similar products or services or other products that users have also viewed when viewing the current one.

- o **First timers.** Online retailers could make short video clips explaining the buying process to consumers and attempt to address any queries or concerns which they may have regarding online shopping. Further, similar to the price hunters, online retailers should have coupons for new customers that register on their shopping site which could encourage them to shop.

- It is further recommended that future research be conducted to delve deeper into website quality factors influencing online shopping in order to provide greater insight into the field, particularly in developing countries.

6.7 THE STUDY'S CONTRIBUTION TO ONLINE SHOPPING IN SOUTH AFRICA

Having examined various secondary sources available regarding website quality factors influencing online shopping in South Africa, it appears that the topic has not been comprehensively researched. This study aimed to explore this gap in the literature in order to benefit the online shopping industry in South Africa. The research study contributes to the South African online industry by highlighting that website quality factors influence consumers when shopping online. The results of this study confirm the literature in that these quality factors should be considered by online retailers when developing their shopping websites. The study also contributes to the online shopping industry by providing recommendations on how retailers can improve their websites in order to better service South African consumers.

The next section will address the limitations which were encountered during the research study.

6.8   LIMITATIONS OF THE STUDY

There were a number of limitations to this study, which need to be taken into consideration. These are discussed below.

- Due to the researcher making use of non-probability convenience sampling and having a small sample, the results could not be generalised to the larger South African population. In addition, respondents residing in the Northern Cape, Free State and Limpopo did not take part and therefore the study is not geographically representative of South Africa. Further, respondents are not representative of the different age groups as there were no respondents under the age of 18 or older than 65. People in those age groups are considered as vulnerable and therefore required ethical clearance and consent from their guardians in order to participate and were therefore excluded from the sample.
- The focus area of the study was online shopping, which as stated previously, forms part of the Web and the Internet, which is a dynamic and continuously changing topic. Due to the changes in the environment, it could have an impact on the relevancy of the literature and the empirical research results.
- The survey was conducted using LimeSurvey, an online self-administered survey, which means that the researcher was unable to provide further explanations of the questions to the respondents if needed. Further, respondents who used Internet Explorer may have experienced technical difficulties due to the incompatibility of LimeSurvey and Internet Explorer. Even though the researcher recommended that respondents make use of Mozilla Firefox or Google Chrome, it was possible that some respondents did not.

6.9   CONCLUSION

Conclusions and recommendations were given based on the research objectives of the study. It was concluded that the research objectives for the purpose of this study were achieved. Recommendations were then made for online retailers operating in South Africa, followed by the contribution of the study and lastly the limitations.

This chapter concludes the research study which aimed to explore which quality factors influence South African consumers when shopping online. The purpose of the study was

not to provide conclusive results representative of South Africa, but rather to enable the researcher to transfer results and identify suggestions for future research based on the understanding, results and conclusions articulated in the study. From the research, it can be seen that online retailers need to take into account the various website quality factors as they have an influence on online shopping.

REFERENCES

Aaker, D.A., Kumar, V. & Day, G.S. 2007. *Marketing research.* 9[th] ed. Hoboken, New Jersey: John Wiley & Sons.

Active Network. 2012. Top 10 benefits of online registration for you and your participants. *Active Network, LLC.* [Online] Available from: http://www.activenetwork.co.uk/event-management-resources/articles/top-10-benefits-of-online-registration.htm [Accessed: 2013-09-26].

Adams, D. 2011. Augmented Reality Virtual Mirror: Try Before You Buy Online. *Bit Rebels.* [Online] Available from: http://www.bitrebels.com/technology/augmented-reality-virtual-mirror-try-before-you-buy-online/ [Accessed: 2016-06-18].

Adams, D. 2012. The world's first virtual supermarket: Life just got easier. *Bit Rebels.* [Online] Available from: http://www.bitrebels.com/technology/the-worlds-first-virtual-supermarket-opens/ [Accessed: 2015-09-14].

Ahn, T., Ryu, S. & Han, I. 2007. The impact of Web quality and playfulness on user acceptance of online retailing. *Information and Management,* 44(2007):263–275.

Akazue, M.I., Ogini, N.O. & Ojeme, B.O. 2010. The concept of adaptable and adaptive websites: an overview. *Proceedings of the International Conference on Software Engineering and Intelligent Systems,* 5-9 July 2010:145-158.

Al Saeed, M. 2011. *Tesco: Homeplus subway virtual store (movie).* [Video Online] Available from: http://www.youtube.com/watch?v=nJVoYsBym88 [Accessed: 2013-09-18].

Al-Farsi, F. & Basahel, A. 2014. The sequence of electronic service quality on customer satisfaction. *International Journal for Innovation Education and Research,* 2(3):10-24.

Al-Mamary, Y.H., Shamsuddin, A. & Aziati, N. 2014. The relationship between system quality, information quality and organisational performance. *International Journal of Knowledge and Research in Management and E-commerce,* 4(3):7-10.

Al-Nasser, M., Islam, R., Abidin, I.S.Z., Azam, M. & Prabhakar, A.C. Analysis of e-service quality through online shopping. *Research Journal of Business Management,* 9:422-442.

Alshibly, H.H. 2015. Customer perceived value in social commerce: an exploration of its antecedent and consequences. *Journal of Management Research,* (7)1:17-37.

Andrew, D.P.S., Pedersen, P.M. & McEvoy, C.D. 2011. *Research methods and design in sport management.* Champaign, Illinois: Human Kinetics.

Angell, R., Megicks, P., Memery, P. Hefferman, T. & Howell, K. 2012. Understanding the older shopper: A behavioural typology. *Journal of Retailing and Consumer Services,* 19(2012):259-269.

Asset Analysis. N.d. Variance. [Online] Available from: http://www.asset-analysis.com/stat/stadescript3.html [Accessed: 2016-06-18].

Arkontaky, J. n.d. The three characteristics of a reliable and trustworthy website. *AZ Central.* [Online] Available from: http://yourbusiness.azcentral.com/three-characteristics-reliable-trustworthy-website-22239.html [Accessed: 2014-05-29].

Arnold, T.J., Landry, T.D. & Reynolds, J.K. 2007. Retail online assurances: Typology development and empirical analysis. *Journal of Marketing Theory and Practice,* 15(4):299-313.

Bach, H. 2012. Infographic: How technology boosted eCommerce*. ePages.* [Online] Available from: http://blog.epages.com/en/2012/10/05/infographic-ecommerce/ [Accessed: 2013-09-03].

Bai, B., Law, R. & Wen, I. 2008. The impact of website quality on customer satisfaction and purchase intentions: evidence from Chinese online visitors. *International Journal of Hospitality,* 27(2008):391-402.

Banks, D. 2011. The history of online shopping: Infographic. *SpeckyBoy Design Magazine* [Online] Available from: http://speckyboy.com/2011/11/22/the-history-of-online-shopping-infographic/ [Accessed: 2013-09-03].

Barnett, N. 2011. The iTunes business model and its widespread effects. *The Vly House.* [Online] Available from: http://www.thevlyhouse.com/2011/01/the-itunes-business-model-and-its-widespread-effects/ [Accessed: 2013-09-13].

Barnes, S.J., Bauer, H.H., Neumann, M.M. & Huber, F. 2007. Segmenting cyberspace: A customer typology for the internet. *European Journal of Marketing*, 41(1/2):71-93.

Barnes, S. & Vidgen, R., 2002. An integrative approach to the assessment of e-commerce quality. *Journal of Electronic Commerce Research*, 3(3):114-127.

Barry, M., Cerf, V.G., Clark, D.D., Kahn, R.E., Kleinrock, L., Lynch, D.C., Postel, J., Roberts, L.G. & Wolff, S. 2013. Brief history of the Internet. *Internet Society.* [Online] Available from: http://www.internetsociety.org/internet/what-internet/history-internet/brief -history-internet [Accessed: 2013-08-27].

Beal, V. 2015. Internet. *Webopedia.* [Online] Available from: http://www.webopedia.com/ TERM/I/Internet.html [Accessed: 2015-09-09].

Beal, V. 2010. The difference between the Internet and World Wide Web. *Webopedia.* [Online] Available from: http://www.webopedia.com/DidYouKnow/Internet/Web_vs_Internet .asp [Accessed: 2016/01/07].

Beger, G. & Sinha, A. 2012. South African mobile generation: Study on South African young people on mobiles. [PDF] *New York: Unicef.* [Online] Available from: http://www.unicef.org/southafrica/SAF_resources_mobilegeneration.pdf [Downloaded: 2016-01-07].

Beijing Universal Trade (UIEWT) Customer Service Information Public Center. 2009. Online shopping process. [Online] Available from: http://www.uiewt.com/English/about us.asp?id=11 [Accessed: 2015-09-15].

Belanche, D., Casalo, L.V. & Guinalıu, M. 2012. Website usability, consumers' satisfaction and the intention to use a website: The moderating effect of perceived risk. *Journal of Retailing and Consumer Services,* 19(2012):124-132.

Berndt, A. & Petzer, D. 2011. *Marketing research.* Cape Town: Pearson Education.

Bid or Buy. 2015. Internet access in South Africa*. Bidorbuy.co.za* [Online] Available from: http://www.bidorbuy.co.za/article/6111/Internet_Access_in_South_Africa [Accessed: 2015-09-09].

Blue Collar Catwalk. 2011. GlassesUSA product review*. Blue Collar Catwalk.* [Online] Available from: http://www.bluecollarcatwalk.com/2011/01/glassesusa-product-review.html [Accessed: 2013-09-18].

Blumberg, B., Cooper, D.R. & Schindler, S.P. 2011. *Business research methods.* 3rd European ed. New York: McGraw-Hill Education.

Bolton, D. 2013. Definition of Encryption. *About.com.* [Online] Available from: http://cplus.about.com/od/glossar1/g/encryption.htm [Accessed: 2013-09-12].

Boshoff, C. 2007. A psychometric assessment of E-S-Qual: A scale to measure electronic service quality. *Journal of Electronic Commerce Research,* 8(1):101-114.

Bosomworth, D. 2015. Mobile marketing statistics 2015. *Smart Insights (Marketing Intelligence) Ltd.* [Online] Available from: http://www.ybis.co.uk/blog/smartphone-or-tablet-is-the-future-of-online-shopping-going-mobile [Accessed: 2013-09-17].

Boswell, W. 2014. What are the advantages of online shopping? *About.com.* [Online] Available from: http://websearch.about.com/od/onlineshoppingsearch/f/advantages-online-shopping.htm [Accessed: 2014-04-01].

Botha, D.H. 2015. The determinants of South African consumers' online shopping satisfaction. Master's degree. Pretoria: University of Pretoria.

Boudreaux, R. 2013. What is the difference between responsive vs adaptive Web design? *CBS Interactive.* [Online] Available from: http://www.techrepublic.com/blog/web-designer/what-is-the-difference-between-responsive-vs-adaptive-web-design/ [Accessed: 2014-05-29].

Boundless. 2016. Analysing data and drawing conclusions. *Boundless.* [Online] Available from: https://www.boundless.con/sociology/textbooks/boundless-sociology-textbook/sociological-research-2/the-research-process-26/analysing-data-and-drawing-conclusions-170-7474/ [Accessed: 2016-06-19].

Bourgeois, D.T. 2014. Information systems for business and beyond. *Open Text Book Challenge by the Saylor Academy.*

Bradley, N. 2010. *Marketing research: Tools and techniques.* 2nd ed. New York: Oxford University Press Inc.

Brengman, M., Geuens, M., Weijters, B., Smith, S.M. & Swinyard, W.R. 2005. Segmenting Internet shoppers based on their web-usuage-related liefsytle: a cross-cultural validation. *Journal of Business Research,* 58(2005):79-88.

Brennan, B. 2013. The real reason women shop more than men. *Forbes.* [Online] Available from: http://www.forbes.com/sites/bridgetbrennan/2013/03/06/the-real-reason-women-shop-more-than-men/#6f1b4b1449f4 [Accessed: 2016-06-14].

Bennett, S. 2015. 28% of time spent online is social networking. *Social Times.* [Online] Available from: http://www.adweek.com/socialtimes/time-spent-online/613474 [Accessed: 2016-06-14].

Brooks, C. 2015. Shoppers still prefer in-store over online shopping. *Purch.* [Online] Available from: http://www.businessnewsdaily.com/7756-online-shopping-preferences.html [Accessed: 2016-06-14].

Brown, I. & Jayakody, R. 2008. B2C e-commerce success: A test and validation of a revised conceptual model. *Electronic Journal Information Systems Evaluation,* 11(3):167-184.

Burkotler, D. & Kluge, A. 2015. Online consumer behaviour and its relationships with socio-demographics, shopping orientations, need for emotion and fashoion leadershop. [Online] Available from: http://journal-bmp.de/2011/12/das-verhalten-von-online-konsumenten-und-dessen-beziehung-zu-soziodemographischen-und-den-faktoren-shopping-orientation-need-for-emotion-und-fashion-leade/?lang=en [Accessed: 2016-06-14].

Burns, A.C. & Bush, R.F. 2010. *Marketing Research*. 6[th] ed. Upper Saddle River, New Jersey: Pearson Education.

Business Dictionary. 2013a. Amazon. *WebFinance, Inc.* [Online] Available from: http://www.businessdictionary.com/definition/Amazon.html [Accessed: 2013-09-12].

Business Dictionary. 2015. Online shopping. *WebFinance, Inc.* [Online] Available from: http://www.businessdictionary.com/definition/online-shopping.html [Accessed: 2015-08-06].

Business Tech. 2013. SA online shopping takes a step backwards. *Business Tech.* [Online] Available from: http://businesstech.co.za/news/internet/40796/sa-online-shopping-takes-a-step-backwards/ [Accessed: 2013-09-28].

Cai, Y. & Cude, B.J. 2012. Consumers' adoption of online shopping. In Yan, Z. (ed.). *Encyclopaedia of Cyber Behaviour,* 2(40):466-476.

Campbell, A. 2011. What the heck is an "app"? *Small Business Trends LLC.* [Online] Available from: http://smallbiztrends.com/2011/03/what-is-an-app.html [Accessed: 2016-06-18].

Cant, M. 2010. *Essentials of marketing.* 3[rd] ed. Cape Town: Juta.

Carstens, M. 2012. What exactly are South Africans buying online? *Ventureburn.* [Online] Available from: http://ventureburn.com/2012/12/what-exactly-are-south-africans-buying-online/ [Accessed: 2015-09-08].

Casalo, L.V., Flavian, C. & Guinaliu, M. 2007. The role of security, privacy, usability and reputation in the development of online banking. *Online Information Review,* 31(5):583-603.

Castells, M. 2014. The impact of the Internet on society: A global perspective. *OpenMind* [Online] Available from: https://www.bbvaopenmind.com/en/article/the-impact-of-the-internet-on-society-a-global-perspective/?utm_source=views&utm_medium=article07&utm_content=Internet-society [Accessed: 2015-09-09].

Catchpole, N. 2007. The dot-com bubble and its aftermath. *Domainmonster.com Inc.* [Online] Available from: http://www.domainmonster.com/editorials/dot_com_bubble/ [Accessed: 2013-09-17].

Cavanagh, C. 2013. Are virtual stores the future? *mCommerce.* [Online] Available from: http://www.mcommerce.io/are-virtual-stores-the-future-17012013/ [Accessed: 2013-09-18].

