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Assessing the quality of airline websites and its impact on user satisfaction and continuance intention

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By

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NZRMOH001

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Preface

This report is not confidential.

The author would like to thank the following people for their valuable assistance in completing this study:

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- The participants - without whose assistance, this study would not have been possible.

I certify that except where noted, this thesis is my own work and all references have been accurately reported.

Mohammad Nabeel Nazeer

Abstract

The growth of the Internet since the mid-1990s has created a variety of new business opportunities for many industries. The airline industry, one of the world's largest industries, responded to this growth by developing websites both to inform customers about their service offerings and to allow them to conduct e-commerce transactions. With the increasing number of airline companies using the Internet medium as a means of generating revenue, competition is always intense in the airline industry. In order to gain an advantage over their competitors, there is a need for airline companies to offer high quality websites that satisfy online users and entice them to continue using these websites in the future.

Numerous studies have investigated the concept of website quality and used various research instruments to assess user-perceived website quality. However, very few of these studies have looked at the airline industry in particular. Furthermore, most of the research instruments used in these studies do not provide a comprehensive set of website quality attributes to assess an airline website.

This research aims to investigate the quality of airline websites and its impact on user satisfaction and continuance intention. The literature surrounding these key concepts is reviewed and evaluated, and gaps therein are identified. A conceptual research model that incorporates a very comprehensive set of website quality attributes is then formulated. The model is based on an existing theoretical framework from literature, but is complemented with two additional variables, namely User Satisfaction and Continuance Intention.

The study followed a quantitative research approach. A paper-based questionnaire, based on a strongly validated research instrument from literature, namely the WebQual, was administered to a large sample of students at a research university. Different statistical analyses were conducted on the data collected to empirically test the comprehensive conceptual model and validate it within the context of the airline industry.

Results of the study indicated that the ease of use, usefulness, response time and entertainment components of an airline website have a significant direct influence on user satisfaction. It was further established that only the entertainment components of an airline website significantly influence an online user's intention to continue using the airline website. To gain a better understanding of trends that emerged within the data collected, a cross-region comparison of website quality was conducted. Results showed that there were significant differences between airline websites from four regions of the world in terms of trust. This is attributed to the ongoing concerns that online users have in terms of conducting monetary transactions on the Internet. A further comparison of website quality between the five most rated airline websites in the study revealed that there were significant differences between them in terms of their relative advantage, visual appeal, response time and intuitiveness.

The significance of these results to both the academic arena and practitioners within the airline industry are discussed and avenues for further research suggested.

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Chapter 1: Introduction

1.1 Background

Over the past few years, the explosive growth of the Internet, together with the expansion of public access to this medium, has strengthened the practice of conducting business online and has been the centre of attention for investors and executives in most industries (Liao, To, & Shih, 2006). The airline industry in particular has fostered a dependency on the Internet for most of its marketing and operational activities (Buhalis, 2004). Many airline companies have developed their own websites to facilitate e-commerce transactions (Chu, 2001; SITA, 2003). Airline websites are both informative and functional, in the sense that they allow Internet users to book their flights online, make hotel and car reservations, register package tours, search for flight information and carry out other key functions (Chu, 2001). Research conducted in 2005 showed that online travel sales reached $64.9 billion in the US, $35.5 billion in Europe, and $15.9 billion in the Asia-Pacific region, with annual growth rates of 24.1%, 49%, and 31.4%, respectively (Yu, 2008). According to Goldstuck (2007), online travel sales in South Africa accounted for 2.3 billion rands in e-commerce in 2006, which was almost four times the size of conventional online retail (688 million rands). It was expected that this figure would rise above 3 billion rands in 2007 (Goldstuck, 2007).

With more and more airline companies joining the Internet bandwagon and using this medium as a powerful tool to generate revenues, competition is always at its highest level in the airline industry (Buhalis, 2004). As a result, improving customer satisfaction and retention can be very challenging (Bhattacherjee, 2001). Internet users are being lured by more and better product and service offerings. Ever changing customer demands and global competition mean that the airline industry has to seek continuous improvements in their products and services (Chu, 2001). Since websites are a critical component of the rapidly growing phenomenon of e-commerce in the travel industry (Loiacono, Watson, & Goodhue, 2007; SITA, 2003), there is a need for airline companies to strive for competitive advantage by designing their websites to meet the needs, wants and preferences of their current and prospective customers (Yu, 2008). It is therefore important for them to continuously review the quality of their websites as perceived by their customers and in the context of the industry (Barnes & Vidgen, 2005; Carlson, Voola, & Sinnapan, 2003).

In this light, website quality can be a major factor in helping airline companies to attain website effectiveness (Shchiglik & Barnes, 2004). Research has shown that it is more likely for customers to visit and purchase at websites that exhibit highly desirable qualities (Law & Leung, 2000; Shchiglik & Barnes, 2004). It has also been found that customers are better judges of quality (Drucker, 1979). Because the airline industry is increasingly becoming reliant on the Internet for e-commerce, there is a need for airline companies to obtain customer perceptions of website quality in order to increase their likelihood of generating website visitors and sales. Furthermore, customer satisfaction and continuance intention are important in the airline industry since they both can have a direct impact on revenue and market share. This research thus aims to investigate the impact of airline website quality on user satisfaction and continuance intention.

1.2 Purpose of the Research

The primary purpose of this research is to evaluate the impact of airline website quality on user satisfaction and the intentions of the user to continue using the website (continuance intention). It also aims to use a well-documented framework from literature, namely WebQual (Loiacono et al., 2007), and adapt it to the context of the airline industry. The proposed conceptual model for the study can be found in section 3.

1.3 Objectives of the Research

The objectives of this research are as follows:

- To identify, by means of a literature review, the relevant website quality characteristics within the context of the airline industry.
- To identify, by means of a literature review, the concepts of user satisfaction and continuance intention.
- To develop a conceptual model and assess the relationships between website quality, user satisfaction and continuance intention.
- To empirically validate the conceptual model within the context of the airline industry.
- To identify possible areas for future research.

1.4 Scope of the Research

Most of the studies that have been conducted in the area of website quality have looked at the e-commerce aspect of websites, more specifically at the ability of the user to conduct transactions online. The focus of this research is to obtain the perspectives of people who visit airline websites and conduct certain specific transactions (such as searching for a flight and conducting a flight booking) up to the point where they are required to make a payment.

Furthermore, the research does not focus on a specific airline website. It aims to assess the experience that the participants of the study have with any airline website, from a given list. The list consists of the websites of airline companies from four different regions around the world namely Africa, Asia & Australia, Europe & Middle East and North America. In addition, even if the study aims to gather data from the South African population, the focus is not specifically on the South African airline industry. This is because the participants in the sample may have had a previous experience with an airline website from a different region of the world. It is thus wise to cater for a bigger variety of airline websites than just the South African ones.

1.5 Importance of the Research

From an academic perspective, this study attempts to use and refine the theoretical framework proposed by Loiacono et al. (2007), thereby testing its validity and applicability in the airline industry.

This study is motivated by the belief that knowledge about the perceptions of users of airline websites about website quality can be of great value to airline companies in designing and targeting their marketing strategies more effectively. In addition, high quality websites can provide airline companies with a competitive advantage and increase their customer base through generating revisits (Supphellen & Nysveen, 2001). Consequently, this can have a direct impact on their revenues and market share.

The results of this study can have immediate implications for airline companies operating on the web and for research in the field of Information Systems. Many studies have been conducted to evaluate website quality from user perspectives but very few of these have looked at the airline industry in particular. This research can contribute to the body of

Information Systems (IS) and Information Technology (IT) literature on the airline industry by providing meaningful insights into the importance of website quality in this industry and ultimately lead to greater success in harnessing the potential of websites in the airline industry.

This study can also provide airline managers and web developers with an understanding of which constructs of website quality impact on user satisfaction and continuance intention, thereby enabling them to meet the demands of their consumer market more effectively. In addition, results of the study can offer unique insights to airline managers on how to manage user satisfaction and retention. Having access to reliable and scientifically tested metrics in this study, practitioners in the airline industry can examine the structure and dimensionality of web user satisfaction and continuance intention. Overall, by looking at website quality and its impact on user satisfaction and continuance intention, this research can provide some useful insights about how to sustain and enhance the potential of the airline industry. Finally, the results of this study can facilitate further research in analysing website quality, user satisfaction and continuance intention in industries other than the airline industry.

1.6 Overview of the Dissertation

The dissertation has been broken down into various chapters. The abstract summarised the purpose and scope of the research, the methodology used and the key findings and conclusions of the research. ***Chapter 1***, the introduction, provided a background to the research, the purpose of conducting the research and the research objectives. It also emphasised the value of the research.

Chapter 2 provides a condensed and focused summary of the literature, which forms the basis of this research. It begins with an overview of the airline industry, followed by a review of the impact that the Internet has had on the airline industry. Relevant statistical figures of e-commerce in the travel industry are then laid out to gain a better understanding of the impact of the Internet in this dynamic industry. This is ensued by an overview of consumer perspectives of airline websites. Website quality is subsequently discussed, followed by an outline of the different instruments used to evaluate website quality. The review then explores user satisfaction and continuance intention, two other important constructs which are being investigated in the study. A few relevant studies which provide empirical evidence of a link

between the two constructs are examined. This is followed by a summary of the key findings of the literature review and a discussion of the gaps identified through the review.

Chapter 3 presents the conceptual research model which is used for the study. The research model is thoroughly explained and the research questions and refined research objectives are outlined. This section also provides a comprehensive overview of how the proposed hypotheses, which form the basis for the study, are developed.

Chapter 4 outlines the methodology used in conducting this study. This includes sections such as the underlying research philosophy, the sampling plan, data gathering method, data analysis technique, research timeframe and ethical issues. The design of the research instrument is also explained in detail in this section.

Chapter 5 contains the descriptive statistical analyses conducted on the data collected from the sample. A description of the respondents' profiles is included, followed by a description of the questionnaire items, constructs and second-order categories.

Chapter 6 presents the tests that were conducted to analyse the validity and reliability of the research instrument (questionnaire).

Chapter 7 outlines the results of the hypothesis testing. These results are then analysed and evaluated. Focus is also given to the implications of the findings. The chapter ends with a summary of the research findings followed by a refinement of the conceptual model to reflect the findings of the study. Additional findings from the study are also discussed.

Chapter 8 concludes the dissertation. In this section, the concepts discussed in the paper are reviewed. Focus is also given to the implications of the findings for academics as well as the implications for practitioners. Thereafter, recommendations for possible future research are provided and a few limitations of the study are discussed.

Relevant appendices detailing the research results and the data analysis process are found at the end of the dissertation.

Chapter 2: Literature Review

Findings from several studies that analyse the airline industry, website quality, user satisfaction, and continuance intention have been reviewed and summarised. The first part of this section will give an insight into the airline industry and the use of the Internet in this industry. This is followed by an overview of studies that looked at website quality and the tools that are available for measuring website quality. The last sections look at user satisfaction and continuance intention.

2.1 The airline industry

2.1.1 Overview of the airline industry

Air transport is one of the world's largest industries and has a history of strong underlying growth in traffic volumes (IATA WATS, 2005). The air travel market grew up originally to meet the demand for business travel as companies became increasingly global in their business activities, as reflected in the rapid growth in world trade and investment (IATA WATS, 2005).

The major reason behind these developments is that the airline industry became deregulated throughout the 1970s. Prior to that time, the airline industry around the world was heavily regulated and protected by government (Cheng, Chen, & Chang, 2008). Deregulation encouraged new carriers to enter the market and led to the emergence of the low-cost/no-frills sector which started to compete with the incumbent full-service carriers (Ferreira, 2001; Hunter, 2006). Deregulation thus led to an increase in competition (today, 85% of passengers have a choice of 2 or more carriers for their flights) and boosted air travel (240 million passengers in 1977 and 640 million in 1999) (Ferreira, 2001). The leisure market subsequently evolved with rising living standards and extra leisure time encouraging holidaymakers to travel to destinations increasingly further afield (IATA WATS, 2005). In addition, international routes were gradually deregulated through negotiated bilateral open-skies agreements, which generally allowed airline companies from two countries to fly between those countries without restrictions (Gowrisankaran, 2002).

After showing strong growth during the late 1990s, the global airline industry was heavily impacted between 2000 and 2003 due to the global economic downturn in 2001 and the subsequent slow recovery (IATA WATS, 2005). The terrorist attacks in the United States on

September 11th, 2001, the Iraq war and the SARS epidemic in 2003 further worsened the situation in the air travel industry (Hatty & Hollmeier, 2003; IATA WATS, 2005). As a result, many airlines needed restructuring and began to look into ways of cutting costs to be able to survive in the adverse conditions (IATA WATS, 2005). The Internet provided a strong medium for the airline industry to achieve these objectives.

