



Cape Peninsula
University of Technology

**MEASUREMENT OF THE USABILITY OF WEB-BASED HOTEL RESERVATION
SYSTEMS**

by

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DECLARATION

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ABSTRACT

The aim of this research project was to determine what the degree of usability is of a sample of online reservation systems of Cape Town hotels.

The literature has indicated that the main aim of website usability is to make the engagement process with a website a more efficient and enjoyable experience. Researchers noted that well designed, high-quality websites, with grammatically accurate content, create a trustworthy online presence. User-friendly sites also attract far more traffic. Previous research has also shown that a loss of potential sales is possible due to users being unable to find what they want, if poor website design has been implemented. Loss of potential income through repeat visits is also a possibility, due to a negative user experience.

The research instrument that was employed in this research is usability testing. It is a technique used to evaluate product development that incorporates user feedback in an attempt to create instruments and products that meet user needs, and to decrease costs. The research focused on Internet-based hotel reservation systems. Only the usability was measured. Both standard approaches were used in this research project, in a combined quantitative and qualitative research design.

In conclusion, the purpose of this research was to determine the degree of usability of specified Cape Town hotel online reservation systems. The outcomes of this study indicated interesting patterns in that reservation systems met user requirements more often than expected. However, the figures of acceptability obtained were still below the generally accepted norms for usability. The amount of time spent to complete a booking also decreased, as users worked on more than one reservation system.

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DEDICATION

This research is dedicated to my late father **Mandla Raymond Shasha** and my grandparents, who taught me that no one can ever take your dreams away once you believe in yourself. They also told me that education is the most powerful weapon which can be used to unlock the golden door and change the world. Special thanks to **Nokwanda Vivian Shasha, Thembekile John Shasha,** and **Mqengqeni Hamilton Filana.**

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GLOSSARY

Booking system – also referred to as TDS (Travel Distribution System), is a computer-based system used by hotel management to store and retrieve information about lodging facilities and tour products/tour product options, and it facilitates transactions for booking these.

Evaluation – defined as the methodical application of social study procedures for assessing the conceptualisation, design, implementation, and utility of programs.

Epistemology – the theory of knowledge concerning sources and scope of knowledge and how notions relate to each other, and further deals with ambiguity in knowledge claims.

Hotel – defined as an establishment/place that provides temporary overnight space, meals and other services for the public, but especially for tourists.

Internet – the interconnection of computers across the globe that can provide instant and simultaneous connections and access to virtually unlimited amounts of information.

Measurement – is the process used to determine the magnitude of a quantity, normally express in a given unit of measurement.

Online system – it is a system where data is entered through computer applications into a device (typically a computer station or mobile device). A user can interact with an Internet-based booking system through the device.

Ontology – is a formal, explicit specification of knowledge as a set of concepts contained in a category, and the relationship among those concepts, objects, and even other entities that are assumed to be in an area of interest. Also, the relationships that can exist between them are also studied.

Search engine – a service that allows an Internet user to enter a keyword or phrase to search for information. The search engine displays its findings on its result page(s).

SEO – search engine optimisation is the use of various techniques when designing a webpage, in order for that webpage to attain a high ranking and greater visibility in the listing of search results produced by a search engine algorithm.

SERP – search engine results page. It is the webpage displayed on a user screen, by a search engine in response to a user-generated search query using a specific keyword or key phrase. The results page contains listings of items such as webpages, videos, maps, books and images. A SERP consists of three components; namely the sponsored links, search result area (natural listing), and the assistive information area. Each result returned from the search query comprises of the title, description information of the subject title, and the Uniform Resource Locator (URL).

Triangulation – the application of various research methods in order to increase the result accuracy through factual analysis, conclusion and recommendation, and to further achieve a high level of reliability and valid outcomes.

Usability – in the context of this study, usability pertains to the ability of an end-user to perform various applicable actions on a webpage without experiencing frustration, by providing a positive and logical experience, together with easy-to-follow navigation.

User – generally refers to a human (regardless of the level of Internet knowledge) who uses the Internet for different reasons - research, buying and selling, games, chatting and other commercial and non-commercial services.

Web-based – an application that is usable over a network only with an Internet connection using HTTP as communication protocol, is web-based.

Webpage – an HTML document that forms part of a website, mostly with descriptive content and images which together define the topic. A webpage may contain a mixture of text, links, graphics, videos, and other elements.

Website – it is a collection of webpages which all have a common thread or topic, such as a company, brand, product or person, or any other subject. The first page is usually called the homepage. It then acts like an index, giving an indication of the content on the site.

RESEARCH OUTPUTS

The author has produced the following research outputs during this study.

Output Type	Authors	Title	Institution	Status
Working Paper	Shasha, ZT and Weideman, M	Cape Town hotel reservation system usability	M&D Conference Paper at South African Institute of Computer Scientists and Information Technologists (SAICSIT) 2012, Pretoria, South Africa.	Published 01 October 2012. https://cput.academia.edu/MeliusWeideman
Poster	Shasha, ZT and Weideman, M	User testing of Cape Town hotel reservation systems usability	15th Annual Conference on World Wide Web Applications.	Published September 2013. www.zaw3.co.za 1 st Prize winner.
Article	Shasha, ZT and Weideman, M	The usability measurement of web-based hotel reservation systems	International Journal of Hospitality Management (International journal, ISI listed).	Submitted for review on 14 April 2016.
Conference Paper	Shasha, ZT and Weideman, M	Western vs Eastern interfaces: The usability of hotel reservation systems	M&D Conference Paper at South African Institute of Computer Scientists and Information Technologists (SAICSIT) 2016, University of Johannesburg, South Africa.	Submitted for review on 19 June 2016.
Conference Paper	Shasha, ZT and Weideman, M	The usability measurement of web-based hotel reservation systems	1st TESA International Conference 2016, Cape Peninsula University of Technology South Africa	Submitted for review on 04 August 2016.

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CHAPTER ONE

BACKGROUND AND RESEARCH PROBLEM

1.1 Introduction

During the past two decades, the expansion of public access to the Internet has strengthened the practice of doing business online. It has been focussed on investors and executives in many industries. The Internet, especially the search function, has had a great impact on the hotel industry (Buhalis and Law, 2008). The increase in the number of users of hotel online reservation systems, and the increased rate of hotel online transactions, provide clear evidence of the popularity of these systems (Law, Qi and Buhalis, 2010).

Many hotel companies use the Internet as an instrument to generate revenue, and competition in the hotel industry is at a high level (Buhalis, 2004). However, the potential competitive advantages transform into real advantages only if the websites are well designed. Buhalis (2004) indicates that information ease of use and completeness are important in the determination of hotel website usability.

Since websites are a major contributing factor to the high growth rate of e-commerce in the tourism industry, the hotel sector needs to focus on their websites to gain a competitive advantage. This could be done by ensuring top quality design of their websites (Yu, 2008). Research has shown that usable websites are more likely to draw visits and business from users (Shchiglik and Barnes, 2004). This research will focus on the measurement of the usability of Cape Town web-based hotel booking systems and will provide Web developers and managers with an understanding of website usability.

1.2 The Internet

According to Lawrie (1997), the first ever South African Internet connection was a dial-up link in 1988. It was established in Grahamstown between Rhodes University and a private home in Portland, Oregon, United States of America. A year after this took place, other South African Higher Education Institutions, such as the University of Cape Town in Cape Town and the University of Natal in Durban, commenced using email communications. The first dial-up link was replaced with a full connection to the Internet in 1991 and worked on rented landlines. Commercial Internet access for business and private use became available in late 1993 (Lawrie, 1997).

1.3 Usability

Nielsen (2012) claims that usability is a quality attribute that assesses the ease of learnability of user interfaces. Rouse (2005) agrees that “usability is the measure of a product's potential to accomplish the goals of the user”. The author further refers to usability as a method for improving ease of use of a website, and identified five quality components that define usability:

- Efficiency - how much time does the user spend learning the design when performing tasks?
- Errors - how often do users make errors and recover from the errors?
- Learnable - how easy is it for users to achieve basic tasks especially when is it their first time encountering these designs?
- Memorable - how easily can users re-establish proficiency, for example when the user returns to the website after some time?
- Satisfaction - how enjoyable is the website to a user during a working session?

According to Nielsen (2012) there are some other quality attributes which can play a role - a key one being usefulness, which refers to the functionality of the design. Utility and usability are equally important. Together they determine whether or not something is useful. If something is easy to use it is of little importance if it is not what the user wants. It is also meaningless if the system can hypothetically do what the user wants, but the user is unable to utilise it appropriately. User testing can be implemented to study a design's utility, using the same user research methods that improve usability (Nielsen, 2012). Usability testing can also be done to determine unique needs of certain user groups (Chelule, Herselman, Van Greunen, 2010).

1.4 Hotel Reservation Systems

A CRS (Central Reservation System) is an instrument used to reach the global and Internet distribution systems, from one single system (Yahoo!, 2014). According to Sathwara (2010), a CRS is a computerised booking system which stores and distributes information of a hotel on the Web. It also helps hotel managers to manage their marketing and sales online, permitting them to upload their availabilities and rates in order to be noticed by various sales channels based on that CRS. The online travel agencies, as well as the conference travel agencies, may be included as some of these sales channels (Sathwara, 2010).

1.5 Background and the research problem

Website usability refers to the ease with which a user can interact with an interface to accomplish defined objectives. Usability is incorporated into a website by satisfying the following design goals: functional accuracy, organised interface, ease of use, simple to remember, tolerance of errors and whether or not it is subjectively pleasing. Poor website design could result in loss of potential sales because users are unable to find what they are looking for. A further result could be a reduction in repeat visits as a result of an initial negative experience (Coniffer, 2000). Van der Merwe and Bekker (2003) noted that websites which do not offer a positive experience lose potential customers, because users take a decision that it is simpler and easier to visit the physical store, or an alternative website. An example could be the use of Computicket or a travel agent, rather than purchasing their product online. Kearney (2001) showed that a large number of users (82%) attempted to purchase goods online but eventually terminated their session as a result of the poor design and usability of websites.

A hotel's image has become more important than a shop front (Liang and Law, 2003). A perception exists that many hotels do not have sufficient knowledge to create a usable website. Some of the information on their websites is irrelevant, or it is arranged in an illogical order. Several websites in the hotel industry are not updated daily and the outdated information may be harmful to the image of hotels (Chung and Law, 2003). Jeong, Oh, and Gregoire (2003) claimed that maintaining and developing an effective website is critical to business success. Some hotels are self-publishing reviews about their own institutions, providing very positive information. This could increase bookings over the short and medium term, but could eventually lead to a low perceived value by users. It could also produce more negative reviews, which in turn results in the hotel's image being tarnished in the long-term (Muller, 2011). However, the value of user-generated content through reviews cannot be ignored (Herrero, San Martin, and Hernández, 2015).

Stringam and Gerdes (2010) carried out research regarding the effect of usability, or lack thereof, of graphic images on hotel websites. This study also confirmed the importance of a high level of usability on this type of website. Alvaro and Victor (2009) proved that quality, or lack thereof, can play a role in attracting paying clients to hotels. The importance of research on hotel interfaces was confirmed (Srikanth and Kutay, 2009) in a study carried out on the difference between single screen and multi-screen

booking interfaces. The findings suggested that the general quality of hotel booking websites is low. Other research (Wei, Cheung, and Law, 2010) on online hotel booking systems has proven that user demographics need to be considered in the design of these systems. Ignoring this factor could lead to a loss of income because of fewer bookings. This confirms the importance of proper design and usability considerations in hotel booking systems.

Based on this prior research, it has become clear that the research problem is a perceived *lack of usability of online hotel booking systems - this could deter potential clients from spending money at hotels.*

1.5.1 Research question

Mizrachi (2010) claims that the booking process of hotel rooms, flight tickets, and car rentals form the centre of eTourism. For that reason, the online reservation systems have to be usable, friendly, easy to learn and understand, and reliable. Assawy's (2005) study focused on website usability and showed that severe usability problems with data quality, and interface quality negatively affect the purchase and the revisit intention of website users. The author identified some of the practical tools and activities for: increasing users' perceived contentment, assisting with purchase intention, potential relationship building, exchange connections with local points of interest, shorter and simpler pathways to leisure breaks, greater depth of information for room service and pricing, providing proactive interfaces, and preventing the user from using third party reservation systems. The research question was also based on the work done by Onwuegbuzie and Leech (2006).

It has become clear that the main research question is:

- To what degree do users of hotel online reservation systems find these systems to be usable?

1.5.2 Research sub-questions

The following were identified as sub-questions related to the research problem and formed the backbone of the research:

- Does the sample of hotel websites provide the right content and are the online reservation systems usable?
- How much time do hotel website users spend on reservation systems?
- What are the usability impediments on hotel website reservation systems?

1.5.3 Research objectives

The following are objectives for this research study:

- To determine to what degree hotel online reservation systems are usable.
- To determine how much time website users spend making an online reservation.
- To identify the usability impediments on hotel website reservation systems.

The purpose of this research was to determine the degree of usability in specified Cape Town hotel online reservation systems.

The research instrument that was employed is usability testing. It is a technique used to evaluate product development that incorporates direct user feedback in order to decrease costs and create products and instruments that meet user needs. Both standard approaches to user testing were applied in a combined quantitative and qualitative research design.

1.6 Project management/organisation of the proposed study

Chapter one includes an introduction of the research topic, brief explanations of the background, objectives, purpose of the research, and the research questions. In chapter two, the researcher conducted a comprehensive literature review of the subject matter. Chapter three deals with methodology issues; such as methods that were used to collect data and how the data was analysed. In chapter four, data presentation and analysis is covered. This is essentially a comparison of the study's empirical results with previous literature and theories regarding the research topic. In the closing chapter; findings, conclusions, and recommendations are presented as the research questions are answered and the research purpose is fulfilled.

1.7 Delineation of the research

The research was subject to the following limitations:

- Only hotels with web-based booking systems were included.
- A sample of South African hotels was investigated.
- Only the usability was measured.

Although the importance of social media as marketing tool in the hospitality industry has grown over the last decade (Aluri, Slevitch, and Larzelere, 2015), this phenomenon will not be covered in this research.

1.8 Summary

The study established that a lack of usability of online hotel booking systems deter potential clients from spending money at hotels. The research also determined that poor website design resulted in a loss of potential sales. This happened because users were unable to discover what they are looking for, and it prevented potential repeat visits due to an initial negative experience. The objectives of this research study were to determine if the hotel online reservation systems are usable, to ascertain the time hotel websites users spend when they make online reservations, and to identify the main usability impediments on hotel website reservation systems.

Furthermore, the outcomes of this research study could be applied to improve the usability of web-based hotel booking systems, as they are suspected to be leading to a loss of potential repeat visits due to an initially negative experience when users make reservations. Future research could be performed to implement factors affecting usability of hotel web-based reservation systems, as identified in this research. It can also provide hotel managers and Web developers with a clear knowledge of website usability and its impact on satisfying the user.

CHAPTER TWO LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of the hospitality industry, focusing mainly on the hotel industry, determining the usability of online reservation systems, the average time users spend on making a reservation, and the main usability impediments of these online reservation systems.

The goals of this chapter are to determine what previous research has been done on testing the usability of hotel reservation systems, and to also determine if there are any research findings which have produced detailed results of usability tests in this area.

2.2 Overview of the hotel industry

The hotel industry is one of the world's largest accommodation industries, according to the Federated Hospitality Association of Southern Africa (FEDHASA, 2008). This industry offers accommodation, food services and conference facilities. It has seen positive growth in the hotel market. The South African hotel market has experienced an increase in revenue per available room, with 2007's sales up by double digits compared to previous years (FEDHASA, 2008). The hotel market meets the demand of the accommodation business globally and shows rapid growth in the world of trade and investment.

A grouping of tourism products could have many components which include accommodation, services, activities, facilities, and attractions which together provide visitors and tourists with the desired experience. Of these tourism products, accommodation is one of the most basic tourism destinations, plus the accompanying hospitality service. It consists of a wide variety of establishments, from luxurious resorts to modest bed and breakfast establishments.

The hospitality industry, including catering and hotel industries, is one of the world's fastest growing industries. According to Gilje (2004:36), the word hospitality refers to an act of being hospitable, as seen in the cordial and generous reception and entertainment of guests, visitors, and strangers, both commercial and social. The author notes that the ancient base of the hospitality industry is its social value, and reflects a natural relationship between guest and household.

2.2.1 Definition of the hospitality industry

The hospitality industry is defined as one of the main commercial industries, and also one of the largest employers in the world (Kotler, Bowen and Makens, 2003). According to Smith (2012), hospitality primarily focuses on customer satisfaction. It can be based on luxury or leisure services, as opposed to meeting basic needs. The author notes that hotel and accommodation resorts, airlines, cruise lines and many other forms of travel, tourism, special events planning, restaurants and fast food places, generally resort under the umbrella of the hospitality industry. Bayat and Ismail (2008), and Buhalis and Costa (2006), all agree that a hotel is a building providing accommodation in a residential format, and food, to paying clients.

These authors also mention that the term “hotel” usually indicates a “superior” type of accommodation in a property of substantial size, offering a range of other services, in contrast to a boarding house or guest house. Hotels are places where visitors can obtain good quality food and comfortable rooms. However, they could also serve as centres of community life, with amenities for entertainment, communication, meetings, and many other personal services. Their most basic fixture has always been hospitality and service. Hotels focus on dispensing comfort, providing an enjoyable stay, and creating an atmosphere representing home for visitors (Henkin, 2001). Within these broad definitions of a hotel, there are however many different types of hotel accommodation, and different ways of distinguishing between them:

- Location in cities, coastal resorts or towns, for example, next to the beach or highway, in the town or city centre.
- A specific means of transportation is associated with the relationship, for example airport hotels, motels and railway hotels.
- The reasons and purpose of a guest’s stay could differ; for example, some visitors might specifically visit and utilise convention hotels or holiday hotels, or possibly business hotels.
- A clear tendency towards a short or long period of guests’ stay. This could be for example, a residential hotel or a transit-type hotel.
- Hotels have a variety of different amenities and services, for example, non-residents and open residents, overnight accommodation with or without breakfast, and an apartment hotel.
- There is a difference between an unlicensed and licensed hotel.
- A hotel size and the number of beds per room.

- Ranking and categorisation of a hotel (e.g. five-star accommodation, or a one-star graded hotel) (Henkin, 2001).

The hotel industry, as only a single part of the hospitality industry, has developed from very modest beginnings. It all started with landowners and families opening their homes to travellers, and has grown to the large properties of today that can contain up to thousands of rooms. Hotels are possibly the most visible aspect of the tourism and hospitality sector. This industry is an important sub-sector of the tourism industry and offers a place to stay and related amenities to tourists. The accommodation division forms a significant division of the tourism industry in South Africa and can be regarded as integral to any tourism initiative - see Figure 2.1.

Hospitality Industry

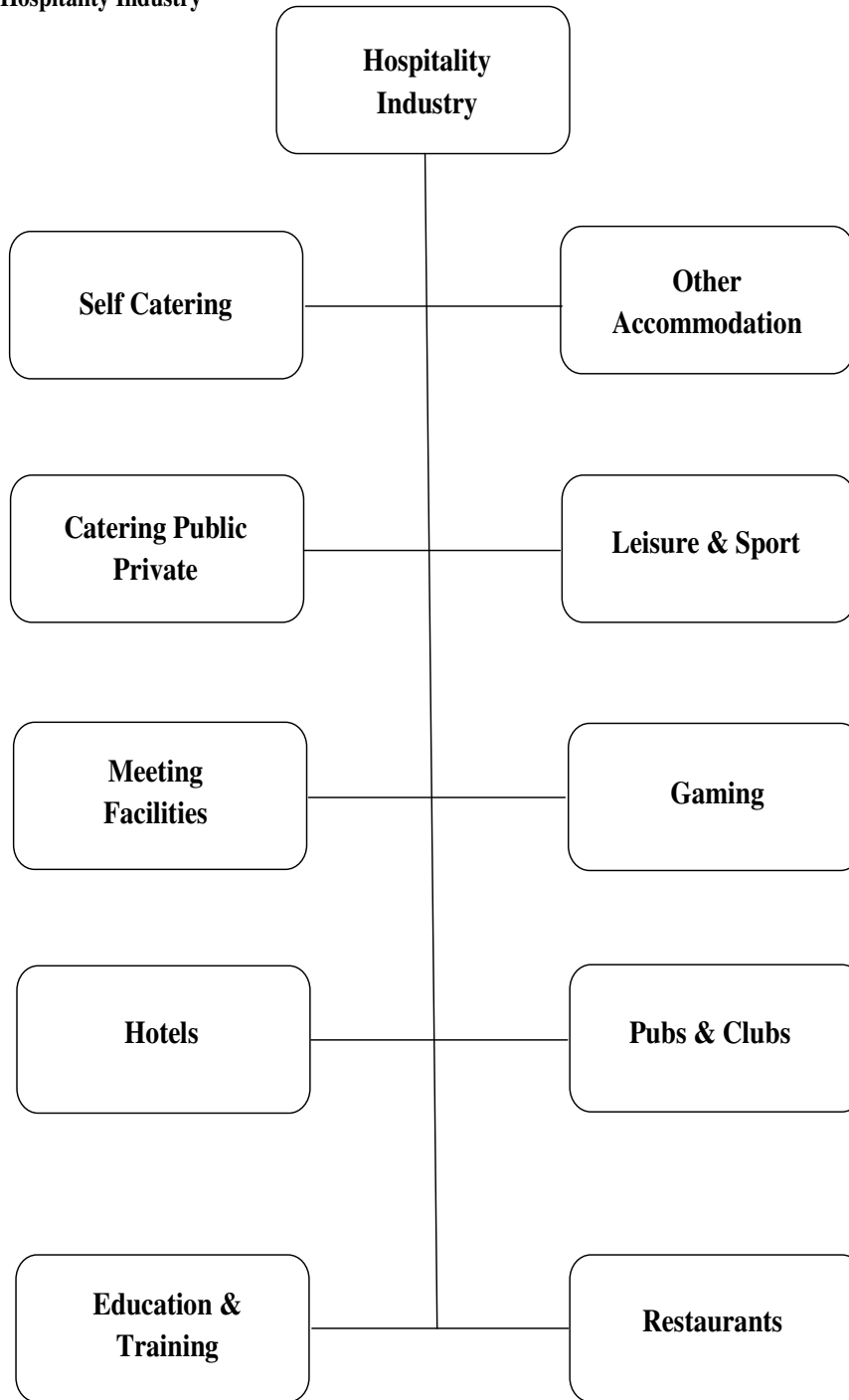


Figure 2.1: A vision of the future (Mullins, 1995).

2.2.2 Characteristics of the hospitality Industry

The following are four characteristics of service that differentiates service marketing from product marketing:

- Perishability - if the full capacity of the service is not utilised, the service becomes perishable.
- Variability - the quality of service must be unique to each consumer.
- Inseparability - service occurs at the same time, with both provider and consumer involved in the process of delivery.
- Intangibility - the hospitality industry product cannot be felt, heard, seen, smelt, or tasted before being bought.

2.2.3 Importance of hotels

The tourism and hospitality industry can play a role in both underdeveloped and developing countries to resolve many of their problems. This industry has lately emerged as a fast growing industry in terms of invested capacity, and foreign exchange earnings and jobs provided. According to Medlik and Ingram (2000:4), hotels play an important role in most countries in terms of providing amenities for businesses, for conference meetings, and for entertainment and recreation. Hotels are important attractions for tourists who are associated with a high buying power. These users tend to spend at a much higher rate than what they would have spent if there were at their place of origin. Hotels are also attracting visitors and foreign country earners. Decades ago it was claimed that hotels recruit labour and they are product outlets of other industries as well as sources of facilities for local residents (Medlik, 1994).

The global increase in the tourism industry has highlighted various trends. While the level of competition is high, the cost of gaining customers is increasing, and customer anticipation is rising. This indicates that presentation and competitiveness of hotels are dependent on their capability to satisfy visitors efficiently and effectively (Gilmore and Pine, 1997). Running a group of chain hotels or individually owned/independent hotels is a major challenge. They vary in the nature of hospitality and accommodation they offer, and present constant challenges to the management and staff to adapt to new conditions, competition, and customer needs. The hotels can operate as an independent property, or they could be a franchise to a branded hotel company, or as members of a marketing group. According to Chon and Sparrowe (2000), hotels can be run by owners, hotel management companies or by a countrywide or worldwide branded hotel company.

Olsen (1996), and Powers and Barrows (1999), indicate that the hotel sector is highly fragmented as most hotels are owned and operated independently. This is the case even though the concentration level is higher in certain key quality sectors. An example is the first class and the luxury and the limited service sector (Jones, 2002). According to Olsen (1996), the level of perceived fragmentation is also lower, than when using the number of bedrooms rather than the property numbers. The higher product transparency and the new electronic-business models (like auctions, purchasing online) enhances the buying power of tourists. These tourists are more sensitive when it comes to price, but not so much to brand loyalty, and are more sophisticated and experienced (Sigala and Christou, 2002; Sigala, 2003; Christou, 2003; Christou and Kassianidis, 2003).

2.2.4 Hospitality in South Africa

The CEO of Pam Golding Hospitality (a large property group within a specialised hospitality division), has the point of view that the hospitality industry in South Africa remains very positive and is even brighter when considered against the background of international trends (Demes, 2009). The South African Hotel Industry is seeing an accelerated growth in capacity. Admittedly, this is based mostly on the unexpected economic growth that has been experienced over the past decade, producing the global boom that started in September 2008. This resulted in the increased demand for accommodation in hotels - all but disappearing in the tail of the immediate post economic meltdown. The hospitality sector in South Africa is proving to be very resilient amid the downturn of the global economy. South Africa is less dependent on the global market as a lot of its business comes from within South Africa's domestic market, and its Southern African neighbours.

Smith Travel Research's publishes a global hotel benchmark survey. This indicated that the hotel industry in South Africa in 2012, as a whole, achieved 9.1% growth, which is an increase to revenue per single available room (Smith Travel Research, 2012). This is an improvement when compared to September 2011. These surveys signify that the useful room income for an average hotel nationally has in essence increased by 6.2%. The aforementioned occurred regardless of the fact that the number of hotel rooms in South African is increasing since new hotels are constantly being opened. One more positive aspect is that new jobs are created. Demes (2009) also mentioned that the well branded hotels in South Africa remain in good shape, compared to those who are not branded in many other countries in the world.

2.3 The Internet and the hotel industry

Decades ago, before the use of computers were introduced in the hospitality industry, those individuals in charge of making online bookings performed this service by examining availability tables shown on the wall or on a large, updated, handwritten list (O'Conner, 1999). According to the World Tourism Organization (1993), hotels used to receive many telephone calls, telexes, post cards, and letters from possible clients. This produced an enormous workload which included selecting correspondence, typing letters, sending telegrams, and dealing with other hotel demands – often requiring excessive manual labour. Delays occurred on a daily basis; the price of writing letters was high, and specialist typists were needed. The Internet was redesigned in early 1990 to connect several universities, laboratories, and mainframe computers (host computers) run by government. These computers were used for the exchange of computing resources, email and data. Moreover, the Internet enabled computer communications with no governing authority. The initial (incorrect) assumption was that links between any two cities, or points for that matter, were inherently unreliable. This design was first developed by Paul Baran of Rand Corporation (Cho, Willis, and Stewart-Weeks, 2011).

Previously, hotels utilised dissimilar ways of selling their rooms: direct ones, for example call centres and sales offices, and indirect channels including tour operators (Yoon, Yoon, and Yang, 2006). When the company is present on the Internet it automatically makes it available to potential customers globally. Internet communication between the companies and consumers now means that there can be an electronic exchange of data. Purchasers and suppliers/sellers can perform standard business transactions with remarkable ease. The Internet (and e-commerce) provide consumers with opportunities, through easy information gathering using online sources and convenient online hotel bookings or shopping, in order to be prepared better for purchasing the correct product at the right time (Schulze, 1999). Moreover, the Internet makes it easier than ever before to gather competitive marketing intelligence (Chaffey, 2009).

Szymanski and Hise (2000) claimed that consumer perceptions of convenience, online product information, website design, and secure financial transactions were the dominant factors in consumer assessments of online satisfaction. It appears as if some hoteliers are unaware that it is not good enough to have a presence on the Web. Any website, but especially a hotel website, should provide a pleasant experience for the

user. Furthermore, it should provide an easy way to book a room, and also ensure lock-in in order to reduce the degree of customer defection (Chaffey, 2009). Furthermore, it was claimed that - to survive - effective reputation management techniques must be applied by hotels, and they should take appropriate action to minimise adverse effects.

2.3.1 Importance of the Internet in the hotel industry

Decades ago Laudon and Laudon (1999) foresaw that as new technology was increasingly used, the hospitality industry could benefit from that in a range of ways. This includes better qualified service for customers, increase of sales and profit, efficiency in operations and integration of the hospitality industry, quick communication, and cost reduction. The following reflects the importance of the Internet in the hotel industry:

- Information – The Internet and other technological applications enable knowledge and information to bring a competitive advantage to the future profile of the hospitality industry. Individuals can find any information, on any subject, with the assistance of search engines like Yahoo! and Google. Google suggest that users create helpful, information-rich websites and write pages which make content and its meaning clear (Google, 2013). Yahoo! prescribes to the idea of “Unique, valuable and original content.” (Yahoo!, 2013).
- Many contemporary companies build their success upon the amount of knowledge which they have acquired about their customers, as well as information on their products and services (Olsen and Connolly, 2000).
- Communication – According to Mendes-Filho and Ramos (2005), the Internet is utilised as a means of communication; which brings many benefits when compared to other methods. The authors state that the main facts when it comes to the tourist area are: new relationships must be built among companies and consumers; communication should be credible and agile; marketing should be done for the actively participating consumer and self-service applications and the importance of detailed information are highlighted.
- Service – the world of business and its users are revolutionising the purchase of services and products through the Internet. The majority of clients feel more comfortable making hotel reservations online than visiting a travel agency (Yea, Law, Guc, and Chend, 2011).

- The Internet enables the users to work at home, as well as provide new opportunities that arise from the lower cost of telecommunication equipment. It has become possible for sellers to distribute clients' information and process online bookings directly with these clients (O'Connor, 1999).
- E-commerce – the utilisation of the Internet to travel and hospitality database development is spreading very quickly to most consumer access areas. There are many suppliers' home pages, newsgroups, associations, e-news and social chat platforms for the travel and tourism community. Customer products and services may be personalised according to the tourist's needs and may become a differential feature for those who adopt it through information technology (Buhalis, 2000; Law, Leung, Lo, Leung and Fong, 2015).
- Already the Internet has customised the competitive strategy of a number of hotels (Joeng and Lambert, 2001). Through the Internet, clients can have an understanding of the service that is being offered to them in a well-organised way. Hotel check-in procedures are now completely automated when you make your reservation online. This procedure terminates when the clients collect their keys from an automated dispenser. The consequence is that clients become informed and capable of receiving speedy answers through the online ordering feature.
- Mgijima and Flowerday (2012) stated that many specialists and businessmen are of the opinion that the Internet is almost certainly a vital technological instrument. However, it is still comparatively new and often abused or under-utilised in the hospitality industry.
- Several authors have identified barriers to the increase in the use of the Internet in hotels providing online bookings. Other authors claim that hotel operators are ready to take up or utilise the Internet wholeheartedly (Wei, Ruys, Van Hoof, and Combrink, 2001).

Over the past few decades, the population of Internet users has constantly been growing. From 2007 to 2012 the number of Internet users has increased by over 2.27 billion users. As reflected in Table 2.1, developing countries such as Africa, the Middle East, and Latin America are also starting to make use of the Internet more frequently.

WORLD INTERNET USAGE AND POPULATION STATISTICS						
World Regions	Population	Population % of World	Internet Usage	% Population Penetration	Usage % of World	Usage Growth
Africa	1,037,524,058	14,2%	23,765,700	13.5%	6.2%	2,988.4%
Asia	3,879,740,877	56,5%	389,392,288	26.2%	44.8%	789.6%
Europe	816,426,346	12,3%	312,722,892	61.3%	22.1%	376.4%
Middle East	216,258,843	2,9%	19,382,400	35.6%	3.4%	2,244.8%
North America	347,394,870	5,1%	232,057,067	78.6%	12.0%	152.6%
Latin American/ Caribbean	597,283,165	8,5%	88,778,986	39.5%	10.4%	1,205.1%
Oceania/ Australia	35,426,995	0,5%	18,430,359	67.5%	1,1%	214.0%
WORLD TOTAL	6,930,055,154	100%	1,093,529,692	32.7%	100,0%	528.1%

Table 2.1: World Internet usage population statistics (Miniwatts Marketing Group, 2012).

The Internet allows a large number of users around the world to be connected and it eliminates time and distance constraints (Wymbs, 2000:465). However, in the early years of the Internet, the interface was primarily text-based, similar to a command line interface like DOS or UNIX (Chambers, 2005). Only since 1995 could the World Wide Web (WWW) be accessed through a graphic interface, called a browser (Notess, 2003:54). Companies can use webpages, built from HTML (Hypertext Markup Language), to publish information on the WWW. The WWW can be accessed using a browser in which webpages display text, graphical, and other multimedia resources. Furthermore, a browser can link to websites on the Internet using a Uniform Resource Locator (URL) (Poulter, 1997:133), which is a unique address given to all websites and resources on the Internet.

This technology combined with the availability of browsers, allows WWW pages to be interactive and respond to user choices on webpages; for example, website servers can generate a dynamic webpage in response to a user's choice collected via an online form (Poulter, 1997:133). As a result, the development of Internet technology, and the ease of website access over the last few years, enable advertisers to reach a larger number of potential clients (Chambers, 2005), as well as establish a global market presence.

Internet usage is dramatically increasing daily in all sectors of the world. The same holds for the development of the Web, enhanced by the emergence of new Web technologies. It has been noted that social networks are appearing to be the platform of choice for individuals' interaction with the Web. These platforms include MySpace, Twitter and Facebook, all of them incorporating a substantial number of Internet users. Refer to Figure 2.2, Figure 2.3, and Figure 2.4 for July 2012 Internet usage statistics.