Cerejo, L. 2011. Improving the online shopping experience, part 2: Guiding customers through the buying process. *Smashing Magazine.* [Online] Available from: http://www.smashingmagazine.com/2011/09/improving-the-online-shopping-experience-part-2-gu iding-customers-through-the-buying-process/ [Accessed: 2016-01-05].

Chang, H.H. & Wang, H.W. 2011. The moderating effect of customer perceived value on online shopping behaviour. *Online Information Review*, 35(3):333-359.

Charlie, S. 2011. Online shopping trends. *Buzzle.com.* [Online] Available from: http://www.buzzle.com/articles/online-shopping-trends.html [Accessed: 2013-08-29].

Charlton, G. 2010. The importance of uptime in e-commerce: Survey. *Econsultancy.com.* [Online] Available from: https://econsultancy.com/blog/5536-the-importance-of-uptime/ [Accessed: 2015-03-04].

Chen, C.W.D. & Cheng, C.Y.J. 2009. Understanding consumer intention in online shopping: A respecification and validation of the DeLone and McLean model. *Behaviour and Information Technology,* 28(4):335-345.

Chen, Y., Hsu, I. & Lin, C. 2010. Website attributes that increase consumer purchase intention: A conjoint analysis. *Journal of Business Research,* 63(2010):1007-1014.

Cheung, C.M.K. & Lee, M.K.O. 2005. Research framework of consumer satisfaction with Internet shopping. *Sprouts: Working Papers on Information System,* 5(26):1-19.

Chui, J. n.d. Assurance seals: Security and privacy seals, *ACC626, section 2.* [PDF] University of Waterloo. [Online] Available from: http://uwcisa.uwaterloo.ca /Biblio2/Topic/ACC626%20 Assurance%20Seals%20J%20Cui.pdf [Downloaded: 2014-07-09].

Chris, A. 2015. What is a high quality Web site in the eyes of Google? *ReliableSoft.Net.* [Online] Available from: https://www.reliablesoft.net/what-is-a-high-quality-web-site-in-the-eyes-of-google/ [Accessed: 2015-04-23].

Close, A.G. & Kukar-Kinney, M. 2009. Beyond buying: Motivations behind consumers' online shopping cart use. *Journal of Business Research,* 63(2010):986-992.

Cobb, M. & Cusack, B. 2007. Secure sockets layer (SSL). *TechTarget.* [Online] Available from:http://searchsecurity.techtarget.com/definition/Secure-Sockets-Layer-SSL [Accessed: 2013-09-12].

Cohen, H. 2011. What is social commerce? *Heidi Cohen.* [Online] Available from: http://heidicohen.com/what-is-social-commerce/ [Accessed: 2013-09-17].

Cohen-Almagor, R. 2011. Internet history. *International Journal of Technoethics,* 2(2):45-64.

Colombo, J. 2012. The dot-com bubble. *The Bubble Bubble.* [Online] Available from: http://www.thebubblebubble.com/dot-com-bubble/ [Accessed: 2013-09-16].

Cooper, R.D. & Schindler, P.S. 2011. *Business research methods.* 11[th] ed. Hong Kong: McGraw-Hill Education.

CP-Africa. 2013. Infographic: E-commerce in Africa - preferences of African consumers in Nigeria, Kenya and South Africa*. CPAfrica.* [Online] Available from: http://www.cp-africa.com/2013/06/03/e-commerce-in-africa/ [Accessed: 2013-09-30].

Crumley, B. 2012. France bids adieu to Minitel, its Internet forerunner. *Time Inc.* [Online] Available from: http://world.time.com/2012/06/27/france-bids-adieu-to-minitel-its-internet-forerunner/ [Accessed: 2013-09-11].

Dai, B., Forsythe, S. & Kwon, W.S. 2014. The impact of online shopping experience on risk perception and online purchase intentions: does product category matter? *Journal of Electronic Commerce Research,* 15(1):13-24.

Daniel, C.N. & Berinyuy, L.P. 2010. *Using the SERVQUAL model to assess service quality and customer satisfaction.* Master's degree. Sweden: Umea University.

Davidson, L. 2015. Is your daily social media usage higher than average? [Online] Available from: http://www.telegraph.co.uk/finance/newsbysector/mediatehnologyand telecoms/11610959/Is-your-daily-social-media-usage-higher-than-average.html [Accessed: 2016-06-14].

Davis, F.D. 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3):319-339.

De Lanerolle, I. 2013. The New Wave: Who connects to the Internet, how the connect and what they do when they connect. *University of Witwatersrand.* [Online] Available from: http://www.networksociety.co.za/report+highlights [Accessed: 2013-09-11].

De Swardt, M. 2008. *Factors influencing the choice to shop online: A psychological study in a South Africa context.* Master's degree. Pretoria: University of Pretoria.

De Swardt, M. & Wagner, C. 2008. Factors influencing the choice to shop online: a psychological study in a South Africa context. *New Voices in Psychology*, 4(2):68-82.

Delk, C. 2012. Meet the 4 types of online shoppers (and then sell to them). *Volusion, LLC.* [Online] Available from: http://onlinebusiness.volusion.com/articles/meet-the-4-types-of-online-shoppers-and-then-sell-to-them/ [Accessed: 2013-09-22].

DeLone, W.H. & McLean, E.R. 2003. The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems,* 4(19):9-30.

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.

Department of Communications. 2013. South Africa connect: creating opportunities, ensuring inclusion. *South Africa's Broadband Policy.* [PDF] *South Africa: Department of Communications.* [Online] Available from: http://www.researchictafrica.net/countries/south _africa/South_Africa%5C's_Broadband_Policy_2013.pdf [Downloaded: 2016-06-19].

Department of Health. 2010. Making written information easier to understand for people with learning disabilities. [PDF] *London: Department of Health.* [Online] Available from: http://odi.dwp.gov.uk/docs/iod/easy-read-guidance.pdf [Downloaded: 2014-05-24].

Dreyer, K. 2014. Study: Consumers demand more flexibility when shopping online. *comScore, Inc.* [Online] Available from: https://www.comscore.com/Insights/Press-Releases/2014/6/Study-Consumers-Demand-More-Flexibility-When-Shopping-Online [Accessed: 2015-09-09].

Dixon, C. 2012. eBay vs Amazon: Decentralised vs centralised ecommerce. *Cdixon Blog.* [Online] Available from: http://cdixon.org/2012/02/13/ebay-vs-amazon-decentralized-vs-centralized-e-commerce/ [Accessed: 2013-09-20].

eCommerce News. 2013. South Africans highly satisfied with online shopping - MasterCard survey. *eCommerce News SA*. [Online] Available from: http://ecommercenews .co.za/south-africans-highly-satisfied-with-online-shopping-mastercard-survey/ [Accessed: 2013-09-30].

Econtrader. 2012. 2000 dot come bubble. *Econtrader.* [Online] Available from: http://history.econtrader.com/dot_com_bubble.htm [Accessed: 2013-09-17].

Effective Measure and IAB South Africa. 2013. South African eCommerce Report. *Effective Measure and IAB South Africa.* [Online] Available from: http://www.effectivemea sure.com/documents/South_Africa_Ecommerce_Report-Feb14.pdf [Downloaded: 2016-06-14].

Engel, A. & Browning, T.R. 2006. System engineering: Shining light on the tough issues. *INCOSE 2006 – 16th Annual International Symposium Proceedings.* Florida: United States of America, 10-13 July 2006. Florida: International Council on Systems Engineering (INCOSE).

EZFace. n.d. Virtual Tester SDK – Provides e-commerce shoppers the ability to try before they buy. *EZFace.* [Online] Available from: http://www.ezface.com/products/#SDK [Accessed: 2015-09-14].

Farlex Financial Dictionary. 2012. Virtual storefront. *Farlex, Inc.* [Online] Available from: http://financial-dictionary.thefreedictionary.com/Virtual+Storefronts [Accessed: 2016-06-18].

Fekete, G. 2011. Usability best practices for eCommerce websites. *SpyreStudios.* [Online] Available from: http://spyrestudios.com/usability-best-practices-for-ecommerce-websites/ [Accessed: 2015-09-08].

First National Bank. n.d. *PayPal: Get started by creating an account.* [Online] Available from: https://www.fnb.co.za/commercial-banking/transact/paypal.html [Accessed: 2015-09-09].

Fitzpatrick, M. 2013. Ikea's 3D furniture app: First look. *Telegraph Media Group Limited.* [Online] Available from: http://www.telegraph.co.uk/property/interiorsandshopping/ 10247596/Ikeas-3D-furniture-app-first-look.html [Accessed: 2013-09-18].

Flores-Araoz, M. 2011. South Africa's online shopping on the rise. *Consultancy Africa Intelligence.* [Online] Available from: http://www.consultancyafrica.com/index.php? option=com_content&view=article&id=853:south-africas-online-shopping-on-the-rise-&cati d=82:african-industry-a-business&Itemid=266 [Accessed: 2015-08-06].

Forbes. 2013. Groupon. *Forbes.com LLC^TM.* [Online] Available from: http://www.forbes.com/companies/groupon/ [Accessed: 2013-09-16].

Fraunhofer. 2013. Image processing virtual mirror. *Fraunhofer Heinrich Hertz Institute.* [Online] Available from: http://www.hhi.fraunhofer.de/departments/vision-imaging-technologies/research-groups/computer-vision-graphics/research-topics/virtual-clothing.ht ml [Accessed: 2013-09-18].

Frost, J. 2014. How to correctly interpret p values. *The Minitab Blog.* [Online] Available from: http://blog.minitab.com/blog/adventures-in-statistics/how-to-correctly-interpret-p-values [Accessed: 2016-06-18].

Galatis, P. 2013. Why the majority of South Africans aren't yet shopping online. *Yuppiechef Online (Pty) Ltd.* [Online] Available from: http://www.yuppiechef.com/spatula/ why-south-africans-arent-yet-shopping-online/ [Accessed: 2013-08-31].

Ganesh, J., Reynolds, K.E., Luckett, M.G. & Pomirleanu, N. 2010. Online shopper motivations and e-store attributes: An examination of online patronage behaviour and shopper typologies. *Journal of Retailing,* 86(2010):106-115.

Garling, C. 2012. Before the Web, AOL, and the Prodigy, there was Minitel. *Condé Nast.* [Online] Available from: http://www.wired.com/wiredenterprise/2012/06/services-begone/ [Accessed: 2013-09-11].

Gera, R. 2013. Evaluating the relationship of online service quality dimension with satisfaction, value and behavioural outcome. *African Journal of Business Management,* 7(10):754-761.

Gil, P. 2015. The top 30 Internet terms for beginners, 2015. *About.com.* [Online] Available from: http://netforbeginners.about.com/od/internetlanguage/tp/the-top-internet-terms-for-beginners.htm [Accessed: 2013-08-31].

Gil, J. 2015. Paypal 101: What exactly is PayPal? *About.com.* [Online] Available from: http://netforbeginners.about.com/od/ebay101/ss/paypal101.htm [Accessed: 2015-09-09].

Gil, P. 2013. *The top 30 Internet terms for beginners, 2013.* [Online] Available from: http://netforbeginners.about.com/od/internetlanguage/tp/the-top-internet-terms-for-beginners.htm [Accessed: 2013-08-31].

Gil, P. 2010. What is a computer protocol? How to protocol affect my Web surfing. *About.com.* [Online] Available from: http://netforbeginners.about.com/od/h/f/what-is-a-computer-protocol-http.htm [Accessed: 2013-08-31].

Gill, J. & Johnson, P. 2010. *Research methods for managers.* 4[th] ed. London: Sage Publications Ltd.

Godoe, P. & Johansen, T.S. 2012. Understanding adoption of new technologies: Technology readiness and technology acceptance as an integrated concept. *Journal of European Psychology Students,* 3(2012):38-52.

Goldstuck, A. 2012. *Internet matters: the quiet engine of the South African economy.* [PDF] Helen Suzman Foundation. [Online] Available from: http://hsf.org.za/resource-centre/focus/focus-66/AGoldstuck.pdf [Downloaded: 2016-06-18].

Gorla, N., Somers, T.M. & Wong, B. 2010. Organisational impact of system quality, information quality and service quality. *Journal of Strategic Information Systems,* 19(2010):207-228.

Goodrich, R. 2013. What is server hosting? *Business News Daily.* [Online] Available from: http://www.businessnewsdaily.com/5077-server-hosting.html [Accessed: 2015-06-06].

Goodwin, C.J. 2010. *Research in psychology: Methods and design.* 6[th] ed. Hoboken, New Jersey: John Wiley & Sons.

Granic, A., Mitrovic, I. & Marangunic, N. 2011. Exploring the usability of Web portals: A Croatian case study. *International Journal of Information Management,* 31(4):339-349.

Gravetter, F. & Forzano, L.B. 2012. *Research methods for the behavioural sciences.* 4[th] ed. Belmont, California: Wadsworth, Cengage Learning.

Gravetter, F.J. & Wallnau, L.B. 2009. *Statistics for the behavioural sciences.* 8[th] ed. Belmont: Wadsworth, Cengage Learning.

Hadfield, G. 2013. E-commerce forecast for 2013. *BizCommunity.* [Online] Available from: http://www.bizcommunity.com/Article/196/87/87674.html [Accessed: 2013-10-01].

Hager, C. 2012. Minitel signs off for good. *The Long Now Foundation.* [Online] Available from: http://blog.longnow.org/02012/07/11/minitel-signs-off-for-good/ [Accessed: 2013-10-22].

Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. 2010. *Multivariate data analysis.* 7[th] ed. Hoboken, New Jersey: Prentice Hall/Pearson.

Hair, J., Bush, R. & Ortinau, D. 2006. *Marketing research within a changing environment.* 3[rd] ed. New York: McGraw-Hill/Irwin.

Hanai, T. & Oguchi, T. 2009. How do consumers perceive the reliability of online shops? *Cyberpsychology: Journal of Psychosocial Research on Cyberspace,* 3(2):1.

Harbeck, R. 2015. Network definition*. TechTarget.* [Online] Available from: http://www.nitconnect.net/computer_glossary_l_o.shtml [Accessed: 2013-08-31].

Harker, S. & Riccio, J. 2012. *The future of retail – consumer adaptive retailing.* [PDF] PwC. [Online] Available from: http://www.pwc.com.au/industry/retail-consumer/assets/ Digital-Media-Paper-Jul12.pdf [Downloaded: 2014-05-24].

Harris, M. 2013. iTunes store history – the history of the iTunes store. *About.com.* [Online] Available from: http://mp3.about.com/od/history/p/iTunes_History.htm [Accessed: 2013-09-17].

Harvey, C.R. 2011. Economic bubble. *NASDAQ, Inc.* [Online] Available from: http://www.nasdaq.com/investing/glossary/e/economic-bubble [Accessed: 2013-09-17].

Haughn, M. 2015. Millennials (Millennial generation). *TechTarget.* [Online] Available from: http://whatis.techtarget.com/definition/millennials-millennial-generation [Accessed: 2016/06/14].

Hayes, M. 2012. 10 comparison shopping engines to increase ecommerce sales. *Shopify Inc.* [Online] Available from: http://www.shopify.com/blog/7068398-10-best-comparison-shopping-engines-to-increase-ecommerce-sales#axzz2egR548OH [Accessed: 2013-09-13].