2.1.2 The Internet and the airline industry

The proliferation of the Internet since the mid-1990s has created a variety of new business opportunities for many industries (Yoon, Yoon, & Yang, 2006). The Internet became an important tool to conduct business, particularly as a communication and distribution channel for services and products between customers and suppliers (Yoon et al., 2006). The presence of a company on the Internet automatically opens it up for potential customers from anywhere around the world (Lituchy & Ann Barra, 2008). The number of Internet users worldwide surpassed 530 million in 2001 and was expected to grow strongly in the following years (Jiang, 2003). Most of the growth at that time was coming from Asia, Latin America and parts of Europe (Jiang, 2003). A study conducted in March 2008 by Internet World Stats estimated the number of Internet users worldwide to be approximately 1.36 billion (Internet World Stats, 2008).

As with many other industries, the Internet has had an impact on the air travel industries (Yoon et al., 2006). It has provided a direct connection between airlines and customers without the need to use travel agents, thereby leading to cost savings in the distribution of air tickets (Law & Leung, 2000; Yoon et al., 2006). Previously, airlines have used different channels for selling their tickets, including direct channels such as sales offices and call centres, and indirect channels such as travel agents and tour operators (Yoon et al., 2006). The emergence of the Internet has changed the paradigm of air ticket distribution and offered new alternatives to the airline industry (Buhalis, 2004; Yoon et al., 2006; Yu, 2008).

By early 1998, most airlines already hosted websites to inform consumers and to support itinerary building, fare construction and reservations (Buhalis, 2004). Websites also allowed airlines to launch another communication and purchasing channel in order to reduce the costs of the conventional intermediaries (Buhalis, 2004). Since 1998, airlines have increasingly adopted the Internet as a platform to generate new streams of profit (Douglas & Mills, n.d.). They have increased their customer base though online marketing and sale of their core

services (e.g. flights, check-in and transportation). Maintaining customer loyalty has been made easier through the integration of Customer Relationship Management systems (e-CRM) into their websites and the distribution of newsletters and offers by email (Douglas & Mills, n.d.; Li, Browne, & Chau, 2006; Otim & Grover, 2006).

Recently, airlines have even managed to link their websites to other aspects of the consumer travel experience by offering complementary services such as car rental, hotel bookings and merchandised items through their websites, thereby creating considerable sources of revenues and developing new forms of profit centres (Harison & Boonstra, 2008; Jarach, 2002). Furthermore, the fixed and operating costs of airlines have decreased substantially as e-ticketing systems electronically send the tickets to the customers thereby saving the costs of issuing and distribution (Harison & Boonstra, 2008). E-ticketing has thus proved to be a win-win solution for the airline industry (Jiang, 2003). Online bookings have made accounting procedures much simpler by automating the transactions for online reservations (Harison & Boonstra, 2008). They have also led to significant price reductions in the travel industry, allowing airline companies to offer lower air fares on their websites (Alamdari & Mason, 2006; Harison & Boonstra, 2008). This resulted in a larger number of reservations being made online and greater revenues generated for airlines.

After the deregulation of the airline industry in the 1970s, the increasing use of low-cost airlines (e.g. Ryanair and EasyJet in Europe) has also influenced the emergence of airline websites or consortia websites, (i.e., several carriers aggregating their offers online) (Harison & Boonstra, 2008). These carriers are able to offer low-priced tickets because online bookings allow them to enjoy substantial cost savings. These savings come from their offering of lower quality of service on flights, while enjoying additional revenues from the complementary services offered on their websites, such as transportation and hotel reservations (Harison & Boonstra, 2008; Jarach, 2002). Through simple distribution strategies, the low-cost carriers take full advantage of the Internet for communicating with their customers (Buhalis, 2004). Several of these carriers even paint their aircraft with their Internet address and organise special promotions with newspapers to drive traffic to their websites (Buhalis, 2004). They also provide incentives for their clients to book online. For instance, in 2002, EasyJet and Ryanair in Europe took the vast majority of their bookings through the Internet and passed on their cost savings to consumers by giving them a £5 discount on a return fare (Buhalis, 2004).

More recently, the airline industry had to meet the deadline imposed by the International Air Transportation Association (IATA) for 100% e-ticketing by the end of May 2008 (IATA, 2008). This affects both airline companies and their customers in the sense that the airline companies must offer better services through electronic infrastructures, especially through their websites to decrease costs and increase revenue while customers have to accept the new service (Dehbashi, 2006).

2.1.3 Internet Statistics in the airline industry

Research has shown that travel remains the largest sector of Internet commerce and that travel-related products have rapidly become the largest category of goods sold over the Internet (Chen, 2006; McGee, 2004; SITA, 2003). A study conducted by Jupiter Research showed that by 2009, online travel sales will account for approximately 33% of the total travel market representing a 70% increase over 2004 (Chen, 2006).

Forrester Research (2007) forecasted that in 2007, nearly 40 million US households would book travel online, spending $86 billion on airline tickets and travel-related products. Similarly, airlines in the Asia-Pacific region are optimistic regarding the Internet's contribution to their businesses (Yu, 2008). They expect the Internet to produce 42% of their revenues in 2010, up from 16% in 2005 (Forrester Research, 2005).

2.1.4 Airline websites: A consumer perspective

Internet travel has become the most common distribution channel used by prospective travellers to research options, seek out the best prices and book reservations for travel services (Laudon & Traver, 2002). In fact, customers can use an airline website to perform the following tasks:

- Find out travel and airline information (e.g. on-board services, destinations offered, flight frequencies and timetables)
- Book tickets online and use the e-ticketing services
- Check-in through the Internet
- Check flight status and cargo delivery status
- Find answers through the online frequently asked questions (FAQ)
- Use the chat room facilities and the site personalisation functions

(Jarach, 2002; Jiang, 2003)

All these tasks can be performed through the Internet 24 hours, 7 days a week, at anytime and anywhere (Jiang, 2003). In addition, the Web provides airlines with a cost-effective way of getting valuable information about their customers, thereby allowing them to target individual customers with specific and relevant marketing information and improve advertising and sales efforts (Cheng et al., 2008; Clemons, Hann, & Hitt, 1999; Jiang, 2003). Activities designed to maintain and enhance customer relationships are continuously being integrated in airline operations (Cheng et al., 2008).

The new customer environment for travel services has been described by Combes and Patel (1997) as an enhanced level of convenience and ubiquity to the shopping experience. Consumers have been empowered with the ability to price and compare features with ease as well as inquire about various aspects of a travel destination without having to speak to a travel agent (Combes & Patel, 1997). According to SITA (2003), a good website will not only transform the customer sales process, but has the opportunity to positively transform the whole customer relationship.

2.2. Website Quality

An organisation with a poor website or ineffective services can project a poor image and weaken its position within its industry (Ahn, Ryu, & Han, 2007). In addition, empirical evidence suggests that a website that provides outdated and inaccurate information leads to visitor dissatisfaction and abandonment of the website (Barnes & Vidgen, 2002; Chakraborty, Srivastava, & Warren, 2005; Palmer, 2002; Wang, 1998). According to Yoo and Donthu (2001), there is increasing pressure to better understand the issue of online quality since with rising consumer experience, their expectations of online businesses are increasing. Therefore, identifying the key website quality attributes is a first step for organisations to improve the success of their online presence (Carlson et al., 2003; Zeithaml, 2002). Research on website quality is focused on identifying the significant factors that influence customers' attitude and behaviour in terms of their intentions to revisit and/or purchase from particular websites (Liu & Goodhue, 2008). Website quality is important and has been widely studied in e-commerce literature (Cao, Zhang, & Seydel, 2005). Different researchers have identified different characteristics of website quality over the past few years.

Quality factors such as accuracy, completeness, relevancy, security, reliability, customisation, ease of use, speed, functionality and organisation were identified by Liu and Arnett (2000) as website success factors in the context of e-commerce. These factors were further grouped into four major dimensions, namely, quality of information and service, system use, playfulness and system design quality (Liu & Arnett, 2000). Website quality was divided by Wan (2000) into four categories, namely, information, friendliness, responsiveness and reliability. Factors such as download speed, web interface, search functionality, measurement of web success, security and Internet standards were highlighted by Rose, Khoo, and Straub (1999) as being very important in evaluating websites. The effectiveness of Internet websites from the user's perspective was examined by Bell and Tang (1998). They claimed that factors, such as access to the web, content, graphics, structure, user friendliness, usefulness, navigation and unique features, are key determinants of website effectiveness in an e-commerce context.

A study conducted by Cao et al. (2005) revealed that from a customer's perspective, website quality can be addressed using dimensions such as functionality, content, service and attractiveness. In another study conducted by Chakraborty et al. (2005), informativeness, usability and quality of information were found to be antecedents of website effectiveness. Clarity of purpose, design, accessibility, speed, content, customer service and customer relationships were identified as key website quality factors (KQFs) in a study conducted by Cox and Dale (2002). Information quality, privacy/security, ease of use, graphic style, reliability, and responsiveness have also been identified as dimensions of website quality (de Oliveira, 2007).

According to Ethier, Hadaya, Talbot, and Cadieux (2006), studies of website quality can be classified into four complementary categories. The first group focused on website functionalities (e.g. design, hypertext links and search engines) and/or content. The second category of studies was influenced by the Technology Acceptance Model (TAM) of Davis (1989) and comprised of authors who considered information quality, systems quality, service quality and/or attractiveness to be the main components of website quality (Ethier et al., 2006). The third category included studies that highlighted service quality as a primary aspect of overall website quality. The final category included authors who believed that the principal criterion for website quality was defined by customers' perceptions of quality (Ethier et al., 2006).

2.3. Evaluation of Website Quality

As the development of Internet technology continues to grow at an exponential rate, the measurement of website quality in the context of business-to-consumer (B2C) electronic commerce has forced academics and practitioners to develop rigorous and reliable methods (Carlson et al., 2003; Zeithaml, Parasuraman, & Malhotra, 2002). As seen in the previous section, numerous studies have been conducted to evaluate website quality in IS research (Barnes & Vidgen, 2001a, 2001b, 2001c; Kim & Stoel, 2004a; Loiacono et al., 2007; McGoldrick, Vasquez, Lim, & Keeling, 1999). Most of the research in this area relies on website users' subjective judgements about websites (Aladwani & Palvia, 2002; Barnes & Vidgen, 2001a; Cao et al., 2005; Kim & Stoel, 2004a). A review of IS, marketing and travel literature shows that various instruments have been used to measure diverse aspects of website quality (content and functionalities as well as users' perceptions). Most of the studies conducted in the area of online quality mostly point to two specific instruments. These are SERVQUAL and WebQual. SERVQUAL is an instrument used to measure customer perceptions of *service quality* (Parasuraman, Berry, & Zeithaml, 1988) as opposed to the WebQual instrument which assesses customer perceptions of *website quality* (Barnes & Vidgen, 2001a, 2001c; Carlson et al., 2003; Kim & Stoel; 2004a; Loiacono et al., 2007).

2.3.1 WebQual

As mentioned previously, WebQual is a method for assessing the quality of websites from the user's perspective (Barnes & Vidgen, 2001a, 2001c; Carlson et al., 2003; Kim & Stoel; 2004a; Loiacono et al., 2007). It has emerged in both marketing and IS literature and has been described by various researchers as being a highly reliable and valid instrument to assess the perceived quality of websites (Carlson et al., 2003; Loiacono, Chen, & Goodhue, 2002). WebQual has been developed from the constructs of the Theory of Reasoned Action (TRA) (Azjen & Fishbein, 1980; Fishbein & Azjen, 1975) and the TAM (Davis, 1989), which is one of the most popular models used in IS research (Carlson et al., 2003; Venkatesh, 2000). According to Carlson et al. (2003), these two theories provide a strong conceptual basis for a relationship between the user beliefs about a website and the behavioural intentions of reusing the website. The first study conducted by Loiacono (2000) led to the development of WebQual which included 12 dimensions of website quality namely informational fit-to-task, tailored communication, ease of understanding, intuitive operations, response time, visual appeal, innovativeness, emotional appeal, trust, online completeness

and relative advantage, assessed by a 36-item scale. In her later study, Loiacono et al. (2007) proposed a hierarchical model of website quality containing the 12 first-order factors combined into five second-order factors (Kim & Stoel, 2004b). This is illustrated in Figure 1.

Figure 1: Refined WebQual model (Loiacono et al., 2007)

Table 1, which follows, provides a detailed description of the constructs in the hierarchical model.