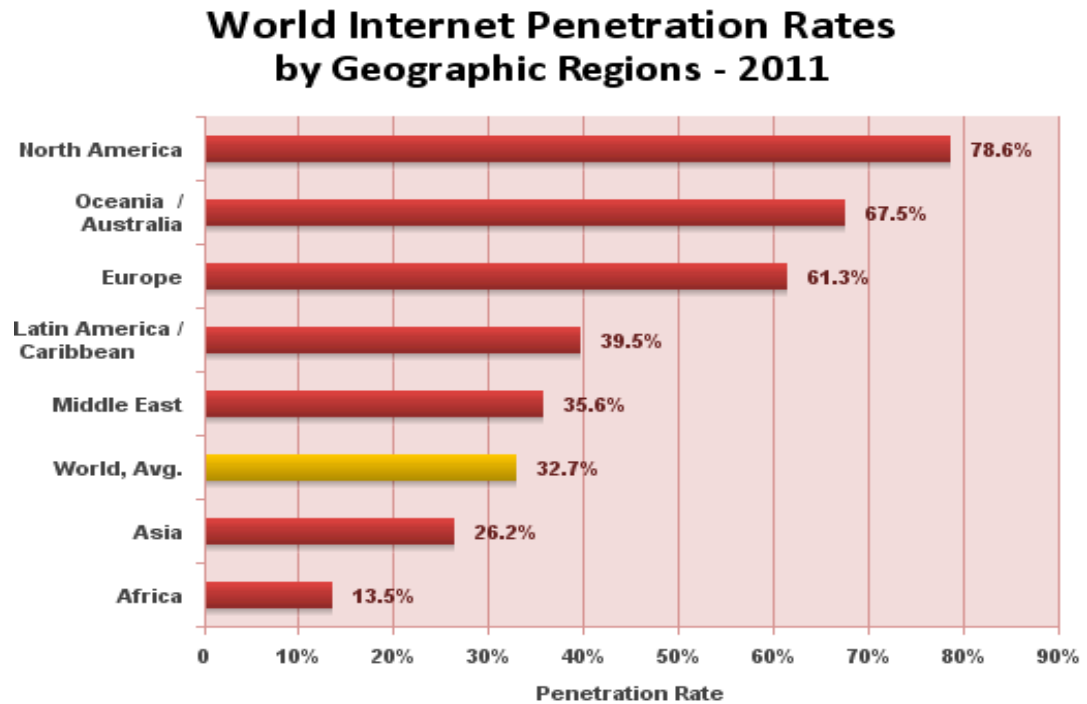


Figure 2.2: World Internet penetration rate by geographic regions – 2012 (Internet World stats organization, 2012).

Internet Users in the World by Geographic Regions - 2011

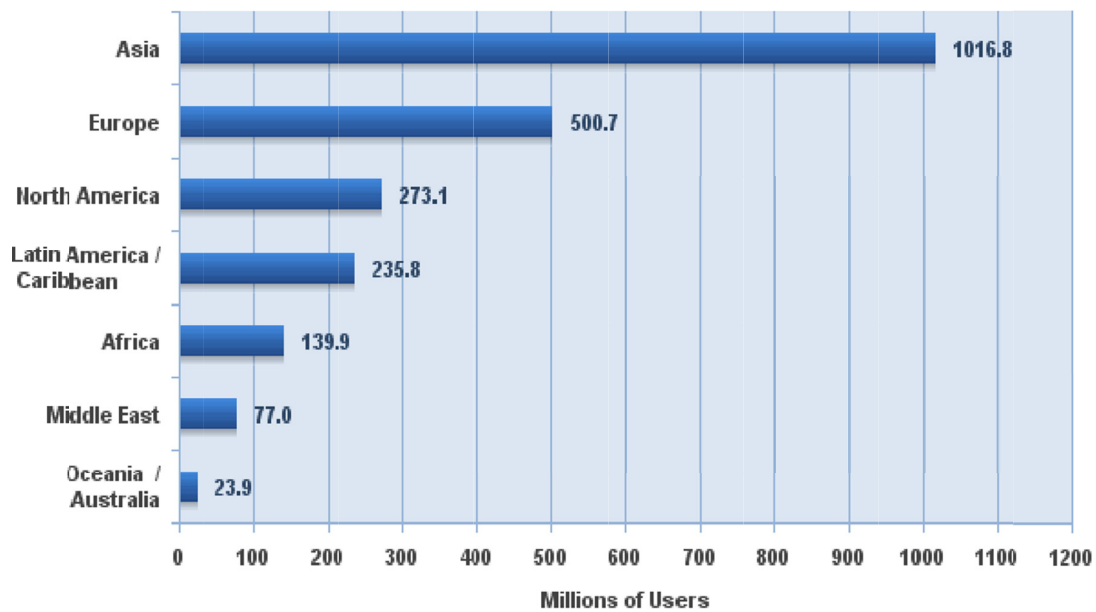


Figure 2.3: Internet users in the world by geographic regions – 2012 (Internet World stats organization, 2012).

Internet Users in the World Distribution by World Regions - 2011

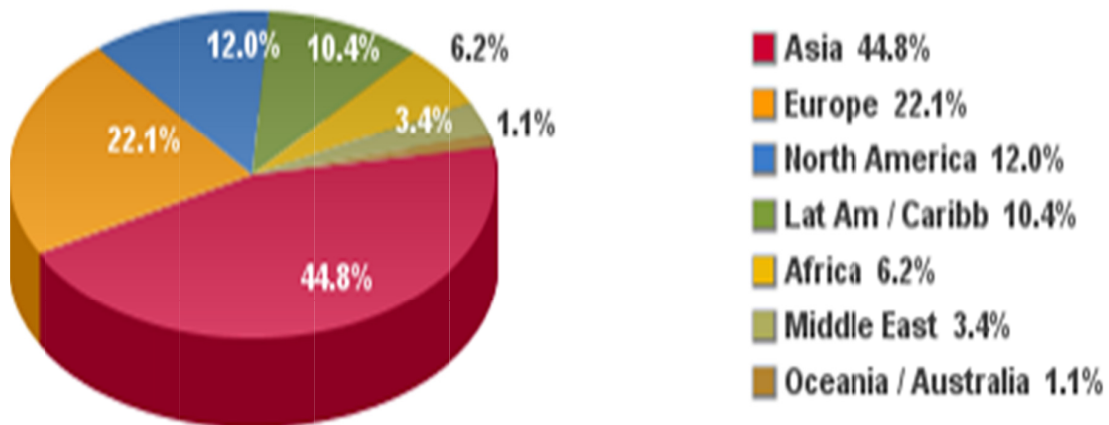


Figure 2.4: Internet users in the world by regions - 2012 (Internet World stats organizations, 2012).

The Internet is an enabling tool for business, which transforms the economy. The application of Internet technology in the hospitality sector and the travel booking industries has attracted much attention from academic researchers, as well as industry practitioners. Due to information sharing being a key part of these business operations, the use of the Internet provides a benefit in the flow of useful information. The key issue for e-business applications in service operations is the possibility of online delivery of the customer's service as ordered. However, not all types of services (or products) can be verified, questioned and ordered online effortlessly and conveniently, as well as communicated and supplied electronically via the Web.

The presence of the Internet has positively affected the hospitality industry and it has resulted in an increase in opportunities - the majority of hoteliers are aware of the advantages which their businesses can harvest from the Internet. If they are well informed of the importance of using the Web, they will become more motivated to create an awareness of their business in the industry. It also secures more online reservations. This has impacted website development for hotels and airlines, online booking systems as well as some other online tourism-related enterprises. In fact, there is a steady growth in the Web strategies of the hotel and hospitality industry. The rapid increase in numbers of online users and the growth in numbers of online businesses, provide clear evidence of the popularity of this technology (Law *et al*, 2010).

2.3.2 The Internet and electronic commerce

In the business world the use of the Internet has become a major trend, where it provides free exchange of information through a collection of interrelated computer networks. As long ago as 1999 Palmer (1999) claimed that the Internet has become an influential channel for communication and business marketing, as well as for new business opportunities. Making use of this channel for sales is normally known as "e-commerce" or "e-business" (Schneider and Perry, 2001). Commerce allows growing companies to provide a better presentation of their products and services on the Web. Online customers now enjoy a wider choice of services and products. Prices are competitive, and customers are able to purchase their favourite service from sellers located far away. E-commerce provides communication between companies and consumers.

Diwan and Sharma (2009) state that "electronic commerce refers to all forms of transactions relating to commerce activities that involve both individuals and

organizations that are based upon processing and transmission of digitized data. These can include text, visual images and sound". These authors also refer to the effects that the electronic exchange of commercial information may have on the institutions and processes that govern and support commercial activities (Diwan and Sharma, 2009).

Zhou (2004:56) points out that "e-commerce is defined as the conducting of business communications and transactions over networks and through computer technology". Watson, Berthon, Pitt, and Zinkhan (2000:1), are of the same opinion as this author, namely "that e-commerce involves the use of information technology to enhance communications and transactions with all stakeholders of companies". Greenstein and Feinman (2000:2), agrees with the above definitions and add that the buying and selling of products and services that require digital transport is well suited to e-commerce. Faisal (2011) notes that e-commerce is a combination of: the distribution; buying; selling; marketing; and servicing of products and services over electronic systems such as the Internet, and other computing services.

According to Yang, Flynn, and Anderson (2008) new businesses and entrepreneurs are utilising the Internet to better their current businesses, or follow roads to new business opportunities. The record of published work shows that e-commerce impacts on marketing - some of the earliest experiences with electronic commerce proved that not everyone will become users. Berry reported more than two decades ago that in moving to e-commerce, businesses should identify the potential customers first – those who are interested in working with technology (Berry, 1995). Although a company website (in principle) should have the capacity to serve a large number of users, not all individuals will be attracted to the service. Successful e-commerce implies that the customer's orders are delivered on time. This should not need customer participation but it should be easy to purchase these online products.

It is significant to consider the website, and determine which specific market segment it attracts. In this pattern of evolving experience, it has become clear that the new growth pattern of e-commerce will dramatically raise the level of business competition. This could result in the forcing of businesses to continuously adapt to new market situations (Mellahi and Johnson, 2000). The most common online transaction in the hospitality industry is the booking of hotel rooms. This has become a prime example of enquiry and ordering of services through the internet.

2.3.3 Electronic bookings

Electronic bookings (e-booking) refer to making a reservation for a service via the Internet. Internet booking is defined as “an application which enables a better tourism experience and it supports the travel industry through the Internet”. It also assists consumers in booking airlines flights, accommodation, holiday packages, and other online services. This application is very popular, and it has become one of the fastest growing sales channels for the commercial airlines industry. The Internet has changed physical bookings and hand written bookings, by converting it to electronic bookings or reservation systems via a Central Reservation System (CRS). Internet World Stats (2008) show the increase of Internet users making use of the Internet to purchase travel-related services. The Internet Advertising Bureau (2012) agrees that online reservation systems increased over the past years; they use an example of U.S. online leisure travel sales, totalling \$93.8 billion in 2007, and in 2012 the revenue reached \$162.4 billion.

2.3.4 The importance of online hotel bookings

Technology, specifically online processes, has taken over almost all areas of applications in travel and tourism. Online hotel booking provides users with all the information that a user needs before embarking on a journey. A user can have a complete list of the best hotels relating to the area he/she intends to visit, information about the rooms and their tariffs, and even details concerning offers and discounts being offered (Viduka, 2011). Some of the features now available to both users and service providers of online booking systems include:

- Direct online bookings: an online reservation service that allows guests to directly book accommodation at a hotel, which is accompanied by a waiting period for a reply, in spite of the time difference or the hotel's trading hours.
- Direct online payment: online reservations provide guests with a safe online payment option, and payment security is assured by 128-bit Security Socket Layer (SSL) encryption technologies.
- Accommodation search is quick and easy: potential guests can search for detailed accommodation offers through a simple and intuitive user interface, and instantly obtain price information for a given time period.
- Suggested alternative system: In case that the preferred accommodation unit is unavailable during a certain period, the system suggests the most comparable alternative units. The objective of this approach is to keep potential guests on

the hotel's website and to allow them to discover an alternate but appropriate accommodation unit at the same hotel.

- Automatic calculation of prices in different currencies: guests can view prices in whichever currency they choose - this price is automatically re-calculated any time reservation terms are changed.
- Multilingual Interface: it allows guests to make reservations in a language of their choice.
- Quick hotel confirmation: guests no longer have to wait to receive confirmation of a booking, which in the past could have taken a few days. The cause of the delay is most commonly as a result of human involvement. Currently online bookings take care of this type of situation and guests receive an automatic confirmation within a few seconds.
- Satisfaction of the guest: the final result is customer satisfaction with service quality on the higher technology level, which adds to a competitive advantage for hotels.

See Figure 2.5 for how this operates.

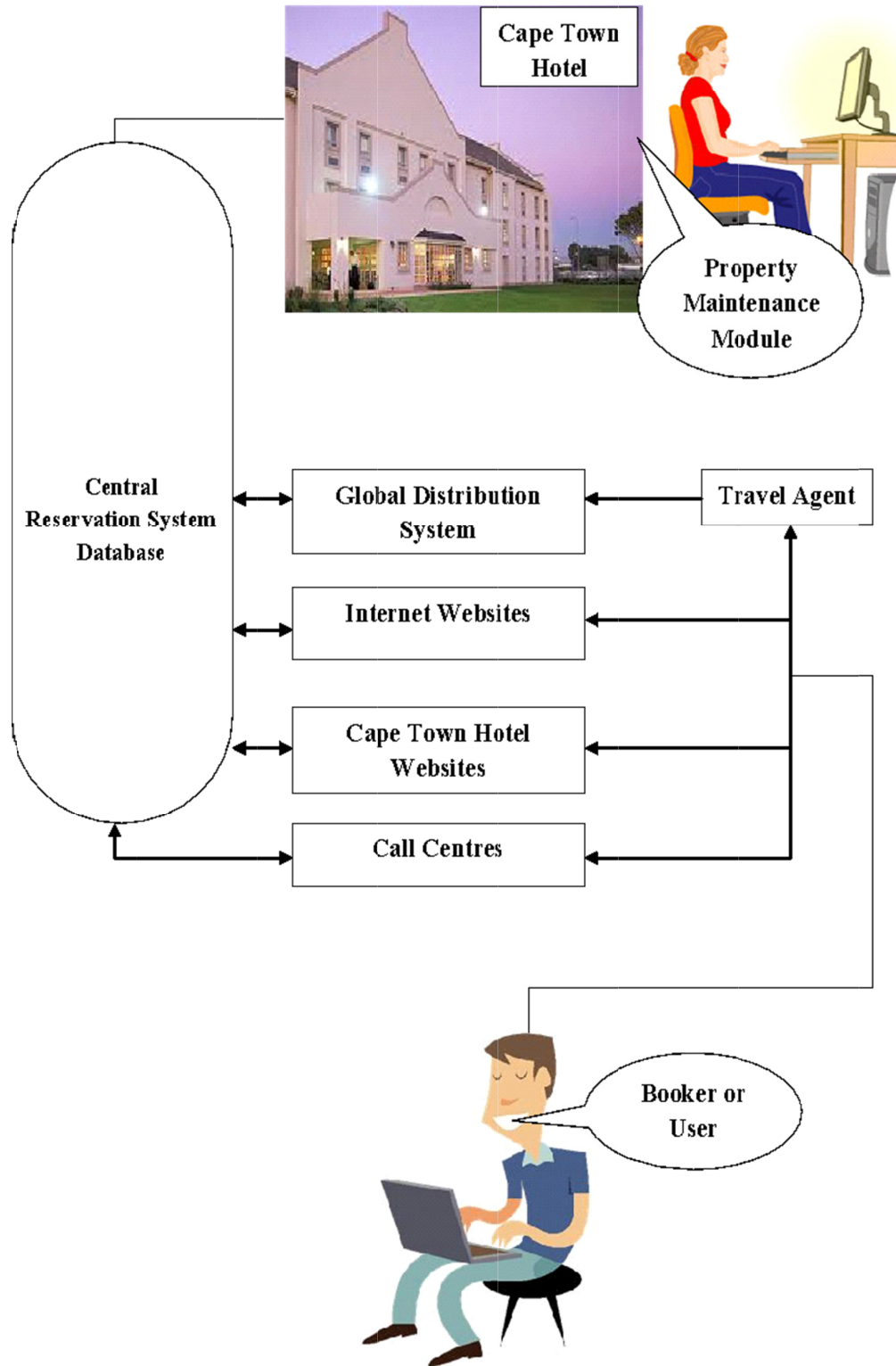


Figure 2.5: Central Reservation System Operation (Unirez by Pegasus, 2007).

2.3.5 Internet as a marketing tool

An important role of the Internet is the way in which it is used as a marketing tool. The hotel industry often offers the electronic booking function on its website to attract guests. The Internet empowers some hotels to reach a larger fraction of potential customers by means of using SEO (Search Engine Optimisation), which is a tool that assists in increasing the traffic and page ranking, as well as traffic in the results of a search engine (Mattison, 2013). SEO is the process of modifying a website in order to satisfy search engine ranking algorithms, in an attempt to be ranked highly on search engine results pages (George, 2005:3). Weideman (2009:14) agrees that SEO relates to the process of making alterations to a webpage in such a way that the search engine can locate and index the given webpage with greater ease of use, resulting in an improved ranking. SEO techniques are used to achieve top placements (Anonymous, 2012a), as a site is relevant to a particular search term, and not because of payments made. It offers a number of advantages to a business. Examples of such advantages include improved exposure and awareness, increase financial income, it is scalable to advertising, and it produces opportunities for more market leads (WordStream, 2009:2).

2.3.5.1 Customer relationship management (CRM) and e-marketing

The business strategy that combines internal functions, processes, and the external network is defined as CRM; it aims to create and deliver value, increase profits and improve customer service. It is based on high-quality customer data and the use thereof to benefit the customer (Buttle, 2004). According to Anon (2008), CRM is an Internet marketing strategy used in the hospitality industry, which makes use of Internet Web browsers to manage customer relationships. Electronic Customer Relationship Management (eCRM) assists the hospitality industry, specifically hotels, to gain additional information about their website visitors and specifically those that use it for booking. E-CRM also assists hotels in differentiating leisure customers from business customers and enables these customers to follow up on appropriate marketing messages. In conclusion - hotels use eCRM to facilitate the identification of their customers and their travelling plans and purchases (Ghosh, 2013).

2.3.5.2 Consumer Generated Media (CGM)

CGM is another marketing strategy of the hospitality industry that operates on the Internet. It consists of discussion boards, blogs, forums, review sites, and social network sites. Blackshaw and Nazzaro (2006) agree that CRM refers to online word-of-

mouth communication, including but not limited to; emails between consumers, posting on Internet discussion boards and forums on public platforms, consumers rating websites on forums, blogs (weblogs or digital diaries), mob logs (sites where users upload digital movies/image/photos), social network sites and individual websites. It can also reach a much larger audience and may change a business overnight (SEO Term Glossary, 2012).

CGM includes the following approaches that can assist in the marketing of hotels in the following ways:

- Advertising and market medium: to converse with consumers getting the information from high traffic CGM sites.
- Provides company supported CGM initiatives: to leverage the special knowledge that currently exists on the hotel website.
- Provides a defensive brand plan: to defend and observe chattering/talk on the Web pertaining to the competition.

E-CRM relates to the activities of managing purchaser relationships by using Web browsers and the Internet (Hotel Marketing, 2008). E-CRM assists the hospitality industry, especially hotels, to learn more about their online users and customers and helps hotels to differentiate business from leisure visitors. The above mentioned also allows visitors to follow up on suitable marketing messages. In other words, it assists with identification of customer needs, the travelling planning and recording the purchasing behaviour.

Another well-known Internet marketing tool for the hospitality industry is Web Destination; it strives to provide a website with very useful and relevant information to be read by a user. Web Destination is defined as “a corporate based initiative that leverages the popularity of the destination for the advantage of a particular hotel or a cluster of local properties” (Grillot, 2007). These destination websites differ from the typical product website in that they attempt to offer a pleasant visit, while portraying attractive and clear images of what the destination represents. When visitors and tourists do not have a positive first experience at a destination website, the experience and judgment generated from the process of the website browsing influences decision-making and the general image of the destination. Visitors are attracted to re-visit websites by sending them email messages or news regarding current information about the relevant destination (Kaplanidou and Vogt, 2003:5). To create a website that

is to become one of a traveller's favourites, is quite important since it could encourage repeat visitations while at the same time increasing opportunities for choosing the destination described on that website. The majority of website destinations are presented as simple online brochures, and often fail to incorporate the innovation which is possible with advanced Web technologies. The value of a hotel website as part of the corporate identity has been proven (Mohammed, Guilet, Schuckert and Law, 2016).

According to Gretzel, Yuan and Fesenmaier (2000), the success of destination website marketing and communication can be measured through the ability to engage and interact with users according to the following five success factors:

- The degree to which users are attracted to the site.
- User interest and participation.
- Stickiness: the ability of keeping the users returning to a certain site.
- Knowledge about users' preferences.
- Feedback to users through customised interactions.

Park and Gretzel (2007) identified the following accomplishment factors for destination marketing websites:

- Ease of use.
- Fulfilment.
- Interactivity.
- Personalisation.
- High quality information.
- Responsiveness.
- Security/Privacy.
- Trust.
- Fresh content.
- Visual appearance which improves trust.

The most important of the key success factors for hotel websites is being search engine friendly, so that the website can be easily found when a customer performs an online search. Gilbert, Powell-Perry, and Widijoso (1999), stated that hotel website designers have to ensure that websites provide the correct content and have a high degree of usability.

2.4 Websites

A website is a collection of webpages (documents that are accessed through a user's browser). Hearn (2012) defines a website as a collection of related webpages or files and documents hosted on a Web server and accessed on the World Wide Web (WWW). The website is a recognised form of advertising, and its performance may be influential in the decision-making of tourists via the process of communication. According to Tu (2012), website features can play an important role in communicating with potential visitors - by enhancing users' experience and comprehension, and thereby facilitating their evaluation and selection of destinations before the real visitation. It has been established that some website attributes do not only assist with users' decision-making - they also produce a more positive online experience. It also becomes possible to give more advanced product presentations, thereby increasing the value of a website to its visitors.

A website contains one or more related documents, called "webpages", which are linked to each other through the use of hyperlinks. According to Weideman (2009), a webpage may be defined as an information document resource that is appropriate for the WWW and can be displayed on a monitor and a Web browser. Other resources such as images, style sheets, and scripts are frequently subsumed on webpages. Each webpage should present a different and diverse collection of information - this depends on the specific characteristics of its content. Fiol-Roig, Miro-Julia, and Herraiz (2011:61) stated that "the uncontrolled nature of the Web content presents additional challenges to webpage classification as compared to traditional text classification, but the interconnected nature of hypertext provides features that can assist the process".

Some websites are static by nature, the content of the webpages do not change until the designer makes changes and uploads it to the server. Static websites are not conducive to user interaction. Many modern websites however are dynamic by nature, allowing user interaction and adapting a website to personal preferences. According to Ricca, Tonella, Girardi, and Pianta (2004:204), SEO algorithms allocate different scores to different keywords on a webpage. More specific keywords weigh more and have a better score compared to other keywords. Ricca *et al* further states that when a webpage contains a large number of a set of certain keywords, then the webpages are regarded as similar. As a result, keyword weight is determined by its contribution to the overall content of webpage (Ricca *et al*, 2004).

According to Kyrmn (2013), Web design could be seen as a broad term which covers a number of different skills and disciplines. These could all be used in a websites' planning and creation. Web designs include the following: authoring, graphic design, as well as standardised cipher and proprietary software, interface design, search engine optimisation, and user experience design. According to Good and Sambhanthan (2012), if hotels rely on Web bookings only, they are without a doubt going to face a drop in reservations if they fail to keep pace with the design of the website and the importance it has to users. They also mention that poorly designed websites will decrease the chances of a user returning to the Web system and increase the chance that they will tell others, often making use of media and social networks – news about a poor experience spreads very quickly.

Web design is a term often used to attempt to describe the process of design of the client side (front-end) of a website, as well as writing mark-up code. Website designers are expected to understand usability design. If their role involves doing mark-ups, they are also expected to be up to date with Web accessibility guidelines. According to Weiss and Weideman (2008:2), the vital reason for the design of a website is providing relevant content for searchers or end-users. Krug (2000) mentioned that a well-designed webpage and relevant information can provide quick answers. High quality websites that provides useful information can help take website-based businesses to an entirely new level, which can also attract many users. Visser and Weideman (2011) mentioned that a website's value can be determined by the page on which it ranks. Thus ranking on the first page of the SERP for a given search query is an indication that the website is present in the index of search engines, and ranks very well. Zuze and Weideman (2011) concluded that websites are often being used as marketing tools, which results in competition between websites with similar content.

2.4.1 Importance of hotel websites

A hotel website will assist hoteliers in boosting their hotel worldwide, and provides them with many advantages in terms of promoting their hotel. Some of these advantages include:

- Hotel websites offer information to its customers, for example hotel room specifications and services provided.
- When a hotel website is regularly updated, users can find the latest information about that particular hotel.

- Hotel websites usually have a map included on their website so that the user can easily locate the hotel.
- Communication between hotel and customer is easy via a contact form or chat tool.
- Hotel websites often have pictures of typically the facilities and of the hotel rooms.
- Pictures help to give a user an idea of the hotel's look and feel. Some hotel websites also offer a walk-through function (using video), which allows an online visitor to virtually walk through the hotel. Hotel bookings can be made online, which is in most cases a faster and cheaper option than the manual alternative.

However, it has also been proven that false impressions are easy to create using photographs on hotel websites (Kuo, Zhang and Cranage, 2015).

2.5 Website usability

Website usability is described as an approach that makes websites easier to use with no requirement that any specialised training be undertaken. Part of the design of a usable website includes:

- To present information to the users' in a clear and concise way.
- To provide the users with best choices in a very obvious way.
- To remove any ambiguity regarding the results of an action.
- To place the most significant features in the right locations on a webpage (Krug, 2014).

Kritzinger and Weideman (2008) mentioned that "website usability in general refers to the efficiency with which a customer can perform a task with the product and the overall satisfaction with such processes". They also mention that website usability normally concentrates on the needs of the human user only. Weideman (2006) reported that the correct usage of search engine services could help users in finding and evaluating relevant information in a short time. The way in which a website has been put together by the Web designer determines to an extent how it is used. This not only makes sure that it is actually included in the index by search engines, but also ensures that the webpages will rank well based on a relevant search query. Website design should include knowledge of the preferences and usage patterns of the visitor. The real challenge of hotel's usage of e-commerce is seated in the use of technology in

a way which will make business sense (Gilbert *et al*, 1999). Hotel website designers must ensure that their websites provide relevant content and have a high degree of usability. Website usability is important since it provides website users with a better experience, and it enables them to spend more time doing, and less time learning.

Usability refers to some characteristics that influence a user's overall feeling of a communication channel; it does not only refer to obtaining the desired information but also responds to questions or completing the booking transaction. If usability is implemented correctly and effectively, consumer loyalty can contribute to these factors. These characteristics include overall accessibility, accuracy, information completeness, and convenience, ease of use, service, speed, personalisation, and reliability. Consumer's confidence and trust will be built by the two latter factors. A system with easy navigation leads a consumer to book accommodation and can instantly receive confirmation while receiving personalised attention. Based on a travel profile, there will be a greater degree of confidence that user requirements will be met than if the system is unstable, sluggish, and unable to give immediate confirmation. The visual appeal of graphics, photographs and movies is very important. However, the abovementioned information and services can slow down the process of accessing the channel's core utility. Therefore, the number of graphs and images must be used with discretion, thereby balancing content and utility of the channel.

Usability, in general, is a product's potential to achieve the objectives of the user. Usability of a website refers to a user's "feeling" of how easy or difficult it is to use a website (Nielsen and Loranger, 2006). The objective of usability is to remove all the obstacles holding back a positive experience and the process of online communication (Eisenberg, Quarto-von Tivadar, Davis, and Crosby, 2008:10).

Website usability is vitally important to attracting and keeping visitors (James, 2002). Nielson (2003) concurs with this author, noting that the usability of a website is crucial for its survival. A reason for this is noted as being that if a customer's information need is not satisfied by a particular website, the user will simply leave that particular website and visit others which will meet their requirements (Kritzinger and Weideman, 2008).

Website usability is critical; it is essential to approach usability from a number of perspectives. Bruno and Al-Qaimari (2004:1-4) compiled a number of definitions that define usability, as described by various authors

According to Shackel (1981), website usability is “[a system’s] capability in human functional terms to be used effectively and easily by the specific training of users, given specified support and training, to fulfil a specific range of tasks, within a specific range of environmental scenarios”.

Website usability is defined as a qualitative and quantitative measurement of the Web design of a consumer interface. Nielsen and Shneiderman (1993) identify five categories into which usability factors can be divided:

- Efficiency.
- Errors.
- Learnability.
- Memorability.
- Satisfaction.

These five factors are further defined in Table 2.2. Preece (1997) (ISO/DIS 9241 - 11.2) claims that usability is: “the extent to which product can be utilized by specified users to accomplish specific objectives with contentment and effectiveness of use in a particular context”.

Krug (2000) warns: “make sure that what you design, works well: that a person of average ability and experience can use what you design – whether it’s a website, a jet fighter or a revolving door – for its intended purpose without getting hopelessly frustrated”.

Learnability	A website is supposed to be easy and learnable in order for the user to swiftly start accepting jobs completed with the website.
Memorability	A website is supposed to be easily remembered in order for the informal user to be able to return to it after some time and still recall how the system functions, without having to once again study and understand its operation.
Efficiency to use	A website is supposed to be efficient to use, in order for the user to study the website so that a high output level is possible.
Reliability in use	A website is supposed to have a small error rating, in order for users to continue with the process, fairly unhindered, despite making errors.
User satisfaction	A website is supposed to be enjoyable, and users need to have a pleasant online experience.

Table 2.2: Nielsen’s criteria of website usability (Nielsen, 1994b).

Barnard and Wesson (2003:258) identified an additional component of website usability: Trust. Trust is an important factor of achievement, especially for the virtual organisation. A website cannot reach its full potential without the presence of trustworthiness.

McLaughlin and Skinner (2000) identified some website usability criteria - see Table 2.3. In their model, they list the six necessary criteria: confidence, speed, checkability, ease of use, understanding and control.

Check ability	The system consents to ensure that the correct information is going in and out of it.
Confidence	User's confidence lies both in capabilities of use, and in the system.
Control	User's control over the functioning of the system, especially of the data that they get into and out of the system.
Ease of Use	The user's system must be easy and usable.
Speed	The system needs to work quickly.
Understanding	Understanding the outputs of the system.

Table 2.3: McLaughlin and Skinner's six website usability criteria (McLaughlin and Skinner 2000).

The travel technology consultancies Equinus and Ellion (2007) have created a website usability report for travel websites in order to offer suggestions on how to improve its usability. This study is beneficial because it was accompanied by a new website usability model and explains the use of each criterion as displayed. The outcomes of this research are reflected in Table 2.4.

Usability criteria	Reasons
Accessibility	Acceptance of portable devices is growing rapidly. Vital market share can be gained simply by making the website accessible by PDAs, mobile phones, tablets and Internet-ready televisions; also called "Responsiveness".
Interactivity	Interactivity can enhance the user experience and it is an important method of keeping in touch with the customers.
Visibility	Recent research shows that up to 70% of online travel purchases originate from search engines such as Google, Yahoo! and MSN.
Design	If a website is not designed in an attractive way, the visitors will leave the page regardless of how well the website can function.
Navigation	The easier the website is to navigate, the higher the percentage of visitors that would become customers (conversion rate).
Content	It is the content and the way it is presented that provides opportunities to sell the products.
Personalization	Customers are more likely to return and purchase from a website that stores detail of the previous product enquiry and is therefore familiar to them.
Commercial elements	Adding more commercial elements, such as special offers, can generate more revenue and improve rates.

Table 2.4: Usability of a travel website (Equinus and Ellion, 2007).

The online hotel reservation industry is highly competitive. One important differentiating factor is the design of user interfaces. Users should understand the design of the website as soon when they enter the website. It should not be necessary to first train the user or refer them to user manuals. When users are unable to immediately understand the interface of a website, they will either move to another website, or change their communication mode (e.g. email or telephone). The most important difference between market research and usability research is that market research conveys whether a group of individuals will use a website, while usability research tells one whether or not they can use it. According to Visser and Weideman (2011), the usability attributes of inclusion will enhance conversion; therefore, website design that is effective should incorporate usability as a prerequisite. Authors further state that there is a need for ranking in terms of significance of usability and SEO

towards search engines and visitors, since these two practices occasionally contradict each other.

Therefore, websites should be compartmentalised into smaller segments that are easier to manage. This will enable usability to be a factor considered at each level. Ricca *et al.* (2004:204) claim that as the website grows, its navigation structure and volume of content tends to grow as well. This usually results in an increased level of complexity, hence opposing the aspect of usability.

Usability testing is commonly done in other areas as well - one such study focussed on the usability of ERP systems (Singh & Wesson, 2009). Another study was done on the experience of mobile device users in an m-learning environment (Botha, Herselman, Van Greunen, 2010).

2.5.1 Importance of website usability

Usability engineering can be defined as a field which is concerned with the interaction between humans and a computer. It specifically focuses on making human-computer interfaces which are both usable and user friendly (Sun Microsystems, 2001). It has been proven that usability engineering details the application of the principles of design, and that it has large payoffs, which include:

- Production cost reduction: costs and time can be reduced by avoiding over-design.
- Support cost reduction: websites that are easy to use require less training, less user support and less maintenance.
- Use reduction in cost: websites which correspond better to user requirements are efficient. Systems that are easy to use decrease pressure on users and allow them to execute a wider variety of work.
- Product quality improvement: user-centeredness has consequences in how products are perceived. They have high a degree of usability and are more competitive in a market.

2.5.2 Website quality

According to DeMarco (1999), quality is an attribute of a given product that can change the world for the better. Website quality refers to how well the interface of a website is designed, and how well this design meets with the user's satisfaction. This website quality is the key factor noticed by a user or customer - hence its importance. It also

helps the customer or user in shaping their impressions about the value of the website, and it influences the decision of whether or not to continue or stop current and future information searches. An industry with a poor website service projects a weak image and weakens its position (Ahn, Ryu, and Han, 2007). Carlson, Voola, and Sinnapan (2003) mention that the identification of the key quality attributes of a website is an important step for the industry towards bettering the chances of success of online presence. Zuze *et al* (2011) mentions that website designers strive to build up good quality websites, which are only one of its kind and rich in content, as this could assist them in achieving a higher ranking from search engines. Moreover, Cao, Zhang, and Seydel (2005) referred to the importance of perceived users' satisfaction with the quality of the website.

Website research focus on finding the important factors which could influence users' behaviour and their attitude - in terms of intentions to return to the site, and eventually buy from it (Liu and Goodhue, 2008). Website quality can be measured from both the perspective of programmers and end-users (Liburne, Devkota, and Khan, 2004). Website quality as viewed by programmers involves the degree of "maintainability", functionality and security. However, the typical end-user pays more attention to usability, creditability and efficiency. Liu and Arnett (2000) agree with this statement, and note the following factors affecting the success of a website in the e-commerce context: accuracy, completeness, applicability, safety, dependability, and customisation, ease of use, functionality, speed and organisation.