Heape, J. 2009. Types of ecommerce sites*. SparkNET.* [Online] Available from: http://ezinearticles.com/?Types-of-Ecommerce-Sites&id=3498615 [Accessed: 2013-09-02].

Heiney, J.J. 2011. Dot com bubble. *Business in United States of America.* [Online] Available from: http://historybusiness.org/2450-dot-com-bubble.html [Accessed: 2013-09-17].

Hong, J.M.T. 2013. *The Informavore Shopper: Analysis of Information Foraging, System Design, and Purchasing Behavior in Online Retail Stores*. MCom. Singapore Management University.

Hsiao, A. 2013. What is eBay? *About.com.* [Online] Available from: http://ebay.about.com/od/gettingstarted/a/gs_whatisebay.htm [Accessed: 2013-09-12].

Hwang, D., Preiser-Houy, L. & Shang, R.A. 2012. A comprehensive framework for online store functionality. *Information Systems,* 13(2):336-345.

Hwang, D. 2013. Online stores: system goals. *Secure Web Development.* [Online] Available from: http://hwang.cisdept.cpp.edu/swanew/SDLC.aspx?m=Online-Store-System-Goals [Accessed: 2014-05-24].

Huang, Z. & Benyoucef, M. 2013. From e-commerce to social commerce: a close look at design features. *Electronic Commerce Research and Applications,* 12(4):246-259.

Iacobucci, D. & Churchill, G.A. 2010. *Marketing research methodological foundations.* 10th ed. Mason, Ohio: South-Western, Cengage Learning International.

IBM. 2009. IBM helps retailers respond to changing consumer behaviour. *IBM.* [Online] Available from: http://www-03.ibm.com/press/us/en/pressrelease/26441.wss [Accessed: 2015-09-14].

Idler, S. 2013. 5 key principles of good website usability. *Crazy Egg Inc.* [Online] Available from: http://blog.crazyegg.com/2013/03/26/principles-website-usability/ [Accessed: 2015-03-04].

InstantShift. 2011. The history of online shopping. *InstantShift.* [Online] Available from: http://www.instantshift.com/2010/03/26/the-history-of-online-shopping-in-nutshell/ [Accessed: 2013-09-03].

Internet World Stats. 2012. South Africa Internet usage and marketing report. *Miniwatts Marketing Group.* [Online] Available from: http://www.internetworldstats.com/af/za.htm [Accessed: 2012-02-29].

Jain, A. 2011. Web browsers. [PDF] *LinkedIn Slide Share.* [Online] Available from: http://www.slideshare.net/RaviKumar97/web-browser-pdf [Downloaded: 2016-06-18].

Jayawardhena, C., Wright, L.T. & Dennies, C. 2007. Consumers online: Intentions, orientations and segmentation. *International Journal of Retail and Distribution Management,* 35(6):515-526.

Jensen, K. 2013. What do B2B & B2C mean? *Hearst Newspapers, LLC.* [Online] Available from: http://smallbusiness.chron.com/b2b-b2c-mean-56101.html [Accessed: 2013-10-27].

Jiménez, A.J. 2011. Understanding economic bubbles. *Programa Universitat-Empresa.* Universitat Autònoma de Barcelona, Spain.

Jusoh, Z.M. & Ling, G.H. 2012. Factors influencing consumers' attitude towards e-commerce purchases through online shopping. *International Journal of Humanities and Social Science,* 2(4):223-230.

Kajan, E. Dorloff, F.D. & Bedinin, I. (eds.). 2012. *Handbook of research on E-Business standards and protocols: Documents, data and advanced Web technologies.* Hershey, Pennsylvania: IGI Global Publications.

Kalia, P., Singh, T. & Kaur, N. 2016. An empirical study of online shoppers' search behaviour with respect to sources of information in Northern India. *Productivity: A Quarterly Journal of The National Productivity Council,* 56(4):353-361.

Kapoor, A. & Kulshrestha, C. 2010. *Marketing research.* New Delhi, India: Excel Books.

Karim, R.A. 2013. Customer satisfaction in online shopping: a study into the reasons for motivations and inhibitions. *Journal of Business and Management,* 11(6):13-20.

Kassim, N. & Abdullah, N.A. 2010. The effect of perceived quality dimensions on customer satisfaction, trust and loyalty in e-commerce settings. *Asia Pacific Journal of Marketing and Logistics,* 22(3):351-371.

Katawetawaraks, C. & Wang, C.L. 2011. Online shopper behaviour: influences of online shopping decision. *Asian Journal of Business Research,* 1(2):66-74.

Kempen, E., Kasambala, J. & Toerien, E. 2015. A conceptual framework of e-fashion shopping intent. *The Retail and Marketing Review*, 11(1):23-43.

Khalifa, M. & Liu, V. 2007. Online consumer retention: Contingent effects of online shopping habit and online shopping experience. *European Journal of Information Systems,* 16(6):780-792.

Khurana, A. 2013. What is ecommerce? *About.com.* [Online] Available from: http://ecommerce.about.com/od/eCommerce-Basics/f/What-Is-Ecommerce.htm [Accessed: 2013-09-27].

Kim, C., Galliers, R.D., Shin, N., Ryoo, J.H. & Kim, J. 2012. Factors influencing Internet shopping value and customer repurchase intention. *Electronic Commerce Research and Application,* 11(4):374-387.

Kim, H. & Niehm, L.S. 2009. The impact of website quality on information quality, value and loyalty intentions in apparel retailing. *Journal of Interactive Marketing,* 23(2009):221-233.

Kim, J. & Forsythe, S. 2010. Factors affecting adoption of product virtualisation technology for online consumers' electronics shopping. *International Journal of Retail and Distribution Management,* 38(3):190-204.

Kim, J. & Lennon, S.J. 2013. The effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention: based on the stimulus-organism-response model. *Journal of Research in Interactive Marketing,* 7(1):33-56.

King's College London. 2007. *Telecommunication Networks II, 7CCSMTN2.* King's College London.

Klimczak, S. n.d. *Live Chat Inc.* [Online] Available from: http://www.livechatinc.com/online-customer-service-best-practices/live-chat/ [Accessed: 2014-06-07].

Kolb, B. 2008. *Marketing research: A practical approach.* London: Sage Publications Ltd.

Kuan, C. n.d. Internet shopping. *University Computing Service.* [Online] Available from: http://www-bcf.usc.edu/~wdutton/comm533/internetshopping.html [Accessed: 2013-08-29].

Kujundzic,T., Jadric, M. & Cukusic, M. 2011. Markets and consumers: What influences online shopping of individuals from European countries? *International Cross-Industry Journal,* 7(1):16-20.

Kukar-Kinney, M. & Close, A.G. 2009. The determinants of consumers' online shopping cart abandonment. *Journal of the Academy of Marketing Science,* 38(2):240-250.

Kumar, R. 2011. *Research methodology: A step-by-step guide for beginners.* 3rd ed. London: Sage.

Kuo, H. & Chen, C. 2011. Application of quality function deployment to improve the quality of Internet shopping website interface design. *International Journal of Innovative Computing, Information and Control,* 7(1):253-268.

La Barbera, V. 2015. Online marketing with group buying websites. *Business Marketing Blog.* [Online] Available from: http://www.businessmarketingblog.org/online-marketing-with-group-buying-websites/ [Accessed: 2013-09-16].

Lacoussiere, P.J. 2012. Why the FAQ page is so important in the world of e-commerce. *PrestaShop SA.* [Online] Available from: https://www.prestashop.com/blog/en/what-makes-good-faq-page/#more-12692 [Accessed: 2015-09-17].

Ladhari, R. 2010. Developing e-service quality scales: A literature review. *Journal of Retailing and Consumer Services,* 17(2010):464-477.

Lavergne, I. 2012. RIP Minitel (1982-2012). *GFG Group Ltd.* [Online] Available from: http://www.gfg-group.com/uncategorized/2012/07/rip-minitel-1982-2012/ [Accessed: 2013-09-11].

Lawless, S., O'Connor, A. & Mulwa, C. 2010. A proposal for the evaluation of adaptive personalised information retrieval. CIRSE '10 Workshop on Contextual Information Access, Seeking and Retrieval Evaluation, 28th March, 2010, Milton Keynes, UK.

Lee, G.G. & Lin, H.F. 2005. Customers perceptions of e-service quality in online shopping. *International Journal of Retail and Distribution Management,* 33(2):161-176.

Lee, Y. & Kozar, K.A. 2012. Understanding of website usability: Specifying and measuring constructs and their relationships. *Decision Support Systems, Decision Support Systems,* 52(2012):450-463.

Levin, A. 2013. 5 types of email online retailers need to master. *Rejoiner Ecommerce Growth Blog.* [Online] Available from: http://blog.rejoiner.com/2013/07/types-of-online-retail-emails/#order_ followup [Accessed: 2014-07-10].

Liang, K.C. Chai, L.T. & Piew, T.H. 2010. The effect of shopping orientations, online trust and prior online purchase experience toward customers' online purchase intention. *International Business Research,* 3(3):63-76.

Liang, T.P., Li, Y.W. & Turban, E. 2009. Personalised services as empathic responses: the role of intimacy. *PACIS 2009 Proceedings.*

Lin, H. 2007. The impact of website quality dimensions on customer satisfaction in the B2C E-commerce context. *Total Quality Management and Business Excellence,* 18(4):363-378.

Lohr, S. 2012. For impatient Web users, an eye blink is just too long to wait. *The New York Times Company.* [Online] Available from: http://www.nytimes.com/2012/03/01/technology/impatient-web-users-flee-slow-loading-sites.html?pagewanted=all&_r=0 [Accessed: 2014-05-24].

Loiacono, E.T., Watson, R.T. & Goodhue, D.L. 2002. WEBQUAL: A measure of website quality. *American Marketing Association,* 13(2002):432:438.

Luthi, B. 2014. The importance of keeping the soul in ecommerce shop keeping. *Access Intelligence, LLC.* [Online] Available from: http://multichannelmerchant.com/ technology-1/c ustomer/importance-keeping-soul-ecommerce-shopkeeping-27052014/ [Accessed: 2014-07-09].

Machani, S.E. 2010. *Method and system for delivering a command to a mobile device*, US Patent 20100291899 A1.

Macmillan Dictionary. 2015. Availability. *Macmillian Publishers Limited.* [Online] Available from: http://www.macmillandictionary.com/dictionary/british/availability [Accessed: 2015-09-16].

Maditinos, D.I. & Theodoridis, K. 2008. Satisfaction determinants in the Greek online shopping context. *Information Technology and People,* 23(4):312-329.

Maldonado, A. 2013. The evolution of online sales towards empathy and emotions. *Colbenson.* [Online] Available from: http://www.colbenson.com/-/the-evolution-of-online-sales-toward-empathy-and-emotions [Accessed: 2014-07-10].

Malhotra, N.K., Birks, D.F. & Wills, P. 2012. *Marketing research: An applied approach.* 4th ed. Torino, Italy: Pearson Education Ltd.

Mallon, D. 2013. First online home shopping: 1984. *CBS Interactive.* [Online] Available from: http://www.zdnet.com/uk/first-online-home-shopping-1984-7000014128/ [Accessed: 2013-09-03].

Mail & Guardian. 2012. South Africa lagging in Internet access*. Mail & Guardian Online* [Online] Available from: http://mg.co.za/article/2012-05-29-south-africa-lagging-in-internet-access [Accessed: 2013-08-27].

Mao, D. 2010. *A study of consumer trust in Internet shopping and the moderating effect of risk aversion in mainland China.* Honour's project, Hong Kong Baptist University.

Masterson, R. & Pickton, D. 2010. *Marketing: An Introduction.* 2nd ed. London: McGraw-Hill.

Matlhaga, B. 2013. 2013 trends: Looking ahead at retail, shopper marketing in SA. *BizCommunity.com.* [Online] Available from: http://www.bizcommunity.com/Article/ 196/424/88246.html [Accessed: 2013-10-01].

Mazaheri, E., Richard, M. & Laroche, L. 2010. Online consumer behaviour: Comparing Canadian and Chinese website visitors. *Journal of Business Research,* 64(2011):958-965.

McDaniel, C. & Gates, R. 2013. *Marketing research.* 9th ed. Singapore: John Wiley & Sons.

McQuarrie, E.F. 2012. *The market research toolbox: a concise guide for beginners.* 3rd ed. Newbury Park, California: Sage Publications, Inc.

Mebrate, T.W. 2010. *A framework for evaluating academic website quality from students' perspective.* Master's Thesis. Delft: Delft University of Technology.

Mendenhall, W., Beaver, R.J. & Beaver, B.M. 2013. *Introduction to probability & statistics.* 14th ed. Boston: Brooks/Cole, Cengage Learning.

Meyer, C. 2013. E-commerce boom triggers transformation in retail logistics: driving a global wave of demand for new logistics facilities. *John Lang Lasalle IP, Inc.* [Online] Available from: https://www.jll.com/Research/eCommerce_boom_triggers_transformation_ in_retail_ logistics_whitepaper_Nov2013.pdf [Downloaded: 2016-06-18].

McGivern, Y. 2013. *The practice of market research: an introduction.* 4th ed. Edinburgh Gate, Harlow, UK: Pearson Education Limited.

Merriam-Webster. 2016. Website. *Merriam-Webster Incorporated.* [Online] Available from: http://www.merriam-webster.com/dictionary/Web%20site [Accessed: 2016-01-05].

Merriam-Webster. 2015. Quality. *Merriam-Webster Incorporated.* [Online] Available from: http://www.merriam-webster.com/dictionary/quality [Accessed: 2015-04-24].

Mochiko, T. 2013. Online shopping 'vital to African boom'. *Times Media (Pty) Ltd.* [Online] Available from: http://www.bdlive.co.za/africa/africanbusiness/2013/07/03/online-shopping-vital-to-african-boom [Accessed: 2013-09-27].

Moorad, Z. 2012. Surge in online shopping as SA gets to grips with the e-conomy. *Mail and Guardian.* [Online] Available from: http://mg.co.za/article/2012-01-24-sa-shopping-goes-online [Accessed: 2015-09-08].

Moorad, Z. 2013. Retailers get savvy with sharp rise in e-commerce. *BizCommunity.com.* [Online] Available from: http://www.bizcommunity.com/Article/196/394/100853.html [Accessed: 2013-10-01].

Morgan, J. 2014. Are you confusing your customers? *John Morgan.* [Online] Available from: http://johnmichaelmorgan.com/are-you-confusing-your-customers/ [Accessed: 2014-05-29].

Moses, L. 2013. Tablets overtake smartphones as the big shopping device: Mobile fuels retail. *AdWeek.* [Online] Available from: http://www.adweek.com/news/advertising-brand ing/tablets-overtake-smartphones-big-shopping-device-149654 [Accessed: 2014-05-29].

Muller, J. 2013. How will technology affect SA shoppers? *Times Media (Pty) Ltd.* [Online] Available from: http://www.financialmail.co.za/features/2013/09/26/how-will-technology-affect-sa-shoppers [Accessed: 2013-10-01].

My Broadband. 2013. The state of SA's Internet community revealed. *MyBroadband.co.za.* [Online] Available from: http://mybroadband.co.za/news/ internet/69946-the-state-of-sas-internet-community-revealed.html [Accessed: 2015-09-15].