Second-Order Category	Construct	Description	Major Sources
Usefulness	Information Fit-to-Task	The extent to which users believe that the website meets their needs	Davis (1989) Goodhue & Thompson (1995) Harry (1998)
	Tailored communications	Communications can be tailored to meet the user's needs	Ghose & Dou (1998) Emerick (1995) Xie, Wang, & Goh (1998)
	Online Completeness	Allowing all or most necessary transactions to be completed online	Seybold (1998)
	Relative Advantage	Equivalent or better than other means of interacting with the company	Moore & Benbasat (1991) Rogers (2003) Seybold (1998)
Trust	Trust	Secure communication and observance of information privacy	Gruman (1999) Doney & Cannon (1997) Hoffman, Novak, & Peralta (1999)
Response Time	Response Time	Time to get a response after a request or an interaction with the website	Machlis (1999) Seybold (1998)
Ease of Use	Ease of Understanding	Easy to read and understand	Davis (1989) Kotler (1973)
	Intuitive Operation	Easy to operate and navigate	Davis (1989) Morkes & Nielsen (1997)
Entertainment	Visual Appeal	The aesthetics of the website	Geissler, Zinkhan, & Watson (1999) Elliot & Speck (1998) Ha & Litman (1997)
	Innovativeness	The creativity and uniqueness of the website	Eighmey (1997) Aaker & Stayman (1990) Ducoffe (1995)
	Consistent Image	The website image is compatible with the image projected by the firm through other media	Watson, Zinkhan, & Pitt (2000) James & Alman (1996) Machlis (1999)
	Emotional Appeal	The emotional affect of using the website and intensity of involvement	Richins (1997)

Table 1: WebQual Constructs (Liu & Goodhue, 2008; Loiacono et al., 2002)

Several researchers have used WebQual and adapted the instrument to the context of their studies. WebQual was used in conjunction with SERVQUAL (Parasuraman et al., 1988) to assess website quality in an online service provision environment. In this study, four factors influencing users' perceptions of website quality were identified. These factors were user-friendly design, marketing communication, information management, and maintenance. Kim

and Stoel (2004a) adapted Loiacono's WebQual instrument to their study of how website quality dimensions impacted on customer satisfaction for clothing retailers. Exploratory and confirmatory factor analyses found that website quality factors such as web appearance, entertainment, informational fit-to-task, transactional capability, response time, and trust had a significant impact on satisfaction (Kim & Stoel, 2004a). In another study which aimed to conduct a cross-cultural comparison of website quality, Loiacono's WebQual was used to compare 278 US and Korean Internet users in terms of their perceptions of quality of retail websites (Kim & Lee, 2006). Loiacono's WebQual was also used in a study in Australia where three Australian B2C websites were compared to determine whether there were any differences between them across the website quality constructs being assessed (Carlson et al., 2003).

2.3.2 WebQual/eQual by Barnes and Vidgen (2000)

From a study conducted by Barnes and Vidgen (2000), an instrument for assessing website quality, also termed as WebQual, was developed (*Note*. Instrument name similar to that developed by Loiacono (2000)). It measured four dimensions of website quality namely ease of use, experience, information, communication, and integration (Barnes & Vidgen, 2000). Subsequent studies conducted by Barnes and Vidgen in 2001, 2002 and 2003 refined the WebQual instrument. The latest version of the instrument, WebQual 4.0, adapted some measures of the SERVQUAL and was developed to assess website quality using research from the following three core areas (Barnes & Vidgen, 2003):

- Information quality from IS research (Bailey & Pearson, 1983; Strong, Lee, & Wang, 1997)
- Interaction and service quality from marketing, e-commerce and IS service quality research (Jarvenpaa, Tractinsky, & Vitale, 2000; Pitt, Watson, & Kavan, 1995; Zeithaml, Parasuraman, & Berry, 1990)
- Usability from human-computer interaction (e.g. Davis, 1989; Nielsen, 2000)

Applications of the WebQual instrument by Barnes and Vidgen (2000) included business school websites from the United Kingdom (Barnes & Vidgen, 2000), Internet bookshops (Barnes & Vidgen, 2001a), small companies (Barnes & Vidgen, 2001b) and online auction websites (Barnes & Vidgen, 2001c). The WebQual instrument was later renamed as eQual (Barnes & Vidgen, 2003; Barnes & Vidgen, 2005).

2.3.3 Perceived Airline Website Quality Instrument

A study conducted by Shchiglik and Barnes (2004) led to the development of the Perceived Airline Website Quality Instrument (PAWQI), an instrument to measure the quality of airline websites from a customer's perspective. This 25-item instrument was adapted from previously developed and validated instruments but included some measures derived from an inductive approach (Shchiglik & Barnes, 2004). Four dimensions of website quality were emphasised in the PAWQI namely, site quality, information quality, interaction quality, and airline-specific quality. Two of these dimensions, information quality and interaction quality, were adapted from the eQual instrument developed by Professor Stuart Barnes, one of the PAWQI authors. The PAWQI instrument consisted of 7 items to measure site quality, 7 items for information quality, 8 items for interaction quality and 3 items for airline-specific quality. The sample used in the study was instructed to evaluate the websites of three airlines operating in the New Zealand air travel market. Even though the PAWQI had good validity and reliability, no other studies were found to have used the instrument.

2.3.4 SERVQUAL

After reviewing the literature on IT and service quality, Sigala and Sakellaridis (2004) concluded that research on web service quality has been mainly based on the SERVQUAL model. SERVQUAL, a 22-item instrument developed by marketing academics (Parasuraman et al., 1988) was modified and found to be appropriate for measuring IS service quality in prior studies (Kettinger & Lee, 1997; Pitt et al., 1995). SERVQUAL has also been applied to websites in an exploratory study conducted by van Iwaarden, van der Wiele, Ball, and Millen (2003) and in their subsequent study in 2004. The results of the study conducted by van Iwaarden, van der Wiele, Ball, and Millen (2004) showed that the quality dimensions of the SERVQUAL from the service sector were also relevant and applicable to websites. These five quality dimensions can be found in Table 2.

Dimension	Description
Tangibles	The appearance of the website, navigation, search options, and structure
Reliability	The ability to assess the trustworthiness of the offered service and the organisation performing the service
Responsiveness	The willingness to help customers and to provide prompt service
Assurance	The ability of the website to convey trust and confidence with respect to security and privacy
Empathy	The provision of caring and individualised attention to customers, including user recognition and customisation

Table 2: SERVQUAL Dimensions (Bressolles & Nantel, 2004; van Iwaarden et al., 2004)

2.3.5 SiteQual

Yoo and Donthu (2001) developed a rigorous instrument, termed as SITEQUAL, to measure the perceived quality of an Internet shopping site. SITEQUAL consists of the following four dimensions (Donthu, 2008):

- Aesthetic design: site creativity, multimedia and colour graphics
- Ease of use: Search capabilities
- Processing Speed: of order and responsiveness to consumer's requests
- Security: of personal and financial information

SITEQUAL was used in conjunction with SERVQUAL in a study investigating the elements of customer relationship management (CRM) in an e-business context (Horn, Feinberg, & Salvendy, 2005). In another study conducted by Bressolles and Nantel (2004), SITEQUAL was compared to two other instruments namely WebQual 4.0 (which was later renamed eQual) and eTailQ. SITEQUAL was found to be best suited for the data used in the study and to provide the best predictive power. A limitation of the instrument, however, was that the scale, which included 9 items, failed to provide a reliable and global image of the complexity of the online purchasing process (Bressolles & Nantel, 2004).

2.3.6 eTailQ

The eTailQ is an online retailing quality evaluation scale that can be used to predict customer judgement concerning website quality, customer satisfaction, loyalty intentions and attitude towards the retailing website (Mekovec, Bubas, & Vrcek, 2007; Wolfinbarger & Gilly, 2003). Based on online and offline focus groups, a sorting task, and an online survey of a customer panel, Wolfinbarger and Gilly (2003) established the dimensions of the retail experience, and developed a reliable and valid scale for the measurement of retail quality. The eTailQ instrument has 14 items distributed in four factors/subscales: website design, fulfillment/reliability, privacy/security, and customer service (Bressolles & Nantel, 2004; Mekovec et al., 2007). Table 3 provides a comprehensive explanation of these factors.

Factor	Description
Fulfillment/Reliability	The accurate display and description of a product so that what customers receive is what they ordered and the delivery of the right product within the time frame promised.
Website design	Consists of all the elements of the consumer's experience with the website (excluding customer service), including navigation, information search, order processing, appropriate personalisation and product selection.
Customer service	The responsive, helpful and willing service that responds to customer inquiries quickly.
Security/privacy	The security of credit card payments and privacy of shared information.

Table 3: eTailQ Factors (Wolfinbarger & Gilly, 2003)

2.3.7 Other Instruments

Other instruments have also been developed to measure online quality. The Perceived Internet Retailing Quality (PIRQ) model explores the determinants of quality in Internet retailing and is based on the difference between expected service and perceived service quality (Mekovec et al., 2007). The PIRQ model was used to develop a 23-item instrument called PIRQUAL that evaluates three groups of attributes: self-service properties, ownership properties and relationship properties of a commercial website (Mekovec et al., 2007). Another instrument with five dimensions of quality namely system quality, information quality, service quality, and attractiveness, was developed by Cao et al. (2005). In an attempt to understand user-perceived web quality, Aladwani and Palvia (2002) developed an instrument which consists of four dimensions of quality: specific content, content quality, appearance and technical adequacy. In a study conducted by Yang, Cai, Zhou, and Zhou (2005), another instrument was developed and validated to measure online service quality of information presenting Web portals. The five dimensions of service quality which formed the basis for the instrument are usability, usefulness of content, adequacy of information, accessibility and interaction (Yang et al., 2005). A recent study was conducted by Guertin and Nantel (2007) to understand what customers perceived to be the value of products or services offered through the Internet as well as the means of finding, ordering and receiving them. Netqual, a scale of Internet site perceived value, attitude and behavioural intent was developed in this study. Literature therefore shows that there are many instruments that have been developed and used to measure online quality. Some of these instruments measure website quality while others look at e-service quality.

2.3.8 Comparative Analysis of Instruments

Table 4 shows a comparative analysis of the instruments described above:

Instrument Name	Dimensions/concepts measured	Description	Useful for airline websites
WebQual (Loiacono, 2000)	Information Fit-to-Task Tailored Communications Online Completeness Relative Advantage Trust Response Time Ease of Understanding Intuitive Operation Visual Appeal Innovativeness Consistent Image Emotional Appeal	36-item instrument measuring website quality. Has strong validity and strong reliability.	Developed using 40 websites including CDs, books, hotel reservations and airline reservations. Very useful.
SERVQUAL	Tangibles Reliability Responsiveness Assurance Empathy	22-item instrument originally developed to measure service quality but was adapted to measure online website quality. Has strong validity and strong reliability.	Has been used in service industries (including the airline industry) to measure service quality.
WebQual/eQual (Barnes & Vidgen, 2000)	Information quality Interaction and service quality Usability	22-item instrument (WebQual 4.0) used to measure website quality. Adapted from SERVQUAL since service quality is also measured.	Used to assess business school websites, Internet bookshops, small companies and online auction websites. Has not been used in airline industry.
PAWQI	Site quality Interaction quality Information quality Airline-specific quality	25-item instrument measuring airline website quality. Validity and reliability not tested.	Developed specifically to assess airline website quality but validity and reliability have not been tested. Items for Airline-specific quality measures economic factors rather than website quality.

SITEQUAL	Aesthetic Ease of Use Processing speed Security	9-item instrument (one limitation) developed to measure website quality. Has strong reliability and validity. However, it failed to provide a global and reliable image of online purchasing process.	Has not been used in the airline industry.
eTailQ	Website design Fulfillment/reliability Privacy/security Customer Service	14-item instrument used to measure quality of online retail websites. Reliable and valid scale.	Has not been used to assess airline website quality.
PIRQUAL	Self-service properties Ownership properties Relationship properties	23-item instrument used to measure quality of online retailing websites. Reliable and valid.	Has not been used to assess airline website quality.

Table 4: Comparative Analysis of Instruments

2.4. User satisfaction

In a competitive e-commerce environment, such as the one in the airline industry, companies have to understand how to satisfy their customers to sustain their growth and market share (McKinney, Yoon, & Zahedi, 2002). Within the context of this research, it is therefore important to understand the website quality factors that impact on web customer satisfaction. A review of the literature on user satisfaction revealed that satisfaction has been defined in many ways by different researchers. Chea and Luo (2005) defined satisfaction as the judgement that a particular product or a service feature is providing a pleasurable level of consumption-related fulfillment. Satisfaction, according to Oliver (1981, p. 29), has been explained as "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with a consumer's prior feelings about the consumer experience".