Other authors (Wolfenbarger and Gilly, 2001) state that certain factors have a positive impact on customer satisfaction, like quality judgment and loyalty by the website user. The higher the website quality, the higher the service quality perceived by the customer or user. Some customers will only experience an organisation's service through the website and therefore many authors state that customer satisfaction is linked to the quality of the Web service (Loiacono, Watson, and Goodhue, 2002). A study carried out Mzoughi, Negra, and Habacha (2012) on online reservation abandonment, shows that online consumer procrastination and website quality encourage online shoppers to drop out of the reservation process.

Bai, Law, and Wen (2008) did a study, empirically developed and tested a conceptual model of the impact of high quality websites on a customer's satisfaction and buying intentions. The results indicated that the quality of a website has a direct impact on

customer satisfaction, and that customer satisfaction has a positive and direct impact on purchase intentions. Generally, the quality of a website is susceptible to interpretation unless it is fully described and quantified by a Web quality model. This model should define the website quality requirements, which are in turn described by a group of measurable attributes, which need to meet the users' expectations.

2.6 Measuring website usability

The objective of achieving website usability is to create a website that is more enjoyable and efficient in the user's experience, than another similar website. As noted elsewhere, Nielsen (2000a) suggested that website usability be defined by five elements, namely: It must be simple to learn, be efficient to use, be remembered easily, have a small number of errors and be an enjoyment to use. According to Rhodes (1998), well written content, easy-to-follow design and a small number of grammatical errors are required to establish the user's trust in the website. They then tend to believe that websites are more usable. According to Lu and Yeung (1998), usability points to whether or not the website is actually helpful to users and enables them to achieve their intended purpose. Functionality, on the other hand, relates to the degree to which information is provided about the service of the websites (Chung and Law, 2003; Liang and Law, 2003). However, usability looks at to what extent a given website is enjoyable and efficient to use (Au-Yeung and Law, 2003).

Information satisfaction contributes towards website usability, and it provides a clear determinant of behavioural intention. It portrays the strongest relationships between both behavioural intentions and information satisfaction. Researchers argue that those hotels with professional email responses improve the usability of the website (Murphy and Olaru, 2003). Other authors point out the theoretical and practical problems of achieving this, by investigating which functions and features of hospitality operators have to be incorporated into websites. For example, according to Jeong *et al* (2003) operators should build on previous literature to develop the six important elements of a website. These are: accuracy of information, quality of navigation, completeness, clarity, ease of use, and combination of colours.

The measurement of website usability is commonly ignored by many website developers. Often it is the creative department inside a company that determines the look-and-feel of a website. From this point onwards, a design is created with little attention being paid to the way in which users actually interact with the site. According

to Preece (2010), measures of website usability include numbers of errors, productivity, user satisfaction, and others. Website usability is the measure of ease with which the users can use a website - a website which is unpleasant to use is quickly abandoned by its targeted visitors. It is clearly important for every website owner to enhance the usability of their website in order for it to supply in the needs of its users. Yeung and Law (2006) conducted empirical research to measure the usability of websites. The evidence did show that slight problems of usability existed on Hong Kong hotel websites. However, there was no noticeable difference found among luxury, middle-priced, and economic hotels.

A consolidated model for usability measurement should be built for the following reasons:

- Usability testing provides an understanding of and allows comparisons between various usability metrics – this will reduce costs.
- Assessments of usability complement more subjective and expert-based opinions.
- Clear communication provides inputs on usability measurements from both usability experts and software developers.
- Usability assessment practices promote best practise guidelines that are more accessible to software developers in usability engineering who may not have strong foundations in usability (Seffah, Donyaee, Kline, and Padda, 2006).

Thurow and Musica (2009) identified five components through which website usability's success is measured:

- Effectiveness: User's capability to successfully discover information which they need to complete a task.
- Efficiency: User's ability to speedily and effortlessly accomplish tasks without annoyance.
- Satisfaction: How satisfied is the user after interaction with the website in terms of their original goals?
- Frequency of error and severity: Do users often make errors - how serious are they - do users easily recover easily from them?
- Memorability: Can the user remember enough detail to use a website when next they visit, or do they have to start the learning process again?

2.6.1 User satisfaction

There is a need for a business website to be properly designed, and it must be taken into consideration that there are many elements needed to produce user's satisfaction. User satisfaction has in the past been considered as being one of the most important goals of marketing, and it plays a very important role in online business. According to Chea and Luo (2005), user satisfaction is defined as the judgment that a special service or product feature provides a pleasurable consumption-related level of fulfilment. Many decades ago Oliver (1981:29) described satisfaction as "a summary of an emotional state resulting when the emotion surrounding disconfirmed expectations is coupled with a user's prior feeling about the user experiences".

A previous study conducted by Jeong, Oh, and Gregoire (2001) showed that users' satisfaction increases with a website providing more information through high-quality products or services. An online offering could have an important positive influence on the users' intention to continue with the process of making an online reservation. Elliott and Meng (2011) examined perceived customer satisfaction with hotel websites and the results revealed that customers were mostly satisfied with the type of information found on hotel websites. Nevertheless, not all types of information are equally significant in forecasting overall user satisfaction with a hotel's website. Assaf and Magnini (2012) provide empirical evidence that shows that excluding the measurement of customer satisfaction during the design process may lead to a significant drop in the mean and ranking of hotel website efficiency scores. According to Flavian, Guinaliu, and Gurrea (2006), the degree of user trust will increase when a user perceives that the website system is usable, and that an increase in the degree of the trustworthiness of the website is evident.

Bhattacharjee (2001) concluded that one must ensure that user satisfaction has implications for an online business, since it assists to build user trust. Furthermore, the value of favourable word of mouth feedback was noted. It also provides a motivation for customers to make more than one purchase, and it also predicts the user purchasing behaviour.

All five aspects of usability (efficiency, errors, learnability, memorability and satisfaction), are important to hotel websites. Hotel booking websites are no different from any other e-commerce website where customers have to finish their purchasing process so they can spend money through the website.

2.7 Summary

The hotel industry forms a significant part of the South African tourism industry and it can be regarded as integral to the economy of the country. Manual bookings in the pre-Internet days were costly, as there were frequent delays, the cost of manual correspondence writing was high and specialised typists were in demand. However, the Internet was restructured in such a way as to allow a large number of users around the world to be connected and this eliminates time and distance constraints. Many hotel companies use the Internet as an instrument to generate revenue, and competition is always at a high level in the hotel industry (Buhalis, 2004). This author also indicated that ease of use and the completeness of information are important determinants of hotel website usability.

Since websites are a major factor contributing to the high growth rate of e-commerce in the tourism industry, hotel companies need to establish a competitive edge in order to gain advantage by designing a usable website that meets the preferences of users (Yu, 2008).

Based on the academic literature explored, it has become evident that a lack of usability of online hotel booking systems deters potential clients from spending money at hotels. In their study, Good and Sambhanthan (2012) mentioned that hotels that rely on Web reservation systems will see a decrease in online reservations if they are unsuccessful in maintaining pace with usability design principles and acknowledge the significance of it to users. Van der Merwe and Bekker (2003) noted that websites which do not provide a positive user experience, could cause customers to personally approach a store rather than to make a purchase online. Hotel staff normally would not have adequate skills to enable them to build a usable website. Nielsen (2003) concurs with this author, confirming that usability of a website is necessary for survival. A reason for this could be that when a user's information requirements are not satisfied on a given website, the users will simply visit another one (Kritzinger and Weideman, 2008).

To summarise; website usability is of utmost significance in attracting and retaining visitors. This confirms the importance of proper design and usability considerations in hotel booking systems. Ignoring this could lead to a lack of usability of online hotel booking systems and deter potential clients from booking online.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

According to the Merriam-Webster Online Dictionary (2010), *research* is defined as: “Examination or studious inquiry; in particular, experimentation or investigation that intends to determine and interpret the truth, realistic applications of such new revised hypothesis or revision of accepted hypothesis or laws in the light of new facts”. Mouly (1978) states that the process of doing research is best understood as the process of arriving at trustworthy solutions to difficulties through intended compilation, analysis and the interpretation of relevant information. In this chapter the researcher describes the methods that were used and how the research was conducted. The chapter includes an explanation of the research purpose, the approach, strategy, methods, the reliability and the validity of the research study.

3.2 Research questions

The following was identified as being the research problem:

- There is a perceived lack of usability of online hotel booking systems, which could deter potential clients from booking online.

This research is based on the following research question:

To what degree do users of hotel online reservation systems find these systems to be usable?

To answer the above research question, the following sub-questions were identified and investigated:

- Does the sample of hotel websites provide the right content and are the online reservation systems usable?
- How much time do hotel website users spend on reservation systems?
- What are the usability impediments on hotel website reservation systems?

3.3 Ontological stance

Ontology is defined as the theory of various objects, and the ties between them. It also involves a set of criteria to distinguish between various kinds of items (e.g. abstract and concrete, absent and existent, ideal, independent, and real) and their ties (relations, dependences, predictions and relations) (Corazzon, 2009).

Ontology precedes epistemology, according to Nel and Com (2007), and it is the characteristic of matter concerned with “how” instead of “what”, as is the case with epistemology (Darwin, 2007). In this case, the research will concentrate on measuring the usability of hotels in Cape Town using a web-based booking system. The following definitions hold true for this specific project:

Measurement - it is the process used to determine the magnitude of a quantity for example relative to a unit of measurement.

Usability - it is a quality which assesses how easy user interfaces are to use on websites.

Web-based - an application that is accessed over a network with an active Internet connection using HTTP as communication protocol is web-based.

3.4 Epistemological stance

Epistemology is described as the study of justified belief and knowledge. Being a study of knowledge, epistemology is mostly concerned with issues such as:

- What are its sources?
- What are the sufficient and necessary states of knowledge?
- What are its limits, and what is its structure (Steup, 2005)?

Epistemology requires evidence to substantiate its findings to prove that it is more than a view. In this research project, the study will focus on Cape Town based hotel websites and the measurement of the usability of these websites when performing online bookings.

3.5 Conceptual framework

Perez and Anthony (1995) defined a conceptual framework as being a map of various concepts, and the relationships between them. It highlighted the significance of the research (characteristics and entities of), and the associations among pairs of these things of important [relationships]).

Usability (Bevan and Macleod, 1994)

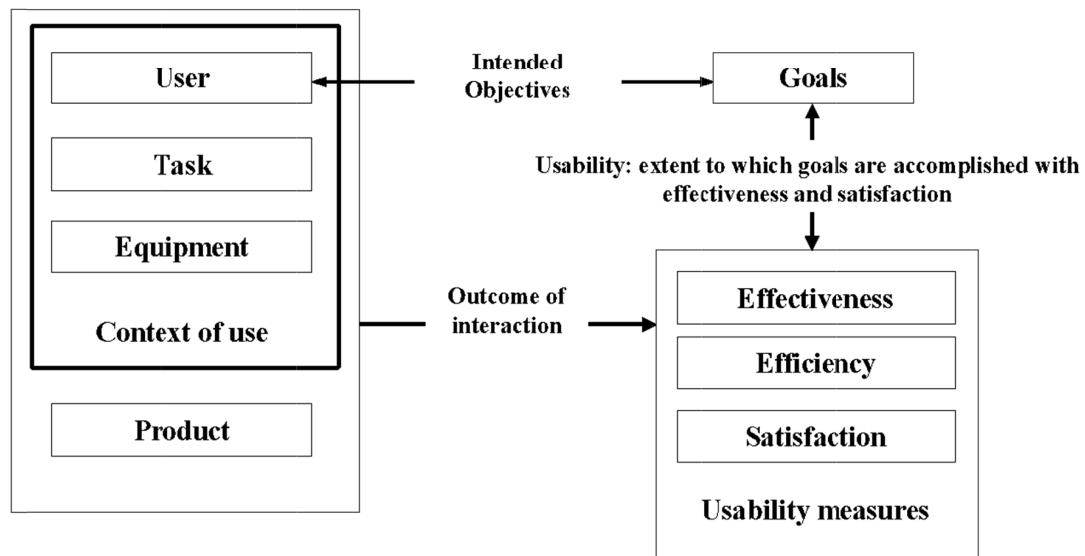


Figure 3.1: Research Entities (Bevan and Macleod, 1994)

Figure 3.1 shows different entities in this research in general, and how elements relate to each other. It also indicates the effectiveness, efficiency, satisfaction, and the relationships between them.

Key

Usability is defined by ISO as the efficiency, effectiveness, and satisfaction which specified users can accomplish as specific objectives in a specific environment. These are defined as follows:

Effectiveness: the correctness and completeness with which specific user can accomplish specific objectives in a particular environment.

Efficiency: the minimisation of resources expended, when viewed in relation to the correctness (and completeness) of objectives achieved.

Satisfaction: is the use of reservation system acceptable and comfortable to customers and other individuals influenced by its use.

In this study, the user had to complete a set of tasks by interacting through equipment in a certain environment – this interaction is with a product which is a hotel reservation

system. This interaction results in a usability measure that consists of effectiveness, efficiency, and satisfaction.

3.6 Research methodology

Research methodology refers to the process of gathering, analysing and interpretation of data, in order to answer questions; however, to meet the requirements of research work, the process must be characterised by certain attributes. These include: its ability to be controlled, its degree of rigor, its degree of being systematic and whether or not it produces valid and verifiable results (Kumar, 2005). Babbie and Mouton (2001:74) also define research methodology as “the methodical, systematic, and accurate execution of the design”. According to Maree (2007:255), there are three recognisable approaches or processes for conducting research and these are: a qualitative approach, a quantitative approach, and a mixed methods approach, which could involve triangulation. Triangulation is the combination, and application of, more than one research perspective while studying the same phenomenon (Beetett and Turner, 2009).

In order to answer various questions that constitute the study, the researcher explored multiple methods, procedures, and models of research methodology in an attempt to ensure that the most reliable results for the research could be obtained. The qualitative and quantitative approaches are both well established in research, as well as behavioural sciences and social environments. The triangulation method is growing in prominence. After studying various methods, the researcher chose the triangulation method that allows the effective evaluation of data collected, leading to well-informed, reliable, and validated conclusions.

3.6.1 Triangulation approach

Triangulation in research is defined as the simultaneous use of different methods in order for different results to shed light on the same topic (Olsen, 2004:3). This author additionally states that the mixed method approach, known as data triangulation, is frequently used since it is believed that it assists in validating the claims that may emanate from an initial study. The researcher selected triangulation as this would enable the result interpretation to be more reliable and to provide a more in-depth picture, gathered from combined sources including a questionnaire, interviews, literature, and the experimental results. This would further ensure a concrete and validated conclusion. With triangulation, both qualitative and quantitative data will be

collected to answer the relevant research questions.

It is essential to understand the advantages and disadvantages of both quantitative and qualitative methods. The rise of the mixed method approach in social science research and the identification of the triangulation approach is important (Tucker, 2010; Creswell and Plano Clark, 2011). Table 3.1 describes some advantages and disadvantages of these concepts.

Qualitative Method		Quantitative Method	
Advantages	Disadvantages	Advantages	Disadvantages
Rich information is collected about people.	Smaller numbers of people make generalisations difficult.	More representative of the population.	Large sample can be problematic.
More personal.	Raises questions of objectivity.	Easy analysis of data.	Can be impersonal.
Observation through study.	Requires judgment and interpretation.	Managers and policy makers use it.	Dehumanises what is happening.
Charges encompassed overtime.			Bias possible by improper constructed questionnaire.
			Static, not in situ.
			Questionnaire can be difficult to understand.
			Not representative because some participants do not take part.

Table 3.1: Disadvantages and advantages of quantitative and quantitative methods (Tucker, 2010).

The “mixed” method is defined as the collection of qualitative and quantitative information in a single study in which the data is gathered sequentially and concurrently. The data is then prioritised, and integrated at various stages of the research process (Creswell, 2012). According to Axinn (2006), the triangulation method was used as the mixed method strategy where combining methods allowed weak points of each process to be offset by another. Therefore, the process became complementary to strengthen the study. In any study where quantitative investigation is employed to confirm qualitative ----- research, the triangulation method is utilised (Bryman, 2008; Onwuegbuzie and Leeds,

2006). This includes:

- The collection of both qualitative and quantitative data (open and closed type questions) in response to research questions.
- The analysis of both qualitative and quantitative data.
- Persuasive and rigorous procedures for the qualitative and quantitative methods.
- The integration of these two data sources (merging, connecting, embedding).
- The use of a specific mixed methods design that involves a concurrent or sequential integration (and equal or unequal emphases).
- An approach to research that has a philosophical foundation.

3.6.2 Quantitative research

The quantitative method is often used with analytical research. Its purpose is to arrive at some universal statement (Schaub, 2008:11). It is when a researcher explores the relationships using sets of numeric data. The survey is considered as one type of quantitative research; its results can sometimes be generalised. However, it is not always the case. Then again, quantitative research seeks predictions and explanations which could generalise other persons and places. According to Maree (2007: 255), qualitative research tests the theories about actuality and looks for causes and effects. It also makes use of quantitative measures to gather information and test hypotheses. The quantitative research method works with large, representative examples and utilises structured data collection to obtain a general conclusion to the phenomena (Leedy and Ormrod, 2005:183; Struwig and Stead, 2004:4). This study involves a large sample and the quantitative method has proven to be a relevant choice.

3.6.3 Qualitative research

According to Parkinson and Drislane (2011), qualitative research is defined as research which can use methods (like case studies and observations) and results in a descriptive and narrative account of a practice. Denscombe (2002:148) claimed that the qualitative research approach is also an enquiry process to try to get to understanding of a phenomenon. In this case, a researcher analyses some words, then reports his/her detailed views of participants, providing a holistic picture. Qualitative research is defined as a research method which can be used to obtain insight into issues surrounding the research problem. This is done by collecting views and feedback from individuals' opinions, attitudes, inspirations, values and perceptions. Information is often drawn from small samples.

Qualitative research leads to answers that are typical for a specific context, and explains what makes the phenomenon different from others (Stenbacka, 2001:551). Leedy and Ormrod (2016) claimed that qualitative researchers often seek to obtain a deeper understanding of a complex situation - this work is often exploratory in nature. They could use human observations to build from-the-ground-up theories. Qualitative research allows open-mindedness, so as to activate participant interaction. However, sometimes categories emerge from the data – this could lead to theories, and information patterns that could assist in explaining the phenomenon of the study (Leedy and Ormrod, 2016). In this study performance was measured qualitatively, by way of open-ended questionnaires. An open-ended question was included in the study and participants answer it in his or her own words. This allowed the researcher to better measure the participants' true feelings.

According to Peshkin (1993:23-29), qualitative research studies normally have some of the following purposes:

Description: This offers the ability of demonstrating certain situations' natures, relationships, people, settings, systems, and processes.

Interpretation: Allows the researcher to:

- Attain newer insight into a certain phenomenon.
- Improve untested concepts or hypothetical phenomenon perspectives.
- Discover the problem that exists around the phenomenon.

Verification: Enables the researcher to do testing of the legality of some claims, assumptions, generalisations, or theories inside the context of the real world.

Evaluation: This provides the capacity for a researcher to evaluate the effectiveness of certain innovations, policies or practices.

By general consensus, qualitative research design can be summarized as:

- Case studies.
- Content analysis.
- Ethnography.
- Grounded theory.
- Phenomenological study.

Most of these qualitative research design approaches could be useful. However, for the purpose of monitoring (for example) students' intrinsic motivation towards reading, a

case study could be the best option. A typical case study often involves collecting data on the individual, events or programs on which the research is focused. This data could include documents, past records, interviews, observation and audio visual materials (Leedy and Ormrod, 2016). The gathering of forms of qualitative data could be vital when presenting an unbiased account of the study, which is also complete.

Qualitative research aims include the establishment of the socially constructed nature of actuality, and to stress the relationship between the study object and the researcher. It also attempts to emphasise the nature of the inquiry (Denzin and Lincoln, 2003). These authors also mentioned that the qualitative research advantage is that it uncovers the underlying motivations for individuals' attitudes, behaviours, perception and opinions. One of the disadvantages of qualitative research is that its results can often not be generalised to a wider population, and should therefore be used only as a general guide.

Furthermore, Leedy and Ormrod (2005:132) also identified the main research design methods (qualitative and quantitative). In this research it is appropriate to use both approaches in user testing. A quantitative research approach refers to the use of numbers to explain and forecast a phenomenon. It is representative and can be conducted on a large sample. Joubish, Khurram, Ahmed, Fatima and Haider (2011) advise that the qualitative research approach is used to obtain some insight into the: attitudes; aspirations; behaviours; concerns; cultures; lifestyles; motivations; systems and values of humans.

3.6.4 Types of sampling

The fundamental significance of sampling is the fact that it should be a representative extraction of a population. Blanche, Durrheim, and Painter (2006) identified the following types of sampling:

- Convenience sampling. It has the following attributes:
 - ✓ Selection of participants who are available without any prior rationale.
 - ✓ It is non-representative (the researcher cannot generalise).
 - ✓ It is used in experiments, where processes are examined.
- Purposive sampling
 - ✓ Cases selected for theoretical reasons.
 - ✓ It is often used in qualitative research.

- Random sampling
 - ✓ Every participant has an equal possibility of being chosen as a participant (randomly).
 - ✓ Representative (generalise).
 - ✓ Used in surveys.

A random sampling method is a sampling method in which all group members (population or universe) have a chance of being selected equally and independently. In this regard, the researcher chose a random sampling, since each element of the population had an equal chance of being selected. In this way, researcher bias was eliminated.

3.6.5 Sample

Walliman (2006:54) points out that a sample describes the small part of a whole (population), selected to show what the whole is like. Hussey and Hussey (1997) agree that a sample is often made up of a selection of members of the overall population. This target population represents a body of people, or other items, for the purpose of the research. The process which is used to draw elements from the population, is generally known as sampling (Fox and Bayat, 2007:54). The researcher identified two entities where sampling will be utilised in the study, namely:

- Participants.
- Hotel master list.

Due to the size of a population it is usually uneconomical and impractical to include all the members of the population in a research study (Welman and Kruger, 2002:83). The researcher had to extract the data obtained from a sample of the population. The researcher considered the following in determining the size of the sample:

- An attempt was made to ensure that the sample was taken randomly from the population of Cape Town.
- An attempt was made to ensure that the sample would be as big as possible, considering the limitations of this research project.
- The size of the testing venue was considered to ensure that the participants could be accommodated.
- The total size of the population for which the sample had to be drawn.

For validation purposes, the researcher submitted a questionnaire and after approval, the survey was distributed to five human personnel in the selected corporations. After the questionnaire was answered, the researcher ask respondents for any suggestions or corrections to ensure further improvement and validity of the instrument. The researcher again examined the content of the questionnaire to determine the reliability of the instrument. The researcher excluded irrelevant questions and simplified phrases which were difficult for respondents.

3.6.6 Participants

A participant, also referred to as a human subject, or an experiment, trial, study participant, or subject, is a human being who chose to participate in human subject research. He/she has chosen to be the target of observation by a researcher. Margolis (2012) stated that “it is too hard to find users for usability testing”. The best way to find participants for user tests is through recruitment (Brocka, 2012). In this study, the following advertising tools were used to recruit participants:

- An advertisement was placed in the Cape Argus and Cape Times newspapers (two popular Cape Town daily newspapers).
- An advertisement was placed on Gumtree (an online advertisement service).
- Street posters were put up in the Cape Town CBD area.

The independent newspaper Cape Argus is an afternoon daily paper, aimed at middle-to-upper income readers in Cape Town. The Cape Argus has a circulation of 71,000 and a readership of 342,000 – this encompasses all races in the Cape Town Metro area. The Cape Times is owned by Independent News, and it is published as a morning newspaper in Cape Town. The circulation is currently almost 50,000, with a readership of 280,000 in the Cape Town Metro area. Its readership is mainly white and coloured people (Anon, 2012). Both newspapers were selected for usability test advertisement, and ran for three days. See Figure 3.2 for a copy of the advertisement as it appeared in newspapers noted.

<p>Website Usability Testers Required</p> <p>Selected applicants will take part in a short (2 hours) website usability testing session in Cape Town on 01 December 2012. Register now - limited seats available! Each participant will receive a R200 shopping voucher</p> <p>Register at: www.surveymonkey.com/s/usabilitytest68</p>
--

Figure 3.2: Newspaper advertisement (Cape Argus 2012).

The advantages of using a newspaper for advertisement purposes include:

- Newspapers allow news to reach possible non-readers who might be part of the secondary target audience.
- It is cheaper than other news media.
- Newspaper advertisements are easier to write, and are less costly than the television equivalent.
- Newspapers advertisements produce effective advertising since they can be read repetitively by different members of the intended audience.
- People who have little access to other forms of media can have easy access to a newspaper.
- People purchase newspapers not only for the news, but also to find jobs, sale items or find out what is taking place on a specific day. Movie advertisements are a prime example of this.
- Newspapers have a better local market penetration.
- Dealer listings can be utilised (Venka, 2012).

Gumtree is a network of classifieds and community websites, offered online. Classified advertisements are both free and paid - depending on the category of the product, and the geographical market (Eisenberg, 2011a). Through Gumtree users have access to a large variety of product and services: everything from a dream car or job, to unique items at bargain prices (Eisenberg, 2011a). Gumtree accommodates all individuals and it is for this reason that the researcher decided to post an advertisement on this medium in order to recruit participants. The Gumtree advertisement can be seen in Figure 3.3.

Wanted: Volunteers for Usability Testing

Register now-limited number taken! There are shopping vouchers for participants. The first step is to complete the questionnaire at: www.surveymonkey.com/s/usabilitytest68

Figure 3.3: Gumtree advertisement (www.gumtree.co.za, 2012).

Poster advertisement is a dying advertising medium, but in some industries it can still be very effective. It is also the most commonly used in the entertainment industry to inform the public of the latest act or event (Eisenberg, 2011b). It is for this reason that the author decided to use street posters. See Figure 3.2 for a comparison of the advantages and disadvantages of poster advertising.

Advantages of poster advertising	Disadvantages of poster advertising
Posters can be produced in various sizes and shapes, which offer the creative team a greater variety of creative opportunities.	Some sites can be vandalised or sprayed with graffiti.
Posters can be three-dimensional, which also opens up new creative possibilities.	Posting can be unreliable (e.g. time-sensitive posters may not be posted in time).
The audience passing the site may read the message again and again on a daily basis.	Site rental can be expensive.
Sites can be bought close to the point of purchase.	It's difficult to reach a national audience through posters, especially when compared to other media such as national press and consumer magazines.
The use of posters is an effective way of building awareness of the brand over time.	Prime locations needed for posters can be tied up in other long-term contracts, resulting in limited availability.

Table 3.2: Poster advertising advantages and disadvantages (Oeil, 2011).

The poster was designed to look the same as Gumtree advertisement. There was a difference in the font size of the wording - for the poster it was bigger. Once printed, the posters were put up in the following areas:

- Local libraries.
- Community centres.
- Some shops e.g. Shoprite, Pick n Pay, Spar, etc.

- Chips shops.
- Public toilets – on the inside of the cubicle.
- Public transports e.g. train stations, bus terminus, and taxi ranks.

It is believed that the poster was effective, since an acceptably sized sample was eventually harvested. The following could be reasons behind the effectiveness of the poster:

- The poster was memorable and conveyed the message effectively.
- It was highly visible.
- The poster stood out from its surroundings, making it eye-catching for passers-by.
- The visual layout was simple.
- The headline was not more than seven or eight words.
- The font used made the poster wording highly legible.
- There was no clutter in the layout.
- The branding was strong (Oeil, 2011).

The researcher wanted to prevent large numbers of phone calls and emails from potential respondents. As a result, an online form was used as the means of initial communication, to provide a safety barrier. SurveyMonkey is known as one of the world's most popular online survey tools, and it was considered sensible to use SurveyMonkey as the first point of contact between potential participants and the researcher. SurveyMonkey makes it easy to set up, manage and run free surveys, polls, short and long questionnaires, gather customer feedback, and do market research (Market Research, 2013).

The advantages of web-based information gathering include:

- Increased access to respondents from varied locations.
- Ability to reach individuals who may otherwise be difficult to contact.
- Automated data collection (Wright, 2005).

Web-based surveys save both time and money for researchers by:

- Automatically transferring information into statistical software programs.
- Decreasing the cost of subject recruitment.

On the other hand, disadvantages include:

- Uncertainty in respect of the validity of the information.
- Issues of sampling.
- Issues of design.
- Functioning and evaluation issues (Wright, 2005).

As used in this research; a questionnaire presented as a form was used. It is referred to, from this point forward, as an online questionnaire Veal (2006). A web-based questionnaire was designed for this study to obtain participants contact details for the user testing session. With regards to this research, two important questions were included to allow selection of participants for usability testing. These two questions were:

- How would you rate your own experience with using the Internet?
 - ✓ I have never used the Internet.
 - ✓ I have used it a few times, using some different interfaces.
 - ✓ I use it regularly and I am familiar with interacting with different interfaces.
- Have you personally used the Internet to make reservations for accommodation before?
 - ✓ YES
 - ✓ NO

The data produced by the questionnaire provided a pool of potential participants. The researcher subsequently selected 55 target respondents, who have experience with using the Internet and who have personally used the Internet to make online reservations for accommodation before.

3.6.7 Master Hotel List

Since there are thousands of hotels in South Africa, a selective sample had to be taken and hotels in home city of the researcher were chosen. The researcher compiled a Master Hotel List (MHL) (see appendix B), which is the final list of hotels that meet all the requirements for user testing. The Cape Town Tourism Board was visited in order to obtain an updated map of Cape Town based hotels. This map (the Jewel Africa 2012/13 map) (see appendix A) contains a list of all Western Cape hotels, including the name of the hotel, area and star rating. Only three star and higher hotels are listed, and

B&B, Guesthouses, and Lodges were omitted. It was impossible to collect data on the whole population because it was too large. Castillo (2009) stated that a research population is normally a larger collection of objects or individuals which is the focus of scientific query. According to Stankovic II and Macedonia (1999), including larger populations can be exhaustive and impractical, research work will take too long and will be too expensive and difficult to execute. In addition, the results of such a survey cannot be extrapolated to other regions. See Appendix G for an example of a typical user interface of Booking.com and agoda.com.

Hotels in the Cape Town were selected for user testing. The researcher minimised the study area and focused on Cape Town hotels only. The researcher also determined that there are too many hotels in Cape Town, and decided to concentrate on a specific area. The final sample was taken to be hotels which are enclosed in the test area circled on Jewel Africa map (see appendix B). A total of 62 hotels were found inside this area, and these 62 were then checked against a list of qualifying criteria. Some of the hotels were removed because they were either duplicates (using the same reservation system) or they did not have a website or online reservation system. In this process the sample was reduced to 54 hotels – this was the final number of hotels which were chosen for the usability test.

The study was initially based on Western Cape Hotels, but due to the large number of hotels involved, it was further delimited to include only hotels in the Cape Town CBD.

In the case of more than one hotel using the same reservation system, the duplicate was removed. This was done through an alphabetic selection process in order to prevent repeating user testing of the same booking system. Those hotels which did not have a reservation system or a website at all were removed. Please refer to Table 3.3 for an extract of the MHL before hotels that did not meet conditions were removed.

Selected Cape Town hotels			
List of Hotels in Cape Town	Hotel homepage	Star Rates	Fail Hotels
Adderley Hotel	http://adderley.ahagroup.co.za	4	
Breakwater Lodge	http://www.bwl.co.za	3	
Cullinan Hotel	http://www.tsogosunhotels.com/hotels/the-cullinan/pages/overview.aspx	4	
Fountain Hotel	http://www.booking.com/hotel/za/fountains.en.html	3	
Head South	http://www.agoda.com	4	
Hippo Boutique Hotel	http://www.booking.com/hotel/za/hippo-boutique.en.html	4	DO
Holiday Inn Express	http://www.hiexhotels.co.za	4	
Southern Sun	http://www.tsogosunhotels.com/pages/home.aspx	5	DO
The Capetonian	http://www.agoda.com	4	DO

Table 3.3 Selected Cape Town Hotels with an Online Reservation System.

MHL identification codes:

- DC (duplicate from the same chain).
- DO (duplicate because of the same Online Reservation System).
- ND (no domain – the hotel has no website).
- NO (no Online Reservation System).

3.7 Data collection

It is a process used to gather information to be used in the assessment of performance, external evaluation, and even self-evaluation. Instances hereof include email, telephonic discussions, web-based surveys and personal interviews, direct or participatory observation, questionnaires, case studies, expert's opinions, focus groups, literature investigation and content analysis of external and internal records (MECD Glossary of Terms, 2013). Data collection instruments should be reliable enough to support the results of evaluation. It must also be collected in an accurate and suitable way (Cohen, 1982). In this research, a questionnaire presented as an instruction list was used as the data collection method (Finney, 1975). Respondents were from both genders, different races, varying age, and different backgrounds. This variety ensured accuracy of information collected. Fang (2008) noted that the

questionnaire is a common approach to investigate something, as a wealth of information can be gathered swiftly.

3.7.1 Usability testing

Usability testing has proven to be the most effective way of identifying usability problems and flaws. Nielsen (1994a) stated that usability testing can be regarded as a rather unique process, as it provides direct feedback on how actual human users utilise a system. According to Jeffrey (1994), usability testing is a practice based on participant feedback. The participants are agents of the target population used to assess the extent to which manufactured goods met usability standards. Usability testing measures the usability and/or ease of use, whilst general HCI studies attempt to formulate universal principles.

Usability testing is focussed on the measurement of a project's capacity to meet its goals. Websites and Web applications are some examples of "products" which could benefit from some form of usability testing.

During a usability test, typical users are required to carry out tasks using the software to be tested, or they have to perform tasks of specific interest to the researcher. Their performance could be measured qualitatively (typically by using questionnaires) and/or quantitatively (for example by recording a number of errors). There is a distinction between usability testing and usability evaluation; testing is a more accurate technique than usability evaluation. When comparing heuristic evaluation to testing, usability testing generally attains better results and a better hit ratio of real problems. Combining the two techniques will yield the best results (Hassen, 2005).

The user testing session took place at the Cape Peninsula University of Technology e-Learning Centre in Cape Town campus on Saturday, 01 December 2012. A large computer laboratory was booked, with 60 computers to be used in the testing session. Before commencing with the session, the users were oriented on the laboratory and also the testing process. They were then provided with an information document, which was read and signed. The testers signed this document which reflected their consent, and also indicated that both their names and their affiliations would be kept confidential and that inputs were for research use only. Participants were asked to follow the supplied instructions in order to make an attempt to execute an online accommodation reservation. The users were asked to record their experiences as they progressed, and to terminate the process just before being prompted to make an actual payment.

The users were seated in the testing centre and were allocated unique numbers (Tester 1, Tester 2 up to Tester 55). Next the UTIL/questionnaires were handed out, and the hotels were identified as H1, H2, etc. Tester 1 received a UTIL for H1, Tester 2 for H2, etc. All users were eventually given three different UTILs, so that all reservation systems were tested three times, but by different users.