Nevill, G. 2013. Fourteen million Internet users in South Africa. *The Media Online.* [Online] Available from: http://themediaonline.co.za/2013/07/fourteen-million-internet-users-in-sou th-africa/ [Accessed: 2013-10-25].

Nguyen, T. 2012. IRCE 2012 vendor scouting report: Top 10 social commerce exhibitors. *CPC Strategy.* [Online] Available from: http://www.cpcstrategy.com/blog/2012/06/best-social-commerce-vendors/ [Accessed: 2015-09-09].

Nielson, J. 2010. Website response times. *Nielson Norman Group.* [Online] Available from: http://www.nngroup.com/articles/website-response-times/ [Accessed: 2015-06-17].

Norwood, S.L. 2010. *Research essentials: Foundations for evidence-based practice.* 1st ed. Upper Saddle River, New Jersey: Pearson Education, Inc.

Novotny, J. 2013. E-commerce boom in South Africa predicted in 2013. *Ecommerce News SA.* [Online] Available from: http://ecommercenews.co.za/e-commerce-boom-in-south-africa-predicted-for-2013/ [Accessed: 2013-09-28].

Nylander, S., Lundquist, T., Brännström, A. & Karlson, B. 2009. "It's just easier with the phone" - a diary study of Internet access from cell phones. *Pervasive Computing,* 5538(2009):354-371.

Ogince, M. 2012. 4 startups revolutionising social commerce. *Mashable, Inc.* [Online] Available from: http://mashable.com/2012/06/04/startups-social-commerce/ [Accessed: 2013-09-18].

Optivo. N.d. Follow-up emails: How to successfully reactivate shopping cart abandoners. *Optivo.* [Online] Available from: https://www.optivo.com/newsletter/customer-newsletter /customer-newsletter-march-2012/follow-up-emails-how-to-successfullyreactivate-shopping-cart-abandoners/ [Accessed: 2014-07-10].

Orgera, S. 2013. What is a Web browser? *About.com.* [Online] Available from: http://browsers.about.com/od/howbrowserswork/a/whatisabrowser.htm [Accessed: 2013-08-31].

Oxford Dictionaries. 2015. Online. *Oxford University Press.* [Online] Available from: http://www.oxforddictionaries.com/definition/english/online [Accessed: 2015-09-09].

Pagano, R.R. 2012. *Understanding statistics in the behavioral sciences.* 10th ed. Belmont, California: Wadsworth Cengage Learning.

Papageogiou, K. 2015. 9 ways to make the payment process easy for online customers. *KISSMetrics.* [Online] Available from: https://blog.kissmetrics.com/easy-payment-process/ [Accessed: 2015-06-17].

Parasuraman, A., Zeithaml, V.A. & Malhotra, A. 2005. E-S-Qual: A multiple-item scale for assessing electronic service quality. *Journal of Service Research,* 7(3):213-233.

Patel, N. 2011. 7 common sales mistakes and how to avoid them. *QuickSprout, LLC.* [Online] Available from: http://www.quicksprout.com/2011/09/15/7-common-sales-mistakes-and-how-to-avoid-them/ [Accessed: 2014-05-29].

PayPal, 2013. Who we are. *PayPal.* [Online] Available from: https://about.paypal-corp.com/ [Accessed: 2013-09-13].

Pearson, A., Tadisina, S. & Griffin, C. 2012. The role of e-service quality and information quality in creating perceived value: antecedents to Web site loyalty. *Information Systems Management*, 29(3):201–215.

Peat, J., Barton, B. & Elliot, E. 2008. *Statistics workbook for evidence-based health care.* West Sussex, Chichester: John Wiley & Sons.

Peavler, R. 2013. Setting up a merchant account for credit card processing. *About.com.* [Online] Available from: http://bizfinance.about.com/od/accountsreceivable/a/setting-up-merchant-account-credit-card-processing.htm [Accessed: 2013-08-31].

Pellerin, J. 2011. Live chat customer support: What is live chat? *Phaseware.* [Online] Available from: http://www.phaseware.com/PhaseWare-Files-blog/bid/53766/Live-Chat-Customer-Support-What-is-Live-Chat [Accessed: 2014-06-07].

Pegnfei, B.A.I., Yanhong, C.U.I. & Lvbo, Y.E. 2012. Research of the relationship of e-service quality, customer satisfaction and customer loyalty in C2C online shopping. *Eastern Academic Forum,* 2012:8-13.

Peppetta, M. 2013. SA retailers look to future with digital marketing. *BizCommunity.com.* [Online] Available from: http://www.bizcommunity.com/Article/196/16/90205.html [Accessed: 2013-10-01].

Perc, A. 2013. The five basic types of online shoppers: How to attract them and convince them to buy. *Creatim Ržišnik Perc d.o.o.* [Online] Available from: http://www.creatim.com /blog/en/web/the-five-basic-types-of-online-shoppers-how-to-attract-them-and-convince-th em-to-buy/ [Accessed: 2013-09-22].

Piercy, N. F. & Lane, N. 2009. *Strategic customer management: Strategizing the sales organization.* New York: Oxford University Press.

Prestipino, P. 2012. Slow response times cause cancelled orders for merchants. *Website Magazine.* [Online] Available from: http://www.websitemagazine.com/content/blogs/posts /archive/2012/11/19/slow-response-time-cause-cancelled-orders.aspx [Accessed: 2014-05-24].

Rababah, O.M.A. & Masoud, F.A. 2010. Key factors for developing a successful e-commerce website. *Communication of the IBIMA,* 2010(2010):1-9.

Random News. 2010. The electronic mall. *Random News.* [Online] Available from: http://www.gsbrown.org/compuserve/electronic-mall-1984-04/ [Accessed: 2013-09-12].

Rath, P.M., Bay, S., Gill, P. & Petrizzi, R. 2014. *The why of the buy: Consumer behaviour and fashion marketing.* 2nd ed. New York: Bloomsbury Publishing.

Retail Minded. 2012. Customer service for online stores. *Retail Minded, Inc.* [Online] Available from: http://retailminded.com/customer-service-for-online-stores/ [Accessed: 2014-07-10].

Rieger, O.Y. 2009. Search engine use behaviour of students and faculty: User perception and implications for future research. *First Monday.* [Online] Available from: http://journals.uic.edu/ojs/index.php/fm/article/view/2716/2385 [Accessed: 2015-08-06].

Rigby, D. 2011. *Omnichannel retail: Delivering on customer experience.* [PDF] Harvard Business Review. [Online] Available from: https://www.ups.com/media/en/HBR_Rigby_ Webinar_12-07-11_v0120911.pdf [Downloaded: 2015-08-06].

Rizzo, F. 2013. Internet access in South Africa on the rise. *KPMG Services (Proprietary) Limited.* [Online] Available from: http://www.sablog.kpmg.co.za/2013/08/internet-access-in-south-africa-on-the-rise/ [Accessed: 2013-08-27].

Robin, L. 2011. The history of online shopping: The origins of online shopping websites. *Brighthub.com.* [Online] Available from: http://www.brighthub.com/money/personal-finance/articles/40015.aspx [Accessed: 2013-09-12].

Roeder, L. 2013. Bulletin Board. *About.com.* [Online] Available from: http://personalweb.about.com/cs/glossary/g/bulletinboard.htm [Accessed: 2013-09-12].

Rohm, A.J. & Swaminathan, V. 2004. A typology of online shoppers based on shopping motivations. *Journal of Business Research,* 57(2004):748-757.

Rose, S., Clark, M., Samouel, P. & Hair, N. 2012. Online customer experience in e-retailing: An empirical model of antecedents and outcomes. *Journal of Retailing,* 2(2012):308-322.

Rotem-Mindali, O. 2010. E-tail versus retail: The effects on shopping-related travel: Empirical evidence from Israel. *Transport Policy,* 17(2010):312-322.

Rouse, M. 2015. IS (information system or information services). *TechTarget.* [Online] Available from: http://whatis.techtarget.com/definition/IS-information-system-or-information-services [Accessed: 2015-09-08].

Rouse, M. 2011. Discussion board (discussion group, message board, online forum). *TechTarget.* [Online] Available from: http://whatis.techtarget.com/definition/discussion-board-discussion-group-message-board-online-forum [Accessed: 2013-09-12].

Rouse, M. 2007a. Browser. *TechTarget.* [Online] Available from: http://searchwindevelopment.techtarget.com/definition/browser [Accessed: 2013-08-31].

Rouse, M. 2007b. Application program. *TechTarget.* [Online] Available from: http://searchsoftwarequality.techtarget.com/definition/application-program [Accessed: 2013-08-31].

Rouse, M. 2007c. Response time. *TechTarget.* [Online] Available from: http://searchnetworking.techtarget.com/definition/response-time [Accessed: 2014-05-24].

Rouse, M. 2005. Reliability. *TechTarget.* [Online] Available from: http://whatis.techtarget.com/definition/reliability [Accessed: 2014-03-31].

Roy, A. & Sinha, S. 2012. Why FAQ page is so important for your website? *AMS Technologies.* [Online] Available from: http://amstechweb.blogspot.com/2012/08/why-faq-page-is-so-important-for-your.html [Accessed: 2014-06-07].

Rudolph, S. 2013. Importance of personalised online shopping experience in numbers. *Business 2 Community.* [Online] Available from: http://www.business2community.com/infographics/importance-personalized-online-shopping-experience-numbers-0675997#JRqgsYSZ7UIDXoLi.97 [Accessed: 2016-01-05].

Safari, A. 2011. Customers' international online trust – insights from focus group interviews. *Journal of Theoretical and Applied Electronic Commerce Research,* 7(2):59-72.

Sahota, D. 2011. *Mobile commerce: Why IT chiefs must be in the driving seat. Incisive Business Media (IP) Limited.* [Online] Available from: http://www.computing.co.uk/ctg /feature/2027819/mobile-commerce-business-drivers [Accessed: 2013-09-17].

Sam, M.F.M. & Tahir, M.N.H. 2009. Website quality and consumer purchase intention of air ticket. *International Journal of Basic and Applied Sciences,* 9(10):4-9.

Schade, A. 2014. Designing for 5 types of e-commerce shoppers. [Online] Available from: https://www.nngroup.com/articles/ecommerce-shoppers/ [Accessed: 2016-06-14].

Schaupp, L.C., Belanger, F. & Fan, W. 2009. Examining the success of websites beyond e-commerce: An extension of the IS success model. *Journal of Computer Information Systems,* 19(4):42-52.

Schmidt, N. & Brown, J. 2011. *Evidence-based practice for nurses: appraisal and application of research.* 2nd ed. Burlington: Jones & Bartlett Learning.

Schofield, H. 2012. Minitel: The rise and fall of the France-wide web. *BBC.* [Online] Available from: http://www.bbc.co.uk/news/magazine-18610692 [Accessed: 2013-10-27].

Scholasticus, K. 2013. History of Internet banking. *Buzzle.com.* [Online] Available from: http://www.buzzle.com/articles/history-of-internet-banking.html [Accessed: 2013-09-12].

Senatore, L. 2010. A critical analysis of factors influencing Internet diffusion in South Africa and its application on the rollout of e-government service. Master's degree. Johannesburg: University of Witwatersrand.

Sharkey, U., Scott, M. & Acton, T. 2010. The influence of quality on e-commerce success: An empirical application of the DeLone and McLean IS success model. *International Journal of E-Business Research*, 6(1):68-84.

Sharma, R.S., Alexander, N., Ho, W.C. & Arasu, P.K. 2013. Functional modelling and analysis of IDM e-tailer platforms. *International Journal of E-Business Research,* 7(20101):38-59.

Shezi, L. 2015. What do SA's 24.9 mil Internet users spend most of their time doing online? [Online] Available from: http://www.htxt.co.za/2015/01/21/what-do-sas-24-9-mil-internet-users-spend-most-of-their-time-doing-online/ [Accessed: 2016-06-14].

Sia Partners. 2013. Online banking and fraud: A new generation of cybercriminals. *Sia Partners.* [Online] Available from: http://en.finance.sia-partners.com/20130228/online-banking-and-fraud-a-new-generation-of-cybercriminals/ [Accessed: 2013-09-12].

Singh, N., Giri, M. & Mathew, S. 2015. Responsive website: A transformation in Web design. *International Journal of Engineering Technology Management and Applied Sciences,* 3(1):182-190.

Stat Trek. 2016. Hypothesis test: difference between proportions. *StatTrek.com.* [Online] Available from: http://stattrek.com/hypothesis-test/difference-in-proportions.aspx?Tutorial =AP [Accessed: 2016-07-20].

Stoyanov, S. 2012. *E-business tools for supply chain integration: Trends and opportunities.* MSc degree. Denmark: Aarhus University.

Smartling. 2012. Developing countries driving global Internet growth. *Smartling.* [Online] Available from: http://www.smartling.com/blog/2012/05/31/developing-countries-driving-global-internet-growth/ [Accessed: 2013-02-14].

Smith, C. 2015. The surprising facts about who shop online and on mobile. *Business Insider Inc.* [Online] Available from: http://www.businessinsider.com/the-surprising-demographics-of-who-shops-online-and-on-mobile-2014-6 [Accessed: 2016-06-14].

Smith, K. 2015. History of the dot-come bubble burst and how to avoid another. *SparkCharge Media, LLC.* [Online] Available from: http://www.moneycrashers.com/dot-com-bubble-burst/ [Accessed: 2013-09-17].

Soopramanien, D.G.R. & Robertson, A. 2007. Adoption and usage of online shopping: An empirical analysis of the characteristics of buyers, browsers and non-Internet shoppers. *Journal of Retailing and Consumer Sciences,* 14(2007):73-82.

Southey, G. 2011. The theories of reasoned action and planned behavior applied to business decisions: A selective annotated bibliography. *Journal of New Business Ideas and Trends*, 9(1):43-50.

Spencer, M. 2010. The importance of shopping cart for an ecommerce website. *PLAVEB Corporation.* [Online] Available from: http://www.plaveb.com/blog/the-importance-of-shopping-cart-for-an-ecommerce-website [Accessed: 2013-09-20].

Suh, W. (ed.). 2005. *Web engineering: Principles and techniques.* Hershey, Pennsylvania: IGI Global Publications.

Summerson, K. 2012. *Virtual shopping is the future of retail – Mikko Martikainen, Sayduck ltd. [Video].* [Online] Available from: http://www.psfk.com/2012/10/mikko-martikainen-sayduck-psfk-london-video.html [Accessed: 2013-09-18].

Sun, C. & Lin, G.T.R. 2009. Using fuzzy TOPSIS method for evaluating the competitive advantages of shopping websites. *Expert Systems with Applications,* 36(9):11764-11771.

Strydom, J. 2011. *Introduction to marketing*. 4[th] ed. Cape Town: Juta.

Tapson, M.J. 2009. Demographical diversity influence on online shopping orientation and propensity to buy online. Master's degree. Grahamstown: Rhodes University.

Taylor, B. 2013. Why social commerce is a high priority. *Six Revisions.* [Online] Available from: http://sixrevisions.com/ecommerce/social-commerce/ [Accessed: 2013-09-18].

The Michael Aldrich Archive. 2011. Gateshead celebrates world's first home shopper. *Michael Aldrich.* [Online] Available from: http://www.aldricharchive.com/gateshead_ pr.html [Accessed: 2013-09-03].

Think with Google. 2014. New research shows how digital connects shoppers with local stores. *Google Inc.* [Online] Available from: https://www.thinkwithgoogle.com/articles/how-digital-connects-shoppers-to-local-stores.html [Accessed: 2016-06-18].