Definitions of satisfaction have also been provided by researchers in the domain of online quality. Satisfaction was defined by Chiu, Sun, Sun, and Ju (2007) as an individual's feelings of pleasure or disappointment resulting from comparing the perceived performance of a web-based application in relation to his or her expectations. Muylle, Moenaert, and Despontin (2004) defined website user satisfaction as the attitude of a web user towards an organisation's website and conceptualised user satisfaction as a measure of utility in the user's decision-making process. According to Cyr, Bonnani, Bowes, and Ilsever (2005), website satisfaction relates to stickiness and can be understood as the sum of all the website

qualities that induce visitors of the website to remain at a particular website instead of moving to another site. Web satisfaction or e-satisfaction is defined by Anderson and Srinivasan (2003) as the contentment of the customer with respect to his or her prior purchasing experience with a given e-commerce firm.

The concept of satisfaction has important implications for online business since it helps to build consumer trust, increases favourable word of mouth, provides an impetus for users/customers to conduct repeat purchases, and predicts purchasing behaviour of users/customers (Bhattacherjee, 2001; Flavian, Guinaliu, & Gurrea, 2006; Kim, 2005; Nusair & Kandampully, 2008).

Information quality and system quality were identified as the antecedents of user satisfaction and use in Delone and McLean's (1992) highly cited model. Research has also shown that within the context of online shopping, user experience could be affected by information quality factors, such as a richer product description on the website, and system quality factors, such as extra links provided on the website. Almost similar results were found in a study conducted by Brown and Jayakody (2008) where user satisfaction was found to be directly influenced by service quality and perceived usefulness, whilst the latter was found to be directly influenced by trust and information quality. In other studies conducted by Ho and Wu (1999), and Szymanski and Hise (2000), consumer perceptions of website characteristics such as logistical support, security and home page design were found to have an impact on customer satisfaction with Internet shopping. Furthermore, a study of online pharmacy patrons by Yang, Peterson, and Huang (2001) revealed that website quality attributes of customer service, product cost and availability, and online information systems were all related to customer satisfaction. More recently, Kim (2005) proposed a model to explore the factors affecting online customer satisfaction. The model extended the number of antecedents of online satisfaction and included 10 factors, namely after sales service, purchase result and price attractiveness, customer service, product information, product attractiveness, payment method, site design, site information, and log-on convenience. In another more recent study, Hsu (2008) developed an online customer satisfaction index in which perceived quality of a website had an impact on customer satisfaction. Altogether, these studies point to the fact that website quality can have an impact on satisfaction.

2.5. Continuance Intention

From a practical perspective, due to the increasing competition among companies offering their products and services on the Internet, a major challenge for many companies is to generate revisits to their websites (Supphellen & Nysveen, 2001). Companies therefore spend a considerable amount of resources to develop superior websites that attract and retain customers (Supphellen & Nysveen, 2001). Harnessing the ability to both attract new consumers and retain existing consumers on websites has drawn considerable attention from the research community (Babakus, Beinstock, & Van Scotter, 2004; Boyer & Hult, 2005; Li et al., 2006). The terms "IS continuance intention", "IS continuance behaviour" and "IS continuance usage" have been used interchangeably by different researchers to conceptualise this issue. IS continuance behaviour or usage has been described as the behavioural patterns that reflect an individual's continued use of a particular information system (Hsu, Yen, Chiu, & Chang, 2006; Limayem, Hirt, & Cheung, 2007). According to Lin and Lu (2000), continuance intention is the extent to which the user would like to reuse or revisit the website in the future.

A review of the literature on continuance intention reveals that continued usage of information technologies is a very important research orientation in the IS field (Bhattacherjee, 2001; Chiu et al., 2007; Premkumar & Bhattacherjee, 2008). A study conducted by NVision (1999) showed that 80% of web users do not revisit websites and argued that such an issue should be of greater concern to website providers (Hsu et al., 2006). Chiu et al. (2007) explored users' intentions to continue using web-based learning in a voluntary setting and concluded that the success of web-based learning depended on many factors but largely on user satisfaction. Similarly, Liao, Chen, and Yen (2007) found that a customer's intention towards e-service continuance is primarily determined by customer satisfaction. In another study, factors such as affective commitment, calculative commitment, quality of alternatives and trust were found to be significantly associated with users' intention to continue to use a website (Li et al., 2006).

Perceived usefulness and subjective norm from the TAM were also found to affect continuance intention. In the study conducted by Loiacono (2000), 12 dimensions of website quality including tailored communications, and visual appeal (to be discussed in section 4.1) were found to impact on a consumer's intention to purchase or revisit a website (Loiacono et

al., 2002). In a more recent study by Brown and Jayakody (2008), system quality was found to have a direct impact on continuance intention while information quality indirectly influenced continuance intention through perceived usefulness.

Research showed that users' decisions to continue using Internet applications are similar to consumers' decision to continue repurchasing a product or a service. This is because both decisions follow an initial (acceptance or purchase) decision and are influenced by the initial use (of an information system or a product) experience (Bhattacherjee, 2001). Furthermore, Lee, Kim, and Moon (2000) showed that the lack of trust can be an important barrier in coming back to purchase from an Internet store. Similarly, Atcharityachanvanich, Okada, and Sonehara (2007) demonstrated that customers are reluctant to continue purchasing from a website if they do not trust that website. This set of empirical evidence confirms the fact that understanding continuance intention is a critical issue for e-commerce firms.

2.6. Link between Satisfaction and Continuance Intention

Much of the literature written on continuance intention points out that user satisfaction is a major predictor of continuance intention. Research has shown that increasing customers' satisfaction with website information through high-quality product or service offerings has a significant positive influence on customer's intention to continue making reservations online (Jeong, Oh, & Gregoire, 2001 as cited in Kim, Ma, & Kim, 2006). According to a study conducted by Cheung and Lee (2002), 80% of the highly satisfied online consumers would shop again within two months and 90% would recommend the Internet to others. It was also found that 87% of dissatisfied customers would permanently leave their e-commerce merchants. Similar results were obtained in a study conducted by Lin, Wu, and Tsai (2005) and Chiu, Hsu, Sun, Lin, and Sun (2005) confirming that satisfaction has a positive effect on users' continuance intention of web portal usage. A more recent study conducted by Brown and Jayakody (2008) also provided considerable support for the influence of user satisfaction on continuance intention.

Altogether, the studies reviewed provide the necessary empirical evidence of a link between user satisfaction and continuance intention. An overview of the conceptual models that underlie this link is provided in the next section. These models were used in the studies conducted by Bhattacherjee (2001) and Brown and Jayakody (2008).

2.6.1 Expectation Confirmation Theory (ECT)

The ECT was designed to explain the determinants of repurchase intention for a broad range of products and contexts including automobile purchases, restaurant services and online brokerage services (Atchariyachanvanich, Okada, & Sonchara, 2006; Bhattacherjee, 2001; Kim, Ferrin, & Rao, 2003). The ECT posits that satisfaction depends on the extent to which consumers perceive their initial expectations of a B2C service as being confirmed or disconfirmed during actual use (Bhattacherjee, 2001). Confirmation of the initial expectations will lead to satisfaction and continuance intention while disconfirmation will lead to dissatisfaction and discontinuance intentions (Bhattacherjee, 2001). Bhattacherjee (2001) used the expectation confirmation theory (ECT) in consumer behaviour literature to explain IS continuance intention. This study provided support for the hypothesised relationships between satisfaction and continuance intention. The research framework used in this particular study is shown in Figure 2. The link between satisfaction and continuance intention is highlighted in red.

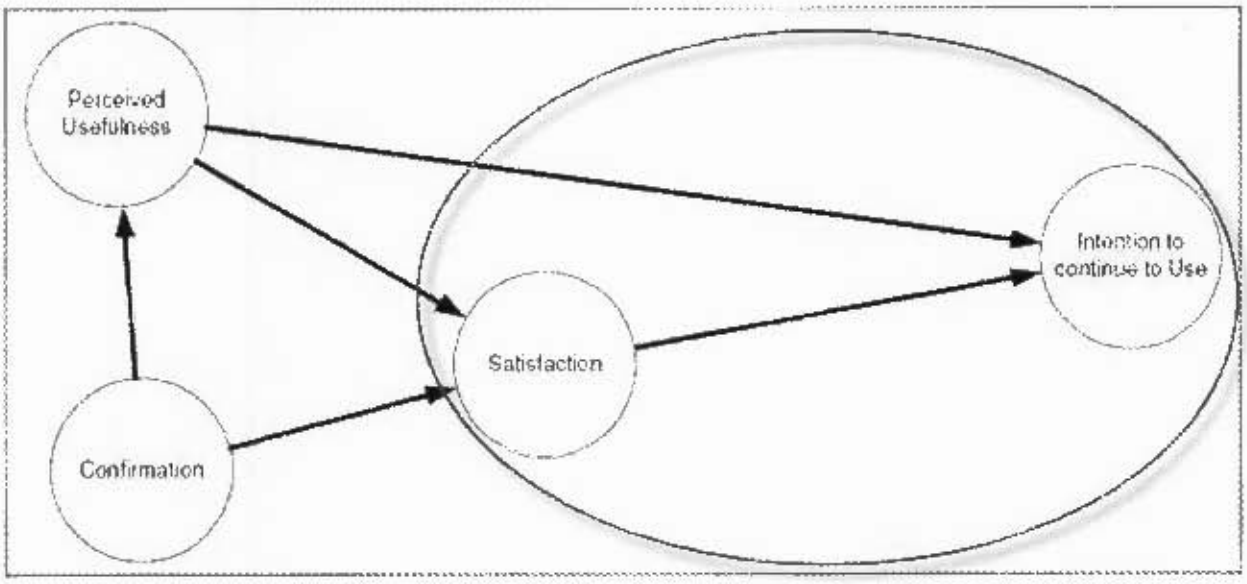

Figure 2: A theoretical model of customer satisfaction/continuance intention (Bhattacherjee, 2001)

This model of customer satisfaction/continuance intention has been used in subsequent studies to understand e-learning service continuance (Chiu et al., 2005), online repurchase intentions (Atchariyachanvanich et al., 2006) and online shopping behaviour (Hsu et al., 2006).

2.6.2 E-commerce Success Model

Brown and Jayakody (2008) developed a revised research model derived from the TAM, the ECT, and IS success theory to examine the determinants of B2C e-commerce success. The model which included 7 interrelated dimensions (service quality, system quality, information quality, trust, perceived usefulness, user satisfaction, and continuance intentions) was proposed. Trust was included in the model since it was identified as an important variable in the e-commerce space (Brown & Jayakody, 2008; Gefen, Karahanna, & Straub, 2003; Molla & Licker, 2001). The results of the study showed that user intentions to continue using an online retail site were directly influenced by perceived usefulness, user satisfaction, and system quality. Other identified relationships were:

- User satisfaction was directly influenced by service quality and perceived usefulness.
- Perceived usefulness was directly influenced by trust and information quality.
- Trust was directly influenced by service quality and system quality.

The revised research model is shown in Figure 3. The link between satisfaction and continuance intention is highlighted in red:

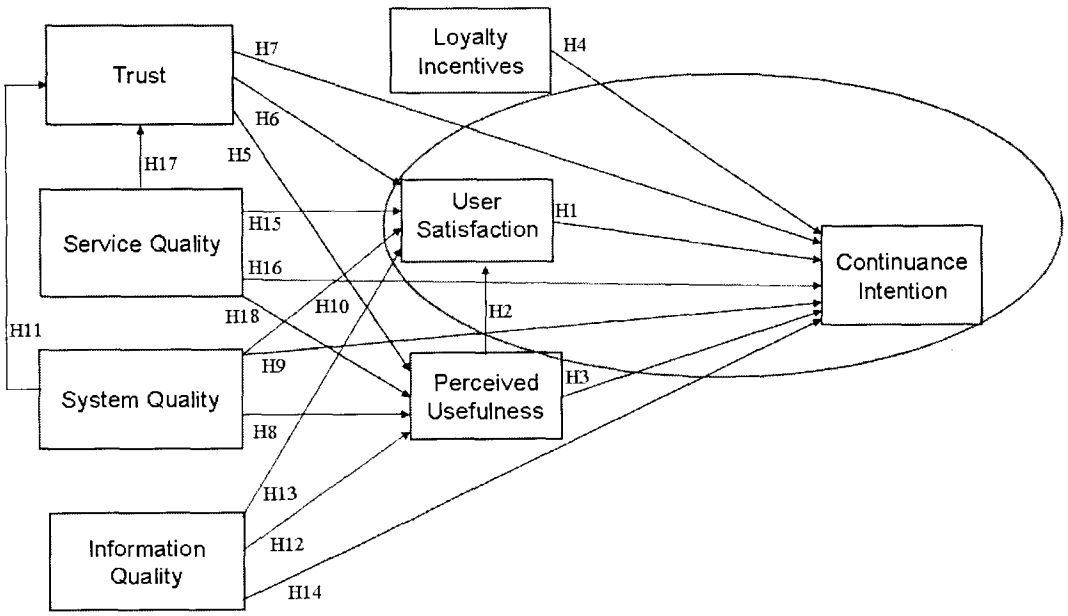

Figure 3: E-commerce success model (Brown & Jayakody, 2008)

2.7 Identified Gaps

Most of the studies cited in this literature review were conducted in industries other than the airline industry. The aim of this research is to adopt the ideas derived from these studies and conduct similar research in the airline industry.