User testing is a resource-demanding and expensive method, involving live interactive participation of the end users, and is a quality attribute which measures how easy to use interfaces are a user (Nielsen, 2011a). It is used when the design is mature enough to have a prototype that the end users can properly interact with. This powerful tool introduces the voice of the end users into the product development process and can also be used early in the product development process with, for instance, a paper prototype (Finland, 2010).

The user testing involved a number of participants, using several hotel websites to attempt to make a reservation for accommodation. It recorded their experiences as they progressed, and they terminated the process the moment they were asked to make a payment for their booking. When considering the ethical aspects of this component of this project, the researcher did make the following clear to participants before they partook in the user testing session(s):

- The main experimental procedures.
- Participants were told that their participation is voluntary.
- Participants had to give written consent before the testing starts.
- Participants were told that they may withdraw at any point.
- Participants were told that the data they would provide would be completely anonymous, and that their identity or association would not be disclosed to any other person or body.
- Participants were also briefed before the testing session to explain the background and purpose of the study. See Appendix H.

3.7.2 Usability test sample size history

The number of user testers before 1990

Al-Awar, Chapanis and Ford (1981) and Lewis (1982) all agree that approximately five to six users reveal most of the difficulties in a user test. Chapanis and colleagues published tutorials for the first-time computer user, which describe usability as more of

a formative than summative activity. These authors suggested that observing about five to six users of the software will reveal most of the difficulties in a usability test.

The number of user testers from 1991 to 1994

Virzi (1990) details three experiments at the Human Factors and Ergonomic Society (HFES) conference, replicating earlier work from Nielsen. Virzi later published a paper on “Refining the test phase of usability evaluation: How Many Subjects is enough?” and findings were more detailed in 1992. The two papers from Virzi state that:

- Additional user testers past a certain point, are unlikely to reveal new information.
- Eighty percent of problems in a usability test are mostly found by the first 4-5 users (avg. p of 32).
- The first few users in a user study are likely to detect severe problems.

Nielsen and Landauer (1993) in their eleven separate sets of studies established that a single user assessor on average discovers 30% of problems. Jeffrey (1994) mentioned that in order to obtain generalised results, the test needs 10 to 12 participants per user testing, according to classic experiment test recommendations.

Lewis (1993) and Virzi (1990) agree that the first few users discover the majority of the problems; their data did not demonstrate that frequency and severity are connected.

The number of user testers from 1995 to 2000

Nielsen (2000b) published results which summarise the history of a decade’s worth of research. One section of these results becomes known as the “parabola of optimism”.

It shows that reliable results can be achieved if no more than five users are involved in a testing session. It was suggested to rather run many small tests than one big one, in terms of the number of users.

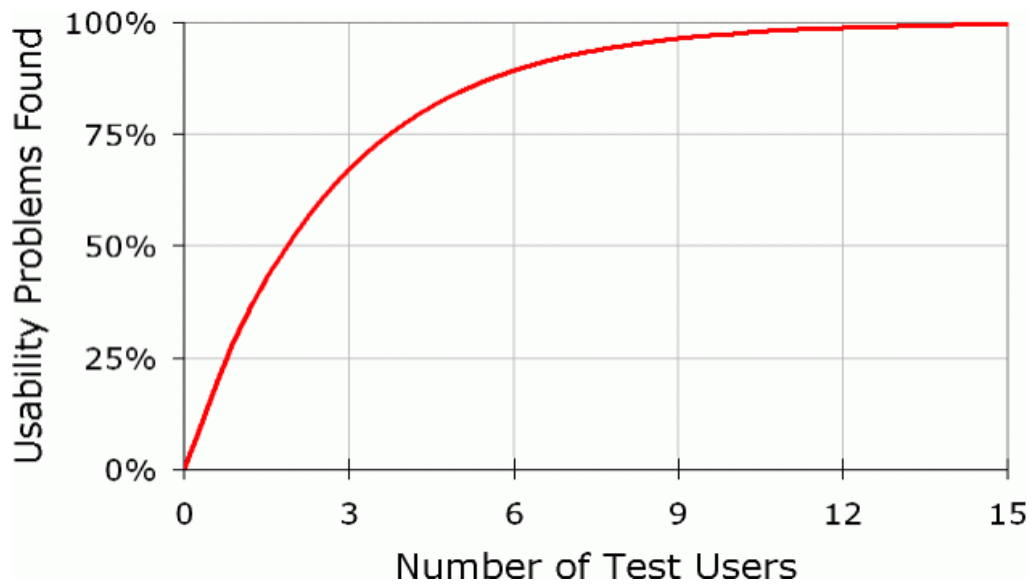


Figure 3.4: Taper off point of detection of usability problems (Nielsen, 2000a).

Figure 3.4 indicates how the number of usability problems found decreases rapidly as the number of users bypasses approximately five. From the graph it is clear that even a single user as sole participant of a user testing session, is likely to already identify approximately one third of all usability errors. It is clear that an increase in the number of testers produces a progressively lower number of errors.

If a second tester is added, that user will discover the same things as the first user, plus a limited number of new errors. Since all humans differ, every new tester is likely to add something that the previous user did not detect.

When a third tester is added, again, multiple errors already identified by the other two are likely to be picked up, and new errors might be added.

In other words, as testers are being added, the number of new errors discovered is reduced. There is no real value in observing the same error being reported multiple times. In increasing users past the number of five, researchers are likely to wasting resources by recording the same results repeatedly.

Nielsen (2000a) recommended that for qualitative user testing, five users are the optimum number if researchers run three testing sessions across the project. The premise behind the recommendation is that five participants will discover 85% of the usability issues. After three rounds of testing, the researcher should be able to catch

all of them with a manageable number of participants. Nielsen (2000a) suggests that if researchers want to discover 100% of the issues they need to carry out the test with fifteen users.

However, there are researchers over the years whose research results seem to indicate different figures from the proposed figure of five as noted by Nielsen. The argument of why ten users are not enough (Woolrych and Cockton, 2001), points out a problem in Nielsen's theory, which is that he does not take into account the visibility of an issue. These two authors prove that a group of only five users can miss a number of usability issues.

The number of user testers from 2001 to 2005

More recently Spool and Schroeder (2001) mentioned that serious problems were discovered even after numerous users partook in testing. Caulton (2001) agrees that different types of users will experience different errors, but these will not necessarily be the same errors. Caulton (2001) further suggests that the number of users should be increased.

Other authors even reduce the number produced by Nielsen. Lewis (2001) provides a correction for estimating that the first two to four users will produce the reliable results. Hertzum and Jacobsen (2001) agree that in general the number of users required to produce reliable data has been inflated there for concurring with Lewis.

Perfetti and Landesman (2002) did a usability study with three groups of six different users each. From these testing sessions it was seen that each group found more than five new usability obstacles.

Faulkner (2003) did a study which demonstrated variability in the number of users who identify problems. These results also indicate that on average five users will identify 85% of the problems. In some cases, as few as 55% or as much as 99% of difficulties were discovered in this way.

Faulkner (2003) also did various studies with a varying number of users, producing different percentages of errors identified. Faulkner's work summarised data from a large number of studies using various numbers of participants. Table 3.4 shows that the percentage of errors found increases constantly as the number of users per session grows. However, similar to Nielsen's data (Figure 3.4) the increases in the

number of errors found is smaller as the number of users grows past a certain point. Interesting to note in Faulkner's study, is that five users produce 55% of errors identified, while in Nielsen's study the figure of five users produce a figure of approximately 85%.

No. Users	Minimum % Found	Mean % Found
5	55	88.55
10	82	94.686
15	90	97.050
20	95	98.4
30	97	99.0
40	98	99.6
50	98	100

Table 3.4: Error percentages (Faulkner, 2003).

Faulkner (2003) conducted new empirical research that shows benefits from an increased sample size. This author stated that when doing usability testing it is better to use a bigger sample size. Faulkner claims that fifteen users in a testing session is an ideal number – as opposed to five users noted previously (Nielsen and Landauer, 1993). Faulkner (2003) tested 60 users, where-after he analysed random sub-samples of five users. The findings indicated that some random selected sets of five participants already identified 99% of the problems, while some other sets claimed only 55%. Nielsen and Landauer (1993) also determined that the percentage of problems identified by five-person sub-groups varied from 55% to 99%. In contrast to this, samples of ten users uncovered around 95% of problems. This fell inside a range of 80% to 100%.

The number of user testers from 2006 to present

Krug (2006) supported the use of a small sample size for usability testing, asserting that some data research problems are better than none. This would assist in identifying patterns of flawed design in the development of Web based systems.

Lindgaard and Chatratichart, (2007) use Comparative Usability Evaluation-4 data as a reminder that, when a researcher changes the tasks to be performed, different problems will be experienced. Seventeen professional usability teams participated in

their study. A total of nine of them did usability tests based on a total of 76 test users, while the balance utilised a different set of inspection methods.

Moczamy, De Villiers, and Van Biljon (2012) initially supported the claims by Nielsen of four to five evaluators being necessary to identify between 80% and 85% of the usability problems. However, their 2012 study suggested that between eight and 12 were required to correctly identify 80% of the problems. Twelve human participants were recruited, ensuring that an equal split across the user parameters was maintained.

In summary, this researcher had to take a decision on the size of the user testing group. The results from other research indicated a group size ranging from as small as two tests up to more than 50 users. The guidance provided by Faulkner (see Table 3.4) seems to indicate that the number of users around 50 will produce almost 100% of the errors in the system. However, in this study, usability testing would not be done on only one test website. A total of 54 websites were involved. Finally, the researcher decided to aim at a user group size which would ensure that every separate website would be tested by at least three users. This would be achieved by having each individual in the group testing at least three different hotel websites.

3.7.3 Questionnaire

The use of a questionnaire provides an efficient method to gather responses from a large sample group. A questionnaire is a research tool that consists of questions and it has the aim of collecting information from respondents. A questionnaire is normally a group of questions which is prepared beforehand (Rugg and Petre, 2007:142). Respondents are able to answer some questions by responding in their own words, and others by selecting from an offered set of responses - prepared beforehand (Rugg and Petre, 2007:142). There is a need for different types of questions so that respondents can answer the questions in different ways. The following standardised user testing questionnaires were investigated:

The System Usability Scale (SUS): it provides a “quick and dirty” but reliable tool for measuring perception of usability. It consists of a 10 item questionnaire with five response options for respondents; from strongly agree to strongly disagree. It allows users to evaluate a wide variety of products and services, including hardware, software, mobile devices, websites and applications (Brooke, 1987).

Post-Study Usability Questionnaire (PSSUQ): it is a 16-item survey that measures users' perceived satisfaction with a product or system. Obtaining an overall satisfaction score is done by averaging the four sub-scales of System Quality (the average of items 1-6), Information Quality (the average of items 7-12), and Interface Quality (the average of items 13-16). The PSSUQ is highly reliable (Cronbach's $\alpha = .94$) and is entirely free (Lewis, 1995).

Computer System Usability Questionnaire (CSUQ): This questionnaire, developed at IBM, is composed of 19 questions. The term "system" or "computer system" was replaced by "website". Each question is a statement and a rating on a seven-point scale of "Strongly Disagree" to "Strongly Agree" (Lewis, 1995).

Usefulness, Satisfaction and Ease of Use Questionnaire (USE): this non-proprietary questionnaire can be used to measure any interface. It is a 30-item questionnaire measuring the following metrics: Usefulness, satisfaction, ease of learning, and ease of use of an interface. Usefulness and ease of use, two of the metrics measured by questionnaire, correlate with each other and, when combined, provide more accurate results (Lund, 2008) and (Johnson, Johnson, Crowley, Culbertson, Rippen, Damico and Plaisant. 2011).

However for the purpose of this research it was decided that these examples did not meet the conditions of the test that the researcher was planning, thus a unique questionnaire was designed. For this research a questionnaire format was used to provide instructions to the users in terms of the task at hand. The following types of questions were included in this task list:

- Open-ended questions, where no choices or alternative options were provided, and a respondent was free to answer in their own words and to express any ideas they might have.
- Multiple choice questions, where specific options were provided from which the respondent had to choose one or more answers.
- Scaled-response questions: a format where a respondent's attitude and perception were measured based on a scale.

Axinn (2006) listed advantages and disadvantages of questionnaires as a research method - see Table 3.5

Advantages	Disadvantages
Sample size is large.	Response rate is low (below 40%).
Generalising of data can be done.	Poor designs affect the success rate.
Results are easy to analyse and summarize.	Poor design can produce bias in answers.
Can be distributed easily.	It is impersonal.
It is affordable.	Inability to place.
No pressure on respondents to complete it in a certain time frame.	Difficult to obtain large sample size.
Bias (as in interviews) is removed.	

Table 3.5 Advantages and disadvantages of questionnaires as a research method (Axinn, 2006).

The questionnaires were distributed to 55 target participants, who had experience with using the Internet and with making online accommodation bookings. All of the participants were provided with three questionnaires, each one based on a different reservation website. All 55 questionnaires were returned - one was invalid and the remaining 54 were used for further analysis.

3.8 Data Analysis

Analysis of data refers to the process of assessing information using an analytical and also a reasoning approach to examine each constituent of the information provided (BusinessDictionary.com, 2014).

The analysis of data has a number of factors and approaches, encompassing a set of diverse techniques with different names, in different fields of study, including the social science and science domains (Ullah, 2010). During this phase of research, the data was summarised from the questionnaires, and this summary was analysed (Jahanshahloo et al., 2005). The Statistical Product and Service Solution program (SPSS) was used as the instrument for the data analysis. This is the world's leading statistical software program used in government, commercial and academic organisations to summarize research results (Zhong and Zhao, 2008).

The advantage of using SPSS is that data can easily be manipulated to investigate and report on a range of statistics. The information formatting can then be adapted to be displayed in table or chart formats.

SPSS includes a statistical analysis function, including the descriptive statistics,

professional statistical analysis (discriminate analysis) and advanced statistical analysis of variance (Jing, Gillette, and Weiss, 2009). These functions were found to satisfy the requirements of this research to analyse the results of user testing. See Appendix I for confirmation of the statistical analysis done.

3.9 Summary

This chapter identified the research question and its sub-questions, and provided a clear indication of how the research was designed and articulated. The sample of the research was determined, and the variables and the questionnaire designs were also presented. In this chapter, the researcher discussed the methodology used and provided an analysis of why certain methods were chosen. The triangulation method formed the basis of the study and this was selected in order to prove the validity of the study. The following chapter will deal with the discussion of the findings from the questionnaire, based on results produced by the SPSS tool.

CHAPTER FOUR DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

In this chapter the results of the website usability test based on both quantitative and qualitative data analysis are discussed. This is done in relation to previous studies in the literature review. The questionnaire was distributed to 55 target respondents, who all had the prerequisite experience in make online reservations. The results of the user testing are presented in this chapter.

Data analysis refers to the process of extracting, gathering, and eventually modelling raw data. The purposes of this process are to gather useful information that can be used to arrive at a conclusion, to predict results, or to support choices in business and social science (Rouse, 2008). More than three decades ago, Leedy (1980) defined interpretation analysis as the examination of data for contracts, themes, and patterns. This information could be used to describe and explain the phenomena being studied. An unbiased and objective data analysis and presentation was conducted.

4.2 Demographics

The initial harvesting of users was done with a simple SurveyMonkey form. On this form, demographic details were collected. The characteristics of the sample are reflected in Figure 4.1 to 4.4.

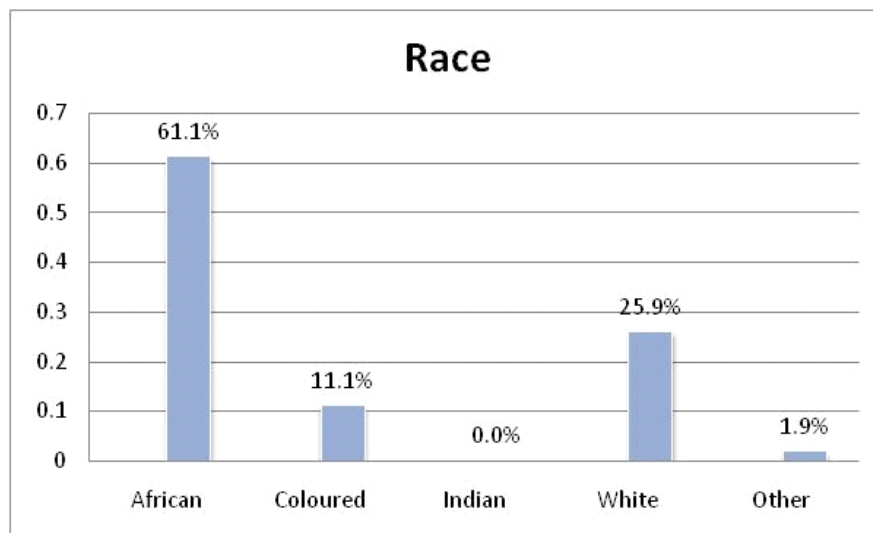


Figure 4.1: Participant's Race

According to Figure 4.1, more than 61% of the respondents were African, 25.9% were white, 11.1% were coloured, and 1.9% of the respondents were from other races.

The reason for the demographic split in Figure 4.1 could be because Cape Town is dominated by white, coloured and African individuals. Cape Town has a small population of Indian people, which could be the reason why no respondents from this people group were present for the user testing session. However, the focus of this research did not include the race or gender of participants.

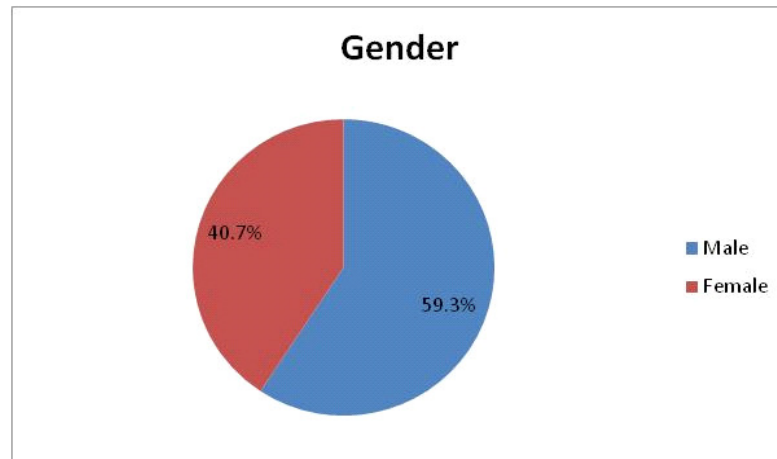


Figure 4.2: Gender split between participants

According to Figure 4.2, the majority of respondents (59.3%) were male, and female respondents accounted for 40.7% of the total. This may be due to the fact that in South Africa there are more males in Information Technology field than females, and as a result they make up a bigger percentage of respondents.

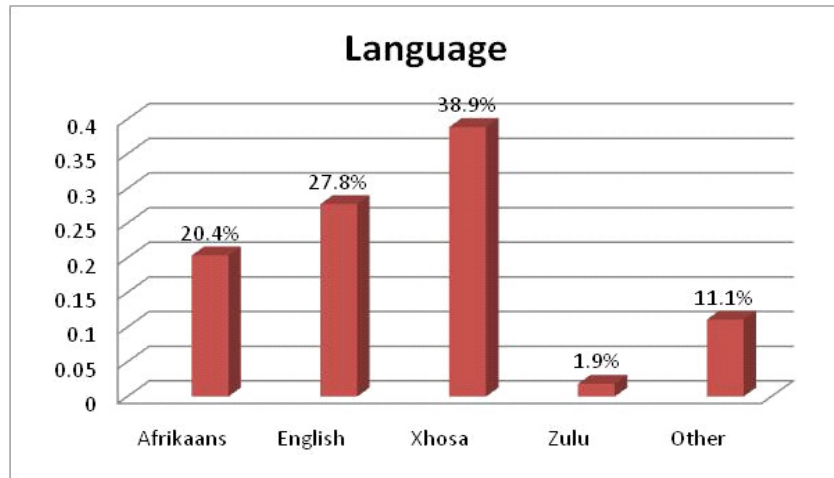


Figure 4.3: Languages spoken by different participants

According to Figure 4.3, 38.9% of respondents were Xhosa speaking, 27.8% English, 20.4% Afrikaans and 11.1% of respondents spoke a language other than that listed on the questionnaire. Finally, 1.9% of respondents were Zulu speaking. At this point the demographics of language and race respectively should be brought into perspective. Figure 4.1 summarises the race and Figure 4.3 the language of the participants. According to Figure 4.1 African participants contributes the most to the total number of participants - just over (60%) - followed by white and coloured participants with just over 25% and 11% respectively. In comparison, Figure 4.3 indicated that Xhosa was the most prevalent language of the participants with just over 38%, followed by English and Afrikaans by 27.8% and 20.4% respectively. These two sets of results support each other since black participants (Figure 4.3) are mostly Xhosa speaking in the Western Province, while, according to Figure 4.3, white and coloured participant are mostly English and Afrikaans speaking.

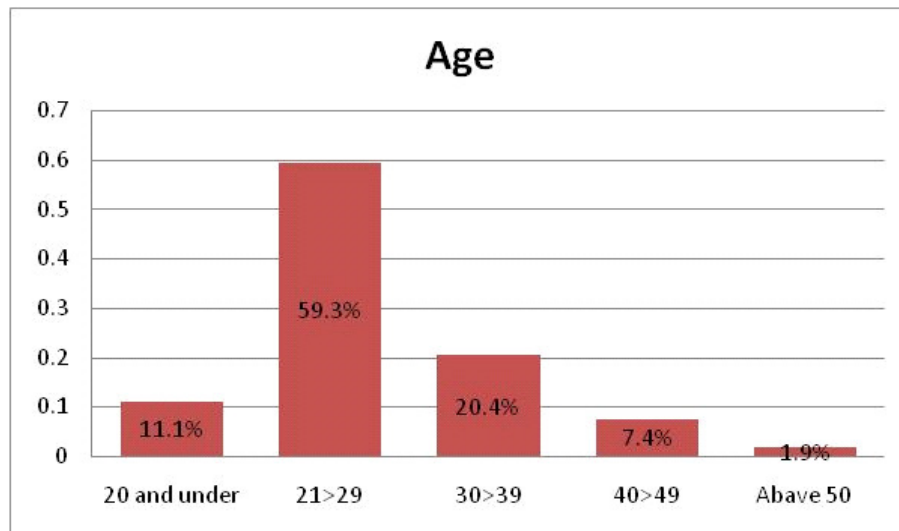


Figure 4.4: Participant's ages

According to Figure 4.4, 59.3% of respondents were aged between 21 and 29 years of age, 20.4% between 30 and 39 years and 11.1% were 20 years and younger. Another 7.4% of respondents were aged between 40 and 49 years, and 1.9% were 50 years and older. The category of 21 to 29 years represents the majority of the respondents (59.3%). The advertisement to canvas the participants was put in daily newspapers, categorised under the “Employment Offered” section. It can therefore be assumed that the respondents in this age group normally search for jobs by reading newspapers and making use of the Internet. It is possible that they passed the news on to their friends, contributing to the high percentages. The age group 50 and above represented only 1.9% of the participants. It was not part of this study to determine the reason for the category sizes, but it can be assumed that the older participants are often not up to date with technology.

4.3 Questions and respondents

This section considers the questions and responses. A brief analysis based on the information obtained has also been included.

4.3.1 Record the time when you start and finish the session.

The participants were asked to record the start and finish time of the session, which was used to calculate the amount of time (in minutes) which was spent on every session. Participants did three sessions producing a total of 162 different times (see Figure 4.5). The three graphs are titled First, Second and Third respectively, and

indicate the number of participants (Y axis) spending a certain number of minutes (X axis) on each booking task.

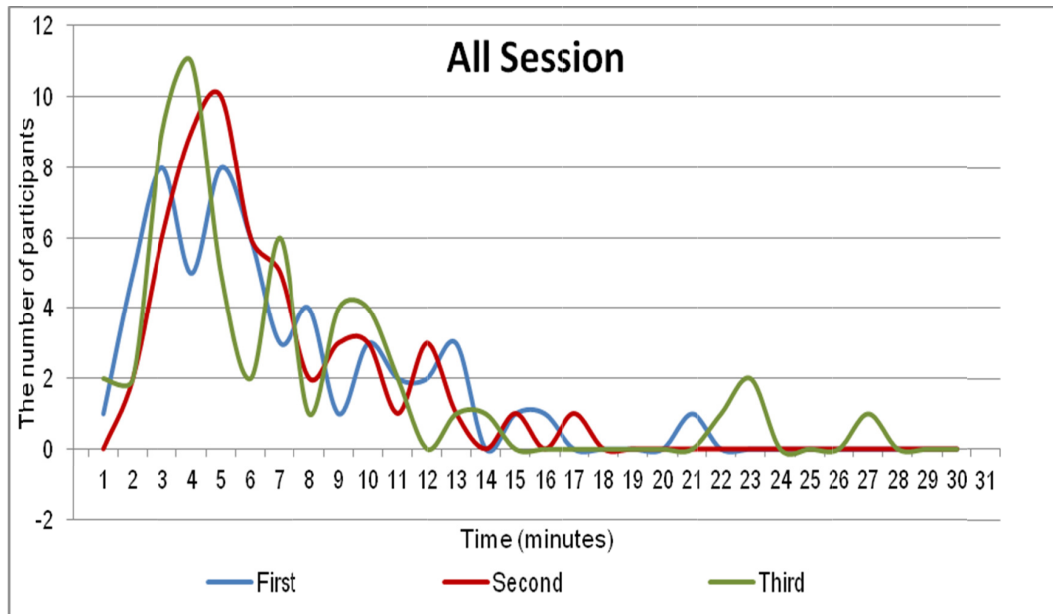


Figure 4.5: Recorded time when users start and finish the session.

4.3.1.1 Analysis and Interpretation

Figure 4.5 indicates the patterns in terms of the time taken to complete the bookings. When interpreting the graphs, the following becomes clear:

- All graphs have the highest peak between two and seven minutes.
- All three graphs decrease rapidly between five and approximately fourteen minutes.
- All graphs approach zero as from fifteen minutes up to thirty minutes.

When considering the peaks of all three graphs towards the left of the graph area, it is evident that for all three attempts, most of the participants took between three and five minutes on the booking tasks. Secondly, the sharp decrease of all three graphs over the next approximately ten minutes, indicate that fewer and fewer participants are spending between two and seven minutes on the task. Finally, as can be expected, fewer and fewer participants spent a time going beyond fifteen and twenty-seven minutes.

In the following section similar results for example “strongly agree” and “agree” will be combined to give one percentage. In the same way, negative results such as “strongly disagree” and “disagree” will also be combined to ensure easier interpretation.

4.3.2 Question A: My first impression of the home page was positive.

The first question was intended to measure the participant’s first impression of the homepage.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	87	53.7	53.7	53.7
	Agree	18	11.1	11.1	64.8
	Neutral	45	27.8	27.8	92.6
	Disagree	4	2.5	2.5	95.1
	Strongly Disagree	8	4.9	4.9	100.0
	Total	162	100.0	100.0	

Table 4.1: Users’ first impression of the home page

4.3.2.1 Descriptive Analysis

The data in Table 4.1 indicates that 64.8% of the respondents agreed with the statement “My first impression of the home page was positive”, while 27.8% of the respondents were neutral, and 7.4% disagreed.

4.3.2.2 Interpretation

According to Table 4.1, more than 64.8% of the respondents agreed that their first impression of the home page was positive. This result shows that the use of colours and the webpage style was consistent. The participants found the webpage design to produce an interesting layout, text was easy to read, URLs were short and simple and homepages were easily readable and easy to understand. Users often leave webpages within ten to twenty seconds. However, pages with relevant content can hold an individual’s attention for much longer since visit durations follow a negative Weibull distribution (Nielsen, 2011b). Even when combining the two lowest percentages of

those who found the homepage impressive, only 7.4% of the respondents disagreed that the homepage impression was positive.

4.3.3 Question B: It was easy to find where to click on the homepage to take me to the booking page.

This question was included to determine how easy it was for users to find the call to action when they want to make a booking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	101	62.3	62.3	62.3
	Agree	14	8.6	8.6	71.0
	Neutral	21	13.0	13.0	84.0
	Disagree	11	6.8	6.8	90.7
	Strongly Disagree	15	9.3	9.3	100.0
	Total	162	100.0	100.0	

Table 4.2: Summary of user's view of the ease with which the booking page could be found.

4.3.3.1 Descriptive Analysis

The data in Table 4.2 indicates that 70.9% of the respondents agreed with the statement "It was easy to find where to click on the home page to take me to the booking page". Only 13.0% of the respondents were neutral, and 16.1% disagreed.

4.3.3.2 Interpretation

Table 4.2 shows that 70.9% of the respondents agreed that it was easy to find where the call to action on the homepage was, in order to be redirected to the booking page. Eisenberg, Quarto-vanTivadar, Davis, and Crosby (2008:158) noted that homepage usability depends on the following factors: ease of learning, subject satisfaction, ease of use, effective to use, memorability, severity level of errors and error frequency.

The results show that the homepages were well-structured, leaving a good impression with the users visiting the websites. The booking reservation buttons (call to action) were easy to find for most users. The homepage communicates the site's purpose clearly, and all the options on the website were clearly visible to the users. This

includes the spacing and size of characters, label colours, fonts and backgrounds, and locations of labels, text, and pictures. The results also show that 16.1% of the respondents disagreed that it was easy to find where to click on the homepage to take users to the booking page. This low figure indicates that only a small fraction of participants found the call to action difficult to locate.

4.3.4 Question C: I am happy that I completed this booking in a reasonable amount of time.

This question was included to determine the participant’s degree of happiness with the time spent in making the booking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	93	57.4	57.8	57.8
	Agree	17	10.5	10.6	68.3
	Neutral	32	19.8	19.9	88.2
	Disagree	6	3.7	3.7	91.9
	Strongly Disagree	13	8.0	8.1	100.0
	Total	161	99.4	100.0	
Missing	6	1	.6		
Total		162	100.0		

Table 4.3: Users were happy that they completed their booking in a reasonable amount of time.

4.3.4.1 Descriptive Analysis

The data displayed in Table 4.3 indicates that 68.4% of the respondents agreed with the statement “I am happy that I completed this booking in a reasonable amount of time”, while 19.9% of the respondents were neutral, 11.8% disagreed, and 0.6% did not respond.

4.3.4.2 Interpretation

Table 4.3 shows that almost 70% of the respondents agreed that they are happy that they completed their booking in a reasonable amount of time. The results also show: it was easy to go back or exit from the transaction; important control buttons are

represented on the screen; facilities were provided to easily return to the top navigational level at any point; the use of terminology was clear and the help function was provided. The results also show that 11.8% of respondents disagree with the statement that users were happy that they completed their booking in a reasonable amount of time. This last result indicates that some of the hotels' booking systems were not user friendly and perceived to be complex.

4.3.5 Question D: I can recommend this booking system.

This question was included to determine how many users found the experience positive enough to recommend it to others.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	79	48.8	49.7	49.7
	Agree	16	9.9	10.1	59.7
	Neutral	39	24.1	24.5	84.3
	Disagree	10	6.2	6.3	90.6
	Strongly Disagree	15	9.3	9.4	100.0
	Total	159	98.1	100.0	
Missing	6	3	1.9		
Total		162	100.0		

Table 4.4: Choices made re recommendations.

4.3.5.1 Descriptive Analysis

The data analysis of Table 4.4 indicates that 59.8% of the respondents agreed with the statement "I can recommend this booking system". A total of 24.5% were neutral, 15.7% disagreed and 1.9% did not respond.

4.3.5.2 Interpretation

Table 4.4 shows that almost 60% of the respondents agreed that they can recommend the booking systems they used. The results indicated that: information presented by the booking systems was current, timely, accurate and relevant; the information provided was easy to understand; the system provided information to let the users

know where they were at all times and the contact information was displayed prominently. This relatively high number of users recommending the booking system to others shows that they found the booking systems to be useful and suitable for other users. However, 15.7% of the respondents disagreed with the above. This may lead to negative comments about hotel booking system as they were not practical or functional.

4.3.6 Question E: Every time I made a mistake using the booking system, I recovered easily.

This question was included to determine the user’s recovery when they experienced problems on the system.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	53	32.7	45.7	45.7
	Agree	17	10.5	14.7	60.3
	Neutral	31	19.1	26.7	87.1
	Disagree	6	3.7	5.2	92.2
	Strongly Disagree	9	5.6	7.8	100.0
	Total	116	71.6	100.0	
Missing	6	46	28.4		
Total		162	100.0		

Table 4.5: Recovery of users after errors.

4.3.6.1 Descriptive Analysis

The data in Table 4.5 indicates that 60.4% of the respondents agreed with the statement “Every time I made a mistake using the booking system, I recovered easily”, and 26.7% were neutral, 13% disagreed, and 28.4% did not respond.

4.3.6.2 Interpretation

Table 4.5 shows that about 60% of the respondents agreed that every time they made a mistake using the booking system, they recovered easily. This fixture is normally welcomed by users who now know that when they make mistakes it would be easy to

recover and continue with the process. As a result of this, the user can navigate more freely (i.e. navigation of unknown options). Most users will make a mistake somewhere in the process of booking tickets - this is human nature. If the system permits a corrective action, it means that the system has better usability. Presently, users expect the corrective action to be present in the transaction processing pages.

4.3.7 Question F: The booking system gave an error message which clearly explained how the problem should be fixed.

This question was included to determine how clear the system’s indication was on how to recover from an error situation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	37	22.8	35.9	35.9
	Agree	9	5.6	8.7	44.7
	Neutral	28	17.3	27.2	71.8
	Disagree	13	8.0	12.6	84.5
	Strongly Disagree	16	9.9	15.5	100.0
	Total	103	63.6	100.0	
Missing	6	59	36.4		
Total		162	100.0		

Table 4.6: Frequency of error message display.

4.3.7.1 Descriptive Analysis

The data in Table 4.6 indicates that 44.6% of the respondents agreed with the statement “The booking system gave an error message which clearly explained how the problem should be fixed”. Another 27.2% were neutral, 28.1% disagreed, and 36.4% did not respond.

4.3.7.2 Interpretation

Table 4.6 shows that just under one half of the respondents agreed that the booking system gave an error message which clearly explained how the problem should be fixed. The results also show that booking systems were designed in such a way that

the user should not make major errors. Regardless of this, errors were made and the booking system identified the errors and provided easy mechanisms for handling the error most of the time. The booking systems identify the mistakes and handled the errors in a user friendly way. If this was the case, the booking system design is considered as highly usable. Twenty-eight per cent of the respondents disagreed that the booking systems gave error messages which clearly explained how a problem should be fixed. This is one of the reasons why some of the users were either unable to finish their booking and/or felt that the booking system was not usable.