TNS Infratest. 2011. South Africa retail: Media touchpoints in the consumer path to purchase. *Google Inc.* [Online] Available from: http://www.thinkwithgoogle.com/insights/emea/library/studies/online-shopping-in-South-Africa/ [Downloaded: 2013-08-31].

Top 10 eCommcerce Site Builders. 2015. The importance of a secure shopping cart. *Top10eCommcerceSiteBuilders.com.* [Online] Available from: http://www.top10ecommerce sitebuilders.com/The-Importance-of-a-Secure-Shopping-Cart-Article [Accessed: 2015-06-17].

TransFirst. 2013. Credit processing for websites and online sales. *TransFirst.* [Online] Available from: http://www.transfirst.com/resources/merchant-basics/what-is-an-internet-merchant-account [Accessed: 2013-08-31].

Trio Training. 2011. Website assessment and evaluation. *TrioTraining.* [Online] Available from: http://depts.washington.edu/trio/resources/web/proof_assess.php [Accessed: 2014-04-23].

Tuten, T.L. In: Gosling, S.D. & Johnson, J.A. (eds.). 2010. *Advanced methods for conducting online behavioural research.* London, England: American Psychology Association.

Udo, G.J., Bagchi, K.K. & Kirs, P.J. 2010. As assessment of customers' e-service quality perception, satisfaction and intention. *International Journal of Information Management,* 30(2010):481-492.

Ujuh. 2013. Online shopping taking off in South Africa. *UJUH.* [Online] Available from: http://www.ujuh.co.za/news/online-shopping-taking-off-in-south-africa/ [Accessed: 2015-09-08].

Unity Global Net. 2012. What is group buying. *UNITY GLOBAL NET SDN BHD.* [Online] Available from: http://www.unityglobalnet.com/buying-club/what-is-group-buying/ [Accessed: 2013-09-16].

United Online Web Service. 2016. What is a website? *United Online Web Service.* [Online] Available from: http://www.freeservers.com/WebHosting101/WhatIsAWebsite.html [Accessed: 2016-01-05].

US Chamber of Commerce Foundation. 2016. The Millennial Generation Research Review. *US Chamber of Commerce Foundation.* [Online] Available from: https://www.us chamberfoundation.org/reports/millennial-generation-research-review [Accessed: 2016-06-14].

Vallie, A. 2012. Consumer spending online rises 30% to R2.6bn. *BizCommunity.com.* [Online] Available from: http://www.bizcommunity.com/Article/196/394/69014.html [Accessed: 2012-02-29].

Van Zyl, G. 2015. Women are SA's most active online shoppers. *Fin24.* [Online] Available from: http://www.fin24.com/Tech/News/Women-are-SAs-most-active-online-shoppers-20150327 [Accessed: 2016-06-14].

Visual Studio. 2012. How to: Set page response time goals in a Web performance test. *Microsoft.* [Online] Available from: https://msdn.microsoft.com/en-us/library/ms404691 (v=vs.110).aspx [Accessed: 2016-01-05].

Vogel, H.G., Maas, J. & Gebauer, A. 2011. *Drug discovery and evaluation: Methods in clinical pharmacology.* Berlin: Springer-Verlag.

Wang, R.Y. & Strong, D.M. 1996. What data quality means to data consumers. *Journal of Management Information Systems,* 12(4):5-33.

Wang, Y. n.d. World Wide Web. *University of Computing Services.* [Online] Available from: http://www-bcf.usc.edu/~wdutton/comm533/WWW-WANG.htm [Accessed: 2013-09-10].

Wang, Y.S. 2008. Assessing e-commerce systems success: A respecification and validation of the DeLone and McLean model of IS success. *Information Systems Journal,* 18(5):529-557.

Warwick Equest. N.d. When should I use quantitative research? *WarwickEquest.* [Online] Available from: http://warwickequestlimited.hostinguk.org/faqs/question/when_should_i_use_quantitative_research [Accessed: 2014-10-22].

Webb, H.W. & Webb, L.A. 2004. SiteQual: An integrated measure of website quality. *Journal of Enterprise Information Management,* 17(6):430-440.

Webber, H. 2011. 17 dot com failures and their modern counterparts. *The Next Web, Inc.* [Online] Available from: http://thenextweb.com/entrepreneur/2011/10/27/17-dot-com-failures-and-their-modern-counterparts/ [Accessed: 2013-09-13].

Werts, B. & Kingyens, A.T. 2015. A guide to marketplaces. *Version One Ventures.* [Online] Available from: http://versionone.vc/wp-content/uploads/2015/11/Marketplace-Handbook-11-08-2015.pdf [Downloaded: 2016-06-18].

Wiebke. 2012. *This history of mobile commerce. Kiosked Ltd.* [Online] Available from: http://www.kiosked.com/blog/the-history-of-mobile-commerce/ [Accessed: 2013-09-17].

Wiid, J. & Diggines, C. 2013. *Marketing research.* 4th ed. Cape Town: Juta.

Wray, R. 2010. Ten years after the crash, the dotcom boom can finally come of age. *Guardian News and Media Limited* [Online] Available from: http://www.theguardian.com/business/2010/mar/14/technology-dotcom-crash-2000 [Accessed: 2013-09-17].

Wrobewski, L. 2013. Data Monday: The six inch gap. *Luke W Ideation and Design.* [Online] Available from: http://www.lukew.com/ff/entry.asp?1679 [Accessed: 2015-06-06].

Wong, C.Y. n.d. Applying cost-benefit analysis for usability evaluation studies on an online shopping website. *Human Factors in Telecommunication,* 3(9):1-8.

Work, S. 2014. How loading time affects your bottom line. *KISSMetrics.* [Online] Available from: http://blog.kissmetrics.com/loading-time/ [Accessed: 2014-05-24].

World Wide Worx. 2012. Executive summary: Internet access in South Africa 2012. *World Wide Worx.* [Online] Available from: http://www.worldwideworx.com/retail2016/ [Accessed: 2013-08-27].

World Wide Worx. 2016. Online Retail in South Africa 2016: Executive summary. *World Wide Worx.* [Online] Available from: http://www.worldwideworx.com/wp-content/uploads /2016/04/Exec-Summary-Online-Retail-in-SA-2016.docx [Downloaded: 2013-08-27].

wwwMetrics.com. n.d. The Growth of Online Shopping. *wwwMetrics.com.* [Online] Available from: http://www.wwwmetrics.com/shopping.htm [Accessed: 2015-09-08].

Yellowwood Future Architects. 2012. South African retailers: Not investing enough in understanding online shopper behaviour. *BizCommunity.* [Online] Available from: http://www.marklives.com/wordpress/2012/11/south-african-retailers-not-investing-enough-in-understanding-online-shopper-behaviour/ [Accessed: 2015-09-08].

Zaied, A.N.H. 2012. An integrated success model for evaluating information systems in public sectors. *Journal of Emerging Trends in Computing and Information Sciences,* 3(6):814-825.

Zarei, S. 2010. Electronic service quality evaluation methods for online banking system. *International Journal of Computer Science and Technology,* 1(2):6-13.

Zhang, X. & Tang, Y. 2006. *Customer perceived e-service quality in online shopping.* Master's degree. Lulea University of Technology, Sweden. [Online] Available from: http://epubl.ltu.se/1653-0187/2006/06/LTU-PB-EX-0606-SE.pdf [Downloaded: 2014-06-07].

Ziaullah, M., Feng, Y.F., Akhter, S.N. & Ahmad, S. 2015. Atmosphere of online retailing quality dimension and development of young generation customers loyalty – an empirical study of China. *International Journal of U- and E- Service Science and Technology,* 8(5):67-82.

Zikmund, W.G. & Babin, B.J. 2010. *Exploring marketing research.* 10[th] ed. Mason, Ohio: South-Western, Cengage Learning International.

Zikmund, W.G., Babin, B.J., Carr, J.C. & Griffin, M. 2013. *Business research methods.* 9[th] international ed. Mason, Ohio, South Western: Cengage Learning.

APPENDIX A
RESEARCH INSTRUMENT

Consent for participation in an academic research study
Department of Marketing and Retail Management:

AN INVESTIGATION ON WEBSITE QUALITY FACTORS INFLUENCING ONLINE SHOPPING: A SOUTH AFRICAN CONTEXT

Research conducted by:
Ms Yu-ting Hung
E-mail: hungy@unisa.ac.za

Supervisors:
Prof MC Cant
Email: cantmc@unisa.ac.za

Mrs C Erdis
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Dear respondent

You are invited to participate in an academic research study conducted by Ms Yu-ting Hung, a Master's student from the Department of Marketing and Retail Management at the University of South Africa. The purpose of this research is to investigate the website quality factors influencing online shopping in South Africa.

Please note the following:

- You were selected to participate in the study as you are 18 years and older, have access to the Internet and currently residing in South Africa.

- This study involves an **anonymous** survey. Your name will not appear on the questionnaire and the answers you give will be treated as strictly **confidential.**

- Your participation in this study is very important to the researcher. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.

- Please answer the questions in the attached questionnaire as completely and honestly as possible. This should not take more than **15 minutes** of your time.

- In completing the questionnaire, you are assisting the researcher to develop a better understanding of website quality factors influencing online shopping in South Africa.

- The results of this study will be used for academic purposes only.

- The research study was approved by the Bureau of Market Research (BMR) as well as the Ethical Clearance Committee at UNISA.

- Electronic copies of your responses will be stored by the researcher for a period of five years on a password protected computer, thereafter it will be deleted.

- If you would like to be informed of the final research findings or require any further information, please feel free to contact the researcher.

You also agree to the following:

- You have read and understand the information provided above.
- You have sufficient opportunity and contact details of researchers available to ask questions, if the need arises.
- You give your consent to participate in the study on a voluntary basis.
- You are aware that the findings of this study will be anonymously processed into the research report, a journal publication and/or a conference proceeding.
- You agree to the recording of your responses in a numeric data set.

Please make an X in the following box to indicate that you agree to participate in this study:

I agree to participate in this study:	

Dear respondent,

Thank you for your time and willingness to complete the following questionnaire. There are no correct or incorrect answers. We are merely interested in your personal opinion regarding the subject matter.

QUESTION 1

"Online shopping is the process a customer goes through to purchase products or services over the web. These include searching and browsing for products and services as well as buying them."

Do you shop online (ie search, browse or purchases products or services over the web)? *(Indicate with an (X) one option only).*

Response	
Yes	1
No	2

Yes → Please continue to question 2

No → Please continue to question 14

QUESTION 2

How often do you shop online (ie search, browse or purchases products or services over the web)? *(Indicate with an (X) one option only).*

Response	
I shop online at least once per day	1
I shop online at least once per week	2
I shop online at least once per month	3
I shop online at least once per year	4

QUESTION 3

"Searching in the online shopping process is when you look for specific products or services over the web that you want to buy online or offline."

Do you search online? *(Indicate with an (X) one option only).*

Response		
Yes		1
No		2

1 ——→ Please continue to question 5
2 ——→ Please continue to question 4

QUESTION 4 (when completed go to question 5)

Please explain why you do not **search** for products/services online.

QUESTION 5

"Browsing in the online shopping process is when you casually look at products or services over the web that you may or may not want to buy online and offline."

Do you browse online? *(Indicate with an (X) one option only).*

Response		
Yes		1
No		2

1 ——→ Please continue to question 7
2 ——→ Please continue to question 6

QUESTION 6 (when completed go to question 9)

Please explain why you do not **browse** for products/services online.

QUESTION 7

"Buying in the online shopping process is when you actually purchase products or services over the web."

Do you buy online? *(Indicate with an (X) __one__ option only).*

Response		
Yes		1
No		2

1 ⟶ Please continue to question 9

2 ⟶ Please continue to question 8

QUESTION 8 (when completed go to question 9)

Please explain why you do not __buy__ products/services online.

QUESTION 9

When shopping online, how much time (in percentages) do you approximately spend on each activity in the online shopping process listed below? (The total should add up to 100%)

Response	
Searching – looking for specific products/services that you are interested in (i.e. using a search engine)	1
Browsing - casually looking for products/services that you may or may not be interested in (i.e. just browsing from site to site without using a search engine)	2
Buying – purchasing products/services	3
Total	**100**

QUESTION 10

Which type of online shopper describes you **_best_**? _(Indicate with an **(X) one** option only)._

Response	
Searcher – you know what you want and you search online for specific products or services to buy online or offline (i.e. you need a fridge, you look for a fridge)	1
Browser – you have a goal which you are shopping for but do not know the specific product you would like to purchase so you browse online for products related to the goal (i.e. you need items for the house so you browse the home section)	2
Wanderer (window shopper) – you do not have a specific product or goal that you would like to purchase so you shop online without the intention of purchasing anything (i.e. you do not need anything but you shop online to see what is available)	3
Price hunter – you go online to look for products or services on special/discount to buy online or offline (i.e. you specifically look for products that are a bargain)	4
First timer – you are new to the online shopping (ie searching, browsing and buying over the web) process	5

QUESTION 11

Please read each statement carefully and indicate to what extent you agree or disagree with the statement.

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
11.1	A shopping site that is easy to use influences me to shop online.	1	2	3	4	5
11.2	A shopping site that is easy to navigate influences me to shop online.	1	2	3	4	5
11.3	A shopping site that provides trouble-free shopping influences me to shop online.	1	2	3	4	5
11.4	A shopping site that has a simple layout influences me to shop online.	1	2	3	4	5
11.5	A shopping site that is well presented (easy on the eyes) influences me to shop online.	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
11.6	A shopping site that is well organised influences me to shop online.	1	2	3	4	5
11.7	A shopping site that is available 24/7 influences me to shop online.	1	2	3	4	5
11.8	A shopping site that avoids downtime due to maintenance influences me to shop online.	1	2	3	4	5
11.9	A shopping site that helps with error recovery influences me to shop online (eg. when you need to refresh a page and your details are saved)	1	2	3	4	5
11.10	A shopping site that performs reliably influences me to shop online.	1	2	3	4	5
11.11	A shopping site that does what it is supposed to influences me to shop online.	1	2	3	4	5
11.12	A shopping site that provides a safe shopping environment influences me to shop online.	1	2	3	4	5
11.13	A shopping site that ensures the authenticity of the products/services influences me to shop online	1	2	3	4	5
11.14	A shopping site that adapts to changing consumer needs influences me to shop online.	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
11.15	A shopping site that adapts to different screen device sizes influences me to shop online.	1	2	3	4	5
11.16	A shopping site that adapts to different operating systems influences me to shop online.	1	2	3	4	5
11.17	A shopping site that adapts to different user system specifications influences me to shop online (eg. portrait or landscape view).	1	2	3	4	5
11.18	A shopping site that has a fast response time influences me to shop online.	1	2	3	4	5
11.19	A shopping site that operates at good constant speeds influences me to shop online.	1	2	3	4	5
11.20	A shopping site that has pages that load quickly influences me to shop online.	1	2	3	4	5
11.21	A shopping site that has images that load quickly influences me to shop online.	1	2	3	4	5
11.22	A shopping site that has links that open quickly influences me to shop online.	1	2	3	4	5
11.23	A shopping site that allows quick access to its services influences me to shop online.	1	2	3	4	5

QUESTION 12

Please read each statement carefully and indicate to what extent you agree or disagree with the statement.