A particularly relevant study to the current research is that of Shchiglik and Barnes (2004), in which an instrument (PAWQI) to measure website quality from a customer's perspective was developed to provide some initial direction in that area. However, the focus of their study was specifically on developing the PAWQI instrument to measure airline website quality rather than investigating concepts such as user satisfaction and continuance intention. Moreover, a significant limitation of the study was that the factor structure of PAWQI was not validated using factor analysis and other relevant and strong statistical techniques. In addition, the three items used to measure airline-specific quality had a big inclination towards economic factors rather than the quality of websites. It should also be noted that the sample used in the study was instructed to evaluate only three airlines operating in the New Zealand air travel market. In comparison to the Shchiglik and Barnes (2004) study, the sample in this research evaluates any airline website from a given list. This list consists of more than three airlines from different regions in the world. Such an approach provides a wider perspective on airline websites since it caters for a larger number of airlines. This research thus complements the study conducted by Shchiglik and Barnes (2004) by expanding the amount of data on airline website quality to include its impact on user satisfaction and continuance intention.

A second study investigating the three aspects that the researcher intends to examine in this research is that of Bai, Law, and Wen (2008). Bai et al. (2008) developed and empirically tested a conceptual model of the impact of website quality on customer satisfaction and purchase intentions. The model examined website quality using only *two* dimensions, namely functionality and usability. In contrast, the current study aims to look at website quality using *more than two* dimensions. Bai et al. (2008) evaluated the quality of *travel* websites in *China*. The current study however aims to assess the quality of *global airline* websites.

A particular limitation of the Bai et al. (2008) study was the failure to report which travel websites were evaluated for quality. The study also focused on purchase intention as compared to continuance intention, which relates more to the intention to continue using a

website rather than only making a future purchase from the website. It is thus clear that the current study aims to examine website quality from a very different angle and in a different context than that of Bai et al. (2008). In addition, the use of WebQual to assess website quality can provide more insights into what exactly has an impact on user satisfaction and continuance intention.

From the literature review, it can be seen that different dimensions and attributes of website quality have been suggested. Previous studies have focused too narrowly on the website itself in the quest for determinants of attitudes towards websites and continuance intention. Even though the specific characteristics of websites are important, it is believed that consumer attitudes towards the impact of these website elements could be equally important in conducting e-commerce website evaluations. In addition, other studies (Chu, 2001; Jeong et al., 2001; Law & Leung, 2000) have addressed web quality in the travel industry but these studies have not been able to extend our understanding of online user/customer satisfaction and continuance intention. The current study therefore aims to fill this gap. This study not only evaluates the quality of an airline website but also looks at its impact on user satisfaction and the user's intention to continue using that website.

From all the instruments described and compared in Section 2.3, the WebQual instrument developed by Loiacono et al. (2007) provides a more comprehensive set of user-centric website quality attributes and has strong validity and reliability. In addition, this instrument was empirically tested using a range of websites including those from the airline industry. However, no attempt has been made to validate the instrument within the airline industry in particular. This study therefore aims to address this gap.

Chapter 3: Research Model & Development of Hypotheses

Based on the above literature review, a conceptual model is proposed. This model includes the website quality attributes derived from the WebQual model (Loiacono et al., 2007), and incorporates the link between user satisfaction and continuance intention proposed by Bhattacherjee (2001), and Brown and Jayakody (2008). The E-commerce success model (Brown & Jayakody, 2008) and the model developed by Bhattacherjee (2001) (discussed in 2.6.1) provide the justification for the inclusion of the satisfaction and continuance intention components in the conceptual model that forms the basis of this study. Following Loiacono et al. (2007) framework, the conceptual model groups the dimensions of website quality under five higher-level categories, namely Ease of Use, Perceived Usefulness, Trust, Response Time and Entertainment. These categories impact on both the user's satisfaction with the airline website and on the user's intention to continue using the website in the future. The conceptual model proposed in this study provides a wider range of constructs relevant to website quality and a richer picture of how these constructs impact on user satisfaction and continuance intention. This is shown in Figure 4:

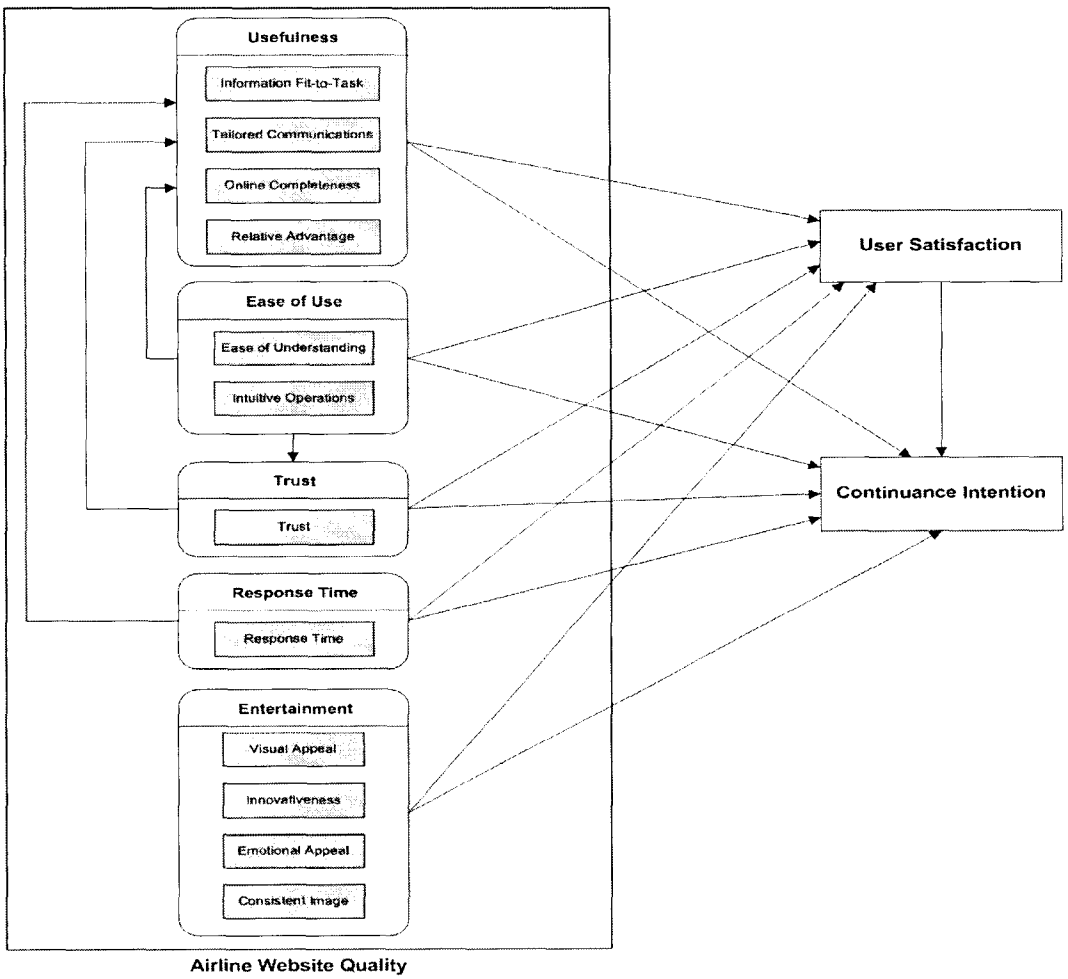

Figure 4: Proposed Conceptual Model

3.1 Explanation of research model

As previously mentioned, the conceptual model has been adapted mostly from the WebQual framework used in Loiacono et al. (2007). In their study, Loiacono et al. (2007) proposed a hierarchical model of website quality containing 12 first-order factors (i.e., informational fit-to-task, tailored communication, ease of understanding, intuitive operations, response time, visual appeal, innovativeness, emotional appeal, trust, online completeness, relative advantage) derived from the first study conducted by Loiacono (2000), further combined into five second-order factors (Kim & Stoel, 2004b). The current study uses this particular model to understand website quality.

From the model, the Usefulness and Ease of Use constructs are adapted from the TAM. However, the instrument used for the WebQual model did not specifically include items for these two constructs. They were instead depicted as higher-level categories and were made up of several constructs. Overall, the items related to a combination of these constructs made up Usefulness and Ease of Use. The same applied to the Entertainment category, which was made up of four other constructs (Visual Appeal, Innovativeness, Emotional Appeal and Consistent Image). On the other hand, the instrument contained specific items relating to Trust and Response Time.

User Satisfaction and Continuance Intention have been adapted from the studies conducted by Bhattacherjee (2001) and Brown and Jayakody (2008). By integrating these two constructs, a more comprehensive model assessing the quality of airline websites and its impact on user satisfaction and user's intention to continue using the airline websites is thus produced. Table 5 provides a detailed description of the constructs in the conceptual model.

Second-Order Category	Construct	Description
Usefulness	Information Fit-to-Task	The extent to which users believe that the website meets their needs
	Tailored communications	Communications can be tailored to meet the user's needs
	Online Completeness	Allowing all or most necessary transactions to be completed online
	Relative Advantage	Equivalent or better than other means of interacting with the company
Trust	Trust	Secure communication and observance of information privacy
Response Time	Response Time	Time to get a response after a request or an interaction with the website
Ease of Use	Ease of Understanding	Easy to read and understand
	Intuitive Operation	Easy to operate and navigate
Entertainment	Visual Appeal	The aesthetics of the website
	Innovativeness	The creativity and uniqueness of the website
	Consistent Image	The website image is compatible with the image projected by the firm through other media
	Emotional Appeal	The emotional affect of using the website and intensity of involvement

Table 5: WebQual Constructs (Liu & Goodhue, 2008; Loiacono et al., 2002 ; Loiacono et al., 2007;)

3.2 Research Questions

In light of the literature review conducted and the research model presented above, the primary research questions that are investigated are as follows:

- How do the characteristics of website quality, as identified in the conceptual model, impact on user satisfaction and continuance intention?
- How valid is the conceptual model specifically in the context of the airline industry?

To answer the primary research questions, it is necessary to answer the following secondary questions:

a. How can website quality be measured from the user's perspective?
   i. Empirically validate and test the model using data gathered from a sample of airline website users.
   ii. Re-examine the relationships between key dimensions of website quality in the proposed model.

b. Do the results provide empirical evidence of the impact of website quality on user satisfaction and continuance intention?

3.3 Refined Research Objectives

Based on the above research questions, the refined research objectives are as follows:

1. Evaluate the quality of airline websites based on the conceptual model and determine its impact on user satisfaction and continuance intention.
    i. Evaluate the basic look and feel of the airline website (use of WebQual constructs – Airline Website Quality in Figure 4).
    ii. Evaluate the quality of the processes involved to perform an e-commerce transaction up to the point where payment notice is displayed (For example, conduct search to obtain flight information and make a flight booking). Evaluate how do (i) and (ii) impact on user satisfaction and intention to continue using the airline website.
2. Refine the initial research model in light of the results, if necessary, and provide sound explanations for the results obtained.
3. Discuss the importance of website quality in the airline industry based on the results obtained and identify possible areas for future research.

3.4 Development of Hypotheses

The above objectives form the basis for developing a comprehensive set of research hypotheses.