4.3.8 Question G: The help system was clear and useful.

This question was included to determine how effectively the help system worked.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	35	21.6	35.4	35.4
	Agree	11	6.8	11.1	46.5
	Neutral	35	21.6	35.4	81.8
	Disagree	5	3.1	5.1	86.9
	Strongly Disagree	13	8.0	13.1	100.0
	Total	99	61.1	100.0	
Missing	6	63	38.9		
Total		162	100.0		

Table 4.7: Clarity and helpfulness of Help systems.

4.3.8.1 Descriptive Analysis

The data in Table 4.7 indicates that 46.5% of the respondents agreed with the statement “The help system was clear and useful”, while 35.4% were neutral, 18.2% disagreed, and 38.9% did not respond.

4.3.8.2 Interpretation

Table 4.7 indicates that 46.5% of the respondents agreed that the help system was clear and useful. This was the case since feedback was always provided swiftly. The website included feedback in numerous ways, and the contact information (e.g.

telephone number and email addresses) were displayed prominently. More than 18% of users found that the help systems were not clear and useful. The reasons may be that feedback was not provided and the contact information was not displayed.

4.3.9 Question H: The wording used on this booking system was clear and easy to understand.

This question was included to determine how users perceive the language usage when they were making a booking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	97	59.9	60.2	60.2
	Agree	27	16.7	16.8	77.0
	Neutral	28	17.3	17.4	94.4
	Disagree	4	2.5	2.5	96.9
	Strongly Disagree	5	3.1	3.1	100.0
	Total	161	99.4	100.0	
Missing	6	1	.6		
Total		162	100.0		

Table 4.8: Ease of understanding the system wording.

4.3.9.1 Descriptive Analysis

The data in Table 4.8 indicates that 77% of the respondents agreed with the statement “The wording used on this booking system was clear and easy to understand”, while 17.4% were neutral, 5.6% disagreed, and 0.6% did not respond.

4.3.9.2 Interpretation

Table 4.8 indicates that more than ¾ of the respondents agreed that the wording used on this booking system was clear and easy to understand. The booking systems seem to use the language with which the users are familiar. In these booking systems the wording was simple and easy for users to understand. Also, 5.6% of respondents disagreed or reported that there were problems with wording while performing the tasks. Some of the booking system’s tourism-specific wording such as “itinerary”

instead of “travel detail” was not well understood. This usage of topic specific terms posed a problem to some users. Some booking systems use a progress bar to indicate how far the users where in the booking process. If the progress bar was not clear, the users did not know how far they are in the process and what they have accomplished.

4.3.10 Question I: The booking system navigation made the next step I should take obvious.

This question was included to determine how easy it was for users to understand what the next step would be when they want to make booking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	89	54.9	54.9	54.9
	Agree	18	11.1	11.1	66.0
	Neutral	32	19.8	19.8	85.8
	Disagree	8	4.9	4.9	90.7
	Strongly Disagree	15	9.3	9.3	100.0
	Total	162	100.0	100.0	

Table 4.9: Clarity of navigation indications.

4.3.10.1 Descriptive Analysis

The data in Table 4.9 indicates that 66% of the respondents agreed with the statement “The booking system navigation made the next step I should take obvious”, 19.8% were neutral, and 14.2% of the respondents disagreed.

4.3.10.2 Interpretation

Table 4.9 shows that around 2/3 of the respondents agreed that the booking system navigation made the next step they should take obvious. The reasons are: the booking systems track where the users were in the previous session; navigation aids were provided and opening of extra browser windows was avoided. However, 14.2% of the respondents disagreed that the booking systems navigation made the next step obvious to users. This result shows that a lack of guidance available to users resulted

in problems for some participants in the booking process, as they did not understand the clear booking flow and the tasks in each step.

4.3.11 Question J: The interface of this booking system was trouble-free to use.

This question was included to determine the ease-of-use of the booking system interface when the users want to make a booking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	80	49.4	50.3	50.3
	Agree	23	14.2	14.5	64.8
	Neutral	35	21.6	22.0	86.8
	Disagree	9	5.6	5.7	92.5
	Strongly Disagree	12	7.4	7.5	100.0
	Total	159	98.1	100.0	
Missing	6	3	1.9		
Total		162	100.0		

Table 4.10: Ease of use of the interfaces.

4.3.11.1 Descriptive Analysis

In Table 4.10 the data indicates that 64.8% of the respondents agreed with the statement “The interface of this booking system was trouble-free to use”, 22.0% were neutral, 13.2% disagreed, and 1.9% (3) did not respond.

4.3.11.2 Interpretation

Table 4.10 indicates that about 2/3 of the respondents agreed that the interface of this booking system was trouble-free to use. Designers of booking systems should understand most important principles, such as: the usability and functionality of the system; the iterative design approach; the provision of regular feedback; the minimum steps required to complete the booking process; risk management and user-centred approach. There is a good balance between context and the graphics included in the interface of such a system. The growth of Web applications is characterised by an growing availability of online services and product trading. Most hotels provide facilities

like reservation booking systems and search facilities. However, more than 13% of the respondents stated that the interfaces of the booking system were not trouble-free to use.

4.3.12 Question K: Specifying the dates on my booking was easy.

This question was included to determine how easy it was for users to find specific dates when they want to make a booking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	120	74.1	74.1	74.1
	Agree	14	8.6	8.6	82.7
	Neutral	16	9.9	9.9	92.6
	Disagree	4	2.5	2.5	95.1
	Strongly Disagree	8	4.9	4.9	100.0
	Total	162	100.0	100.0	

Table 4.11: Ease of specifying dates.

4.3.12.1 Descriptive Analysis

The data in Table 4.11 indicates that 82.7% of the respondents agreed with the statement “Specifying the dates on my booking was easy”, 9.9% were neutral, and 7.4% disagreed.

4.3.12.2 Interpretation

Table 4.11 shows that the majority (over 80%) of the respondents agreed that specifying the dates on their booking was easy. This proved that the calendars on the booking systems were well designed and easy to use. Table 4.11 shows that only 7.4% of the respondents disagreed that specifying the dates on bookings were easy. One of the users mentioned that “the booking system did not allow for one to pick what kind of facilities they have in a single room booking (e.g. king size bed, not two single beds)”. Some of the reasons specified by users as to why the dates on booking accommodation systems were not easily understood include the following: error

messages on date selection were not relative to the booking process; date selection was faulty and did not display an error message.

4.3.13 Question L: Specifying the kind of room I want for this booking was easy.

This question was included to determine how easy it was for users to find specific kind of rooms when they tried to make a booking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	93	57.4	58.1	58.1
	Agree	20	12.3	12.5	70.6
	Neutral	24	14.8	15.0	85.6
	Disagree	5	3.1	3.1	88.8
	Strongly Disagree	18	11.1	11.3	100.0
	Total	160	98.8	100.0	
Missing	6	2	1.2		
Total		162	100.0		

Table 4.12: Ease of specifying rooms required.

4.3.13.1 Descriptive Analysis

The data in Table 4.12 indicates that 70.6% of the respondents agreed with this statement “Specifying the kind of room I want for this booking was easy”, 15.0% were neutral, 14.4% disagreed, and 1.2% did not respond.

4.3.13.2 Interpretation

Table 4.12 indicate that almost $\frac{3}{4}$ of the respondents agreed that specifying the kind of room they want for this booking was easy because different room types were specified. Room types were named, for example twin or double, and contained a description, as well as defining the number of guests it can accommodate and the prices. It is also shown in table 4.12 that 14.4% of respondents disagreed that to specify the kind of room they want to book was easy because some of respondents could either not even find the booking system or the booking system was outdated. Some of the users

mention that “they had problems with wording of room types (sic) - no indication of single room - referred to studio twin and standard twin. Essentially it is not showing the price of the room before I make my decision about the room and also not identify (sic) which room is available and which side, it means booking system need (sic) to improve”.

4.3.14 Question M: At every point in the booking process the system showed clearly where I was.

This question was included to determine how clear it was for users to know where they are on the system while making a booking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	91	56.2	56.5	56.5
	Agree	23	14.2	14.3	70.8
	Neutral	20	12.3	12.4	83.2
	Disagree	11	6.8	6.8	90.1
	Strongly Disagree	15	9.3	9.3	99.4
	6	1	.6	.6	100.0
	Total	161	99.4	100.0	
Missing	System	1	.6		
Total		162	100.0		

Table 4.13: Indication of context.

4.3.14.1 Descriptive Analysis

In Table 4.13 the data indicates that 71.3% of the respondents agreed with the statement “At every point in the booking process the system showed clearly where I was”, 12.5% were neutral, 16.3% disagreed, and 0.6% (2) did not respond.

4.3.14.2 Interpretation

Table 4.13 shows that 71.3% of the respondents agreed that at every point in the booking process the system showed clearly where they were. The results indicate that the booking system does track where users were in the previous session, the navigational aids were given, and the opening of unnecessary browser windows was avoided. Table 4.13 also illustrates that 16.3% of the respondents disagreed that at every point in the booking process the system showed clearly where users were. This last result shows that the booking system was not user friendly to some users.

4.3.15 Question N: I have done a successful booking at this hotel (disregarding the lack of payment).

This question was included to determine if the user managed to make a booking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	98	60.5	60.9	60.9
	Agree	26	16.0	16.1	77.0
	Neutral	20	12.3	12.4	89.4
	Disagree	3	1.9	1.9	91.3
	Strongly Disagree	14	8.6	8.7	100.0
	Total	161	99.4	100.0	
Missing	6	1	.6		
Total		162	100.0		

Table 4.14: Indication of success achieved in the booking process.

4.3.15.1 Descriptive Analysis

The data in Table 4.14 indicates that 77% of the respondents agreed with the statement “I have done a successful booking at this hotel - disregarding the lack of payment”, 12.4% were neutral, 10.6% disagreed, and 0.6% did not respond.

4.3.15.2 Interpretation

Table 4.14 shows that 77% of the respondents agreed that they have done a successful booking at their hotels (disregarding the lack of payment). The users

completed their tasks successfully due to a combination of positive usability factors which include the fact that important menus or links were directly visible to them. In any booking system all the important menu options should be easily accessible from the homepage. These include: travel insurance, free city guide, news, cheap hotel offers and other offers. The Table 4.14 also shows that 10.6% of respondents have not been successful in their booking. This shows that not all booking systems meet users' requirements. Some users mentioned that "they did not even finish the booking as the systems were hard to use and too technical".

4.3.16 Question O: Please put a cross in every box below, which describes your experience with this booking system. You could have one or more than one cross in the table.

In an attempt to measure user's experience of the booking systems in a less rigid way, words/phrases were provided to describe a possible feeling evoked in a user when using the booking systems. Users were invited to tick any one or more of these terms, which would correctly identify the experience of that specific website.

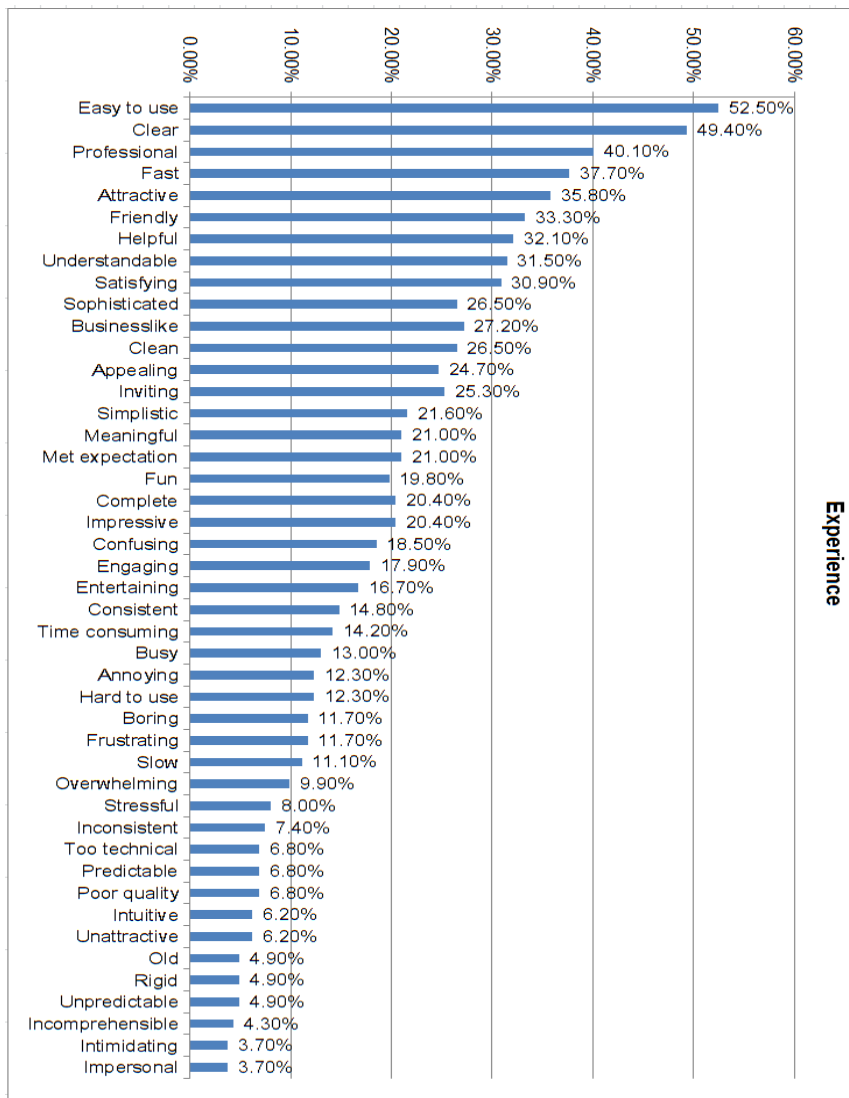


Figure 4.6: Users’ choice of descriptive key phrases to explain the experience.

It is impossible to draw an exact graph of a user’s experience based on their choice of descriptive phrases to indicate what overall experience was like. However, it is possible to see two clear patterns in Figure 4.6, in terms of users’ feelings and experiences with the booking systems. Firstly, if the graph is read from the top moving downwards, it is noted that the first twenty descriptions are positive. This ranges from “easy to use” with 52.50%, down to “impressive” with 20.40%. After the first negative comment (“confusing” with 18.50%), as the graph is read downwards, even then, some positive terms are still appearing around the mid-section of the graph. As the reader moves further down (past the “busy point” at 13.00%) more and more negative terms start appearing (“annoying”, “hard to use”, “boring”, “frustrating”, “slow”, etc). When one

considers the graph from the bottom moving upwards, in other words from the lowest number of checks on the questionnaire, the first nine comments are negative before a positive one is reached (predictable 6.80%). This indicates that many negative terms are bundled together on the bottom end of the scale, meaning they have received a low score. Again working from the top downwards, the first negative term is “confusing” at 18.50% - therefore it can be assumed that of all the negative terms, “confusing” was most often used to describe the negative aspect. Furthermore, the terms “intimidating” and “impersonal”, both at 3.70%, were used by least of the participants indicating that these are not common features of the booking systems. Finally, when reading from the bottom up on the graph the first positive term found is “predictable” at 6.80%. Therefore, this possible aspect was identified by the fewest participants indicating this was not a very common positive description for hotel booking systems.

Results of user experience with the booking systems

Easy to use - participants show that the key factors were mostly provided on booking systems. Systems that are easy to use should have the following attributes:

- Appearance - systems are visually appealing, polished, and professional.
- Content - along with style, the systems should have substance, which means that the information assists the users in making a decision; they were therefore informative and relevant.
- Functionality - the systems were quick and they operated in the correct way.
- Usability - the systems were easy to read, navigate, and understand.
- The systems were search engine optimised.

Clear - the next step in the booking system should be obvious without causing doubt in users' minds. The following are some of the attributes associated with a well-designed online system:

- Crucial business information - the systems should be built the way users expect.
- Contact information - the contact information should be displayed in its own section, containing an address, email, phone number and a contact form - easily visible and accessible.

- Clear navigation – the menu structure and underlying navigation should be such that a user will instinctively make the correct next menu choice, which will then lead to the correct information in the shortest number of clicks.

Attractive - an attractive booking system is more likely to leave a positive impression and retain visitors. As many businesses populate the Web with new websites, the challenge remains to not only attract but also retain users' attention. The following are characteristics of attractive websites:

- The website design catches the attention of users.
- The content is well-written and conveys the right message to its users.
- Font types, colours, and images are used in such a way that most of the users find it attractive.

Satisfying - this is a subjective impression formed by the user after his/her interaction. When a user experiences satisfaction after interaction with a website, it includes the knowledge that the user has: achieved his or her goals on a website; performed a transition that was required; found information that the user was looking for. All this should be done in as short a time as possible.

The following should provide clear recommendations to designers to improve websites, where relevant.

Confusing website - it is a website with too much information on the page, including multiple navigation areas (repeats in different areas), two columns on both sides of the main content - this is distracting to read, inconsistent link colours (difficult to distinguish between links and decorations), and unnecessary icons leading to designer clutter.

Hard to use - when a booking system is difficult to use and users get lost, they tend to leave the site. When booking system information is not easy to read or does not answer users' key question, they leave as well.

Frustrating - this is usually the case when a website is not in a working condition or badly constructed components; this would cause users to feel frustrated and disillusioned with the reservation system. There is an expectation that everything should work as expected - event registration, contact forms and hyperlinks and site search.

Old website - it is a website with a narrow or a table-based layout, bad navigation and old copy (text has not been updated).

4.3.17 Question P: Kindly indicate in a short description below how you experienced the tasks required to complete this booking process (e.g. selecting dates, selecting room type, etc).

Results of user experience about tasks

4.3.17.1 Positive experience while the user completes booking process

According to Nielsen and Norman (2014), a good user experience is more than giving users what they want, or providing a set of checklist features. Achieving a high level of user experience requires seamless merging of the service of graphical and industrial design, including: engineering, marketing, multiple disciplines, and interface design. The last question of the research allowed users to express their experience after their attempt to make a hotel booking online.

Some of the user comments on various fixtures of the website they have worked on are listed below. These comments are quoted verbatim, and grammar and sentence construction errors were left as they were.

- **Home page**

“This booking system and home page was clear and understandable, it’s fast to get where you want to be, date and room types was very clear to select. Very impressive home page they had. Very inviting home page, quite clear. It was easy to access on the home page, showed clearly availability and user friendly. I was impressed with their home page very attractive and easy to use. It is easy to access in the home page it shows clear cost and dates you need to book. I like the interfaces webpage and I like the images provided it was easy to use well done. The selection of the dates was easy”.

“Great interfaces webpage and good quality. All in one page however which could have been details to read through, which could have been sucimplified in one/two, terms (Stunning). All in one page without many clicks to the next page I like the website. However the website is fairly easy to use and to navigate. You have to travel from

screen to screen to fill the details necessary to make booking, so that makes more time consuming than the other two websites”.

- **Enjoyable, understandable and fast**

“All like about this website fun and enjoyable also easy to understand also its fast, I do not go through the way travelling to book room. I had a lot of fun with this booking for the dates were helpful”.

- **Clean**

“Clear, inviting and easy. Clearly this hotel has a well-developed booking system, each step was clearly and so makes it easy to fill it. Descriptions are provided”.

- **Dates**

“Dates were easy to pick as they came up in a calendar format. Selecting date was easy-pop-up calendar. Selecting dates was easy to use. It was easy to select the dates and also straight on the amount that you expected to pay meaning doing all the calculations. It was easy to go to the website and very easy as well to select the date, room and the hotel I wanted. It was easy to select dates and room types”.

- **Time consuming**

“Easy to complete booking and it was not time consuming. Everything was in order, never struggled to complete the booking. Easy to use and clear in terms of what kind of rooms do you want and the type of bed you want not complicated at all. Easy to use, understandable, available dates, comprehensive, quick and logical selection process. It did not take much of my time and was very appealing to choose a room. All tests were easy once book online button was selected. The booking online button looked as if part of promotion only. I found the booking quite easy and user friendly. Was easy to use and hustle free. I did not have hard time. The tasks were easy to complete on this website. The website is no too fancy, thank goodness”.

- **Easy**

“Every step was very simple and easy to complete. Every step I make was easy and clear. Everything was quite easy to do/ use and I appreciated the fact that the booking system explained clearly i.e. how many people I could allow in my room and whether or not I wanted a meal etc. very easy to follow”.

“Had no problems whatsoever wonderful site. I had no problems. No problem in the booking it went well”.

- **Room selection**

“Selecting the room was easy and the different room types with the overview of what you would like and what their overview expression about the room is. Selecting the dates and the room type was easy. Selecting rooms was problem free, was helpful in need e.g. total occupants and room type. I had a choice between two descriptions of rooms, one of which had two single beds as an option. I also went for the cheap option of the two”.

“I had a pleasant experience. The website left me with a smile my face because everything was so quick and easy. My personal experience about this booking was very clear, easy to navigate, simple and straight forward booking. This was a very good experience indeed; each process step is as easy to follow as the previous”.

“I think is expand website and give more opportunity to choose which hotel you would like to be and also which hotel you need 1 or 3 and I like the design attractive website and give more details”.

- **User friendly**

“It is so user friendly, you do not need to know much about the computers in order for you to be able to book. It was a user friendly easy task to do one that can be done in very little time. It was very easy friendly everything was clear and very short it is not boring and it is professional. The system is user friendly it was very easy for me to pick up the dates that I wanted to pick, because they have the calendar already and that is time saving. The website was relatively user friendly it was easy to find everything I needed; as a result I did not use the help option. This booking was very friendly”.

“It was very simple and very straight forward and I appreciate the fact that everything was on one page and that all I had to do was scroll down. It was a good representation different unique but interesting user friendly and easy to use. The website was simple to use and straight forward, it is very easy to select everything (dates, rooms), the interface is not overcrowded with information that is unnecessary”.

“Everything clear obvious font increase button would be a suggestion as I battle to increase it using my computer. It was easy here and there but anyway that good staff

also interest and giving way forward. Perfect website perfect system. It was easy to use, quick and really professional”.

- **Booking process**

“The booking process was easy, fast and the wording was clear, simple English, very easy to understand. The booking process was good; I loved the part when you confirm booking the hotel consultants will be in touch with me. The booking process was impressive as everything just flowed with just a click/selection of what I wanted. I loved the special request part. It gives the user preference. The booking process was so much fun and understandable. The booking system was much friendly, fun and impressive it was clear and easy even to select dates and room types it was understandable. Impressed that the offered or advertised other services they were affiliated to”.

- **Booking system**

“The booking system was quick complicated and it needs clear understanding and also educate people who are not educated. The booking was easy and fun to use, it was not time consuming, it was easy for me to see from the home page where to start with my booking, the words used were simple, and understandable. I complete my booking without any hustles. The online booking for this website was very clear and easy to navigate. It guide user step by step. The whole booking process was easy to use, simple and I managed to complete booking. This booking process was satisfying. The selection process was easy and fast booking procedures. The tasks required in this booking process are inviting and easy to use. The booking was personal at times and was not time consuming from the dates to select rooms was just too easy”.

“This reservation was easy and really attractive. This type of system is clearly. Using the booking system was a breeze and I was impressed by their anticipation of special request from the guest which shows that they are prepared to cater for guest from all walks of life. Very reassuring to be able to make special requests before confirming the booking”.

- **Attractive**

“Very impressive choice of colours used. The feature helped from the word go. Easy selection using buttons, accompanied by pictures so I can see what you are booking”.

- **Recommendation**

“I would recommend it to any user. I would recommend this system to my family and friends to use as it was so impressive and inviting. I would recommend every hotel users the same system/settings on home page. Nice and easy to use and I recommend it”.

4.3.17.2 Neutral (mixed) experience by the user as they completed the booking process.

“It was easy to understand and it was time wasting. It was easy to use but not enough choice of rooms to choose from. It was not easy to spot how to book, otherwise once that was spotted, it was relatively easier to use. The attractive interface did not struggle, but the difficult part is the word they use like (Itinerary) difficult to understand such deep English words. (Finish reservation). The booking system is clear and straight forward but confusing at the beginning”.

“The booking system is relatively easy to use but what annoyed me was to have to give my personal details first before the system could confirm availability of the room. The booking system was professional but boring and impersonal. Booking process started all fine but then went all pair shape. It is interesting and also hard for me to use because of it is a bit little difficult for me to use it. I like the look of the website but I do not like the part of it”.

“The booking is easy and understandable but frustrating for those who do not understand. The booking process was fast but the website booking process has a lot of add-on, especially and luxuries to add to your stay at the hotel. The booking process was interesting the only thing that turned me off is when I entered the number on the maximum children field where the field would not let me at directed me to the home page so this field needs to be altered. The booking process was quite easy to do but the webpage interface was old-faction. The booking was easy but it ask about code which I did not know it and I was also slow”.

“It was usable but did not assist when I made an error. The booking was fun but it not easy to us got many links and the booking system was not clear. It was easy to use for booking but do not provide complete information for the booking. The system's interface impressive but it was quite confusing when selecting the room I wanted to book. Selecting room clear but yet it requested a lot of information, however having to

type date and other things is not on. Menus to choose from or radio button to select date and times would have been appreciated. From that point on it is unclear where exactly you should proceed to”.

“No problems from the word go, beside text. It was difficult at first but as I was continuing with booking it was easy and understandable. The website was not very attractive, but the booking system is relatively simplistic and fast. My experience was neutral. Not the very best kind of booking system. The interface is usable, but can be made simpler maybe there is too much information on one page. In all it is a usable system. Choosing the dates and selecting room types was an easy task to complete but the home page is not clear enough as what to do next. The home page was not much attractive but booking was very easy and clear. This booking system was giving errors but at last I have managed to get there”.

4.3.17.3 Negative experience by the user as they completed the booking process.

The findings show that the users experienced some difficulties in completing the task, and continued facing obstacles. They also attributed the difficulties to their own carelessness and negligence without realising that the website design has led them to make errors while using the online booking system.

- **Booking link**

“Only had trouble finding the link to make a booking. It should be a more obvious link to the booking system. The booking link was difficult to find and the room that I was looking for was not very clear on what I was specifically looking for. I could find the booking button/link on the site. I strongly struggled first in finding where to book, and the hotel search interface the equations are not so user friendly. The home page does not have links like where to click for booking”.

- **Loading and dates**

“This website took a little longer to go through as you first have to choose which hotel you want to stay in, then the check-in date, number of rooms, finally number of guests. This website was not user friendly for me at all I struggle to find my prefer date, because they make you select the month and the year by drop down menu but when it comes to selecting a day you have to click directly on calendar they did not provide a drop down menu, and to me that is strange. The main website redirects the user to a different booking website. This website is slightly more complicated than the last one to use. It takes time to load the URL or website”.

- **Difficult to use**

“The booking system was difficult to use. The booking system did not allow for one to pick what kind of facilities they have in a single room booking e.g. king size bed sends not two single beds. Booking system was a bit too complicated. Error message on date selection were not relative to booking process. This booking process has its faults. The date selection is faulty and does not display error message”.

- **Dates**

“Picking date could have been easier without having to scroll through all the days to one's required day. I could not check the availability at dates was confusing. Once I selected the dates and number of people, the website did not display the booking information it simply returning to the home page. The date selected was not up to standard, obviously if you want February it has to be or later. They should make it change the New Year automatically. Selecting the dates was not as easy as the other hotels websites. This booking was the worst ever because every date that I clicked on was not found and they did not offer any help whatsoever with the dates and when they would be available. The availability box did not automatically adjust the departure time to a date after my specified arrival time”.

“It was not easy to book a room. I had problem with wording of room types-no indication of single room- referred to studio twin and standard twin. Essentially is not showing the price of the room before I make my decision about the room and also not identify which room is available and which side, it means we need to improve. I choose the check-in date the booking system, it changed when I wanted to select the room type. First on the main page I have to guess where to book room then it only shows the available room on that date but does not let me choose which room. I had trouble to book my room and the check in date, the system save me the wrong room instead of what I wanted. I was unable to complete the booking”.

“There were apparently no rooms available at any date I selected. The only downside was that website took a while to see whether there were room available. The booking system did not allow me to pick a room type and the facilities I wanted before asking for payment. The room selection was a bit busy, it would be better to put them as a drop down. There was set back which was to find a single room, and then I had to choose double instead. I did not get the amount of the room”.

- **Slow, Unattractive, Untidy, Too much information**

“It also gives errors and is very slow, there are also technical errors. It is not easy to recover. The initial impressions that the home page made would have caused me to not complete my booking. The home page looks like a child drawing and seems very old and boring. Home page was not attractive. The font size is too small, the images are not attractive. The webpage give problems when you booking the reservation it give you many options to get what you want. The webpages has lot of information which is stressful to find out what or which, rather than that it was so amazing and I rate it one of the best because it is so fast. Too much unnecessary information of the webpage. Large text would be better. When I was making the bookings my concern was too much text on the website and not well aligned. The varying font makes it look untidy. There are also typographical errors i.e. under "superb, a" there is"/rooms were very large".

“Loading time of page was long, as other Protea Hotels. Popped up had to reselect; Breakwater Lodge. I took time to find the room types. The only that needs an improvement is the response time on the user query. Yes it is a big company with large databases set to some computer systems it might time out. If I was in a hurry this booking system would be a waste of time my time. Navigate through the website it was bit challenging it took time to finish booking. I did not really understand where I was at a certain point of my booking did not know where I must click next. The booking system should be revamped or re-coded. Struggle to move from the booking dates forward or next step”.

- **Frustrating**

“I find it frustrating to go back every time with no joy. It was only when I was advised to use dates in February. It got so frustrating that I did not even complete the booking. I was unable to complete the booking for year 2013 because the drop down box to select the arrival year had not been updated to include 2013. I also got confused between the site system to give a quote price and doing an actual booking. It is not easy to use to much information about all hotels around the world”.

- **Confusing**

“The booking was confusing, I did not even finish the booking as the system was hard to use and too technical. Selecting room types was confusing. This site was so

confusing that I was not even able to complete a booking and the help page did not work it showed an error”.

- **Time consuming**

“The process was time consuming for me; remember not all of us are familiar with using Internet. The booking process takes time to load for me is unprofessional but all in all it’s not bad it meets my standards. It is not easy to use this booking you have to think in order to get what you want it is not clear. The booking system was busy and not easy to use; it takes time to understand the system and to select room. The booking was difficult to do and it, to me time to click other points because the booking system was too busy. The overall booking of thee website is just congested”.

“For someone who is a first time in the website this is a puzzle. I did not find the website as simplistic as some of the other hotels and it was very time consuming. Tests were very slow and clicking other buttons was freezing. It was time consuming”.

- **Incomprehensible, too technical**

“The booking was incomprehensible. The booking page in incomprehensive. It was too technical for someone how is not technologically advance. There was no place to fill in my contact details except for email which is not enough. Final feedback was not clearly indicated. Options offered to book were not clear enough”.

- **Recommendation**

“My experience for this booking was bad. I gave up and concluded that there must be a problem with the hotels online booking system. I would rather go through the travel agent. I would never use this website to make a booking. I will never recommend anyone to use this booking system. It would make more sense to have every step on a new page so that it is clear that you are done with the previous step”.

4.4 Summary

This chapter summarises the results of the hotel website usability test. The result of each criterion was presented and the data collection and data analysis have been discussed in order to conclude the study. According to the usability test of users’ satisfaction of hotel booking systems, it was found that the respondents have numerous requirements for ease of use; more than 52.5% of participants indicated that the key factors were simplicity of content and clear product offerings through booking systems (Figure 4.6). It was clear that a large part of the participants (49.40%) felt that

the booking websites were easy to use, not causing any doubt in user's minds, easy to understand and free of confusion (Figure 4.6).

A successful booking website is one that is likely to leave a generally positive impression, and retains visitors on the website. More than 35.80% of participants felt that the websites were attractive. As businesses carry on populating the Web, they face the challenge of attracting and keep their users. Results show that 33.30% of participants considered the online booking system to be user friendly.

Satisfaction is a subjective measure from the user's perspective; 30.90% of participants indicated that they were satisfied with the websites. User's satisfaction refers to the user experiences of the website (e.g. enjoys using the website and has fun while doing so). However, some problems of some of booking systems include that: they do not offer enough interactivity with users to help them through the booking process; the design of the booking system is not attractive; and the booking system do not organise its functions in a user friendly way.

More than 18.50% of participants felt that the websites were confusing. When a website is difficult to use, users tend to leave the site. When the home page does not state clearly what a website offers and what users can do on the site, users leave. Results show that 12.30% of participants felt that those websites were hard to use. A smaller number of the participants (11.70%) felt that the design of the websites was boring, unattractive, not engaging, not conveying the right message, and that the websites were not user-friendly.

More than 11.70% of the participants felt that the booking process was frustrating. This tends to happen when a website is not in a working condition. Also, poorly constructed website components will leave users feeling frustrated and disillusioned. More than 11.10% of the participants felt that the booking systems were slow. Page loading time is a very important part of any website user's experience, and a website which is too slow, wastes the user's time. A small fraction of users (6.60%) commented that the websites were unattractive. If the website design gets in the way of the user completing the task, is difficult to read, and is poorly sign posted, users will go elsewhere. Only 4.90% of the participants felt that booking systems were old.

In conclusion, it can be stated that more booking systems were easy to use than those which were identified as being difficult to use. However, Nielsen claims that around

50% success rate is unacceptable (Nielsen, 2001). Therefore, the sample tested cannot be claimed to have an acceptable degree of usability. However, it still provides Web developers, designers and hotel owners with a clear understanding of the way in which website usability impacts on user satisfaction.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the research and some recommendations, as well as a conclusion. The recommendations relate to the necessity for better design and requirements of a web-based online hotel booking system. The conclusion is based on the facts gathered from user testing, the literature reviewed, and the researcher's own interpretation of various parts of the research exercises.

5.2 Findings

The purpose of this research was to determine the degree of usability of selected Cape Town hotel online reservation systems. The definition of usability includes time taken to perform a task, accuracy, overall success, and user satisfaction with the process. The specific objectives were:

- **Research objective 1:**

To determine to what degree hotel online reservation systems are usable. Nielsen (2012) stated that usability and utility are equally significant to establish whether a website is easy to use. The author further noted that usability is defined as a quality attribute that indicates how simple or usable interfaces are.

According to this research, the participants found that more than 50% of hotel online reservations systems under test were easy to use. About one half of the participants (49.40%) felt that booking systems were very clear, not causing or allowing doubt, easy to understand, and free from confusion. Nielsen and other authors mentioned that a good booking system with user-friendly usability is about making it simple for users to locate the information they require quickly and effortlessly. The findings indicate that 33.30% of participants felt that booking systems were user friendly and that the design appeals to users.

Satisfaction is a subjective impression from the user's perspective. A total of 30.90% of participants indicated that they were satisfied with the booking systems. A well-designed booking system will keep users on the website and will generate a positive impression. More than 35.80% of participants feel that the booking systems were attractive.