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
12.1	A shopping site that suggests products/services based on my interests influences me to shop online.	1	2	3	4	5
12.2	A shopping site that suggests products/services I am likely to buy influences me to shop online.	1	2	3	4	5
12.3	A shopping site that suggests products/services based on my purchasing history influences me to shop online.	1	2	3	4	5
12.4	A shopping site that provides accurate recommendations as to what I am looking for influences me to shop online.	1	2	3	4	5
12.5	A shopping site that provides comprehensive information on their products/services influences me to shop online.	1	2	3	4	5
12.6	A shopping site that provides comprehensive information on their shopping process influences me to shop online.	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
12.7	A shopping site that provides comprehensive information about the company influences me to shop online.	1	2	3	4	5
12.8	A shopping site that provides all the relevant information I need influences me to shop online.	1	2	3	4	5
12.9	A shopping site that provides enough information so that I spend less time searching for more information influences me to shop online.	1	2	3	4	5
12.10	A shopping site that provides relevant information on their products/services influences me to shop online.	1	2	3	4	5
12.11	A shopping site that provides up-to-date information on their products/services influences me to shop online.	1	2	3	4	5
12.12	A shopping site that provides useful information on their products/services their influences me to shop online.	1	2	3	4	5
12.13	A shopping site that provides information that is easy to understand influences me to shop online.	1	2	3	4	5
12.14	A shopping site that provides clear instructions influences me to shop online.	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
12.15	A shopping site that provides information that is simple influences me to shop online.	1	2	3	4	5
12.16	A shopping site that provides information that is easy to read influences me to shop online.	1	2	3	4	5
12.17	A shopping site that provides information that is straight to the point influences me to shop online.	1	2	3	4	5
12.18	A shopping site that provides information that is clear in meaning influences me to shop online.	1	2	3	4	5
12.19	A shopping site that has secure methods of payment influences me to shop online.	1	2	3	4	5
12.20	A shopping site that protects my credit/debit card details influences me to shop online.	1	2	3	4	5
12.21	A shopping site that has privacy policies in place influences me to shop online.	1	2	3	4	5
12.22	A shopping site that protects my personal information influences me to shop online.	1	2	3	4	5
12.23	A shopping site that prevents unlawful use of my information influences me to shop online.	1	2	3	4	5

QUESTION 13

Please read each statement carefully and indicate to what extent you agree or disagree with the statement.

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
13.1	An online retailer that provides prompt services influences me to shop online.	1	2	3	4	5
13.2	An online retailer that provides assistance when I need it influences me to shop online.	1	2	3	4	5
13.3	An online retailer that provides guidance when I need it influences me to shop online.	1	2	3	4	5
13.4	An online retailer that is willing to help when I need it influences me to shop online.	1	2	3	4	5
13.5	An online retailer that provides accurate information when I need it influences me to shop online.	1	2	3	4	5
13.6	An online retailer that is trustworthy influences me to shop online.	1	2	3	4	5
13.7	An online retailer that goes out of their way to help me influences me to shop online.	1	2	3	4	5
13.8	An online retailer that has a good reputation influences me to shop online.	1	2	3	4	5
13.9	An online retailer that is linked to reputable businesses (eg eBucks and Discovery Miles) influences me to shop online.	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
13.10	An online retailer that I am confident in influences me to shop online.	1	2	3	4	5
13.11	An online retailer that is transparent (open and candid) influences me to shop online.	1	2	3	4	5
13.12	An online retailer that is empathetic towards my situation if something goes wrong during the shopping process, influences me to shop online.	1	2	3	4	5
13.13	An online retailer that provides individualised solutions to my problems experienced during the shopping process, influences me to shop online.	1	2	3	4	5
13.14	An online retailer that shows that they care about my situation if something goes wrong during the shopping process, influences me to shop online.	1	2	3	4	5
13.15	An online retailer that gives personalised responses instead of generic auto-replies influences me to shop online.	1	2	3	4	5
13.16	An online retailer that ensures accurate transactions influences me to shop online.	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
13.17	An online retailer that keeps accurate records of purchases influences me to shop online.	1	2	3	4	5
13.18	An online retailer that keeps to their fulfilment promises influences me to shop online.	1	2	3	4	5
13.19	An online retailer that performs their services right the first time influences me to shop online.	1	2	3	4	5
13.20	An online retailer that is effective in providing services influences me to shop online.	1	2	3	4	5
13.21	An online retailer that is efficient in providing services influences me to shop online.	1	2	3	4	5
13.22	An online retailer that follows up after purchases influences me to shop online.	1	2	3	4	5
13.23	An online retailer that follows up on abandoned purchases influences me to shop online.	1	2	3	4	5
13.24	An online retailer that encourages customer reviews influences me to shop online.	1	2	3	4	5
13.25	An online retailer that encourages product/service ratings influences me to shop online.	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
13.26	An online retailer that addresses issues if I am dissatisfied with the product/service, influences me to shop online.	1	2	3	4	5

QUESTION 14

Please give in detail reasons why you do not shop online (from question 3)?

QUESTION 15

Please indicate your gender? *(Indicate with an (X) one option only).*

Gender	
Female	1
Male	2

QUESTION 16

Please indicate your age group? *(Indicate with an (X) one option only).*

Age	
18 - 25	1
26 – 35	2
36 – 45	3
46 – 65	4

QUESTION 17

Please indicate where you currently reside? *(Indicate with an (X) __one__ option only).*

Province	
Eastern Cape	1
Free State	2
Gauteng	3
Kwa-Zulu Natal	4
Limpopo	5
Mpumalanga	6
North West	7
Northern Cape	8
Western Cape	9
Other	10
If other, please specify	

QUESTION 18 (Non-compulsory)

Please indicate your highest qualification? *(Indicate with an (X) __one__ option only)*.

Qualification	
Matric	1
Higher certificate	2
Diploma or Advanced Certificate	3
Bachelor's Degree	4
Postgrad Diploma	5
Honour's Degree	6
Master's Degree	7
Doctoral Degree	8
Other	9
If other, please specify	

QUESTION 19 (Non-compulsory)

Please indicate which employment status describes your situation **_best_**? *(Indicate with an (X) __one__ option only)*.

Employment status	
Self-employed	1
Permanently employed	2
Part time employed	3
Unemployed and looking for work	4
Unemployed and not looking for work	5
Home maker	6
Retired	7
Unable to work	8
Other If other, please specify	9

Thank you for your time and consideration

APPENDIX B

ADDITIONAL RESULTS ON NON-ONLINE SHOPPERS

Those respondents who indicated that they do not shop online (14.58% or 21) as presented in Table 15, chapter 5, were asked in question 14, an open-ended question, to provide detailed reasons as to why they do not shop online (see appendix A). Having examined the responses provided by the respondents, the main reasons that were identified are summarised in Table B1.

Table B1: Reasons for not shopping online (n=21)*

Reason	Responses		Percentage of cases
	N	Percent	
Delivery problems	2	9.09%	10.45%
Online safety issues	12	54.54%	63.22%
Never tried it	3	13.64%	15.82%
Like physical shopping	3	13.64%	15.82%
No credit card	2	9.09%	10.45%
Total	**22**	**100.00%**	**115.76%**

a. Dichotomy group tabulated at value 1.
* Dichotomous multiple response frequency analysis was conducted therefore percentages of cases may not equal 100% as this question was open-ended.

From Table B1 it is clear that the main reason for not shopping online is online safety issues (63.22%). The different explanations pertaining to online safety issues gathered from the respondents included Internet fraud involving credit cards, receiving substandard products and Internet scams. Other reasons for not shopping online included respondents having never tried online shopping (15.82%), respondents preferring to shop in physical stores (15.82%), respondents previously experiencing delivery problems (10.45%) or not owning credit cards (10.45%). These respondents were then only required to answer the demographic questions discussed in the next section.

Question 15 of the research instrument asked the respondents to indicate their gender. Figure B1 illustrates the gender of non-shopper respondents.
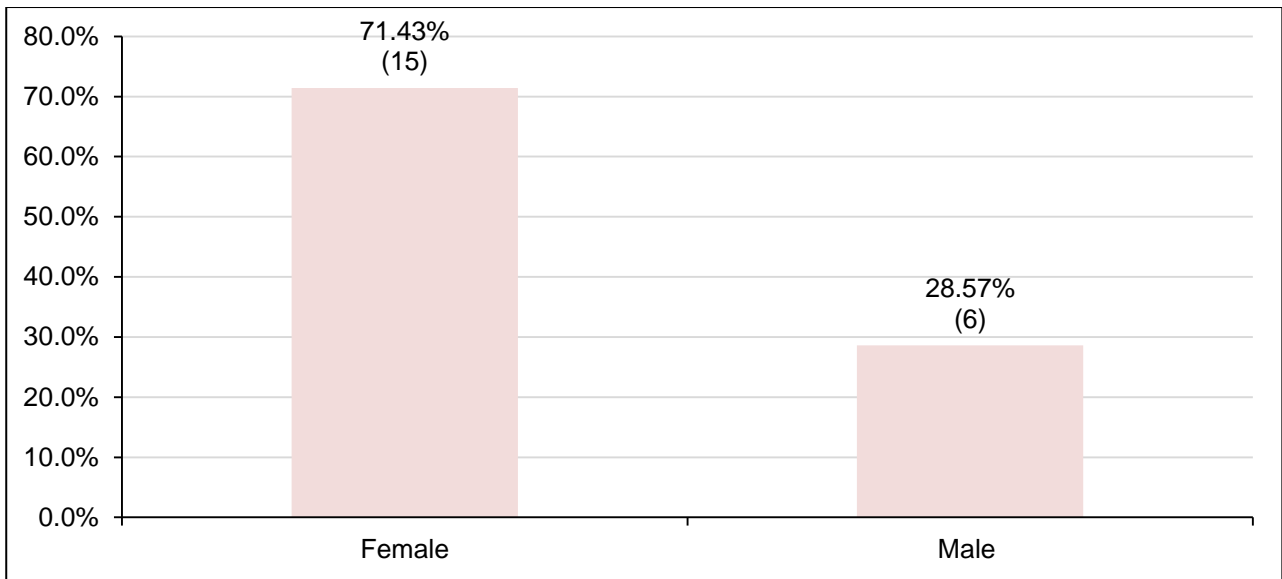
Figure B1:   Gender of respondents (n=21)

As illustrated in Figure B1, 71.43% (15) of the non-shopper respondents are female and the remaining 28.57% (6) are male. The next demographic variable investigated was age group.

Question 16 of the research instrument asked the respondents to indicate their age group. The results are illustrated in Figure B2.
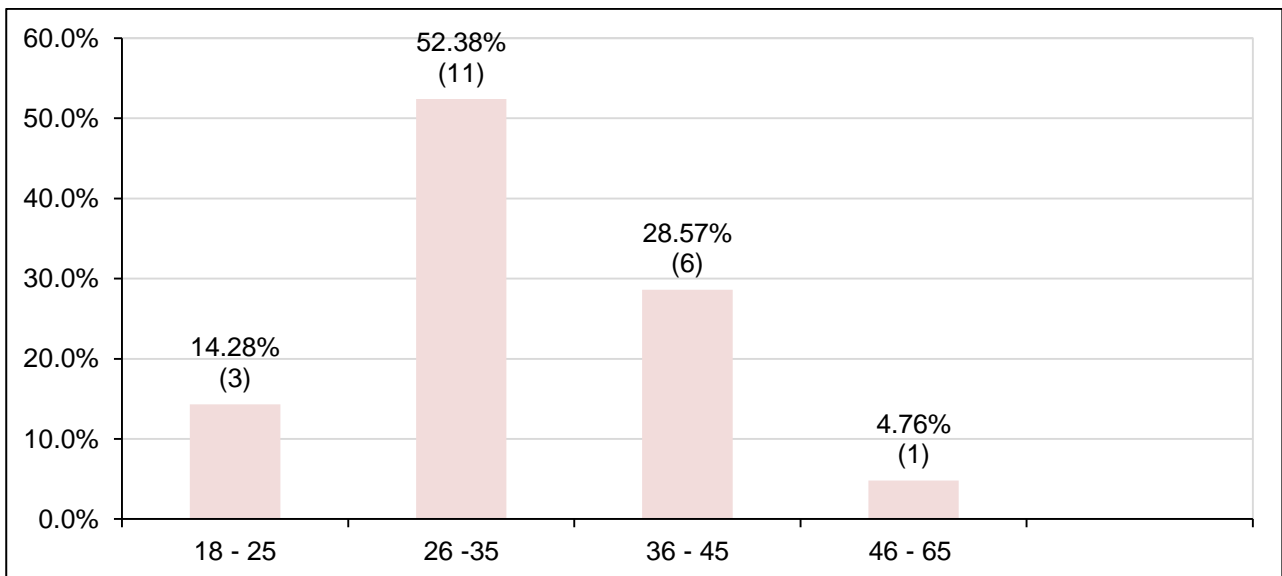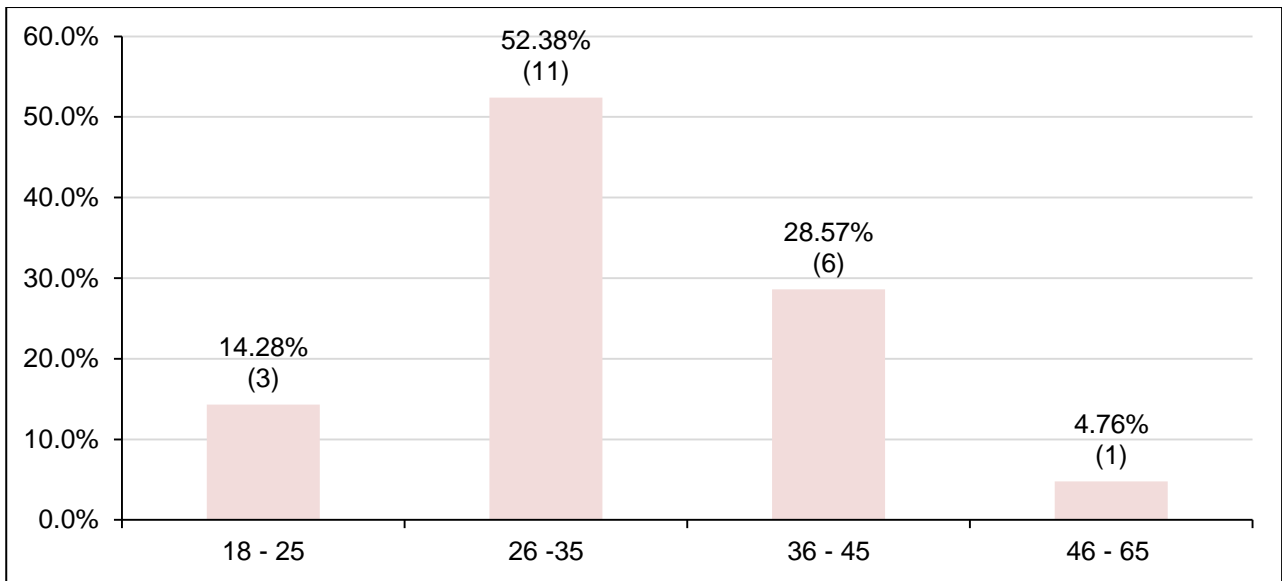
Figure B2:   Age group of respondents (n=21)

As illustrated in Figure B2, 52.38% (11) of the non-shopper respondents are between the ages of 26-35 year old, 28.57% (6) between the ages of 36-45 years old, 14.28% (3) between the ages of 18-25 years old and 4.76% (1) between the ages of 46-65 years old.