3.4.1 Usefulness

Empirical support for the positive association between perceived usefulness and IS use intention has been provided by Davis, Bagozzi, and Warshaw (1989), Mathieson (1991) and Taylor and Todd (1995). Bhattacherjee (2001) also showed that perceived usefulness is a key determinant influencing customer intentions to continue using an e-commerce system. The more useful a website is in enabling the users to accomplish their necessary tasks, the more likely it will be used (Liao, Palvia, & Lin, 2006). Thus, the hypothesis suggested is:

H_1: *Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has a positive effect on Continuance Intention for an airline website*

In a study conducted by Rai, Lang, and Welker (2002), it was found that perceived usefulness positively influences user satisfaction with an information system. The hypothesis suggested is:

H_2: *Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has a positive effect on User Satisfaction with an airline website*

3.4.2 Ease of Use

Dutta-Bergman (2004) and Mukherji and Mukherji (1998) found that perceived ease of use has a positive effect on perceived usefulness. Loiacono et al. (2007) also provided empirical evidence of this relationship in their WebQual model. Thus, the following hypothesis is suggested:

H_3: *Ease of Use (ease of understanding, intuitive operations) has a positive effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website*

In a study conducted by Sun, Tsai, Finger, Chen, and Yeh (2008), it was found that e-learners' perceived ease of use of an e-learning system positively influences perceived e-learner satisfaction with e-learning. Similarly, Kim and Chang (2007) showed that perceived ease of use of a health information website increases customer satisfaction with the website. Thus, the following hypothesis is suggested:

H_4: *Ease of Use (ease of understanding, intuitive operations) has a positive effect on User Satisfaction with an airline website*

According to Koufaris and Hampton-Sosa (2004), a well-designed website that is easy to navigate and which provides an efficient and effective shopping experience has the potential to increase consumer's trust. Tung, Chang, and Chou (2008) showed that perceived ease of use has a positive effect on trust in an electronic logistics information system. Thus, the hypothesis suggested is:

H_5: *Ease of Use (ease of understanding, intuitive operations) has a positive effect on Trust with an airline website*

Previous research has shown that perceived ease of use has a significant effect on behavioural intention to use (Davis et al., 1989; Venkatesh & Davis, 2000). Roca and Gagné (2008) empirical tested the positive relationship between perceived ease of use and intention to continue using e-learning. Thus, the hypothesis suggested is:

H_6: *Ease of Use (ease of understanding, intuitive operations) has a positive effect on Continuance Intention for an airline website*

3.4.3 Trust

In a study to assess how the web can help build customer relationships, Wang and Head (2007) demonstrated that a higher level of trust leads to a higher level of satisfaction in online shopping. Molla and Licker (2001) also provided support for the influence of trust on user satisfaction. Similarly, Kim et al. (2003) proved that a consumer's trust positively affects his/her satisfaction with an e-retailer's product or service. Thus, the hypothesis suggested is:

H_7: *Trust has a positive effect on User Satisfaction with an airline website*

Trust in an e-commerce system has several benefits including increased perceptions of usefulness (Brown & Jayakody, 2008; Gefen et al., 2003). Different researchers have provided empirical evidence of the influence of trust on perceived usefulness (Agarwal & Karahanna, 2000; Horst, Kuttschreuter, & Gutteling, 2007; Moore & Benbasat, 1991; Venkatesh & Davis, 2000). In a more recent study, Tung et al. (2008) demonstrated that trust has a positive effect on perceived usefulness to use an electronic logistics information system. Thus, the hypothesis suggested is:

H_8: *Trust has a positive effect on Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website*

According to Liao et al. (2006), consumers in e-commerce must assume that a web retailer's ethic complies with business norms in order to have trust to transact with the retailer. Trust reduces the behavioural uncertainty related to the retailer's actions, gives the consumer a perception of control over a potentially uncertain transaction, encourages future transactions and helps build long-term relationships (Bhattacherjee, 2002; Gefen et al., 2003; Liao et al., 2006; Pavlou, 2003). Thus, the hypothesis suggested is:

H_9: *Trust has a positive effect on Continuance Intention for an airline website*

3.4.4 Response Time

Delone and McLean (2003) identified response time as being one of the components of system quality. In the study conducted by Brown and Jayakody (2008), system quality was found to have positive influences on perceived usefulness, user satisfaction and continuance intention. This implies that response time, a component of system quality, can also have an impact on perceived usefulness, user satisfaction and continuance intention. Thus, the following hypotheses are suggested:

H_{10}: *Response Time has a positive effect on User Satisfaction with an airline website*

H_{11}: *Response Time has a positive effect on Continuance Intention for an airline website*

H_{12}: *Response Time has a positive effect on Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website*

3.4.5 Entertainment

According to Loiacono et al. (2007), some consumers seek to be entertained in the process of website browsing. As such, the website must create a pleasant experience for them. "Starting with the aesthetics, the site must be visually appealing and inviting with a creative or innovative flare separating it from just any old site. Similar to a brick-and-mortar store, a pleasing atmosphere and image attempts to entrance a consumer through an emotionally appealing site that encourages continued browsing" (Loiacono et al., 2002, p.18). This argument may also be extended to encompass the impact of entertainment on user satisfaction with an airline website. Thus, the following hypotheses are suggested:

H_{13}: *Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has a positive effect on Continuance Intention for an airline website*

H_{14}: *Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has a positive effect on User Satisfaction with an airline website*

3.4.6 Satisfaction

Much of the literature written on continuance intention point out that user satisfaction is a major predictor of continuance intention. Research has shown that increasing customers' satisfaction with website information through high-quality product or service offerings has a

significant positive influence on customer's intention to continue making reservations online (Jeong et al., 2001 as cited in Kim et al. 2006). Bhattacherjee's (2001) study showed that satisfaction with prior use of online banking strongly influenced users' continuance intention. Similar results were obtained in a study conducted by Lin et al. (2005) where it was found that satisfaction had a positive effect on users' continuance intention of Web portal usage. The results of the study conducted by Chiu et al. (2005) also confirmed that users' continuance intention is determined by satisfaction. Brown and Jayakody (2008) also provided considerable support for the influence of user satisfaction on continuance intention. Therefore, the hypothesis suggested is:

H_{15}: *User Satisfaction has a positive effect on Continuance Intention for an airline website*

3.5 Summary of Hypotheses

Based on the previous discussion, the following is a summary of the study hypotheses:

H_1: *Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has a positive effect on Continuance Intention for an airline website*

H_2: *Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has a positive effect on User Satisfaction with an airline website*

H_3: *Ease of Use (ease of understanding, intuitive operations) has a positive effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website*

H_4: *Ease of Use (ease of understanding, intuitive operations) has a positive effect on User Satisfaction with an airline website*

H_5: *Ease of Use (ease of understanding, intuitive operations) has a positive effect on Trust with an airline website*

H_6: *Ease of Use (ease of understanding, intuitive operations) has a positive effect on Continuance Intention for an airline website*

H_7: *Trust has a positive effect on User Satisfaction with an airline website*

H_8: *Trust has a positive effect on Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website*

H_9: *Trust has a positive effect on Continuance Intention for an airline website*

H_{10}: *Response Time has a positive effect on User Satisfaction with an airline website*

H_{11}: *Response Time has a positive effect on Continuance Intention for an airline website*

H_{12}: *Response Time has a positive effect on Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website*

H_{13}: *Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has a positive effect on Continuance Intention for an airline website*

H_{14}: *Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has a positive effect on User Satisfaction with an airline website*

H_{15}: *User Satisfaction has a positive effect on Continuance Intention for an airline website*

Figure 5 further illustrates these hypotheses on the conceptual research model.

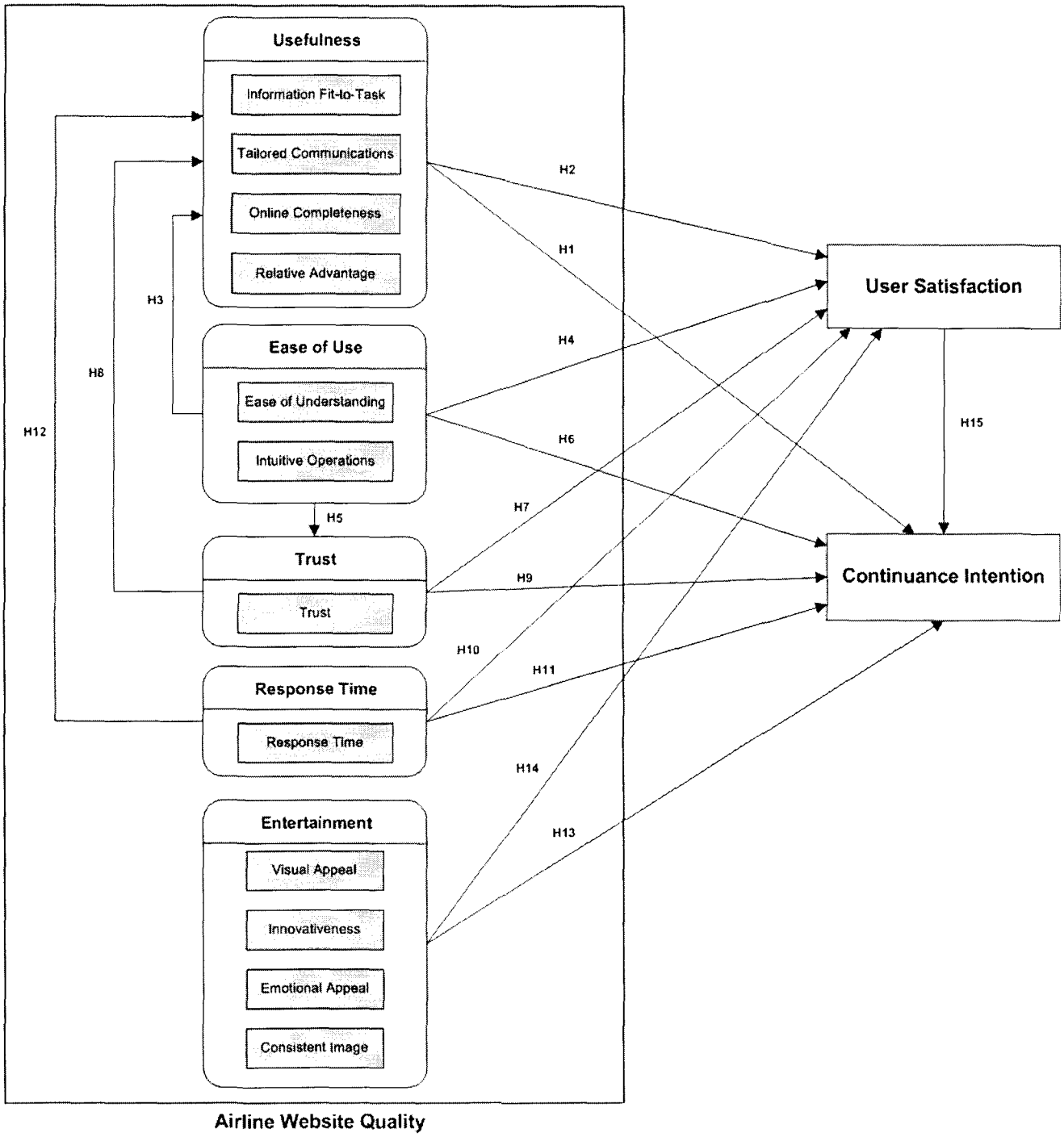

Figure 5: Conceptual Research Model with Hypotheses

Chapter 4: Research Methodology

This section illustrates how the research was carried out.

4.1 Research Purpose

The purpose of this research is explanatory (hypothesis testing) in nature since the aim is to explain how certain website quality constructs impact on user satisfaction and intention to continue using an airline website, through the collection of detailed, accurate and replicable data. The strength of the relationships between the constructs was measured, allowing for a ranking of the website quality constructs that most influence user satisfaction and continuance intention. The research is also explanatory since there is existing information or knowledge about the research topic. Different researchers have previously investigated variations of the concepts examined in this study.

4.2 Research Paradigm and Approach to Theory

The research philosophy used is quantitative with a positivistic approach. According to Orlikowski and Baroudi (1991), there are three research paradigms, namely, positivist, interpretive and critical. Each of these paradigms is based on varying philosophical foundations and conceptions of reality and thus, each of them is implemented by associated approaches and strategies (Roode, 2008). A positivistic paradigm is deemed to be the appropriate approach since the research attempts to validate the use of a conceptual model (adapted from Loiacono et al. (2007)) in the context of a specific industry. A quantitative research approach is most appropriate for the purpose of this study since the aim is to provide an explanation as to how the constructs of website quality impact on user satisfaction and continuance intention.

A deductive approach is used in this research since an integrated research model (derived from a previous study) has been developed from literature. Hypotheses have been formulated to validate the relationships between the variables in the proposed conceptual model and are accepted/rejected after collecting and analysing data. The outcome of the data analysis process led to a modification of the general proposed research model into a more specific one.

4.3 Sampling Plan

A very important consideration when designing most studies is the proper selection of participants that are representative of the population. This selection depends on the phenomenon or situation being studied. As such, the participants need to reflect the relevant characteristics of the population under investigation (Bonebright, Miner, Goldsmith, & Caudell, 2005).

The target population for this research was domestic and international travellers from any region of South Africa. A stratified sampling approach was used to draw a relevant sample from the population to ensure that a representative sample is obtained. The study sample was limited to undergraduate (Second- and Third-year levels) and postgraduate (Postgraduate Diplomas, Honours, Masters and Doctoral levels) students from a research university. These education levels have been chosen since students, with experience in travel, are more likely to have used an airline website before. Proportionate stratified sampling was used to reduce standard errors for survey estimates and to ensure sample sizes for strata were of their expected size. A total of approximately 22500 students (16000 undergraduates and 6500 postgraduates) were enrolled at the research university at the time that the study was conducted (University of Cape Town, 2008). The researcher aimed to use a sampling fraction of 1 in 100 in order to allow for a good spread of the sample across the different educational levels.