The outcomes of this study indicate interesting patterns in that reservation systems met user requirements more often than expected. However, Nielsen claims that around 50% success rate for usability is not acceptable (Nielsen, 2001). According to this study, only about 12.30% of participants felt that the hotel online reservation systems that were tested were difficult to use. A total of 18.50% of participants feel that the websites were confusing. A smaller fraction (11.70%) of the participants felt that the booking systems were frustrating. A total of 11.70% of the participants felt that the design of the booking systems was boring, not attractive, not engaging, content was not conveying the right message and the website was not user friendly.

- **Research objective 2:**

To determine how much time hotel website users spend when they do online reservations. Oztekina, Nikovb, and Zaimc (2009) stated that the efficiency of the booking systems includes the time spent by the users to accomplish the task. The shorter the time used to complete an online booking, the more efficient the booking system. Even though many choices are available on the Internet, the following factors result in visitors remaining to be only “lookers”; perceived risk and uncertainty, security, and lack of personal service. This phenomenon of “abandoned shopping cart” is something that service providers would like to reduce as far as possible, since it reduces income and therefore reduces profit. The shorter the time a user spends waiting, the higher the degree of usability, the higher the level of enjoyment. Simple pricing structures are one of the features increasing the likelihood of more completed reservations and booking of travel services online (Buhalis and Law, 2008).

The summary of three consecutive attempts made by users indicated that they spend different amounts of time completing a booking online, as can be expected. The findings show a decrease in time as users worked on the first, second and third attempts respectively. The results clearly show that some of the users spend more time trying to accomplish tasks than others. When considering the comparative time users spent on the bookings (see Figure 3.5), various trends have become evident. Of the three graphs in this figure, the “third attempt” graph is the first one to hit the zero line on the horizontal axis. This means that the third attempt was the first one where no user took longer than fifteen minutes to complete the task. The second graph to hit the zero line on the horizontal axis is the “second attempt” graph, at seventeen minutes. This means that when participants executed the second attempt they took a little bit longer to finish the task on the average. The last graph to hit the zero point - “first attempt” -

indicates that the first attempts spread across all participants took the longest before reaching the zero point on the graph namely, 27 minutes. As could be expected, this data proves that users perform tasks more quickly the second and even more so, at the third time they repeat the task. This is true even though the tasks were done on different websites – but the tasks to be completed were similar, namely making an online booking. There is a need for designers to ensure that the booking system they design will require a short amount of time for users to navigate through, conclude the booking, and produce an income to the service provider.

- **Research objective 3:**

To identify the usability impediments on hotel website reservation systems.

According to the Merriam Webster Online Dictionary (2014), impediments make it difficult to do or complete a task. It is also something that interferes with movement or progress, or a condition that makes it difficult to speak normally. Elements which contribute to satisfaction is: interactivity, attractiveness and ease of use. Ease of use ensures that a booking system is pleasant to use (Nielsen, 1994c). The following factors were identified by the researcher as being the main usability impediments on hotel website reservation systems:

The impediment factor that tops the list in terms of the number of participants ticking it off was “confusing” (18.50%). Secondly, “time consuming” was indicated by the second highest percentage of the participants (14.20%). Thirdly, “busy” was indicated as a further impediment (13.00%). In the fourth place, “annoying” was indicated (12.30%) as being a problem in the booking process. Finally, the fifth factor was “hard to use”, having been indicated by 12.20% of respondents.

“Time consuming” refers to a wasting of time. A total of 14.20% participants felt that booking systems were time consuming because the booking system took too long to load. Some users did not find the booking systems as simplistic as some of the other hotel systems. The researcher found that more than 12% of the participants indicated that hotel online reservation systems that were tested were hard to use. A busy design contains too much unnecessary information. Some users indicated that the booking systems were too busy. A slow booking system frustrated users. One important part of any website user’s experience is the website loading time.

These participants also identified other impediments, such as websites being boring (11.20%), frustrating (11.70%), slow (11.10%), even stressful (8.00%), too technical (6.80%), of poor quality (6.80%), unattractive (6.20%), old (4.90%), rigid (4.90%), unpredictable (4.90%), incomprehensible (4.30%), intimidating (3.70%) and impersonal (3.70%). However, these attributes attracted a lower percentage of participant ticks.

Although the outcomes of this study indicated interesting patterns in that reservation systems met user requirements more often than expected, the impediments noted above need to be taken seriously by designers. Ignoring these patterns, hotel owners might see an increase in loss of customers, and a subsequent loss of revenue. The percentage of disgruntled users was lower than expected, and this indicates that, in this sample, hotel reservation systems are easier to use than expected. Again however, the figure of around 50% success is unacceptable in usability testing (Nielsen, 2001).

These results refute some of the claims made earlier by other researchers regarding the lack of usability of hotel websites. These claims include one made by Cheung and Law (2010), Chung, Srikanth and Kutay (2009) and Law (2003). However, hotel owners should know that one bad experience on their booking system could affect many other users. Hotel owners need to perform user testing on their booking systems to reduce impediments, thereby increasing the usability.

5.3 Conclusion

The most basic conclusion of this research is the fact that the split between satisfied and dissatisfied users is approximately 50/50. Therefore, about half of the users find the booking interfaces to be relatively easy to use and the other half disagreed. According to Nielsen (2001), this makes the sample of websites tested to have an unacceptable degree of usability. However, the importance of user testing has been proven in this research. The designers need to focus on making homepages simple and attractive for a better first appearance to users. Overdoing graphical mastery is not always useful, but still having a balanced appearance of text and images is good. Websites must have enhanced options to make navigation simple and easy, as this is significant for booking reservation systems. Taking advice from known providers of creative website services will enhance design.

5.4 Recommendations

Some of the online reservation systems were not easy to use - those systems make it difficult for users to finish their tasks. This indicates that the chances are high of a user doing a booking at that time, abandoning a shopping cart without paying. Kritzinger and Weideman's (2008:5) study established that when a website does not state clearly what it offers to the users, the users would easily leave the website. This statement supports the recommendations above.

The overall results show that users spend between one to 27 minutes to complete a reservation attempt. Furthermore, the time decreases as the user makes consecutive online reservation attempts. The difference between minimum and maximum times indicates that some of the online reservation systems were more usable than others. It is therefore recommended that designers create more user friendly online reservation systems. This is likely to reduce the number of very long booking attempts which would probably end in abandoned shopping carts.

The author recommends that the designers and hotel owners need to carry out user testing on their hotel websites and reservation systems to ensure that they meet users' requirements. They also need to ensure that both websites and booking systems are continuously updated.

5.5 Future Research

Ease of use is one of the most important aspects of websites as seen by the users, especially when they do an online reservation. Future research could be done on how to further involve users in the design of online reservation systems in the Western Province. It is also recommended that future research could include larger samples in order to ensure more accurate data.

It is also recommended that future research should adopt more criteria to cater for the rapid development of hotel booking systems. For example, for ease of use for disabled customers (partially sighted) - this research could consider the use of voice media to deliver the webpage content.

5.6 Summary

This chapter includes a review of all of the objectives of this study, and highlights the findings. Although the outcomes of this study indicated interesting patterns in how reservation systems met user requirements more often than expected, the author has

found that around one half of the sample of websites and booking systems were verified as being usable by the participants. However, the results also proved that some of the booking systems were not easy to use. The identification of the main usability impediments of hotel website reservation systems is an important contribution of this research. The author also proved that the amount of time spent to complete a booking decreased as users worked on more than one reservation system.

5.7 Overall conclusion

In final conclusion the following claims can be made:

Chapter two

- Poor website design results in a loss of sales due to customers not being able to find what they want. This could lead to a loss of potential visits due to an initial negative experience (Coniffer, 2000).
- Websites not providing a positive experience could cause customers to go to the physical store, rather than staying to purchase online (Van der Merwe and Bekker, 2003).
- Many hotels do not have adequate skills to build a usable website. Some of the errors on their websites include the omission of relevant information, or information being arranged in an illogical order.
- Some hotel websites contain outdated information. This may eventually strengthen the hotel's negative image (Chung and Law, 2003).
- Some hotels are building fake (positive) reviews and provide misleading information. This could increase bookings in the short-term, but will later yield negative reviews which will reduce the standing of the hotel in the long-term (Muller, 2011).
- Ignoring website usability could lead to loss of income as a result of fewer bookings.

Chapter three

- The research was focussed on web-based reservation systems of hotels with a Web presence and only the usability was measured.
- Only 62 hotel systems which were enclosed in the test area indicated on a Cape Town were included in the test.
- In this research it was appropriate to use both standard approaches in user testing.

Chapter four

- The participants found that more than 50% of hotel online reservations systems under test were easy to use.
- A total of 49.40% of the participants felt that booking systems were very clear, not causing or allowing doubt, easy to understand, and free from confusion.
- According to this study, only about 12.30% of participants felt that the hotel online reservation systems that were tested were difficult to use.
- A total of 18.50% of participants felt that the websites were confusing. An even smaller fraction of 11.70% of the participants felt that booking systems were frustrating.
- A total of 11.70% of the participants felt that the design of the booking systems was boring, not attractive, not engaging, content was not conveying the right message and the website was not user friendly.

The summary of the three consecutive attempts made by users, indicate that they spend different amounts of time to complete an online booking. The summary showed that a decrease in time was evident, when comparing users' first, second and third attempts respectively. The results clearly show that some of the users spend more time trying to accomplish certain tasks than others.

The impediment factor that tops the list in terms of the number of participants choosing it was "confusing" (18.50%). Secondly, "time consuming" was indicated by the second highest percentage of the participants (14.20%). Thirdly, "busy" was indicated as a further impediment (13.00%). In the fourth place, "annoying" was indicated by 12.30% of the participants as being an impediment to the booking process. Finally, the fifth factor was "hard to use", having been indicated by 12.20% of respondents.

This research has proven that at the time of writing, the sample of Cape Town based hotel websites had an unacceptably low degree of usability (Nielsen, 2001).

BIBLIOGRAPHY

- Ahn, T., Ryu, S. and Han, I. 2007. The impact of Web quality and having fun: Cognitive absorption and beliefs about information technology usage. *MIS Quarterly*, 44(3): 263-275.
- Al-Awar, J., Chapanis, A. and Ford, R. 1981. Tutorials for the first-time computer user. *IEEE Transactions on Professional Communication*, 24: 30-37.
- Aluri, A., Slevitch, L. and Larzelere, R. 2015. The effectiveness of embedded social media on hotel websites and the importance of social interactions and return on engagement. *International Journal of Contemporary Hospitality Management*, 27(4): 670-689.
- Alvaro, R. and Victor, A.J. 2009. Quality of hotel websites. Proposal for the development of an assessment methodology. *An international multidisciplinary Journal of Tourism*, 5(1): 173-178.
- Anonymous. 2012a. *SEO Term Glossary - Combined from Institute Glossaries*. <http://www.sempo.org/?page=glossary> [04 February 2016].
- Anonymous. 2012b. *Brand South Africa Media Service*. <http://www.medioclubsouthafrica.com/index.php> [31 January 2013].
- Anonymous. 2008. *Current Trends and Best Marketing Practices in Hospitality Internet Marketing*. <http://www.hotelmarketing.com/index.php/content/article/070824> [11 July 2013].
- Assaf, A.G. and Magnini, V. 2012. Accounting for customer satisfaction in measuring hotel efficiency: Evidence from the United States hotel industry. *International Journal of Hospitality Management*, 31(3): 642-647.
- Assawy, M. 2005. Testing the usability of hotel websites: The springboard for customer relationship building. *Journal of Information Technology & Tourism*, 8(1): 47-70.
- Au-Yeung, T. and Law, R. 2003. Usability evaluation of Hong Kong hotel websites. *Information and Communication Technologies in Tourism*. New York: Springer-Verlag.
- Axinn, W.G.P. 2006. *Mixed method data collection strategies*. New York: Cambridge University Press.
- Babbie, E. and Mouton, J. 2001. *The practice of social research*. South African Ed. Cape Town: Oxford University Press.
- Bai, B., Law, R. and Wen, I. 2008. The Impact of website quality on customer satisfaction and purchase intentions: Evidence from Chinese online visitors. *International Journal of Hospitality Management*, 27(3): 391-402.
- Barnard, L. and Wesson, J.L. 2003. Usability issues for e-commerce in South Africa: an empirical investigation. *Proceedings of the Annual Conference of the South African Institute of Computer Scientists and Information Technologists (SAICSIT)*, South Africa, Pretoria, 17-19 September 2003: 258-267.
- Bayat, M.S. and Ismail, R. 2008. *Tourism and Hospitality Dictionary*. Cape Town: Cape Peninsula University of Technology.

- Beetett, B and Turner, G. 2009. *Triangulation: How and Why triangulation research can help grow market share and profitability*. http://www.beckettadvisors.com/pdfs/09_may_white_1.pdf [23 June 2013].
- Berry, L.L. 1995. On Great Service. *Cornell Hotel and Restaurant Quarterly*, 14-19.
- Bevan, N and Macleod, M. 1994. Usability measurement in context. *Behaviour and Information Technology*, 13: 132-145.
- Bhattacharjee, A. 2001. An empirical analysis of the antecedents of electronic commerce service continuance. *Decision Support Systems*, 32(2): 201-214.
- Blackshaw, P. and Nazzaro, M. 2006. *The Global Measure Standard in Consumer-Generated Media: A Nielsen BuzzMetrics Paper*. Consumer-Generated Media (CGM) 101 Word-of-Mouth in the Web-Fortified Consumer: Second Edition, Spring. http://www.nielsen-online.com/downloads/us/buzz/nbzm_wp_CGM101.pdf [01 February 2016].
- Blanche, T.M., Durrheim, K. and Painter, D. 2006. *Research in Practice: Applied Methods for Social Science*. Cape Town: University of Cape Town Press.
- Botha, A., Herselman, M. and Van Greunen, D. 2010. Mobile user experience in a mlearning environment. *Proceedings of the 2010 Annual Conference of the South African Institute of Computer Scientists and Information Technologists (SAICSIT)*, South Africa, Bela Bela, 11-13 October: 29-38.
- Brocka, B. 2012. *How to recruit user test participants?* <http://ux.stackexchange.com/questions/16409/how-to-recruit-user-test-participants> [05April 2015].
- Bruno, V. and Al-Qaimari, G. 2004. Usability Attributes: An Initial Step Toward Effective User-Centred Development. *Proceedings of the Annual Conference of the Australian Computer-Human Interaction Special Interest Group (CHISIG)*, Wollongong, 22(24): 1-4.
- Bryman, A. 2008. *Social research methods* (3rd ed). Oxford: Oxford University Press.
- Buhalis, D. 2004. Hospitality: Strategic and tactical use of ICTs in the hospitality industry. *Information & Management*, 44(7): 805-825.
- Buhalis, D. 2000. Tourism and Information technologies: Past, Present and Future. *Tourism Recreation Research*, 25(1): 41-58.
- Buhalis, D. and Costa, C. 2006. *Tourism Business Frontiers. Consumers, Products and Industry*. Oxford: Elsevier Ltd.
- Buhalis, D. and Law, R. 2008. Progress in information technology and tourism management: 20 years on and 10 years after the Internet - the state of e tourism research. *Tourism Management*, 29(4): 609-623.
- BusinessDictionary.com. 2014. Data Analysis <http://www.businessdictionary.com/definition/data-analysis.html#ixzz34doPh9Zb> [20 May 2015].

- Buttle, F. 2004. *Customer Relationship Management: Concepts and tools*. Oxford: Elsevier Butterworth-Heinemann.
- Cao, M., Zhang, Q. and Seydel, J. 2005. B2C e-commerce website quality on imperial website. *Information and Management*, 39(2): 151-163.
- Carlson, J., Voola, R. and Sinnapan, S. 2003. Application of the WebQual instrument to three Australian B2C websites: An exploratory investigation. *Proceedings of the ANZMAC 2003 Conference*, Adelaide. <http://www.smib.vum.ac.nz:8081/www/anzwac2003/papers/OL09calsonj.pdf> [20 July 2015].
- Castillo, J.J. 2009. *Research Population*. <http://www.experiment-resources.com/research-population.html> [12 March 2016].
- Caulton, D.A. 2001. Relaxing the homogeneity assumption in usability testing. *Behaviour & Information Technology*, 20: 1-7.
- Chaffey, D. 2009. *Internet marketing strategy implementation and practice*: Financial Times, Prentice Hall, Europe.
- Chambers, R. 2005. Search engine strategies: A model to improve website visibility for SMME websites. Unpublished MTech thesis, Cape Town. Cape Peninsula University of Technology.
- Chea, S. and Luo, M.M. 2005. E-service customer retention: the role of negative affectivity and perceived switching costs. *Proceedings of the 11th Americas Conference on Information Systems*, USA, Omaha, NE.
- Chelule, E., Herselman, M. and Van Greunen, D. 2010. E-commerce usability: do we need guidelines for emerging economies? *Proceedings of the IADIS International Conference on Interfaces and Human Computer Interaction*, 29-31 July, Freiburg, Germany: 19-26.
- Cho, A., Willis, S. and Stewart-Weeks, M. 2011. *The Resilient Society Innovation: Productivity, and the Art and Practice of Connectedness* http://www.cisco.com/web/about/ac79/docs/ps/The-Resilient-Society_IBSG.pdf [08 January 2016].
- Chon, K.S. and Sparrowe, R.T. 2000. *Welcome to Hospitality: An Introduction*. Albany: Delmar.
- Christou, E. 2003. On-line buyer's trust in a brand and the relationship with brand loyalty: the case of virtual travel agents. *Tourism Today*, 3(1): 95-105.
- Christou, E. and Kassianidis, P. 2003. Consumer perception and adoption of online buying for travel products. *Journal of Travel and Tourism Marketing*, 12(4): 93-107.
- Chung, T. and Law, R. 2003. Developing a Performance Indicator for Hotel Websites. *International Journal of Hospitality Management*, 22(1): 119-158.
- Cohen, S.B. 1982. Data Collection Organization Effect in the National Medical Care Expenditure Survey. *The American Statistician*, 36(4): 337-341.

- Coniffer, D. 2000. Development usable websites – a review and model. *Internet Research: Electronic Networking Application and Policy*, 10(4): 295-307.
- Corazzon, R. 2009. *Theory and history of ontology: A resource guide for philosophers*. <http://www.formalontology.it> [02 August 2015].
- Creswell, J.W. 2012. *Qualitative inquiry and research design: Choosing among five approaches*. Los Angeles, CA: Sage.
- Creswell, J.W. and Plano Clark, V.L. 2011. *Designing and Conducting Mixed Methods Research*. London: Sage.
- Darwin, 2007. *Ontological Vs Epistemological Complexity*. <http://www.chilicondrarwin.com/chilicondrarwin/news/entries/2007/6/1.html> [09 October 2015].
- DeMarco, T. 1999. *Management Can Make Quality (Im) possible*. Cutter IT Summit, Boston.
- Demes, J. 2009. *South Africa's hospitality industry*. <http://www.bizcommunity.com/Article/196/166/38976.html> [02 June 2015].
- Denscombe, M. 2002. *The good research guide: for small-scale social research projects*, 3rd ed. Berkshire: McGraw-Hill.
- Denzin, N.K. and Lincoln, Y.S. 2003. *Handbook of Qualitative Research: Strategies of Qualitative Inquiry*. Thousand Oaks: Sage Publications.
- Diwan, P. and Sharma, S. 2009. *E-commerce: A manager's Guide to E-Business*. New Delhi: Naraina.
- Eisenberg, B. 2011a. *What is Gumtree? How to stay safe on Gumtree*. <http://terrasus.com/detail.jsp?articleID=101> [05 April 2016].
- Eisenberg, B. 2011b. *Why you should consider poster advertising*. <http://inspirationfeed.com/inspiration/advertising-inspiration/why-you-should-consider-poster-and-flyer-advertising/> [05 April 2016].
- Eisenberg, B., Quarto-von Tivadar, J., Davis, L.T. and Crosby, B. 2008. *Always be testing: The complete guide to Google website optimizer*. Indianapolis: Sybex.
- Elliott, K.M. and Meng, J.G. 2011. Hotel website information: How satisfied are customers with what a hotel provides. *International Journal of Business Strategy*, 11(1).
- Equinus, K. and Ellion, E. 2007. *Website evaluation*. Website Evaluation Report, 1: 1-11.
- Faisal, S.H. 2011. *Impact of E-commerce on the Business*. <http://faisalshaikh.articlealley.com/impact-of-ecommerce-on-the-business-2166859.html> [13 March 2016].
- Fang, L. 2008. Usability evaluation on websites. *Proceedings of Computer-Aided Industrial Design and Conceptual Design. CAID, 9th International Conference*. 141-144.

- Faulkner, L. 2003. Beyond the five-user assumption: Benefits of increased sample sizes in usability testing. *Behavior Research Methods, Instruments and Computers*, 35(3): 379-383.
- FEDHASA 2008. *The hospitality industry: Industry profile*.
<http://adg.adg.stanford.edu/aa241/intro/hospitalityindustry2007.pdf> [26 November 2015].
- Finland, E. 2010. *A Usability Test Measures Usability and Passes the Voice of the End User*.
<http://www.etnoteam.fi/koti/artikkelit/kayttavyystesti-mittaa-kayttavytta-ja-valittaa-kayttajan-aanta> [21 February 2016].
- Finney, D.P. 1975. Numbers and Data Numbers and Data. *Biometrics*, 31(2): 375-386.
- Fiol-Roig, G., Miro-Julia, M. and Herraiz, E. 2011. Data Mining Techniques for Web Page Classification. *Advances in Intelligent and Soft Computing*, 89: 61-69.
- Flavian, C., Guinaliu, M. and Gurrea, R. 2006. The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information and Management*, 43(1): 1-14.
- Fox, W. and Bayat, S.M. 2007. *A guide to Managing Research*. Cape Town: Juta & Co Ltd.
- Franco, C.F. 2001. *E-business: Technologie de informasaoe negocias na Internet*. Sao Paulo: Atlas.
- George, D. 2005. *The ABC of SEO*. Morrisville, NC: Lulu Press.
- Ghosh, D. 2013. *The burgeoning hospitality industry in India is witnessing a steadily growing use of IT for reaching out to customers-and offering them differentiated personalised service*.
<http://computer.financialexpress.com/features/1114-marketing-redefined> [14 March 2016].
- Gilbert, D., Powell-Perry, J. and Widijoso, S. 1999. Approaches by hotels to the use of the Internet as a relationship marketing tool. *Journal of Marketing Practice: Applied Marketing Science*, 5(1): 21-38.
- Gilje, F.L. 2004. Sharing emotions and experience of care. *Nursing form*, 39(4): 36-39.
- Gilmore, J.H. and Pine, J. 1997. The four faces of mass customization: *Harvard Business Review*, 75(1): 91-101.
- Good, A. and Sambhanthan, A. 2012. *Hotels with a poor website face drop in profits*.
<http://phys.org/news/2012-02-hotel-poor-website-profits.html#jCp> [24 January 2016].
- Google. 2013. *Webmaster guidelines*.
<http://www.google.com/support/webmaster/bin/answer.py?hl=en&answer=35769> [16 March 2016].
- Greenstein, M. and Feinman, T.M. 2000. *Electronic Commerce: Security, Risk Management and Control*. Boston: Irwin McGraw-Hill.
- Gretzel, U., Yuan, Y.L. and Fesenmaier, D.R. 2000. Preparing for the new economy: advertising strategies and change in destination marketing organizations. *Journal of Travel Research*, 29(2): 146-156.

- Grillot, K. 2007. *E-Buss and the Hospitality Industry: Direct Web Distribution Model*. <http://kg-ebuss-emc.blogspot.com/2007/12/direct-web-distribution-model.html> [11 July 2015].
- Hassen, O.C.C. 2005. *A case Study in Methods for Usability Evaluation of Mobile phone application in a controlled environment*. Master's Thesis. Lund University, <http://www1.design.lth.se/usabilitylab/theses/LUTMDNTMAT-5079-SE.pdf> [23 March 2016].
- Hearn, P. 2012. *Websites-it's important for business*. http://www.resource.bravenet.com/article/profit/advertisingwebsite_its_important_for_business [13 January 2016].
- Henkin, S. 2001. *Opportunities in Hotel and Management careers*. Chicago: McGraw Hill Companies.
- Herrero, A., San Martin, H. and Hernández, J.M. 2015. How online search behavior is influenced by user-generated content on review websites and hotel interactive websites. *International Journal of Contemporary Hospitality Management*, 27(7): 1573-1597.
- Hertzum, M. and Jacobsen, N.J. 2001. The evaluator effect: A chilling fact about usability evaluation methods. *International Journal of Human-Computer Interaction*, 13(4): 421-443.
- Hotel Marketing. 2008. *Current Trends and Best Marketing Practices in Hospitality Internet Marketing*. <http://www.hotelmarketing.com/index.phpcontent/article070824> [29 July 2015].
- Hussey, J. and Hussey, C. 1997. *Business Research: A practical Guide for Undergraduate and Postgraduate Student*. Palgrave: MacMillan.
- Internet Advertising Bureau (IAB). 2012. *Travel Online Travel Leisure Business Travel Consumer Travel Booking Unmanaged*. <http://www.grabstats.com/statmain.aspx?StatsID=346> [24 October 2015].
- Internet World Stats. 2012. *1,407 million Internet Users*. <http://www.Internetworldstats> [05 July 2015].
- Jahanshahloo, G.R., Hosseinzadeh, F., Shoja, N. and Sanei, M.G. 2005. Tohidi Sensitivity and Stability Analysis in Data Envelopment Analysis. *The Journal of the Operational Research Society*, 56(3): 342-345.
- James, J.P. 2002. Usability and usefulness of ergonomics websites: A preliminary investigation. *South African Journal of Information Management* 4(1). <http://www.sajim.co.za> [12 January 2016].
- Jeffrey, R. 1994. *Handbook of Usability Testing*. John & Sons, Inc.
- Jeong M., Oh, H. and Gregoire, M. 2003. Conceptualizing Website quality and its consequences in the lodging industry. *Hospitality Management*, 22(2): 161-175.
- Jeong, M., Oh, H. and Gregoire, M. 2001. *An Internet marketing strategy study for the lodging industry*. Washington: America Hotel and Lodging Foundation.

- Jing, J., Gillette, R. and Weiss, K.R. 2009. *Evolving concepts of arousal: insights from simple model systems*, 20(5-6): 405-427.
- Joeng, M. and Lambert, C. 2001. Adaptation of an information quality framework to measure customer's behavioral intention to use lodging websites. *International Journal of Hospitality management*, 20(2): 129-146.
- Johnson, C.M., Johnston, D., Crowley, P.K., Culbertson, H., Rippen, H.E., Damico, D.J. and Plaisant, C. 2011. *EHR Usability Toolkit: A Background Report on Usability and Electronic Health Records*. Rockville.
- Jones, P. 2002. *Introduction to Hospitality Operations*. London: Continuum.
- Joubish, M.F., Khurram, M.A., Ahamed, A., Fatima, S.T.F. and Haider, K. 2011. Paradigms and Characteristics of a Good Qualitative Research. *World Applied Science Journal*, 12(11): 2082-2087.
- Kaplanidou, K. and Vogt, C. 2003. *Destination Holiday branding: Concepts and measurements*. Working Paper, Michigan State University.
http://www.esade.edu/cedit2006/pdfs2006/papers/paper_risitano_esade_def.pdf [23 May 2015].
- Kearney, A.T. 2001. *Usability Net: The business case of usability*. Munich: GRIN.
- Kotler, P., Bowen, J. and Makens, J. 2003. *Marketing for Hospitality and Tourism* (3rd ed.). Upper Saddle river, NJ: Prentice Hall.
- Kritzinger, W.T. and Weideman, M. 2008. Finding the synergy: search engine optimization vs. website usability. *Proceedings of the 10th Annual Conference on World Wide Web Applications*, September 3–5, South Africa, Cape Town. <http://www.zaw3.co.za> [01 February 2016].
- Krug, S. 2014. *Don't make me think Revisited. A Common Sense Approach to Web and Mobile Usability*. Indianapolis: New Riders Publishing.
- Krug, S. 2006. *Don't make me think (2nd ed.)*. A common sense approach to Web usability. Indianapolis: New Riders Publishing.
- Krug, S. 2000. *Don't make me think! A Common Sense Approach to Web Usability*. Indianapolis: Que.
- Kumar, R. 2005. *Research Methodology-A Step-by-Step Guide for Beginners: (2nd ed.)*. Singapore: Pearson Education.
- Kuo, P.J., Zhang, L. and Cranage, D.A. 2015. What you get is not what you saw: exploring the impacts of misleading hotel website photos. *International Journal of Contemporary Hospitality Management*, 27(6): 1301-1319.
- Kyrmn, J, 2013. *What is Web Design? An Introduction to the Basics of Web Design*. <http://webdesign.about.com/od/webdesign/qt/what-is-web-design.htm> [01 February 2016].

- Laudon, K.C. and Laudon, J.P. 1999. *Sistemas de informacaocom Internet* (4th ed.). Rio de Janeiro: LTC.
- Law, R., Leung, R., Lo, A., Leung, D. and Fong, L.H.N. 2015. Distribution channels in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 27(3): 431-452.
- Law, R., Qi, S. and Buhalis, D. 2010. Progress in tourism management: A review of website evaluation in tourism research. *Tourism Management*, 31(3): 297-313.
- Lawrie, M. 1997. *The history of the Internet in South Africa: How it Began*. <http://epies.Frd.ac.za/uninet/history> [12 September 2015].
- Leedy, P.D. 1980. *Practical Research* (2nd ed). McMillan: New York.
- Leedy, D.P. and Ormrod, J.E. 2016. *Practical Research Planning and Design*. 10th Edition. New Jersey: Pearson Education Inc.
- Leedy, P.D. and Ormrod, J.E. 2010. *Practical research: Planning and design*. 9th Edition. New Jersey, Upper Sadla River: Merrill.
- Leedy, P.D. and Ormrod, J.E. 2005. *Practical research: Planning and design*. 8th ed. Upper Saddle River: Pearson Education.
- Lewis, J.R. 2001. Evaluation of procedures for adjusting problem-discovery rates estimated from small samples. *International Journal of Human-Computer Interaction*, 13: 445-479.
- Lewis, J.R. 1995. IBM computer usability satisfaction questionnaire: Psychometric evaluation and instructions for use. *International Journal of Human-Computer Interaction*, 7(1): 57-78.
- Lewis, J.R. 1993. Problem discovery in usability studies: A model based on the binomial probability formula. *Proceedings of the Fifth International Conference on Human-Computer Interaction Orlando, FL*: Elsevier: 666-671.
- Lewis, J.R. 1982. Testing Small System Customer Setup. *Proceedings of the Human Factors Society 26th Annual Meeting Santa Monica, CA*: HFES: 718-720.
- Liang, K. and Law, R. 2003. A modified functionality performance evaluation model for evaluating the performance of China based hotel websites. *Journal of Academy of Business and Economics*, 2(2): 193-208.
- Liburne, B., Devkota, P. and Khan, K.M. 2004. Measure Quality Metrics for Web Application. *Proceedings of the Information Resources Management Association International Conference*, New Orleans, USA: 1-189.
- Lindgaard, G. and Chattrachart, J. 2007. Usability testing: what have we overlooked? *Proceeding of the SIGCHI Conference on Human Factors in Computing Systems*, San Jose, California, USA. April 28-May. CHI '07. ACM, New York, NY: 1415-1424.
- Liu, C. and Arnett, K.P. 2000. Exploring the factors associated with website success in the content of electronic commerce. *Information and Management*, 38(1): 23-33.

- Liu, B.Q. and Goodhue, D.L. 2008. An exploration of hygiene and motivator aspects of WebQual constructs in predicting website reuse. *Proceedings of the 41st Hawaii International Conference on System Science*, Hawaii, HI.
- Loiacono, E., Watson, R. and Goodhue, D. 2002. WESQUAL: a measure of website quality. *Proceedings of the American Marketing Association*, 13: 432-438.
- Lu, M. T. and Yeung, W. L. 1998. A framework for effective commercial Web application development. *Internet Research: Electronic Networking Application and Policy*, 8(2): 166-173.
- Lund, A. 2008. *Measuring usability with the USE questionnaire*, STC Usability SIG Newsletter, <http://garyperlman.com/quest/quest.cgi?form=USE> [23 November 2015].
- Maree, K. 2007. *First steps in research*. Pretoria: Van Schaik Publishers.
- Margolis, M. 2012. *How to find great participants for your user study*. <http://www.designstaff.org/articles/recruiting-how-to-find-great-participants-for-your-user-study-2012-02-22.html> [05 April 2016].
- Market Research. 2013. *SurveyMonkey*. <http://www.surveymonkey.com> [05 April 2016].
- Mattison, S. 2013. *The Role of Internet in the Hospitality Industry Yahoo! Voice – voice.yahoo.com*. <http://voices.yahoo.com/the-role-Internet-hospitality-industry-6499282.html?cat=3> [14 March 2016].
- McLaughlin, J. and Skinner, D. 2000. Developing usability and utility. A comparative study of the user of new IT. *Technology Analysis and Strategic Management*, 12(3): 413-423.
- MECD Glossary of Terms. 2013. *Data collection Methods*. http://www.un.org/Depts/oios/mecd/mecd_glossary/documents/tools_category.htm [12 March 2016].
- Medlik, S. 1994. *The Business of hotels*. Cornwall: Hartnolls Ltd.
- Medlik, S. and Ingram, H. 2000. *The business of hotels* (4th ed.). London: Elsevier Ltd.
- Mellahi, K. and Johnson, M. 2000. Does it pay to be a first-mover in e-commerce? The case of Amazon.com. *Management Decision*, 38(7): 445-452.
- Mendes-Filho, L.A.M and Ramos, A.S.M. 2005. *Internet diffusion in hospitality industry*. Encyclopedia of Information Science and Technology. Hershey, Pennsylvania: Idea Group Reference, 1: 1635-1639.
- Merriam-Webster Online Dictionary, 2014. *Definition of Impediment*. <http://www.merriam-webster.com/dictionary/impediment> [22 February 2016].
- Merriam-Webster Online Dictionary, 2010. *Definition of Research*. <http://www.merriam-webster.com/dictionary/research> [03 August 2015].
- Mgijima, B. and Flowerday, S.V. 2012. Internet success for the small and medium hospitality enterprise: Influence of the owner or manager. *African Journal of Business Management*, 6(37): 10222-10231.