The next demographic variable investigated was the respondents' current residential location. The results are illustrated in Figure B3.
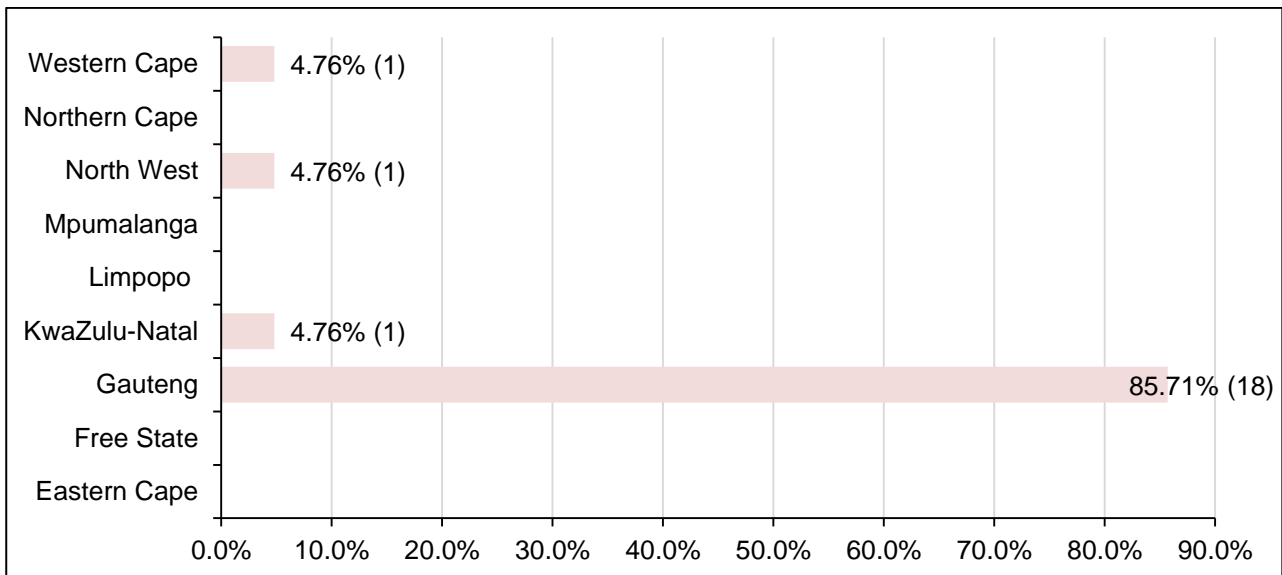
Figure B3:   Residential location (n=21)

Figure B3 indicates that 85.71% (18) of the non-shopper respondents currently reside in Gauteng. The remaining respondents currently reside in the Western Cape, North West and Kwazulu-Natal (4.76% or 1 respectively).

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The next demographic variable investigated was the respondents' highest qualification location. Figure B4 illustrates the results.
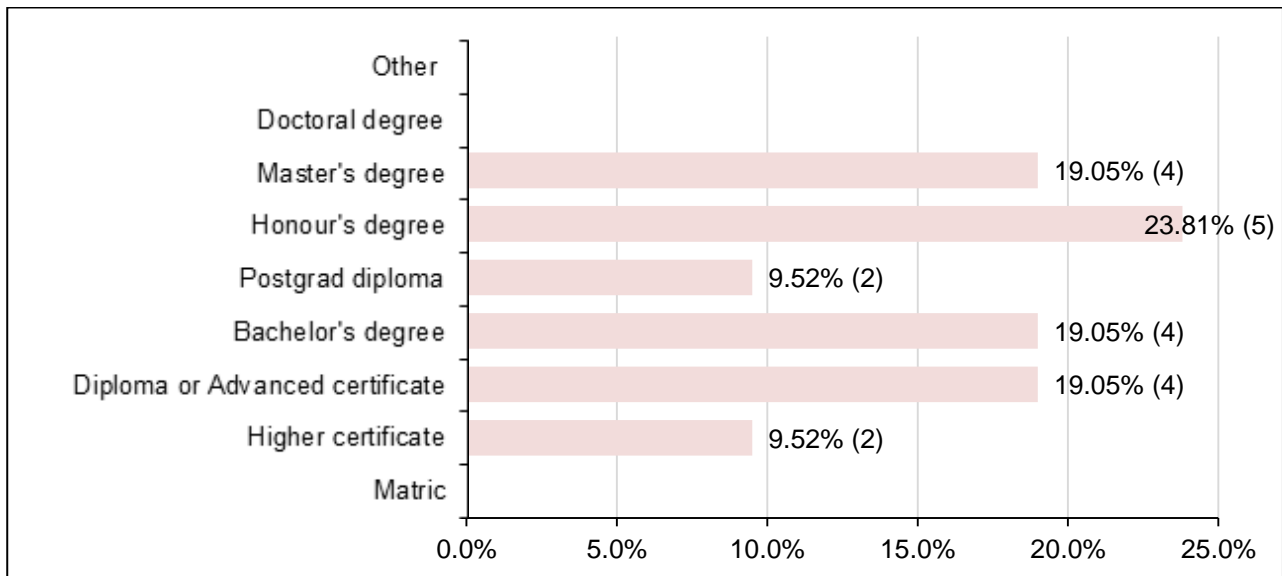
Figure B4:   Highest qualification (n=21)

Figure B4 indicates that 23.81% (5) of the non-shopper respondents have an honours degree, 19.05% (4) of the non-shopper respondents have a diploma or advanced certificate, Bachelor's degree and Master's degree respectively, and 9.52% (2) of the non-shopper respondents have a higher certificate or post-grad diploma respectively.

The last demographic variable investigated was the respondents' employment status. Figure B5 illustrates these results.
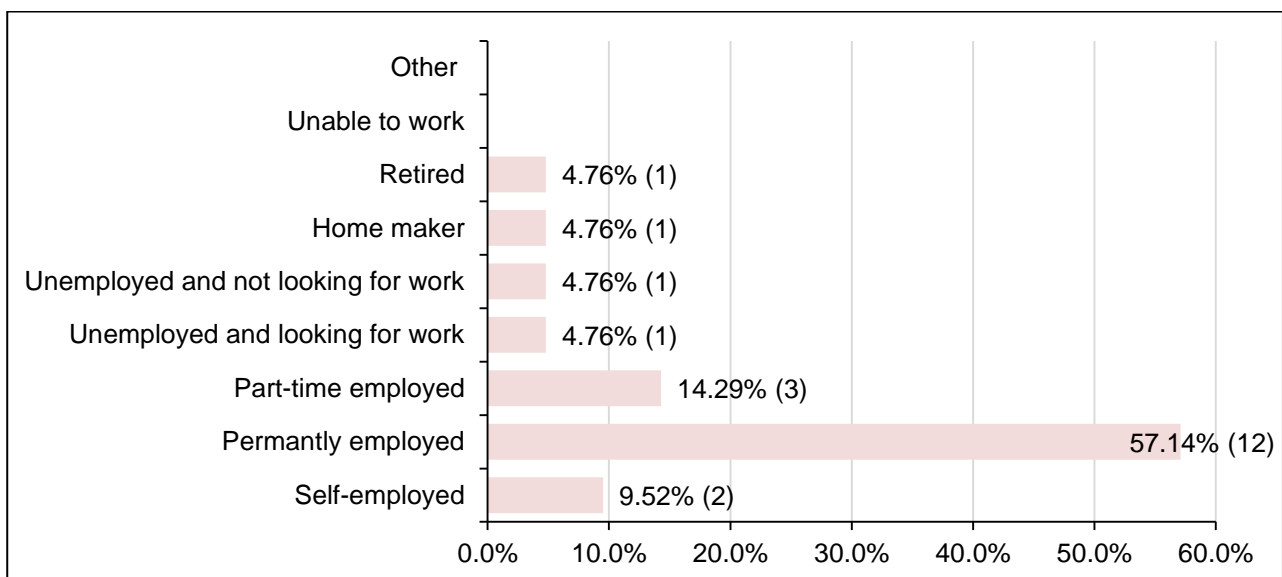
Figure B5:   Employment status (n=21)

Figure B5 indicates that 57.14% (12) of non-shopper respondents are permanently employed, 14.29% (3) are employed part-time, 9.52% (2) are self-employed and 4.76% (1) are retired, home maker, unemployed and not looking for work and unemployed and looking for work.

As discussed in section 5.4.5, the Pearson chi-square test of independence was performed to examine if there are significant relationships between whether respondents are online shoppers or non-online shoppers with demographic variables, namely gender, age group, province, highest qualification and employment status. The results can be found in appendix D.

APPENDIX C

ADDITIONAL DESCRIPTIVE STATISTICS

As discussed in chapter 4, there are a number of analyses used for descriptive statistics in order to describe data from a sample by measuring the central tendency or dispersions (Hair et al., 2006:495). According to McDaniel and Gates (2013:458) measures of central tendency examine the mean, median and mode whereas the measures of dispersion include the standard deviation, variance and range. The mean and standard deviation were discussed in chapter 5. The other descriptive analyses, namely the mean, median, mode, variance and range are presented in this annexure.

The median refers to the midpoint of the distribution whereas the mode is the most frequently occurring value (Cooper & Schindler, 2011:425-426). The range is the distance between the smallest and largest value of a frequency distribution (Zikmund & Babin, 2010:445). Variance refers to the observations being spread around the mean and the larger the variance the more widely spread the data is around the mean (Asset Analysis, n.d.)

Table C1: Additional descriptive statistics for system quality factor usability (n=123)

N	Valid	123
	Missing	21
Median		4.3333
Mode		5.00
Variance		.341
Range		2.67
Minimum		2.33
Maximum		5.00

Table C2: Additional descriptive statistics for system quality factor availability (n=123)

N	Valid	123
	Missing	21
Median		4.0000
Mode		4.00
Variance		.464
Range		2.67
Minimum		2.33
Maximum		5.00

Table C3: Additional descriptive statistics for system quality factor reliability (n=123)

N	Valid	123
	Missing	21
Median		4.5000
Mode		5.00
Variance		.226
Range		2.00
Minimum		3.00
Maximum		5.00

Table C4: Additional descriptive statistics for system quality factor adaptability (n=123)

N	Valid	123
	Missing	21
Median		4.0000
Mode		5.00
Variance		.523
Range		3.00
Minimum		2.00
Maximum		5.00

Table C5: Additional descriptive statistics for system quality factor response time (n=123)

N	Valid	123
	Missing	21
Median		4.3333
Mode		5.00
Variance		.328
Range		2.00
Minimum		3.00
Maximum		5.00

Table C6: Additional descriptive statistics for information quality factor personalisation (n=123)

N	Valid	123
	Missing	21
Median		3.7500
Mode		4.00
Variance		.712
Range		4.00
Minimum		1.00
Maximum		5.00

Table C7: Additional descriptive statistics for information quality factor completeness (n=123)

N	Valid	123
	Missing	21
Median		4.0000
Mode		4.00
Variance		.420
Range		2.67
Minimum		2.33
Maximum		5.00

Table C8: Additional descriptive statistics for information quality factor relevance (n=123)

N	Valid	123
	Missing	21
Median		4.2000
Mode		4.00
Variance		.283
Range		2.00
Minimum		3.00
Maximum		5.00

Table C9: Additional descriptive statistics for information quality factor ease of understanding (n=123)

N	Valid	123
	Missing	21
Median		4.1667
Mode		4.00
Variance		.371
Range		2.33
Minimum		2.67
Maximum		5.00

Table C10: Additional descriptive statistics for information quality factor secureness (n=123)

N	Valid	123
	Missing	21
Median		5.0000
Mode		5.00
Variance		.244
Range		2.20
Minimum		2.80
Maximum		5.00

Table C11: Additional descriptive statistics for service quality factor responsiveness (n=123)

N	Valid	123
	Missing	21
Median		4.2000
Mode		5.00
Variance		.336
Range		2.60
Minimum		2.40
Maximum		5.00

Table C12: Additional descriptive statistics for service quality factor assurance (n=123)

N	Valid	123
	Missing	21
Median		4.3333
Mode		5.00
Variance		.253
Range		2.00
Minimum		3.00
Maximum		5.00

Table C13: Additional descriptive statistics for service quality factor empathy (n=123)

N	Valid	123
	Missing	21
Median		4.2500
Mode		4.00
Variance		.376
Range		2.75
Minimum		2.25
Maximum		5.00

Table C14: Additional descriptive statistics for service quality factor reliability (n=123)

N	Valid	123
	Missing	21
Median		4.5000
Mode		5.00
Variance		.301
Range		2.17
Minimum		2.83
Maximum		5.00

Table C15: Additional descriptive statistics for service quality factor follow-up services (n=123)

N	Valid	123
	Missing	21
Median		3.8000
Mode		4.00
Variance		.470
Range		3.60
Minimum		1.40
Maximum		5.00

APPENDIX D
CHI-SQUARE STATISTICS

The chi-square test for independence determines whether two categorical variables are related or not by calculating the probability value, that is the p-value (Wiid & Diggines, 2013:275). According Wiid and Diggines (2013:275) a p-value lower smaller than 0.05 indicates statistical significance. The different hypotheses tested in the following section aim to gain a better understanding of this research study.

Ho = there is no relationship between gender and online shopper or non-shopper

Table D1 provides the cross-tabulation results of gender and whether respondents are online shoppers or non-online shoppers.

Table D1: **Cross-tabulation: Gender vs online shopper or non-online shopper (n=144)**

		Do you shop online?		Total
		Yes	No	
Gender	Female	67.5%	71.4%	68.1%
	Male	32.5%	28.6%	31.9%
Total		100.0%	100.0%	100.0%

Table D2 provides the Chi-square results of gender and whether respondents are online shoppers or non-online shoppers.

Table D2: **Chi-Square Tests: Gender vs online shopper or non-online shopper (n=144)**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	0.129[a]	1	0.720		
Continuity Correction	0.011	1	0.916		
Likelihood Ratio	0.131	1	0.718		
Fisher's Exact Test				0.805	0.467
Linear-by-Linear Association	0.128	1	0.721		
N of Valid Cases	0144				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.71.

b. Computed only for a 2x2 table

The null hypothesis of no relationship between gender and whether the respondent is an online shopper or not has been accepted with X^2 (1, N = 144) = 0.129, p = 0.72.

Ho = there is no relationship between gender and online shopper or non-shopper

Table D3 summarises the cross-tabulation results of age and whether respondents are online shoppers or non-online shoppers.

Table D3: Cross-tabulation: Age group vs online shopper or non-online shopper (n=144)

		Do you shop online?		
		Yes	No	Total
Age Group	18 - 25	26.8%	14.3%	25.0%
	26 – 35	57.7%	52.4%	56.9%
	36 – 45	7.3%	28.6%	10.4%
	46 – 65	8.1%	4.8%	7.6%
Total		100.0%	100.0%	100.0%

Table D4 provides the Chi-square results of age and whether respondents are online shoppers or non-online shoppers.