According to Roscoe's Rule of Thumb for Sampling (1975), a sample size of more than 30 and less than 500 respondents is sufficient to conduct research of this nature. The anticipated sample size for this research was approximately 200 valid participants. However, only 148 students agreed to participate in the study, of which 6 did not complete the survey questionnaire properly. The final sample therefore consisted of 142 valid participants.

There were no specific demographic requirements (age, income and gender), apart from the fact that the respondents were required to have used the Internet before. The reason for choosing a student sample was because it is considered as a typical segment of Internet users and has been widely used in previous studies (Agarwal & Karahanna, 2000; Barnes & Vidgen, 2001; Gefen et al., 2003; Li et al., 2006; Loiacono et al., 2002; Shchiglik & Barnes, 2004). Hsu, Chiu, and Ju (2004) argued that, since students are expected to become the

primary potential customers of e-commerce in the near future, the results of a study using students as a sample can provide adequate predictability and generalisability. It is also useful to point out that Loiacono et al. (2007) also used a large sample of students to assess different types of websites (including airline websites) to develop the WebQual instrument. The research university from which participants were recruited has both local and international students. This implies that a significant number of students had travelled before and thus, had some knowledge of the airline industry. Even if students are probably not typical of domestic and international travellers, the above discussion balances that to some extent. Thus, this sample was deemed suitable for the purposes of this research.

A list of airline websites was drawn from a study conducted by Law and Leung (2000) and included in the survey (Appendix C). These airline websites were chosen by the researcher based on the following set criteria:

- The website has to be offered in the English language.
- The website must have both a booking engine and a search engine.

As mentioned in Section 1.4, the list that was provided to the participants consisted of airlines from four different regions of the world, namely Africa, Asia & Australia, Europe & Middle East and North America. Because the study was conducted in South Africa and most of the students at the research university were South Africans, all the South African airlines were included in the list for the African region. The justification for the inclusion of all South African airlines is that these students are most likely to have had an experience with an airline company from their own country.

4.4 Questionnaire Design

4.4.1 Questionnaire Overview

The WebQual instrument has been used in prior studies and successfully measured user-perceived website quality in other industries (Barnes & Vidgen, 2001a; Kim & Stoel, 2004a). The 36-item scale used in the instrument was found to possess strong reliability and validity as a measure of website quality (Kim & Stoel, 2004a) and thus, formed the basis for measuring website quality in this research.

4.4.2 Questionnaire Structure & Content

The questionnaire consisted of three main sections. In the first section, the respondents were given a list of airline websites to choose from before conducting the evaluation. The second section of the survey contained multiple items of website quality (adapted from the WebQual instrument), user satisfaction and continuance intention, which the respondents used to rate the website they chose. Items related to satisfaction were adapted from Oliver (1980), Spreng, Mackenzie and Olshavsky (1996) and Anderson and Srinivasan (2003), and appropriately reworded to fit the airline website context. The continuance intention scale was adapted from Bhattacherjee's (2001) three-item measure of IS use intention and also, from work done by Brown and Jayakody (2008) and by Mathieson (1991). The final section of the questionnaire gathered non-sensitive demographic data such as the respondents' age, gender, education level, Internet usage experience, what they use the Internet for, the frequency of Internet use, the number of times they have travelled, and the booking channels they have used.

4.4.3 Questionnaire Items

Based on the participants' responses, the researcher attempted to answer the following research questions:

- How do the characteristics of website quality, as identified in the proposed conceptual model, impact on user satisfaction and continuance intention?
- How valid is the conceptual model specifically in the context of the airline industry?

To answer the above two research questions, the hypotheses outlined in section 3.5 were tested. Table 6 illustrates the questionnaire items related to each of the constructs to be investigated.

Second-Order Category	Construct	Instrument Items
Usefulness	Information Fit-to-Task	• The information on the airline website is pretty much what I need to carry out my tasks. • The airline website adequately meets my information needs. • The information on the airline website is effective.
	Tailored communications	• The airline website allows me to interact with it to receive tailored information. • The airline website has interactive features, which help me accomplish my task. • I can interact with the airline website in order to get information tailored to my specific needs.
	Online Completeness	• The airline website allows transactions online. • All my business with the airline company can be completed via the website. • Most of the business processes can be completed via the airline website.
	Relative Advantage	• It is easier to use the website to complete my business with the airline company than it is to telephone, fax, or mail a representative. • The airline website is easier to use than calling an organisational representative agent on the phone. • The airline website is an alternative to calling customer service or sales.
Trust	Trust	• I feel safe in my transactions with the airline website. • I trust the airline website to keep my personal information safe. • I trust the airline website administrators will not misuse my personal information.
Response Time	Response Time	• When I use the airline website, there is very little waiting time between my actions and the website's actions. • The airline website loads quickly. • The airline website takes long to load.
Ease of Use	Ease of Understanding	• The display pages within the airline website are easy to read. • The text on the airline website is easy to read. • The airline website labels are easy to understand.
	Intuitive Operation	• Learning to operate the airline website is easy for me. • It would be easy for me to become skillful at using the airline website. • I find the airline website easy to use.
Entertainment	Visual Appeal	• The airline website displays visually pleasing design. • The airline website is visually appealing.
	Innovativeness	• The airline website design is innovative. • The airline website is creative.

	Consistent Image	• The website projects an image consistent with the airline company's image. • The website fits my image of the airline company.
	Emotional Appeal	• I feel happy when I use the airline website. • I feel pleased when I use the airline website. • I have a positive feeling when I use the airline website. • I have a negative feeling when I use the airline website.
User Satisfaction	User Satisfaction	• I am satisfied with my decision to visit the airline website • My choice to visit the airline website was a wise one • I feel badly regarding my decision to visit the airline website • I think I did the right thing by visiting the airline website
Continuance Intention	Continuance Intention	• If I needed this product or service in the future, I would be likely to buy it from this airline website. • If I needed this product or service in the future, I would probably revisit and reuse this airline website. • If I needed this product or service in the future, I would not revisit and reuse this airline website. • I would recommend this airline website to a friend interested in this product or service.

Table 6: Constructs and Instrument items

A five-point Likert scale was adopted for all the measures, with anchors ranging from Strongly Disagree (1) to Strongly Agree (5). This was seen as appropriate for the study as it was expected that some of the participants in the research sample would not be very knowledgeable in the area of airline websites. An odd number Likert scale was chosen since it did not force the participants to choose an option if they were indecisive on how to rate a particular statement (Ghauri & Gronhaug, 2002). The study questionnaire can be found in Appendix C.

4.4.4 Pilot Study

The initial version of the research instrument was reviewed by a selected sample of Internet users (two senior lecturers from the research university) for the purpose of evaluating its face and content validity. The survey instrument was adjusted based on their responses. At that stage, the only modification made to the instrument was its adaptation to the context of the airline industry. In other words, all the items were reworded to read "*airline website*" instead of only "*website*". A pilot study was then conducted using convenience sampling to ensure that the data collected during the actual study is complete, relevant, accurate and easily analysed. The pilot study also enabled the researcher to determine if the questionnaire was

clear and understandable to the intended sample. Ten postgraduate students completed the questionnaire and suggested further modifications to ambiguous items. Following these two reviews, minor changes were made to the questionnaire as a whole. The most important change, however, was the rewording of questionnaire items related to the Emotional Appeal construct. The initial WebQual instrument had three items for Emotional Appeal (i.e. "*I feel happy when I use the website*", "*I feel pleased when I use the website*", "*I feel cheerful when I use the website*"). 6 out of the 10 respondents reported that they did not understand the difference between these three items and pointed out that it would be too ambiguous for students. After further consultation with the research supervisor, the researcher decided to keep two of the items (i.e. "*I feel happy when I use the airline website*"; "*I feel pleased when I use the airline website*") and added two additional items related to Emotional Appeal (i.e. "*I have a positive feeling when I use the airline website*"; "*I have a negative feeling when I use the airline website*").

4.5 Data Collection Method

As the sample was limited to students at a research university (section 4.3), a survey strategy was used to collect data. The survey approach was chosen since a large sample was used. The predominant approach used in previous studies has been to use students in experimental situations whereby they are asked to visit certain websites (e.g. books, CDs, airlines, automobiles) and then evaluate the websites. The study thus used a similar approach for data collection except that it focused only on airline websites.

The survey questionnaires were distributed to the targeted sample in 5 computer laboratories at the research university. Once permission was obtained from the laboratory administrators, on each day of the evaluation, the student sample (Second- & Third-year undergraduate and postgraduate students) who presented themselves at the computer laboratories were given the survey questionnaires and were asked to visit an airline website (section 4.3) and evaluate it, based on their experience with the website. Those who reported that they have never used the Internet before were excluded from this study.

The survey questionnaire required respondents to assess the basic look and feel of the website (based on the WebQual constructs). They were also given a list of e-commerce operations (i.e. performing a search to obtain flight information and make a flight booking up to the

point where payment notice is displayed) to conduct and were required to simultaneously evaluate the quality of the processes involved to perform these operations (based on the WebQual constructs). Each student was required to choose and evaluate only one airline website from the list provided.

The evaluation process was expected to last for approximately 35 minutes (30 minutes to surf the airline website and fill in the first section of the survey questionnaire and 5 minutes to fill in the last two sections of the questionnaire). This timeframe was deemed reasonable for the whole evaluation since it was expected (based on the pilot study) that the study sample would be able to evaluate most aspects of an airline website of their choice in 30 minutes. If the sample required extra time to complete the evaluation, they were allocated an extra 5 minutes. When the actual evaluation was conducted, most of the respondents however took longer than 35 minutes to complete the evaluation due to the slow Internet speed in the computer laboratories. The questionnaire responses provided the required data to test the hypotheses which were formulated from the research model.

In order to convince students to participate in the study, the researcher associated the evaluation with a lucky draw competition, whereby the winners would receive small prizes for their participation. This initiative provided the researcher with a high participation rate in the study. Winners of the lucky draw were contacted via the details they provided in an extra sheet that was provided with the questionnaire (Appendix C).

4.6 Data Analysis Techniques

The aim and objectives of the study formed the framework for the analysis and interpretation of the data. After the data collection phase, a spreadsheet package was used to capture the 142 usable questionnaires data for preliminary analysis.

Data was subsequently exported to Statistica 8.0 (StatSoft Inc., 2004). This statistical package allowed the researcher to conduct more detailed statistical analyses of the data and test the various research hypotheses formulated in section 3.5.

Several statistical tests were employed to analyse the data. These were as follows:

- ***Descriptive statistics*** was used to describe the profiles of the respondents, their online behavioural characteristics and to ascertain the mean scores for the key variables in the conceptual model. ***Variance statistics*** was used to test the dispersion of data including calculations such as standard deviation.
- ***Graphical representations (i.e. bar charts and pie charts)*** were used to provide a summary of the raw sample data.
- ***Exploratory factor analysis (EFA)*** was conducted on the questionnaire items to see whether they form separate factors. EFA was also used to test the validity of the constructs.
- ***Item Analysis/Cronbach's Alpha*** was used to test the internal consistency and reliability of the constructs within the research instrument.
- ***Spearman rank correlation coefficient (r_s)*** was used to determine if relationships existed between the constructs and to measure the strength of any relationship identified in the conceptual model.
- To test the hypotheses, ***Multiple Linear Regression Analysis*** was conducted after the formulation of multiple linear regression equations. Multiple regression analysis allowed the researcher to predict the value of one variable, based on the value of other variables from the conceptual research model.
- ***Levene's Test for Homogeneity of Variances*** and ***p-plots*** were used to test for the homogeneity of variances and normality of construct data.
- ***One-way ANOVA tests*** with post-hoc ***Tukey's Unequal N Honestly Significant Differences (HSD) tests*** were used to test whether there were any significant differences between the means of the constructs of website quality across airline websites from the four regions under investigation (i.e. Africa, Asia & Australia,

Europe & Middle East, and North America). The same sets of tests along with ***Fisher's Least Significant Difference (LSD) tests*** were used to test whether there were any significant differences between the means of the constructs of website quality across the five airline websites that were most rated by respondents.

- In all statistical tests, a significance level of 0.05 ($\alpha = 0.05$) was maintained.

4.7 Key Assumptions

The key assumptions for the research were as follows:

- The WebQual instrument is the most appropriate instrument to be used to measure user-perceived website quality and can be adapted to the context of the study.
- The researcher would obtain the necessary permission to use the computer laboratories in the respective faculties to conduct the evaluation.
- The researcher would obtain enough participants to take part in the study.
- The research would contribute significantly to the airline industry and would provide airline companies with a powerful tool to assess the quality of their websites.