- Miniwatts Marketing Group. 2012. *Internet usage statistics: the Internet big picture: World Internet users and population stats*. <http://www.Internetworldstats.com/starts> [12 November 2015].
- Mizrachi, I. 2010. *eTourism is here: Usability of Hotel reservation system-GuestCentric*. <http://www.etourismishere.com/2010/05/usability-of-hotel-reservation-systems.html> [20 March 2016].
- Moczamy, I.M., De Villiers, R. and Van Biljon, J. 2012. How can usability contribute to user experience? A study in the domain of e-commerce. *Proceedings of M&D Conference Paper at SAICSIT 2012*, South Africa, Pretoria, 01-03 October.
- Mohammed, I., Guilet, B.D., Schuckert, M. and Law, R. 2016. An Empirical Investigation of Corporate Identity Communication on Hong Kong Hotels' Websites. *Journal of Hospitality Marketing & Management*, 25(6): 676-705.
- Mouly, G.J. 1978. *Educational Research: The Art and Science of Investigation*, Boston: Ally and Bacon.
- Muller, C. 2011. *The impact the Internet and social media on the hotel industry: How the Internet and Social Media have changed the way hotel needs to operate if they are not succeeding in today's dynamic and global markets*. Norderstedt: Books on demand.
- Mullins, L.J. 1995: *Hospitality Management: A Human Resources Approach* (2nd ed). London: Pitman.
- Murphy, J. and Olaru, D. 2003. The bandwagon Effect: Swiss Hotels' website and E-mail Management. *Cornell Hotel and Restaurant Administration Quarterly*, 44(1): 17-87.
- Mzoughi, M., Negra, A. and Habacha, A. 2012. Online Reservation Abandonment: How to Bridge the Original Intention and the Actual Behavior. *American Journal of Industrial and Management*, 2(3): 89-94.
- Nel, J.P. and Com D. 2007. *Epistemology Vs Ontology*. <http://mentornet.co.za/files/documents/EPISTEMOLOGYVSONTOLOGY.pdf> [16 August 2015].
- Nielsen, J. 2012. *Usability 101- Introduction to Usability. Human Computer Interaction User Testing - Web Usability*. <http://www.nngroup.com/articles/usability-101-introduction-to-usability> [29 January 2016].
- Nielsen, J. 2011a. *Usability 101: Introduction to usability*. <http://www.useit.com/alertbox/2003825.html> [30 January 2016].
- Nielsen, J. 2011b. *Human Computer Interaction – Web usability*. <http://www.nngroup.com/articles/how-long-do-users-stay-on-web-page/> [15 October 2015].
- Nielsen, J. 2003. *Usability 101, Introduction to Usability, Jakob Nielsen's Alertbox*. <http://www.useit.com/alertbox/20030825.html> [01 January 2016].
- Nielsen, J. 2001. *Success Rate: The Simplest Usability Metric*. <https://www.nngroup.com/articles/success-rate-the-simplest-usability-metric/> [1 August 2016].

- Nielsen, J. 2000a. *Designing Web Usability: The Practice of Simplicity*. Indianapolis: New Riders Publishing.
- Nielsen, J. 2000b. *Quantitative Studies: How Many Users to Test?* <http://www.useit.com/alertbox/20000319.html> [08 November 2015].
- Nielsen, J. 1994a. Enhancing the explanatory power of usability heuristics. *Proceedings of the SIGCHI Conference of human Factors in Computing Systems*. Boston: AMC: 152-158.
- Nielsen, J. 1994b. *Usability Engineering (Interactive Technologies)* (1st ed.). San Francisco: Morgan Kaufmann.
- Nielsen, J. 1994c. *Usability Engineering*. Academic Press Inc.
- Nielsen, J. and Landauer, T.K. 1993. A mathematical model of the finding of usability problems. *Proceedings of the SIGCHI conference on Human factors in computing systems*. Amsterdam: ACM: 206-213.
- Nielsen, J. and Loranger, H. 2006. *Prioritizing web usability*. Berkeley: New Riders.
- Nielsen, J. and Norman, D. 2014. *The Definition of User Experience: Nielsen Norman Group* <http://www.nngroup.com/articles/definition-user-experience> [20 March 2016].
- Nielsen, J. and Shneiderman, B. 1993. *Designing the User Interface, Strategies for Effective Human Computer Interaction*. Addison-Wesley.
- Notess, G.R. 2003. *On the Net: A decade on the Net*. Online, 27(2): 53-55.
- O'Connor, P. 2003. Online pricing: An analysis of Hotel Company practices, *Cornell Hotel and Restaurant Administration Quarterly*, 44(1): 88-96.
- O'Connor, P. 1999. *Cutting out the middleman - Tourism and the Internet. Electronic Distribution Technology in the Tourism and Hospitality*. Wallingford: CAB Publishing.
- Oliver, R.L. 1981. Measurement and evaluation of satisfaction processes in retail settings. *Journal of Retailing*, 5(7): 25-48.
- Oeil, S.J. 2011. *Poster Advertising*. <http://oeils.wordpress.com/2011/01/25/poster-advertising> [05 April 2016].
- Olsen, W. 2004. *Triangulation in Social Research: Qualitative and Quantitative Methods Can Really Be Mixed*. <http://www.ccsr.ac.ac.uk> [11 June 2015].
- Olsen, M.D. 1996. Into the New Millennium. *A White Paper on the Global Hospitality Industry, International Hotel Association*. Organisation for Economic Co-operation and Development. Electronic commerce opportunities and challenges for government, PARIS, France.
- Olsen, M.D. and Connolly, D.J. 2000. Experience-based travel. *Cornell Hotel and Restaurant Administration Quarterly*, 41(1): 30-40.
- Onwuegbuzie, A.J. and Leech, N.L. 2006. Linking Research Questions to Mixed Methods Data Analysis Procedures. *The Qualitative Report*, 11(3): 474-498.

- Oztekina, A., Nikovb, A., and Zaimc, S. 2009. An assessment methodology for usability of web-based information system. *Journal of systems and software*, 82(12): 2038-2050.
- Palmer, J. 1999. Digital newspapers explore marketing on the Internet. *Communications of the ACM*, 42: 33-40.
- Park, Y.A. and Gretzel, U. 2007. Success factors for destination marketing websites: A qualitative meta-analysis. *Journal of Travel Research*, 46: 46-63.
- Parkinson, G. and Drislane, R. 2011. *Qualitative research*. In *online dictionary of the social sciences*. <http://bitbucket.icaap.org/dict.pl> [05 April 2016].
- Perez, S.K. and Anthony, K.S. 1995. *Technical Report for IRDS Conceptual Schema, Part 1: Conceptual Schema for IRDS, Part 2: Modelling Language Analysis*. New York: American National Standard Institute.
- Perfetti, C. and Landesman, L. 2002. *Eight is not enough*. <http://world.std.com/~uieweb/Articles/eightisnotenough.htm> [28 March 2016].
- Peshkin, A. 1993. The goodness of qualitative research. *Education researchers*, 22(2): 23-29.
- Poulter, A. 1997. The design of the World Wide Web search engine: a critical review. *Program*, 31(2): 131-145.
- Powers, T. and Barrows, C.W. 1999. *Introduction to Management in the Hospitality Industry*. New York: John Wiley and Sons.
- Preece, J. 2010. Sociability and usability in online communities: Determining and measuring success. *Behaviour and Information Technology*, 20(5): 347-356.
- Preece, J. 1997. *Human-computer interaction*. Reading, MA: Addison-Wesley.
- Rhodes, J.S. 1998. *How to Gain Trust of your users*. <http://webword.com.moving/trust.html> [23 November 2015].
- Ricca, F., Tonella, P., Girardi, C. and Pianta, E. 2004. An Empirical Study on Keyword-based Website Clustering. *Proceedings of the 12th IEEE International Workshop on Program Comprehension (IWPC'04)*, Italy, Bari, 24(26): 204-213.
- Rouse, M. 2008. *Data analytics: Search Data Management*. <http://searchdatamanagement.techtarget.com/definition/data-analytics> [19 November 2015].
- Rouse, M. 2005. *Data analytics: Hotel Reservation Systems*. <http://searchsoa.techtarget.com/definition/usability> [18 November 2015].
- Rugg, G. and Petre, M. 2007. *Research Methods*. Berkshire: Open University Press.
- Sathwara, S. 2010. *Central Reservation System*. <http://www.slideshare.net/Shantimani/central-reservation-system> [18 March 2016].
- Schaub, K. 2008. *Quantitative Methods: MBAC 6030*. <http://leeds-faculty.colorado.edu/schaub/> [01 June 2015].

- Schneider, G.P. and Perry, J.P. 2001. *Electronic commerce*. Boston, BA: Thomson Learning.
- Schulze, R. 1999. *A step ahead*. CEO Report Supplement: 18-20.
- Seffah, A., Donyaee, M., Kline, R.B. and Padda, H.K. 2006. *Usability measurement and metrics: A consolidated model*. <http://psych.concordia.ca/fac/kline/library/sdkh06.pdf> [12 November 2015].
- Shackel, B. 1981. The concept of usability. *Proceedings of IBM software and information usability symposium*. NY, Poughkeepsie, 15-18 September: 1-30.
- Shchiglik, C. and Barnes, S.J. 2004. Evaluating website quality in the hotel industry. *Journal of Computer Information Systems*, 44(3): 17-25.
- Shneiderman, B. 1998. *Designing the User Interface: Strategies for Effective Human Computer Interaction*. 3rd ed. Reading, MA: Addison-Wesley.
- Sigala, M. 2003. Competing in the virtual market space: a strategic model for developing e-commerce in the hotel industry. *International Journal of Hospitality Information Technology*, 3(1): 43-60.
- Sigala, M. and Christou, E. 2002. The transformative power of e-commerce on hotel brands. *Proceedings of the Annual European Council for Hotel, Restaurant and Institutional Education (Euro-CHRIE) Conference, Cross-cultural Challenges in the Tourism Industry*, Barcelona, Spain.
- Singh, A. and Wesson, J.L. 2009. Evaluation criteria for assessing the usability of ERP systems. *Proceedings of the 2009 Annual Research Conference of the South African Institute of Computer Scientists and Information Technologists (SAICSIT)*, South Africa, Vaal River, 13-14 October: 87-95.
- Smith, L. 2012. *What is the Hospitality Industry?* <http://www.wisegeek.com/what-is-the-hospitality-industry.htm> [01 September 2015].
- Smith Travel Research. 2012. *Global hotel benchmark survey*. <http://www.bizcommunity.com/Article/196/166/38976.html> [12 March 2016].
- Spool, J. and Schroeder W. 2001. Testing websites: five users are nowhere near enough. *CHI '01 extended abstracts on Human factors in computing systems*, New York: AMC Press.
- Srikanth, B. and Kutay, K. 2009. Usability Difference Between Single-Screen and multiscreen Booking Interfaces. *Journal of Information Technology & Tourism*, 11(10): 211-220.
- Stankovic II, C and Macedonia, S. 1999. *Sampling methods and Sample size - Calculated for the smart Methodology*. <https://www.smartmethodology.org/documents/sampling/Sampling> [25 March 2016].
- Stenbacka, C. 2001. Qualitative research requires quality concepts of its own. *Management Decision systems*, 39(7): 551-555.
- Steup, M. 2005. *Epistemology*. <http://plto.standord.edu/entries/epistemology> [02 August 2015].

- Stringam, B.B. and Gerdes, J.J. 2010. Are pictures worth a thousand room nights? Success factors for hotel website design. *Journal of Hospitality and Tourism*, 1(1): 30-49.
- Struwig, F.W. and Stead, G.B. 2004. *Planning, designing and reporting research (2nd ed)*. Cape Town: Pearson Education.
- Sun Microsystems. 2001. *Sun Usability Labs and Service: What is Usability Engineering?* <http://www.sun.com/usability/reading.html> [15 March 2016].
- Szymanski, D.M., and Hise, R.T. 2000. E-Satisfaction. *Journal of Retailing*, 76(3): 309-322.
- Thurrow, S. and Musica, N. 2009. *When search meets usability*. Berkeley: New Riders.
- Tu, Y.H. 2012. *Destination Marketing on the Internet: The effect of advanced Features*. <http://iridescent.icograda.org/journal/journal59.php> [01 January 2016].
- Tucker, H. 2010. *Paradigms, Ontology, Epistemology and methodology/ Ethic*. University of Otago: Tour417 Tourism Analysis. University of Otago.
- Ullah, I. 2010. Data Mining Algorithm and Medical Sciences. *International Journal of Computer Science and Information Technology (IJCSIT)*, 2(6). <http://airccse.org/journal/jcsit/1210ijcsit12.pdf> [26 July 2015].
- Unirez by Pegasus, 2007. *Making your business more successful*. <http://www.congrexpo.co.rs/files/Unirez%20Proposal.pdf> [22 March 2016].
- Van der Merwe, R. and Bekker, J. 2003. Framework and methodology for evaluating e-commerce websites. *Internet Research: electronic networking Application and Policy*, 13(5): 330-341.
- Veal, A.J. 2006. *Research Methods for Leisure and tourism: A practical Guide (3rd ed.)*. Essex: Prentice Hall.
- Venka, J.J. 2012. *Advantages of newspaper ads*. <http://www.warriorforum.com/blogs/jaiganeshv/14582-advantages-newspaper-ads.html> [05 April 2016].
- Viduka, D.V. 2011. *Many Advantages of Online Hotel Bookings*. <http://ezinearticles.com/?The-Many-Advantages-of-Online-Hotel-Booking&id=5893573> [18 March 2015].
- Virzi, R.A. 1990. Streamlining the design process: running fewer subjects. *Proceedings of the Human Factors Society 34th Annual Meeting*. Santa Monica, CA: HFES. 291-294.
- Visser, E.B. and Weideman, M. 2011. An empirical study on website usability elements and how they affect search engine optimization. *South Africa Journal of Information Management*, 13(1): 428. <http://www.sajim.co.za/index.php/SAJIM/article/view/428/459> [05 March 2016].
- Walliman, N. 2006. *Your Research Project*. 2nd ed. London: Sage Publishers.
- Watson, R.T., Berthon, P. Pitt, L.F. and Zinkhan, G. M. 2000. *E-commerce and impressions*. Milano: McGraw Hill.

Wei, Q., Cheung, C., and Law, R. 2010. E-Business and E-Government (ICEE). *Proceedings of the International conference on E-Business and E-Government*. Guangzhou: China, 7-9 May.

Wei, S., Ruys, H.F., Van Hoof, H.B. and Combrink, T. E. 2001. Users of the Internet in the global hotel industry. *Journal of Business Research*, 54: 235-241.

Weideman, M. 2009. *Website Visibility: The Theory and Practice of Improving Rankings*. Oxford: Chandos Publishers.

Weideman, M. 2006. Crawler and human usability of a government services website from a technology angle. *Proceedings of The Community informatics for developing countries: Understanding and organizing for a participatory future information society*. CD ROM. Cape Town. South Africa. [14 February 2016].

Weiss, A. and Weideman, M. 2008. *An empirical study on the importance of keyword use in webpage naming convention, in achieving top webpage rankings*. Working Paper, Munich University of Applied Science, Munich.
<http://dk.cput.aac.za/cgi/viewcontent.cgi?article=1051&context=inf> [17 July 2015].

Welman, J.C. and Kruger, S.J. 2002. *Research methodology. 2nd Edition*. Cape Town: Oxford University Press.

Wolfenbarger, M. and Gilly, M.C. 2001. *COMQ: Dimensionalizing, meaning and predicting quality of the e-tailing experience*. *MSL working paper series, no 02 – 100*, Marketing Science Institute, Boston, MA.

Woolrych, A. and Cockton, G. 2001. Why and when the five test users aren't enough. *Proceedings of IHM-HCI 2001 Conference Toulouse, France*, 2: 105-108.

WordStream. 2009. *Search Engine Optimization (SEO) Best Practices: Eight ways to increase reach and exposure through higher natural search rankings (White Paper)*.
www.wordstream.com/download/docs/wordstream-seo.pdf [15 January 2016].

World Tourism Organisation, 1993. *Global tourism Forecasts to the Year 2000 And Beyond*. Madrid: WTO.

Wright, K.B. 2005. Research Internet-based population: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and Web survey services. *Journal of Computer-Mediated Communication*, 10(3): 11
<http://jcmc.indiana.edu/vol10/issue3/wright.html> [05 April 2016].

Wymbs, C. 2000. How e-commerce is transforming and internationalizing services industries. *Journal of Service Marketing*, 14(6): 463-478.

Yahoo!. 2014. *Definition of these Information Systems?*
<https://answers.yahoo.com/question/index?qid=20131129210141AAfA51t> [11 June 2015].

Yahoo!. 2013. *Yahoo! Search content quality guidelines*.
<http://help.yahoo.com/l/us/yahoo/search/basics/basics-18.html> [16 March 2016].

Yang, J., Flynn, J. and Anderson, K. 2008. *E-business Application in the Hospitality Industry - A Case Study. Communications of the International Information Management Association*. Milledgeville: Georgia College and State University.

Yea, Q., Law, R., Guc, B. and Chend, W. 2011. The influence of user-generated content on traveller behavior: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human Behavior*, 27(2): 634-639.

Yeung, A.T. and Law, R., 2006. Evaluation of Usability: A study of Hotel Websites in Hong Kong. *Journal of Hospitality and Tourism Research*, 30(4): 452-473.

Yoon, M.G., Yoon, D.Y. and Yang, T.W. 2006. Impact of e-business on accommodation markets; Distribution of booking reservation in Korea. *Journal of Tourism Management*, 12(5): 253-260.

Yu, S.F. 2008. Price perception of online ticket shoppers. *Journal of Tourism Management*, 14(2): 66-69.

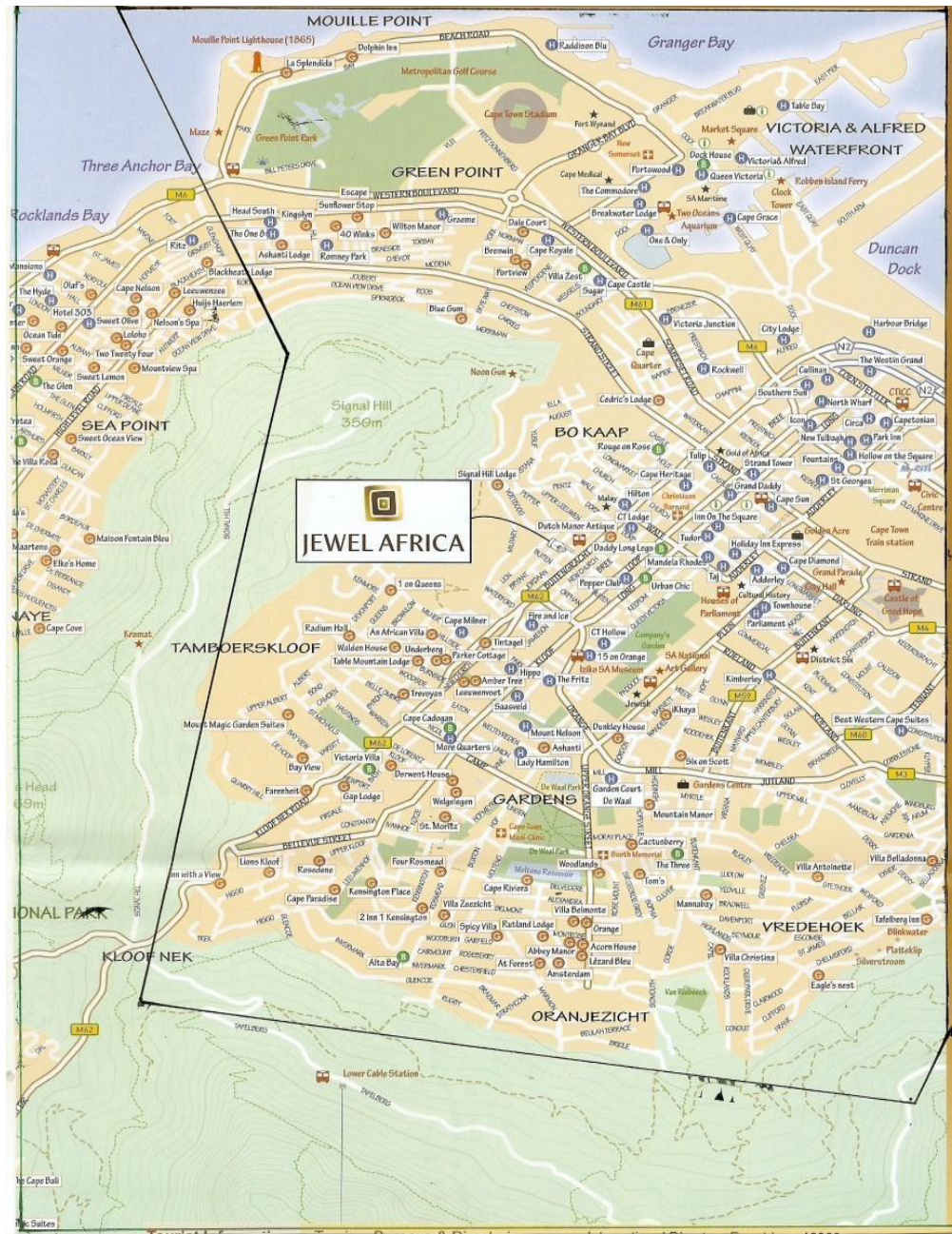
Zhong, W. and Zhao, G. 2008. Education Technology and Training. *Proceedings of International Workshop on Geoscience and Remote Sensing, USA*, 2: 15-17.

Zhou, Z. 2004. *E-commerce and information Technology in hospitality and Tourism*. Thomson: Delmar Learning.

Zuze, H. and Weideman, M. 2011. The crossover point between keyword rich website text and spamdexing. *Poster in Proceedings of The Conference on World Wide Web Applications* http://dk.cput.ac.za/td_cput [21 November 2012].

APPENDICES

APPENDIX A: Jewel Africa map



APPENDIX B: List of selected hotels

Selected Cape Town Hotels with ORS, 3 star +			
List of Hotel in Cape Town	Hotel Homepage	Star Rating	Fail Hotels
Adderley Hotel	http://adderley.ahagroup.co.za/	4	
Best Western Cape Suite Hotel	http://www.capesuites.co.za/	3	
Breakwater Lodge	http://www.bwl.co.za/	3	
Cape Castle	http://www.proteahotels.com/protea-hotel-cape-castle-wa	3	
CapeSun	http://www.capesunhotel.i-res.co/	5	
Cape Milner	http://www.south-african-hotels.com/hotels/cape-milner-h	5	
Cape Diamond Hotel	http://www.capediamondhotel.co.za/	3	
Cape Grace	http://www.capegrace.com/	5	
Cape Heritage Hotel	http://www.capeheritage.co.za/	4	
Cape Royale	http://www.caperoyale.co.za/	5	
CT Hollow	http://www.capetownhollow.co.za/	4	
CT Lodge	http://www.capetownlodge.co.za/	4	
Circa Hotel	http://www.circahotel.co.za/	4	
City Lodge	https://www.citylodge.co.za/d10.php	4	
Cullinan Hotel	http://www.tsogosunhotels.com/hotels/the-cullinan/pages	4	
15 On Orange	http://www.south-african-hotels.com/hotels/15-on-orange	4	
North Wharf	http://www.booking.com/hotel/za/protea-north-wharf.en.h	5	
Fire And Ice	http://www.proteahotels.com/protea-hotel-fire-ice-cape-to	4	
Fountain Hotel	http://www.booking.com/hotel/za/fountains.en.html	3	
Graeme Hotel	http://www.sa-venues.com/visit/hotelgraeme/	4	
Grand Daddy	http://www.granddaddy.co.za/	4	
Garden Court	http://www.tsogosunhotels.com/garden-court/pages/home	4	
Hollow On The Square	http://www.hollowonthesquare.co.za/	3	
Hilton Hotel	http://www.south-african-hotels.com/hotels/hilton-cape-to	4	
Harbour Bridge Hotel	http://harbourbridge.ahagroup.co.za/	4	
Hippo Boutique Hotel	http://www.booking.com/hotel/za/hippo-boutique.en.html	4	DO
Holiday Inn Express	http://www.hiexhotels.co.za/	4	
HeadSouth	http://www.agoda.com/africa/south_africa/cape_town/hea	4	
Icon Hotel	http://www.urbanhiphotels.com/our-hotel-accommodation	4	
Inn On The Square	http://www.agoda.com/africa/south_africa/cape_town/inn	4	DO
Kimberly Hotel	http://www.hostels.com/hostels/cape-town/kimberley-hot	3	
Lady Hamilton Hotel	http://www.ladyhamilton.co.za/	4	
Mandela Rhodes	http://www.booking.com/hotel/za/mandela-rhodes-place.e	4	DO
Mount Nelson Luxury Hotel	http://www.mountnelson.co.za/web/ocap/contact_us.jsp	5	
More Quarters	http://www.morequarters.co.za/	4	
New Tulbagh	http://www.newtulbaghhotel.com/	3	
Pepper Club Luxury Hotel Spa	http://www.pepperdub.co.za/	4	
Protea Hotel Victoria Junction	http://www.proteahotels.com/protea-hotel-victoria-junctio	4	DO
Parliament	http://parliamenthotel.co.za/	3	
Portwood	http://www.portwood.co.za/	3	
Park Inn	http://www.parkinn.com/	4	
Radisson Blue Hotel	http://www.radissonblu.com/hotel-cape-town	5	
Romney Park	http://www.romneypark.co.za/	5	
Rockwell	http://www.rockwellhotel.co.za/	4	
Saavejd	http://www.saasveldlodge.co.za/	3	
Southern Sun	http://www.tsogosunhotels.com/pages/home.aspx	5	DO
St George Hotel	http://www.hotelonstgeorges.co.za/	4	
Strand Tower	http://www.strandtowerhotel.co.za/	4	
Tulip	http://www.thetulip.co.za/	3	
Taj Hotel	http://www.agoda.co.za/africa/south_africa/cape_town/taj	5	DO
Table Bay Hotel	http://www.south-african-hotels.com/hotels/table-bay-hot	5	
The Capetonian	http://www.agoda.com/africa/south_africa/cape_town/the	4	DO
Townhouse	http://www.booking.com/hotel/za/townhouse-conference	4	DO
Tudor	http://www.venere.com/hotels/cape-town/hotel-tudor/	4	
The One And Only	http://www.booking.com/hotel/za/one-only-cape-town/hr	5	DO
The One 8	http://www.theone8.com/	4	
The Fritz	http://www.fritzhotel.co.za/	3	
The Commodore	http://www.the.commodore.co.za/	4	
Victoria and Alfred Hotel	http://www.newmarkhotels.com/hotels/victoria-alfred-hot	4	
Queen Victoria	http://www.newmarkhotels.com/hotels/queen-victoria-hot	4	DO
The Westin Grand	http://www.westincape-town.com/	5	

APPENDIX C: SurveyMonkey questionnaire

USER TESTING

1. The purpose of this questionnaire is to canvass a random selection of Internet users to take part in a User Testing Session of Cape Town hotel websites

2. Only a certain group of Testers with random characteristics will be selected from all the responses, and you will be advised if you have been selected.

IF YOU ARE SELECTED:

3. You will be required to spend at most one hour and 30 minutes in a computer laboratory at CPUT in the centre of Cape Town on Saturday 1 December, starting at 10:00, to participate in this test

4. You will be paid an amount of R200 (two hundred Rand, in a MasterCard shopping voucher format) for your time and travelling, as only and full compensation for this testing session.

5. Your response will form part of a Master's Degree at CPUT, titled: "Measurement of the usability of web-based hotel reservation systems"

BY CLICKING ON "SUBMIT" AT THE END OF THE QUESTIONNAIRE BELOW, YOU ACCEPT THAT:

6. Your participation is voluntary

7. NONE of the information you provide on the form below OR on the testing sheet will be made available to any person other than the researcher and his study leader

8. All personal and contact detail will be destroyed after the test, and only the data will be retained for further analysis

9. No other claims, financial or otherwise, can be made against CPUT, the student or the study leader

10. For more detail, please contact either the Masters student or the supervisor, at: usabilitytest68@gmail.com

11. Please click on the "Next" button below the image to continue



SimpleTap

http://www.surveymonkey.com/s.aspx?sm=7prH4Uo... ziphozakheshasha - Yahoo Mail SurveyMonkey Powered On... X

Google Search Share More Sign In

2. Demographics

Please answer some questions on Demographics. Note that the questions below require answers simply to ensure a random sample, and have no political or other bearing.

#1. Please provide your First Name and Surname in the box below. Note that the contact information on this page is ONLY required to contact you, and will be destroyed after the User Test.

First Name and Surname: [Text Box]

#2. What is your Gender and Race? Please select only ONE button in ONE row.

	African	Asian	Coloured	White	Other
Male	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Female	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected a button in the "Other" column above, please specify your Race

[Text Box]

#3. Please specify your Home Language and Age Group. Please select ONE button in ONE row.

	20 and younger	21-29	30-39	40-49	50 and Above
Afrikaans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
English	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Xhosa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zulu	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected a button in the "Other" row above, please specify your home language

[Text Box]

#4. Please provide your cell or landline number, where you can be contacted during the day.

Cell or Landline Number: [Text Box]

#5. Please provide your email address.

Email Address: [Text Box]

Print Next

Windows Taskbar: 10:57 AM 2014/01/14

3. Filtering www.web-usability.co.za

Kindly answer the following questions on your previous Internet experience

***6. How would you rate your own experience with using the Internet?**

- I have never used the Internet
- I have used it a few times, using some different interfaces
- I use it regularly and I am familiar with interacting with different interfaces

***7. Have you personally used the Internet to make a reservation for accommodation before?**

- No
- Yes

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Taskbar: 11:01 AM 2014/01/14

APPENDIX D: Questionnaire/Util

Usability Measurement - 1 December 2012

This session is part of the empirical research for CPUT Master's thesis titled: Measurement of the usability of web-based hotel reservation systems

Student: Ziphozakhe Theophilus Shasha - 2030 132 39

Supervisor: Prof M. Weideman

1. The purpose of this measurement is to record your experience of using three different hotel booking systems. Your participation is voluntary, and you may decide to withdraw at any time.
2. This is not a test of any kind - you are not required to provide "correct" answers, or finish in a certain time, or "do well". You should simply record your honest experience of the website interactions as requested.
3. You should not at any time during this session conclude a hotel booking by providing payment information such as credit card numbers, personal detail, etc. When for example a credit card number is required, you should stop that session, complete the relevant form and close the window.
4. NONE of your; name, surname or contact information you provided before or today will be made available to any person other than the researcher and his study leader.
5. All personal and contact detail will be destroyed after the test, and only the data will be retained for further analysis.
6. After handing in ALL your completed measurement sheets, you will be paid an amount of R200 (two hundred Rand, in a MasterCard shopping voucher format) for your time and travelling, as only and full compensation for this testing session.
7. No other claims, financial or otherwise, can be made against CPUT, the student, the assistants or the study leader.

By signing below, you acknowledge that you understand and accept the instructions above.

Signature

01 December 2012

BOOKING SESSION #1 h1

Record the time (eg 10:34) when you START this session in this box:

1. If not loaded already, please load the browser (Internet Explorer, Firefox, etc)
2. Now type in this website address: <http://adderley.abagroup.co.za/>
3. Do a dummy hotel booking on this website. Book a single room for one person for the night of 12 February 2013. If necessary, change the date/room type when what you want is not available.
4. When asked for payment details (eg. credit card no), STOP. DO NOT complete or submit the payment phase!

Record the time (eg 10:55) when you FINISHED this session in this box:

5. Now record your experiences of this process by answering the questions below.
6. When done, please close the window, and put up your hand for your next Booking Session.

Please answer the questions below by putting a cross in ONE BOX in EVERY ROW.

	Strongly agree	Neutral	Strongly disagree	N.A.
a. My first impression of the homepage was positive.				
b. It was easy to find where to click on the homepage to take me to the booking page.				
c. I am happy that I completed this booking in a reasonable amount of time.				
d. I can recommend this booking system.				

	Strongly agree	Neutral	Strongly disagree	I had no errors/ used no Help
e. Every time I made a mistake using the booking system, I recovered easily.				
f. The booking system gave error messages which clearly explained how the problem should be fixed.				
g. The Help system was clear and useful.				

- h. The wording used on this booking system was clear and easy to understand.
- i. The booking system navigation made the next step I should take obvious.
- j. The interface of this booking system was trouble-free to use.
- k. Specifying the dates of my booking was easy.
- l. Specifying the kind of room I want for this booking was easy.
- m. At every point in the booking process the system showed clearly where I was.
- n. I have done a successful booking at this hotel (disregarding the lack of payment).

Strongly agree		Neutral		Strongly disagree	N.A.

o. Please put a cross in every box below, which describes your experience with this booking system. You could have one or more than one cross in the table.

Sophisticated	Helpful	Slow	Simplistic	Friendly
Busy	Clear	Meaningful	Confusing	Stressful
Fun	Boring	Business-like	Too Technical	Intuitive
Easy to use	Fast	Old	Complete	Consistent
Annoying	Met Expectation	Frustrating	Attractive	Overwhelming
Predictable	Intimidating	Appealing	Clean	Understandable
Inviting	Entertaining	Time consuming	Impressive	Unattractive
Engaging	Impersonal	Satisfying	Rigid	Unpredictable
Hard to use	Poor Quality	Inconsistent	Professional	Incomprehensible

p. Kindly indicate in a short description below how you experienced the tasks required to complete this booking process (eg: selecting dates, selecting room types, etc).