Table D4: Chi-Square Tests: Age group vs online shopper or non-online shopper (n=144)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.264[a]	3	.026
Likelihood Ratio	7.447	3	.059
Linear-by-Linear Association	1.977	1	.160
N of Valid Cases	144		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 1.60.

The null hypothesis has been rejected with X^2 (3, N = 144) = 9.264, p =0.026. The alternative hypothesis of a significant relationship between age group and whether the respondent is shopping online or not was therefore accepted.

Ho = there is no relationship between province and online shoppers or non-online shoppers

Table D5 provides the cross-tabulation results of province and whether respondents are online shoppers or non-online shoppers.

Table D5: Cross-tabulation: Province vs online shopper or non-online shopper (n=144)

		Do you shop online?		
		Yes	No	Total
Province	Eastern Cape	0.8%		0.7%
	Gauteng	82.9%	85.7%	83.3%
	Kwazulu Natal	2.4%	4.8%	2.8%
	Mpumalanga	1.6%		1.4%
	North West	0.8%	4.8%	1.4%
	Western Cape	11.4%	4.8%	10.4%
Total		100.0%	100.0%	100.0%

Table D6 provides the Chi-square results of age and whether respondents are online shoppers or non-online shoppers.

Table D6: Chi-Square Tests: Province vs online shopper or non-online shopper (n=144)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.646[a]	5	.601
Likelihood Ratio	3.570	5	.613
Linear-by-Linear Association	.305	1	.581
N of Valid Cases	144		

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is .15.

The null hypothesis of no relationship between the province and whether respondents are online shoppers or non-online shoppers has been accepted with X^2 (5, N = 144) = 3.646, p = 0.601.

Ho = there is no relationship between highest qualifications and online shoppers or non-online shoppers

Table D7 summarises the cross-tabulation results of highest qualification and whether respondents are online shoppers or non-online shoppers.

Table D7: Cross-tabulation: Highest qualification vs online shopper or non-online shopper (n=144)

| | | Do you shop online? | | |
		Yes	No	Total
Highest Qualification	Matric	9.8%		8.3%
	Higher certificate	0.8%	9.5%	2.1%
	Diploma or Advanced Certificate	12.2%	19.0%	13.2%
	Bachelor's Degree	26.0%	19.0%	25.0%
	Postgrad Diploma	1.6%	9.5%	2.8%
	Honour's Degree	32.5%	23.8%	31.3%
	Master's Degree	15.4%	19.0%	16.0%
	Doctoral Degree	0.8%		0.7%
	Airline transport licence	0.8%		0.7%
Total		100.0%	100.0%	100.0%

Table D8 provides the Chi-square results of highest qualification and whether respondents are online shoppers or non-online shoppers

Table D8: Chi-Square Tests: Highest qualification vs online shopper or non-online shopper (n=144)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.519[a]	8	.069
Likelihood Ratio	12.953	8	.113
Linear-by-Linear Association	.002	1	.966
N of Valid Cases	144		

a. 11 cells (61.1%) have expected count less than 5. The minimum expected count is .15.

The null hypothesis of no relationship between the highest qualification with regard to whether respondents are online shoppers or non-online shoppers has been accepted with X^2 (8, N = 144) = 14.519, p =0.069.

Ho = there is no relationship between employment status and online shoppers or non-online shoppers

Table D9 summarises the Chi-square results of employment status and whether respondents are online shoppers or non-online shoppers

Table D9: Cross-tabulation: Employment status vs online shopper or non-online shopper (n=144)

		Do you shop online?		Total
		Yes	No	
Employment Status	Self-employed	15.4%	9.5%	14.6%
	Permanently employed	70.7%	57.1%	68.8%
	Part time employed	3.3%	14.3%	4.9%
	Unemployed and looking for work	4.9%	4.8%	4.9%
	Unemployed and not looking for work	0.8%	4.8%	1.4%
	Home maker		4.8%	0.7%
	Retired		4.8%	0.7%
	Student	4.1%		3.5%
	Volunteer	0.8%		0.7%
Total		100.0%	100.0%	100.0%

Table D10 provides the Chi-square results of employment status and whether respondents are online shoppers or non-online shoppers

Table D10: Chi-Square Tests: Employment status vs online shopper or non-online shopper (n=144)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.159[a]	8	.010
Likelihood Ratio	15.227	8	.055
Linear-by-Linear Association	.525	1	.469
N of Valid Cases	144		

a. 13 cells (72.2%) have expected count less than 5. The minimum expected count is .15.

The null hypothesis of no relationship between employment status with regard to whether respondents are online shoppers or non-online shoppers has been rejected with X^2 (8, N = 144) = 20.159, p =0.01. The alternative hypothesis of a significant relationship between employment status and whether the respondent is shopping online or not was therefore accepted.

APPENDIX E

H-TEST ANALYSIS

The Kruskal-Wallis test is a one-way analysis of variance by ranks. Data are prepared by means of converting ratings and scores to ranks for each one of the observations that is being evaluated. This test is a nonparametric test and is used to compare the medians of three or more independent samples (Cooper & Schindler, 2011:500). A high p-value (>0.05) indicates that the sample provides enough evidence to accept the null hypothesis (Frost, 2014). The different hypotheses tested in the following section aim to gain a better understanding of this research study.

Ho = there is no significant difference between the types of online shoppers and system quality factors

For this analysis the non-parametric Kruskal-Wallis H test was used to determine if the mean ranks of the agreement ratings of the influence of system quality factors for online shopping are the same for the different online shopper types. The index for each construct was used in the analysis, and the results are illustrated in Figure E1.
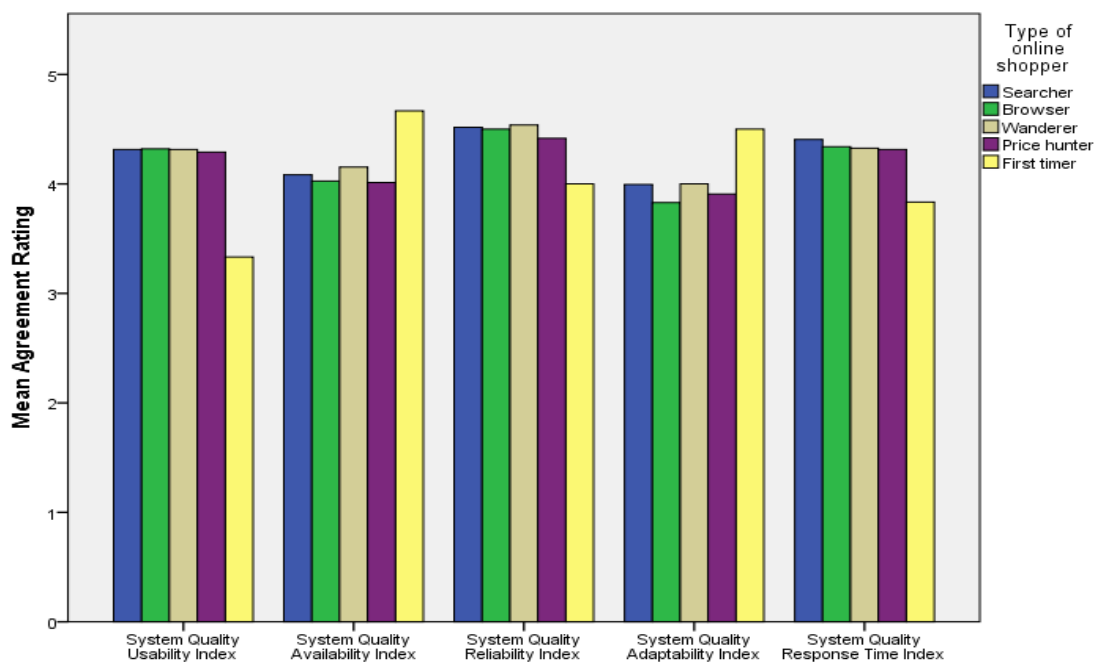

Figure E1: Mean value of the index for each of the system quality constructs for each type of online shopper

The results were as follows:

- The mean rank of the index of agreement ratings of the influence of system quality - usability do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=2.643, 4 d.f., P=0.619).

- The mean rank of the index of agreement ratings of the influence of system quality - availability do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=1.439, 4 d.f., P=0.837).

- The mean rank of the index of agreement ratings of the influence of system quality - reliability do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=2.162, 4 d.f., P=0.706).

- The mean rank of the index of agreement ratings of the influence of system quality - adaptability do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=2.071, 4 d.f., P=0.723).

- The mean rank of the index of agreement ratings of the influence of system quality - response time do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=2.244, 4 d.f., P=0.691).

As all the p-values are high (>0.05) it can be concluded that no significant difference was found in the ratings of importance of system quality factors for online shopping by the different types of online shoppers.

Ho = there is no significant difference between the types of online shoppers and information quality factors

For this analysis the non-parametric Kruskal-Wallis H test was used to determine if the mean ranks of the agreement ratings of the influence of information quality factors for online shopping are the same for the different online shopper types. The index for each construct was used in the analysis and the results are illustrated in Figure E2.
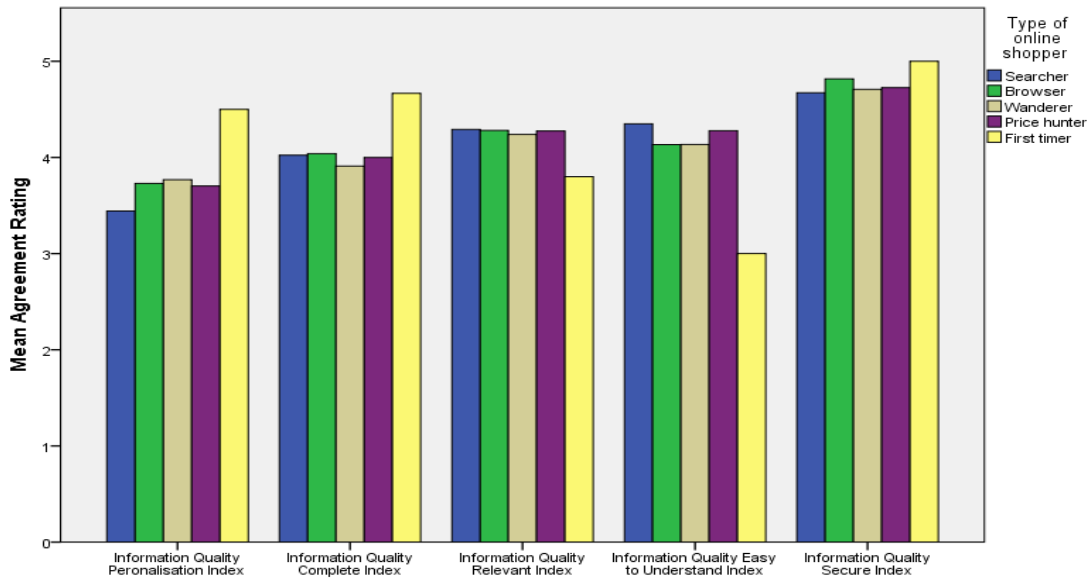
Figure E2: Mean value of the index for each of the information quality constructs for each type of online shopper

The results were as follows:

- The mean rank of the index of agreement ratings of the influence of information quality - personalisation do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=5.723, 4 d.f., P=0.221).

- The mean rank of the index of agreement ratings of the influence of information quality - completeness do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=1.513, 4 d.f., P=0.824).

- The mean rank of the index of agreement ratings of the influence of information quality - relevance do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=1.422, 4 d.f., P=0.840).

- The mean rank of the index of agreement ratings of the influence of information quality – ease of understanding do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=14.684, 4 d.f., P=0.321).

- The mean rank of the index of agreement ratings of the influence of information quality - secureness do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=0.673, 4 d.f., P=0.955).

As all the p-values are high (>0.05) it can be concluded that no significant difference was found in the ratings of influence of information quality factors for online shopping by the different types of online shoppers.

Ho = there is no significant difference between the types of online shoppers and service quality factors

For this analysis the non-parametric Kruskal-Wallis H test was used to determine if the mean ranks of the agreement ratings of the influence of service quality factors for online shopping are the same for the different online shopper types. The index for each construct was used in the analysis, and the results are depicted in Figure E3.
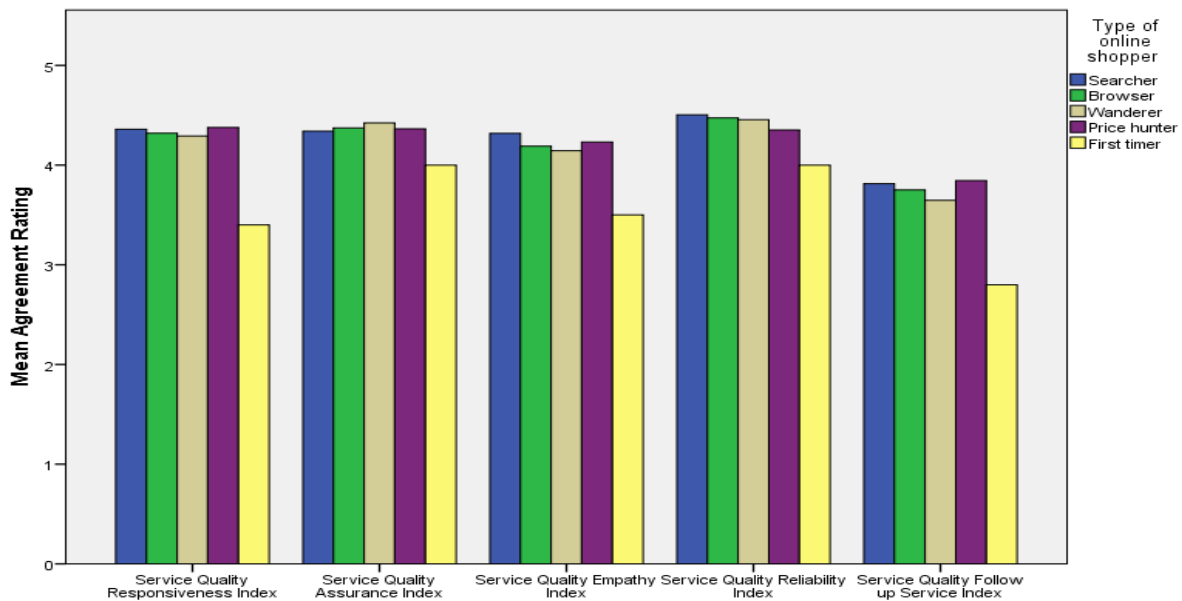

Figure E3: Mean value of the index for each of the service quality constructs for each type of online shopper

The results were as follows:

- The mean rank of the index of agreement ratings of the influence of service quality - responsiveness do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=02.683, 4 d.f., P=0.612).
- The mean rank of the index of agreement ratings of the influence of service quality - assurance do not differ significantly between searchers, browsers, wanderers, price hunter and first timers (H=1.218, 4 d.f., P=0.875).
- The mean rank of the index of agreement ratings of the influence of service quality - empathy do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=3.007 4 d.f., P=0.557).

- The mean rank of the index of agreement ratings of the influence of service quality – reliability do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=2.047, 4 d.f., P=0.727).
- The mean rank of the index of agreement ratings of the influence of service quality – follow-up service do not differ significantly between searchers, browsers, wanderers, price hunters and first timers (H=2.953, 4 d.f., P=0.566).

As all the p-values are high (>0.05) meaning it can be concluded that no significant difference was found in the ratings of influence of service quality factors for online shopping by the different types of online shoppers.