APPENDIX E: Frequencies of user listing the booking system experience

Frequencies

		Hotels			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15 on Orange Hotel	2	1.2	1.2	1.2
	Adderley Hotel	6	3.7	3.7	4.9
	Best Western Cape Suites	8	4.9	4.9	9.9
	Breakwater Lodge	6	3.7	3.7	13.6
	Cape Castle	6	3.7	3.7	17.3
	Cape Diamond Hotel	4	2.5	2.5	19.8
	Cape Grace	3	1.9	1.9	21.6
	Cape Haritage Hotel	3	1.9	1.9	23.5
	Cape Milner	4	2.5	2.5	25.9
	Cape Royale	4	2.5	2.5	28.4
	Cape Sun Hotel	2	1.2	1.2	29.6
	Cape Town Hollow	4	2.5	2.5	32.1
	Cape Town Lodge	4	2.5	2.5	34.6
	Circa Hotel	3	1.9	1.9	36.4
	City Lodge	3	1.9	1.9	38.3
	Cullinan Hotel	2	1.2	1.2	39.5
	Fire and Ice Hotel	1	.6	.6	40.1
	Fire And Ice Hotel	2	1.2	1.2	41.4
	Fountain Hotel	3	1.9	1.9	43.2
	Fritz Hotel	3	1.9	1.9	45.1
	Garden Court Hotel	3	1.9	1.9	46.9
	Graeme Hotel	3	1.9	1.9	48.8
	Grand Daddy	3	1.9	1.9	50.6
	Harbour Bridge Hotel	3	1.9	1.9	52.5
	Head South Lodge	3	1.9	1.9	54.3
	Hilton Hotel	3	1.9	1.9	56.2
	Holiday Inn Express	3	1.9	1.9	58.0
	Hollow On The Square	3	1.9	1.9	59.9
	Icon Hotel	3	1.9	1.9	61.7
	Kimberley Hotel	2	1.2	1.2	63.0
Lady Hamilton Hotel	3	1.9	1.9	64.8	

More Quarters	2	1.2	1.2	66.0
Mount Nelson Luxury Hotel	3	1.9	1.9	67.9
New Tulbag Hotel	2	1.2	1.2	69.1
North Wharf Hotel	2	1.2	1.2	70.4
Park Inn	2	1.2	1.2	71.6
Parliament Hotel	2	1.2	1.2	72.8
Pepper Club Luxury Hotel	2	1.2	1.2	74.1
Portswood	3	1.9	1.9	75.9
Radisson Blue Hotel	3	1.9	1.9	77.8
Rockwell Hotel	3	1.9	1.9	79.6
Romney Park	3	1.9	1.9	81.5
Saasveld Lodge	3	1.9	1.9	83.3
St George Hotel	3	1.9	1.9	85.2
Strand Tower Hotel	3	1.9	1.9	87.0
Table Bay Hotel	3	1.9	1.9	88.9
The Commodore	3	1.9	1.9	90.7
The one8	3	1.9	1.9	92.6
The Tulip	3	1.9	1.9	94.4
Tudor Hotel	3	1.9	1.9	96.3
Victoria-Alfred Hotel	3	1.9	1.9	98.1
Westin Cape Town	3	1.9	1.9	100.0
Total	162	100.0	100.0	

Sophisticated

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	43	26.5	100.0	100.0
Missing	System	119	73.5		
Total		162	100.0		

Helpful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	52	32.1	100.0	100.0
Missing	System	110	67.9		
Total		162	100.0		

Slow

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	11.1	100.0	100.0
Missing	System	144	88.9		
Total		162	100.0		

Simplistic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	35	21.6	100.0	100.0
Missing	System	127	78.4		
Total		162	100.0		

Friendly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	54	33.3	100.0	100.0
Missing	System	108	66.7		
Total		162	100.0		

Busy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	21	13.0	100.0	100.0
Missing	System	141	87.0		
Total		162	100.0		

Clear

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	80	49.4	100.0	100.0
Missing	System	82	50.6		
Total		162	100.0		

Meaningful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	34	21.0	100.0	100.0
Missing	System	128	79.0		
Total		162	100.0		

Confusing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	30	18.5	100.0	100.0
Missing	System	132	81.5		
Total		162	100.0		

Stressful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	13	8.0	100.0	100.0
Missing	System	149	92.0		
Total		162	100.0		

Fun

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	32	19.8	100.0	100.0
Missing	System	130	80.2		
Total		162	100.0		

Boring

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	19	11.7	100.0	100.0
Missing	System	143	88.3		
Total		162	100.0		

Business like

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	44	27.2	100.0	100.0
Missing	System	118	72.8		
Total		162	100.0		

Too technical

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	6.8	100.0	100.0
Missing	System	151	93.2		
Total		162	100.0		

Intuitive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	6.2	100.0	100.0
Missing	System	152	93.8		
Total		162	100.0		

Easy to use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	85	52.5	100.0	100.0
Missing	System	77	47.5		
Total		162	100.0		

Fast

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	61	37.7	100.0	100.0
Missing	System	101	62.3		
Total		162	100.0		

Old

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	4.9	100.0	100.0
Missing	System	154	95.1		
Total		162	100.0		

Complete

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	33	20.4	100.0	100.0
Missing	System	129	79.6		
Total		162	100.0		

Consistent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	24	14.8	100.0	100.0
Missing	System	138	85.2		
Total		162	100.0		

Annoying

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	12.3	100.0	100.0
Missing	System	142	87.7		
Total		162	100.0		

Met Expectation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	34	21.0	100.0	100.0
Missing	System	128	79.0		
Total		162	100.0		

Frustrating

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	19	11.7	100.0	100.0
Missing	System	143	88.3		
Total		162	100.0		

Attractive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	58	35.8	100.0	100.0
Missing	System	104	64.2		
Total		162	100.0		

Overwhelming

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	9.9	100.0	100.0
Missing	System	146	90.1		
Total		162	100.0		

Predictable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	6.8	100.0	100.0
Missing	System	151	93.2		
Total		162	100.0		

Intimidating

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	3.7	100.0	100.0
Missing	System	156	96.3		
Total		162	100.0		

Appealing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	40	24.7	100.0	100.0
Missing	System	122	75.3		
Total		162	100.0		

Clean

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	43	26.5	100.0	100.0
Missing	System	119	73.5		
Total		162	100.0		

Understandable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	51	31.5	100.0	100.0
Missing	System	111	68.5		
Total		162	100.0		

inviting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	41	25.3	100.0	100.0
Missing	System	121	74.7		
Total		162	100.0		

Entertaining

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	27	16.7	100.0	100.0
Missing	System	135	83.3		
Total		162	100.0		

Time consuming

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	23	14.2	100.0	100.0
Missing	System	139	85.8		
Total		162	100.0		

Impressive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	33	20.4	100.0	100.0
Missing	System	129	79.6		
Total		162	100.0		

Unattractive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	6.2	100.0	100.0
Missing	System	152	93.8		
Total		162	100.0		

Engaging

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	29	17.9	100.0	100.0
Missing	System	133	82.1		
Total		162	100.0		

Impersonal

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	3.7	100.0	100.0
Missing	System	156	96.3		
Total		162	100.0		

Satisfying

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	50	30.9	100.0	100.0
Missing	System	112	69.1		
Total		162	100.0		

Ridig

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	4.9	100.0	100.0
Missing	System	154	95.1		
Total		162	100.0		

Unpredictable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	4.9	100.0	100.0
Missing	System	154	95.1		
Total		162	100.0		

Hard to use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	12.3	100.0	100.0
Missing	System	142	87.7		
Total		162	100.0		

Poor Quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	6.8	100.0	100.0
Missing	System	151	93.2		
Total		162	100.0		

Inconsistence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	7.4	100.0	100.0
Missing	System	150	92.6		
Total		162	100.0		

Professional

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	65	40.1	100.0	100.0
Missing	System	97	59.9		
Total		162	100.0		

Incomprehensible

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	4.3	100.0	100.0
Missing	System	155	95.7		
Total		162	100.0		

APPENDIX F: Experience short description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	3.7	3.7	3.7
	All like about this website fun and enjoyable also easy to understand also its fast, I do not go through the way travelling to book room.	1	.6	.6	4.3
	All tastes were easy once book online button was selected. The booking online button looked as if part of promotion only.	1	.6	.6	4.9
	Although the booking system was made easy by having everything on one page, they did not allow for one to pick what kind of facilities they want in a single room booking e.g. king size bed and not two single beds. Picking date could have been easier without having to scroll through all the days to one's required day. The booking system was professions but boring and impersonal.	1	.6	.6	5.6
	Booking hotel was quite easy. Everything was in order, never struggled to complete the booking.	1	.6	.6	6.2
	Booking process started all fine but then went all pair shape. Booking system was a bit too complicated. If i was in a hurry this booking system would be a waste of time my time.	1	.6	.6	6.8
	Choosing the dates and selecting room types was an easy task to complete but the home page is not clear enough as what to do next.	1	.6	.6	7.4
	Clear, inviting and easy.	1	.6	.6	8.0
	Clearly this hotel has a well developed booking system, each step is clearly and so make it easy to fill it. Descriptions are provided.	1	.6	.6	8.6
	Couldn't check the availability at dates was confusing. Other tasks were easy.	1	.6	.6	9.3
	Dates was easy to find for booking. Hard problem with wording of room types-no indication of single room- referred to studio twin and standard twin	1	.6	.6	9.9
	Dates were easy to pick as they came up in a calendar format. Only had a choice between two descriptions of rooms, one of which had two single beds as an option. I also went for the cheap option of the two. The tasks were easy to complete on this website. The website is no too fancy, thank goodness.	1	.6	.6	10.5
	Easy selection using buttons, accompanied by pictures so you can see what you are booking.	1	.6	.6	11.1

Easy to complete booking and it was time consuming.	1	.6	.6	11.7
Easy to use and clear in terms of what kind of rooms do you want and the type of bed you want not complicated at all.	1	.6	.6	12.3
Easy to use and understandable.	1	.6	.6	13.0
Easy, available dates and comprehensive.	1	.6	.6	13.6
Easy, quick, logical selection process. Help with booking offer on first page.	1	.6	.6	14.2
Every step was very simple and easy to complete.	1	.6	.6	14.8
Error message on date selection were not relative to booking process.	1	.6	.6	15.4
Essentially is not showing the price of the room before I make my decision about the room and also not identify which room is available and which side, it means we need to improve.	1	.6	.6	16.0
Everything worked well, except when I chose the check-in date the home screen, it changed when I wanted to select the room type.	1	.6	.6	16.7
Every step i make was easy and clear.	1	.6	.6	17.3
Everything was quite easy to do/ use and I appreciated the fact that the booking system explained clearly the T and C's i.e. How many people I could allow in my room and whether or not I wanted a meal etc.	1	.6	.6	17.9
Fast, easy and uncomplicated.	1	.6	.6	18.5
Final feedback was not clearly indicated.	1	.6	.6	19.1
First had to click on booking along the bar and that took me to a site with booking.co.uk. I am not sure why they are using a booking site from England here, but the programme itself is pretty straightforward to use. Then its a cases of choosing s room, and then do you say for how many people you are looking for. this website is slightly more complicated than the last one to use	1	.6	.6	19.8
First on the main page you have to guess where to book your room then it only shows the available room on that date but doesn't let choose which room.	1	.6	.6	20.4
Had no problems whatsoever wonderful site.	1	.6	.6	21.0
Home page was not attractive. Booking was easy.	1	.6	.6	21.6
I could find the booking button/link on the site. I did not really understand where i was at a certain point of my booking didn't know where I must click next. I took time to book the room types.	1	.6	.6	22.2
I did manage to go to the website however i had trouble to book my room and the	1	.6	.6	22.8

check in date, the system save me the wrong room instant of what i wanted.				
I found the booking quite easy and user friendly. It was only when I placed my first booking, I got an error message that said "no rooms available for the amount of time" I found it frustrating to go back every time with no joy. It was only when i was advised to use dates in February 13, the whole process took of like on jet fuel. Quick, easy, fast an effective.	1	.6	.6	23.5
I had a good experience when making the bookings my concern was too much text on the website and not well aligned. The varying font makes it look untidy. There are also typographical errors i.e. under "superb, a" there is"/rooms were very large".	1	.6	.6	24.1
I had a lot of fun with this booking for the dates were helpful. Selecting the room was easy and the different room types with the overview of what you would like and what their overview expression about the room is. It's easy to use and really professional.	1	.6	.6	24.7
I had a pleasant experience. You left me with a smile my face because everything was so quick and easy.	1	.6	.6	25.3
I had no problems.	1	.6	.6	25.9
I like the interfaces webpage and i like the images provided it's easy to use well done.	1	.6	.6	26.5
I think is expand website and give more opportunity to choose which hotel you would like to be and also which hotel you need 1stw or 3tw and I like the design attractive website and give more details.	1	.6	.6	27.2
I was impressed with their home page very attractive and easy to use. I would recommend every hotel users the same system/settings on home page.	1	.6	.6	27.8
I was unable to complete the booking for year 2013 because the drop down box to select the arrival year had not been updated to include 2013. I also got confused between the site system to give a quote price and doing an actual booking.	1	.6	.6	28.4
I was very hard for me to use this booking; I did not get the amount of the room. In this booking I would rather go through the travel agent.	1	.6	.6	29.0
I would never use this website to make a booking.	1	.6	.6	29.6
I would recommend this one . The feature helped from the word go.	1	.6	.6	30.2
I would recommend this system to my	1	.6	.6	30.9

family and friends to use as it was so impressive and inviting.				
It is easy to access in the home page it shows clear cost and dates you need to book.	1	.6	.6	31.5
It is interesting and also hard for me to use because of it's a bit little difficult for me to use it.	1	.6	.6	32.1
It is not easy to use to much information about all the hotel around the world. It was not easy to book a room.	1	.6	.6	32.7
It is so user friendly, you don't need to know much about the computers in order for you to be able to book-up. Great interfaces webpage and good quality.	1	.6	.6	33.3
It was a user friendly easy task to do one that can be done in very little time.	1	.6	.6	34.0
It was difficult at first but as i was continuing with booking it was easy and understandable.	1	.6	.6	34.6
It was difficult specifying in which city I need a room.	1	.6	.6	35.2
It was easy and understandable to do the booking; it did not take much of my time and was very appealing to choose a room.	1	.6	.6	35.8
It was easy here and there but anyway that good staff also interest and giving way forward.	1	.6	.6	36.4
It was easy to access on the home page, showed clearly availability and user friendly. I would recommend it to anyone.	1	.6	.6	37.0
It was easy to select dates and room types. The website was not very attractive, but the booking system is relatively simplistic and fast.	1	.6	.6	37.7
It was easy to select the dates and also straight on the amount that you expected to pay meaning doing all the calculations.	1	.6	.6	38.3
It was easy to understand and it's not time wasting. But somewhere it's confusing.	1	.6	.6	38.9
It was easy to use but not enough choice of rooms to choose from.	1	.6	.6	39.5
It was easy to go to the website and very easy as well to select the date, room and the hotel I wanted. I did not have hard time.	1	.6	.6	40.1
It was not easy to spot how to book, otherwise once that was spotted, it was relatively easier to use. I would not recommend this system.	1	.6	.6	40.7
It was usable but did not assist when I made an error.	1	.6	.6	41.4
It was very easy friendly everything was clear and very shot it not boring and it is professional	1	.6	.6	42.0
It was very simple and very straight	1	.6	.6	42.6

forward and I appreciate the fact that everything was on one page and that all I had to do was scroll down.				
It's a good representation different unique but interesting user friendly and easy to use.	1	.6	.6	43.2
It's nice but it takes time to load the URL or website, it is giving errors but at last I have managed to get there.	1	.6	.6	43.8
It's not easy to use this booking you have to think in order to get what you want it is not clear.	1	.6	.6	44.4
My experience for this booking was bad.	1	.6	.6	45.1
My experience was neutral	1	.6	.6	45.7
My personal experience about this booking was very clear, easy to navigate, simple and straight forward booking.	1	.6	.6	46.3
Navigate through the website it was bit challenging it took time to finish booking. I like the look of the website but i don't like the part of it.	1	.6	.6	46.9
Nice and easy to use and I recommend it. It's not time consuming.	1	.6	.6	47.5
No problem from the word go, beside text. Maybe large text would be better. I am overall satisfied with the booking I recommend it.	1	.6	.6	48.1
Not the very best kind of booking system.	1	.6	.6	48.8
Once I selected the dates and number of people, the website did not display the booking information it simply returning to the home page. I tried selecting alternative dates but the same thing happened after five attempts. I gave up and concluded that there must be a temporally problem with the hotels online booking system.	1	.6	.6	49.4
Option offered to book was not clear enough. Simplifying the website would be recommended.	1	.6	.6	50.0
Perfect system.	1	.6	.6	50.6
Perfect website, quick and clear.	1	.6	.6	51.2
Quite easy to do/use and quite fast.	1	.6	.6	51.9
Quite professional.	1	.6	.6	52.5
Selecting the dates and the room type was easy. Only had trouble finding the link to make a booking, but found it eventually. Should be a more obvious link to the booking system.	1	.6	.6	53.1
Selecting date was easy-pop-up calendar. Selecting rooms was problem free, was helpful in need e.g., Total occupants and room type.	1	.6	.6	53.7
Selecting dates was easy to use. Selecting room clear but yet it requested a lot of information. Overall it is easy to use	1	.6	.6	54.3

and fast.				
Selecting dates was easy to use. Selecting room types was confusing. The booking page in incomprehensive.	1	.6	.6	54.9
Selecting dates was easy, but I was unable to complete the booking. There were apparently no rooms available at any date I selected. The booking system was difficult to use.	1	.6	.6	55.6
Selecting dates-rooms not hard to find. Loading time of page was long, as other Protea Hotels. Popped up had to reselect; Breakwater Lodge.	1	.6	.6	56.2
Selecting the dates were not as easy as the other hotels websites. The website is professional and I liked the options to add items e.g. bouquets of flowers to the booking it is a unique feature and is very convenient. However, overall I did not find the website as simplistic as some of the other hotels and it was very time consuming.	1	.6	.6	56.8
Straight forward, quick and clear.	1	.6	.6	57.4
Struggle to move from the booking dates forward or next step. For someone who is a first time in the website this is a puzzle.	1	.6	.6	58.0
Sweet, Efficient and short. Crisp, clean, I knew what I wanted. The system took me there. Once again it was quick and efficiency.	1	.6	.6	58.6
Tests were very slow and clicking other buttons was freezing. It was time consuming.	1	.6	.6	59.3
The availability box did not automatically adjust the departure time to a date after my specified arrival time.	1	.6	.6	59.9
The booking experience was easy to understand and relatively hassle-free. Selecting the date and room type was made clear. Each room price was also indicated the option to personalise one's stay was an added delight.	1	.6	.6	60.5
The booking in this hotel is easy and the interface is clear. The only that needs an improvement is the response time on the user query. Yes it's a big company with large databases set to some computer systems it might time out	1	.6	.6	61.1
The booking is easy and understandable but frustrating for those who doesn't understand, it is attracting because it tells you everything that you want to know about the place so users should try it.	1	.6	.6	61.7
The booking link was difficult to find and the room that I was booking for was not very clear on what I was specifically looking for.	1	.6	.6	62.3

The booking page was easy to use and straight forward. The only downside was that website took a while to see whether there were room available.	1	.6	.6	63.0
The booking process was easy, fast and the wording was clear, simple English, very easy to understand.	1	.6	.6	63.6
The booking process was fast but the website booking process has a lot of add-on, specials and luxuries to add to your stay at the hotel.	1	.6	.6	64.2
The booking process was good, I loved the part when you confirm your booking the hotel consultants will be in touch with me.	1	.6	.6	64.8
The booking process was impressive as everything just flowed with just a click/selection of what I wanted. I loved the special request part. It gives the user preference.	1	.6	.6	65.4
The booking process was interesting the only thing that turned me off is when I entered the number on the maximum children field where the field wouldn't let me at directed me to the home page so this field needs to be altered.	1	.6	.6	66.0
The booking process was quite easy to do but the webpage interface was old-faction.	1	.6	.6	66.7
The booking process was so such fun and understandable. The attractive interface did not struggle, but the difficult part is the word they use like (Itinerary) difficult to understand such deep English words. (finish reservation)	1	.6	.6	67.3
The booking system did not allow me to pick a room type and the facilities I wanted before asking for payment. It was however easy to use.	1	.6	.6	67.9
The booking system is clear and straight forward but confusing at the beginning.	1	.6	.6	68.5
The booking system is much friendly, fun and impressive it is clear and easy even to select dates and room types it is understandable.	1	.6	.6	69.1
The booking system is relatively easy to use but what annoyed me was to have to give my personal details first before the system could confirm availability of the room. Impressed that the offered or advertised other services they are affiliated to	1	.6	.6	69.8
The booking system was quick complicated and it needs clear understanding and also educate people who are not educated.	1	.6	.6	70.4
The booking system was busy and not easy to use, it takes time to understand	1	.6	.6	71.0

the system and to select room.				
The booking was a bit confusing, i didn't even finish the booking as the system was hard to use and too technical.	1	.6	.6	71.6
The booking was difficult to do and it, to me time to click other points because the booking system was too busy.	1	.6	.6	72.2
The booking was easy and fun to use, it's not time consuming, it was easy for me to see from the home page where to start with my booking, the words used were simple, and understandable. I complete my booking without any hustles.	1	.6	.6	72.8
The booking was easy but it ask about code which I didn't not know it and I was also slow.	1	.6	.6	73.5
The booking was fun but it not easy to us got many links and the booking system was not clear.	1	.6	.6	74.1
The booking was incomprehensible. It was easy to use for booking but do not provide complete information for the booking. There is no place made available for online payment making the booking unsuccessful.	1	.6	.6	74.7
The date selected was not up to standard, obviously if you want February it has to be or later. They should make it change the new year automatically. The room type was easy since there is only one. The overall booking of thee website is just congested.	1	.6	.6	75.3
The date selection was quite nice. It automatically put the departure day to be the next day, since you can't exactly leave any time before then. The room selection was a bit busy, it would be better to put them as a drop down. The finish reservation part is not quite a good idea, it is bit confusing. Rather make it go to the page automatically and the user will decide there whether or not they want to finish the reservation	1	.6	.6	75.9
The font size is too small, the images are not attractive.	1	.6	.6	76.5
The home page does not have links like where to click for booking. It also gives errors and is very slow, there are also technical errors. It is not easy to recover.	1	.6	.6	77.2
The home page was not much attractive but booking was very easy and clear, I understood their system better.	1	.6	.6	77.8
The initial impression that the home page made word have caused me to not complete my booking. The home page looks like a Childs drawing and seems very old and boring. However, all the other	1	.6	.6	78.4

steps were easy when directed to the online booking system.				
The interface is usable, but can be made simpler maybe there is too much information on one page. In all it is a usable system.	1	.6	.6	79.0
The main website redirects the user to a different booking website. Scrolling down is not as clear as clicking "next" or "continue"	1	.6	.6	79.6
The online booking for this website was very clear and easy to navigate. It guides you step by step.	1	.6	.6	80.2
The process was time for myself, I strongly struggled first in finding where to book, and the hotel search interface the questions are not so user friendly. Remember not all of us are familiar with using Internet.	1	.6	.6	80.9
The second step of the booking process takes time to load for me is unprofessional but all in all its not bad it meets my standards.	1	.6	.6	81.5
The selection of the dates was easy. From that point on it is unclear where exactly you should proceed to. It would make more sense to have every step on a new page so that it is clear that you are done with the previous step.	1	.6	.6	82.1
The system is user friendly it was very easy for me to pick up the dates that I wanted to pick, because they have the calendar already and that is time saving.	1	.6	.6	82.7
The system's interface impressive but it was quite confusing when selecting the room I wanted to book. It was too technical for someone how is not technologically advance.	1	.6	.6	83.3
The tasks required in this booking process are inviting and easy to use. I can recommend to others.	1	.6	.6	84.0
The webpage give problems when you booking the reservation it give you many options to get what you want.	1	.6	.6	84.6
The Webpages has lot of information which is stressful to find out what or which, rather than that it was so amazing and I rate it one of the best cause it is so fast.	1	.6	.6	85.2
The website is simple to and straight forward, it is very easy to select everything (dates, rooms); the interface is not overcrowded with information that is unnecessary.	1	.6	.6	85.8
The website was relatively user friendly it was easy to find everything I needed; as a result I did not use the help option.	1	.6	.6	86.4

The whole booking process was easy to use, simple and i managed to complete booking.	1	.6	.6	87.0
There was no place to fill in my contact details except for email which is not enough. The information required is not enough but was easy to use.	1	.6	.6	87.7
This booking process has its faults. The date selection is faulty and doesn't display error message. The booking system should be revamped or re-coded.	1	.6	.6	88.3
This booking process was satisfying. The selection process was easy and fast booking procedures.	1	.6	.6	88.9
This booking system and home page was clear and understandable, its fast to get where you want to be, date and room types was very clear to select	1	.6	.6	89.5
This booking was the worst ever because every date that i clicked on was not found and they didn't offer any help whatsoever with the dates and when they would be available. It got so frustrating that i didn't even complete the booking.	1	.6	.6	90.1
This booking was very friendly.	1	.6	.6	90.7
This reservation was easy and really attractive. The booking was personal at times and was not time consuming from the dates to select rooms was just too easy.	1	.6	.6	91.4
This site was so confusing that much, I was not even able to complete a booking and the help page did not work it showed an error.	1	.6	.6	92.0
This type of system is clearly. I would recommend it and it need to be monitored.	1	.6	.6	92.6
This was a very good experience indeed; each process step is as easy to follow as the previous. But there was a set back which was to find a single room, then I had to choose double instead.	1	.6	.6	93.2
This website took a little longer to go through as you first have to choose which hotel you want to stay in, then the check-in date, number of rooms, finally number of guests. However the website is fairly easy to use and to navigate. You have to travel from screen to screen to fill the details necessary to make booking, so that makes more time consuming than the other two websites.	1	.6	.6	93.8
This website was not user friendly for me at all I was struggling to find my preferred date, because they may you select the month and the year by drop down menu but when it comes to selecting a day you	1	.6	.6	94.4

	have to click directly on calendar they did not provide a drop down menu, and to one that is strange.				
	Too much unnecessary information of the webpage.	1	.6	.6	95.1
	Using the booking system was a breeze and I was impressed by their anticipation of special request from the guest which shows that they are prepared to cater for guest from all walks of life. Very reassuring to be able to make special request before confirming the booking.	1	.6	.6	95.7
	Very easy and user friendly. No problem with the booking it went well.	1	.6	.6	96.3
	Very easy to follow. Everything clear obvious font increase button would be a suggestion as I battle to increase it using my computer.	1	.6	.6	96.9
	Very easy to use overall. Made the booking easily. Selecting rooms and dates was easy.	1	.6	.6	97.5
	Very impressive and choice of colours used. All in one page however which could have been details to read through, which could have been sucimplified in one/two terms. (Stunning)	1	.6	.6	98.1
	Very impressive home page they had. All in one page without many clicks to the next page - that liked. However having to type date and other things is not on. Menus to choose from or radio bottom to select date and times would have been appreciated.	1	.6	.6	98.8
	Very inviting home page, quite clear.	1	.6	.6	99.4
	Was easy to use and hustle free.	1	.6	.6	100.0
	Total	162	100.0	100.0	

Custom Tables

		Count	Column Responses %	Column N %
Describe your experience	Sophisticated	43	3.2%	26.5%
	Helpful	52	3.8%	32.1%
	Slow	18	1.3%	11.1%
	Simplistic	35	2.6%	21.6%
	Friendly	54	4.0%	33.3%
	Busy	21	1.5%	13.0%
	Clear	80	5.9%	49.4%
	Meaningful	34	2.5%	21.0%
	Confusing	30	2.2%	18.5%
	Stressful	13	1.0%	8.0%
	Fun	32	2.4%	19.8%
	Boring	19	1.4%	11.7%
	Businesslike	44	3.2%	27.2%
	Tootechnical	11	0.8%	6.8%
	Intuitive	10	0.7%	6.2%
	Easytouse	85	6.3%	52.5%
	Fast	61	4.5%	37.7%

Old	8	0.6%	4.9%
Complete	33	2.4%	20.4%
Consistent	24	1.8%	14.8%
Annoying	20	1.5%	12.3%
MetExpectation	34	2.5%	21.0%
Frustrating	19	1.4%	11.7%
Attractive	58	4.3%	35.8%
Overwhelming	16	1.2%	9.9%
Predictable	11	0.8%	6.8%
Intimidating	6	0.4%	3.7%
Appealing	40	3.0%	24.7%
Clean	43	3.2%	26.5%
Understandable	51	3.8%	31.5%
inviting	41	3.0%	25.3%
Entertaning	27	2.0%	16.7%
Timeconsuming	23	1.7%	14.2%
impressive	33	2.4%	20.4%
Unattractive	10	0.7%	6.2%
Engaging	29	2.1%	17.9%
Impersonal	6	0.4%	3.7%
Satisfying	50	3.7%	30.9%
Ridig	8	0.6%	4.9%
Unpredictable	8	0.6%	4.9%
Hardtouse	20	1.5%	12.3%
PoorQuality	11	0.8%	6.8%
Inconsistance	12	0.9%	7.4%
Professional	65	4.8%	40.1%
Incomprehensible	7	0.5%	4.3%

APPENDIX G: Hotel Reservation Systems

The screenshot shows the Agoda website homepage. The browser's address bar displays <https://www.agoda.com/?cid=-1>. The Agoda logo is in the top left, and the top right features a chat icon, a flag icon, the currency 'USD', and a 'Sign in' button. The main banner features a scenic view of a coastal town with white buildings and a blue sea. Overlaid on this is a search form with the following fields: 'Where would you like to go?' (with a placeholder 'City, neighborhood, property...'), 'Check-in:' (with a date '26 Jul 2016' and a calendar icon), 'Check-out:' (with a date '27 Jul 2016' and a calendar icon), and 'Guests:' (with a dropdown menu showing '1 Room, 1 Adult, 0 Children'). A blue 'Search' button is to the right of the form. Below the search form, there is a promotional banner that says 'Up to 30% off with Agoda Insider Deals! Prices drop the moment you sign in!' and a 'Sign in now' button with a right-pointing arrow.

The screenshot shows the Booking.com website homepage. The browser's address bar displays www.booking.com. The Booking.com logo is in the top left. The top right features a 'ZAR' currency icon, a 'My Lists' icon, and 'Register' and 'Sign in' buttons. Below the navigation bar, there are several promotional banners. On the left, a large yellow banner titled 'Find the Best Accommodations' contains a search form with fields for 'Destination, property name or address:', 'Check-in' (with a date 'Check-in Date' and a calendar icon), 'Check-out' (with a date 'Check-out Date' and a calendar icon), and 'Traveling for:' (with radio buttons for 'Work' and 'Leisure'). Below these are dropdown menus for 'Rooms 1', 'Adults 2', and 'Children 0'. A blue 'Search' button is at the bottom right of the form. Below the search form, there is a banner that says '990,369 places to stay. No booking fees, ever!' and a 'Subscribe for Member Deals' button. On the right, there are three destination cards: 'Cape Town' (807 properties), 'Johannesburg' (285 properties), and 'Durban' (232 properties). Each card features a cityscape image and a link to 'Hotels, apartments & more in [City Name]'. Below the destination cards, there is a banner that says 'What Makes Booking.com Unique' and 'New deals listed daily – for every budget!'.

APPENDIX H: Ethical Clearance



Faculty of Business
Ethical considerations for a questionnaire
Cape Peninsula University of Technology

Tick One Box:

- Staff Project
- Postgraduate Project (Masters and Doctoral level)
- Undergraduate Project (ND & BTech level)

Title of Project

Measurement of the usability of web-based booking systems in the hotel industry

Name of researcher(s) ***Ziphozakhe Theophilus Shasha***

Name of Supervisor(s) (if appropriate). ***Prof Melius Weldeman***

		YES	NO	N/A
1.	Will you describe the main experimental procedures to participants in advance, so that they are informed about what to expect?	X		
2.	Will you tell participants that their participation is voluntary?	X		
3.	Will you obtain written consent for participation?	X		
4.	If the research is observational, will you ask participants for their consent to being observed?	X		
5.	Will you tell participants that they may withdraw from the research at any time and for any reason?	X		
6.	With questionnaires will you give participants the option of omitting questions they do not want to answer?	X		
7.	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	X		
8.	Will you debrief participants at the end of their participation (i.e. give them a brief explanation of the study)?	X		

If you have ticked No to any of Q1-8, you must ensure that the reasons for this are made explicit in your project proposal. [Note N/A = Not applicable].

		YES	NO	N/A
9.	Will your project involve deliberately misleading participants in any way?		X	
10.	Is there any realistic risk of participants or researchers experiencing either physical or psychological distress or discomfort? If yes, give details on a separate sheet and state what you will tell them to do if they should experience any problems (e.g. who they can contact for help).		X	

If you have ticked Yes to Q9 or Q10 you should ensure that your proposal describes in sufficient detail the appropriate procedures and provides a scientific justification for their inclusion. You should also identify alternative methodologies and outline the reasons why they were deemed inappropriate.

		YES	NO	N/A
11.	Does your project involve work with animals? If yes, you should also investigate whether you require approval from the S.A. Health Professions Council and/or related organisation? Provide the answer to this in your proposal		X	
12.	Do participants fall into any of the following groups? If they do, refer to professional body guidelines and include some reference to these in your proposal.	Children (under 16 years of age)	X	
		Schoolchildren of all ages.	X	
		People with learning or communication difficulties	X	
		Patients	X	
		People in Custody	X	
		People engaged in illegal activities (e.g. drug taking)	X	

		YES	NO
13.	Does your study include administering a Psychometric test(s)? If yes, name the test (s) and describe your or your supervisor's competence to administer such tests.		X
		YES	NO
14.	Will your study involve any contact with any external institution? If yes, your proposal will not normally be approved unless you submit a letter of confirmation from the person responsible for this institution that they are happy for you to conduct your study on their premises and/or contact their staff and/or people who use the service.		X

There is an obligation on the lead researcher to bring to the attention of the Faculty of Business Ethics Committee any issues with ethical implications not clearly covered by the above check list.

PLEASE TICK EITHER Statement A OR Statement B BELOW AND PROVIDE THE DETAILS REQUIRED IN SUPPORT OF YOUR APPLICATION. THEN PRINT OFF AND SIGN THE FORM

Statement A: I consider that this project has NO significant ethical implications to be brought before the Faculty of Business Ethics Committee .	Please Tick <input type="checkbox"/>
Statement B: I consider that this project may have ethical implications that should be brought before the <u>Faculty of Business Ethics Committee</u> , and/or it will be carried out with children or other vulnerable populations. If you select this Statement please ensure that you outline clearly the ethical issues in your proposal.	Please Tick <input checked="" type="checkbox"/>


If you ticked Statement B then please provide all the further information listed below in a separate attachment.


1. Your Name
2. Title of project
3. Purpose of project and its academic rationale.
4. Full description of methods and measurements
5. Participants: recruitment methods, number, age, exclusion/inclusion criteria
6. Consent and participant information arrangements, debriefing. **Please attach intended information and consent forms.**
7. A clear but concise statement of the ethical considerations raised by the project and how you intend to deal with them.
8. Estimated start date and duration of project.

This form (and any attachments) should be submitted to the Faculty of Business Ethics Committee where it will be considered. **If any of the above information is missing, your application will be returned to you.**

I (student and/or supervisor) am familiar with the ethical practices in research.

I am familiar with the Cape Peninsula University of Technology Guide to Post Graduate Studies and Guidelines for Research Proposals.

Signed 
 Print Name ZEPHORAHE THEOPHILUS SHASHA
 Student Number 203013239
 Date 15/03/12
 (Undergraduate/Postgraduate researcher(s)/student)

Signed 
 Print Name...Prof M. Weldeman
 Date...12 March 2012
 (Lead Researcher or Supervisor)

Approved by H.D.C. on 17 May 2012
Pear Bracket

APPENDIX I: Statistical Analysis Certificate



To whom it may concern:

Ziphozakhe Theophilus Shasha (Student Number 203013239) – MTech dissertation

The statistical analysis of the data in this research project required by the student was done by me, using SPSS 21.

My function was not to be involved in the interpretation thereof – that should be the student's own work.

C Uys.

Corrie Uys, M.Sc (Statistics)