4.8 Data Integrity and Ethical Considerations

A sample of the survey questionnaire was sent to the Ethics Committee at the research university, for approval, before conducting the actual study. The questionnaires were completed voluntarily by all the participants in the study sample. A cover letter stating the purpose of the research was attached to each questionnaire. In addition, the participants were given a brief background to the research and were asked whether they wished to participate or not. No consent form was needed since the voluntary nature of the survey questionnaires implied that the respondents would have given their consent to participate in the study.

Every effort was undertaken to ensure that the identity of all the respondents is kept anonymous. The survey questionnaire was designed in such a way that it did not attempt to gather personal sensitive details of the participants. As mentioned in section 4.4.2, data collected included age, gender and Internet usage experience amongst others. A separate sheet was provided to the participants once they had completed the questionnaire. The participants were asked to provide their contact details (email address and phone number) on the sheet (see Appendix C). This sheet was stored separately from the questionnaire to

prevent any means of tracing back to the participants' responses. The email address and/or phone number was used to contact the winners of the lucky draw competition. Participants were also told that they could request the final results of the study and that these would be sent to them using the email address they provided. Any information gathered was kept strictly confidential and access to raw data collected was restricted to only the researcher and the research supervisor. In addition, data collected was kept at a secure location and regularly backed up to minimise potential problems in case of unforeseen circumstances.

To ensure the quality and integrity of the data, all completed survey questionnaires were checked for completeness and quality of data through a structured screening procedure whereby each questionnaire was tested for irregularities.

4.9 Research Timeframe

This study ran over a period of 4 weeks from end of July 2008 to end of August 2008 in the different computer laboratories. The research university has two semesters per year and the second semester started on the 21st of July 2008. The chosen timeframe was deemed suitable since the students were expected not to have a heavy workload (e.g. assignment and project hand-ins) as soon as they returned from vacation and thus, the data collection process would not clash with any of their major course deliverables. This particular timeframe was also chosen to cater for the fact that the airline websites being evaluated might make changes to their sites over time. The shorter the amount of time used for data collection, the smaller the risk of this happening. As such, a cross-sectional timeline was used. The survey questionnaires represented only a snapshot view during the particular period that the data was be collected. Due to time constraints, the cross-sectional time horizon proved to be the most appropriate way to go.

Chapter 5: Descriptive Statistics

5.1 Introduction

The demographic and Internet usage profile of the survey respondents were obtained through Section 3 of the questionnaire (i.e. Participant Information). This chapter of the dissertation describes the demographic profile of the respondents and attempts to identify important patterns in the sample. It concludes with a set of descriptive statistics for the questionnaire items, constructs and second-order categories. Appendices H and I at the end of the dissertation provides a detailed breakdown of the demographic data.

5.2 Profile of the Sample Surveyed

5.2.1 Gender

All 142 participants indicated their gender. However, using only the gender data gathered to make meaningful inferences about the gender of the typical airline website user profile is not possible because it is only reflective of the proportion of males and females at the research university in this study. Furthermore, the sample excludes another cohort of important users of airline websites, i.e. business people. The data is however useful when attempting to explain other trends such as what the respondents use the Internet for. Figure 6 illustrates the gender of the respondents.

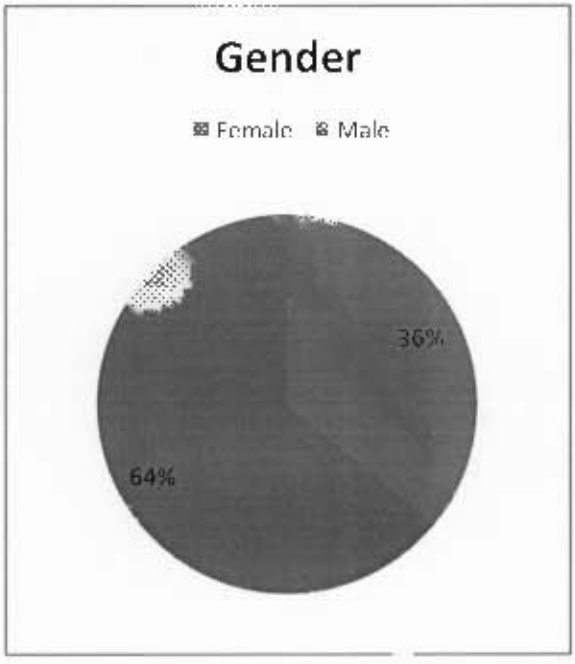

Figure 6: Gender of Respondents

The number of males surveyed was almost twice the size of females. This demographic data reflects the dominance of males within the study sample. However, based on this data alone, it is not possible to conclude that airline website users in general are predominantly male due to the nature of the sample.

5.2.2 Age

Since a student sample was chosen, it was expected that the majority of respondents would be within the 18 to 27 age group. 96% of the sample made up the 18 to 27 age group. Only four students were within the age groups 28 to 37, 38 to 47 and 48 to 57, showing that the age group data was skewed. Higher-level postgraduate students (part-time or full-time Postgraduate Diploma, Masters and Doctoral) are often working professionals or people with working experience coming back to the academic arena, thereby explaining the small number of respondents within these sample strata. Figure 7 illustrates the age group of the respondents.

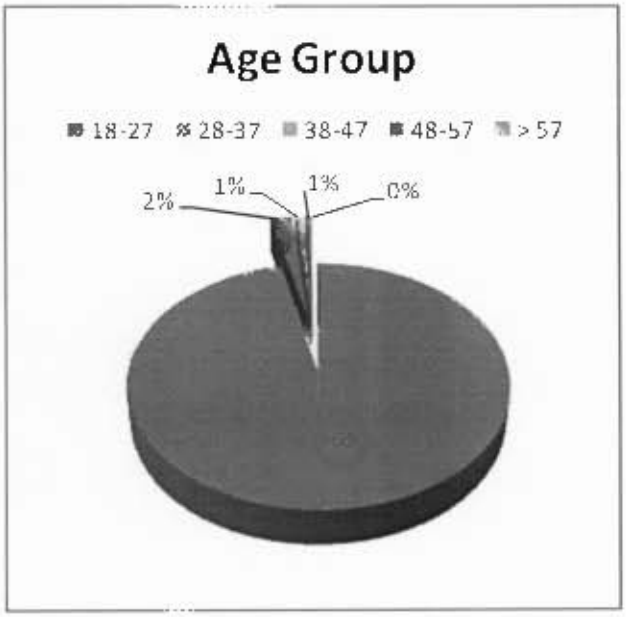

Figure 7: Age Group of Respondents

5.2.3 Current Level of Education

By adopting a stratified sampling approach, the researcher aimed to obtain a sampling fraction of 1 in 100 in order to allow for a good spread of the sample across the different educational levels and ensure sample representativeness within these educational levels. However, this sampling fraction was not achieved due to the nature of the data collection

strategy. Constrained by assignment and major deliverables deadlines, higher-level postgraduate students (Postgraduate Diploma, Masters and Doctoral levels) were not very keen to complete the airline website survey. This explains the low response rate within this stratum. The other strata generated a sufficient number of responses and showed a fairly even spread of responses across the strata.

Figure 8 illustrates the current level of education of the respondents.

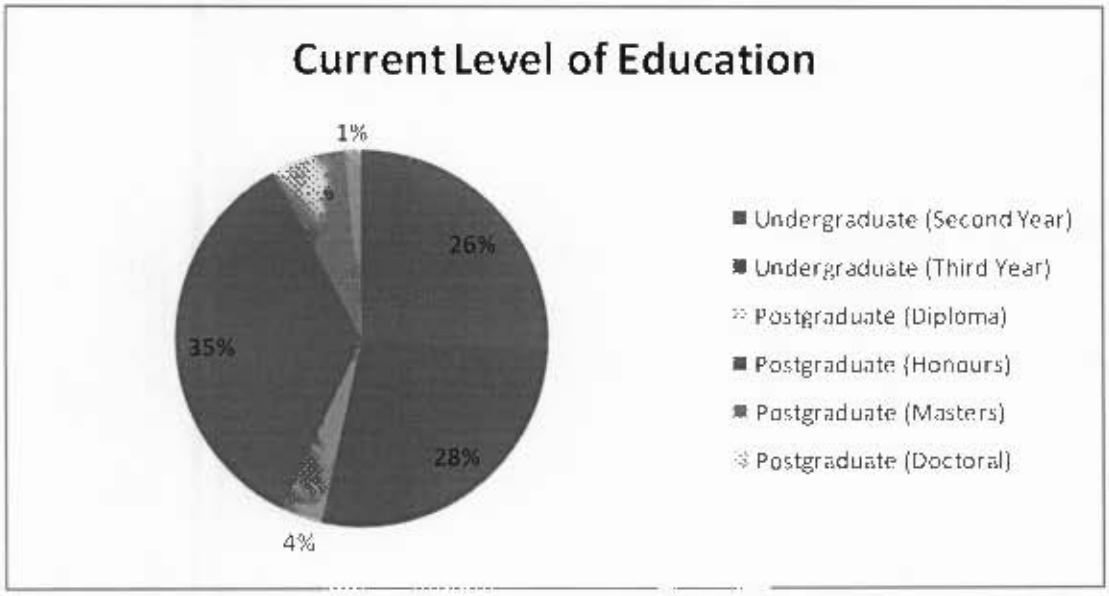

Figure 8: Current Level of Education of Respondents

5.2.4 Familiarity with the Internet & Frequency of Internet Use

Figure 9 shows that most of the respondents were experienced Internet users. Most respondents (96 respondents) knew all aspects of the Internet while the rest indicated that they knew how to search for information relating to specific goods/services (41 respondents). Interestingly, only 5 respondents indicated that they only knew how to search for basic information on the Internet. These results show that all respondents were clearly computer literate. Figure 9 illustrates the respondents' familiarity with the Internet.

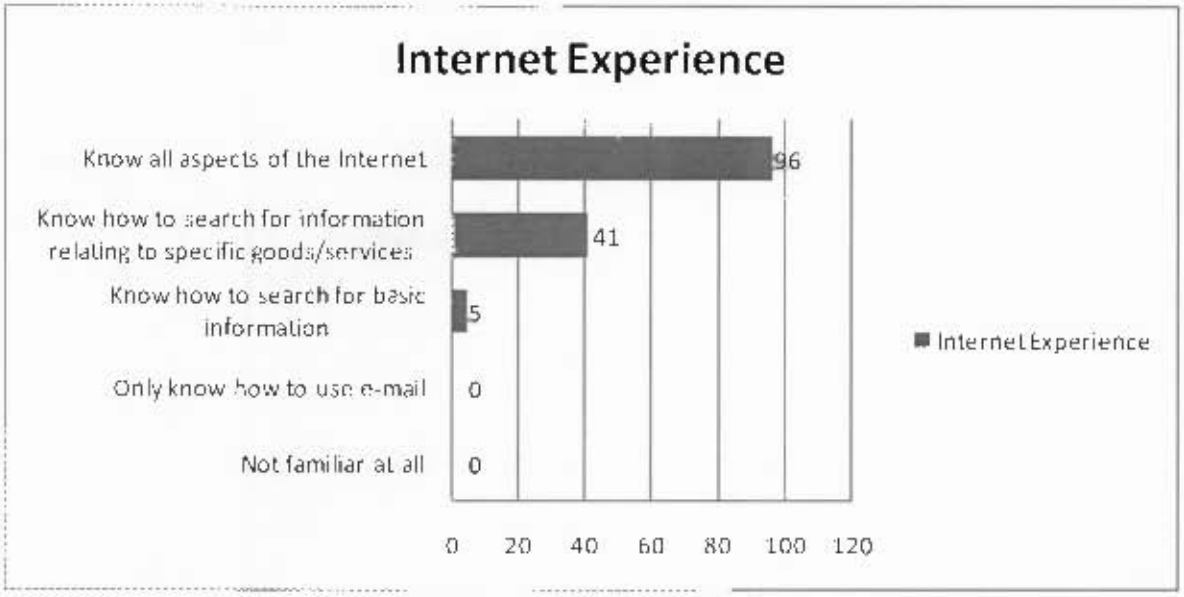

Figure 9: Respondents' Familiarity with the Internet

As outlined in Section 4.3, there was no specific demographic requirement (age, income and gender) for the study, apart from the fact that the respondents were required to have used the Internet before. The demographic data related to frequency of Internet use satisfies this requirement. Figure 10 illustrates the frequency of Internet usage of the respondents. 79% of the respondents have been using the Internet for more than once a day and 18% had been using it once a day. Only 3% indicated that they used the Internet less frequently (i.e., for once a week). These results further support the fact that the respondents had a high level of computer literacy.

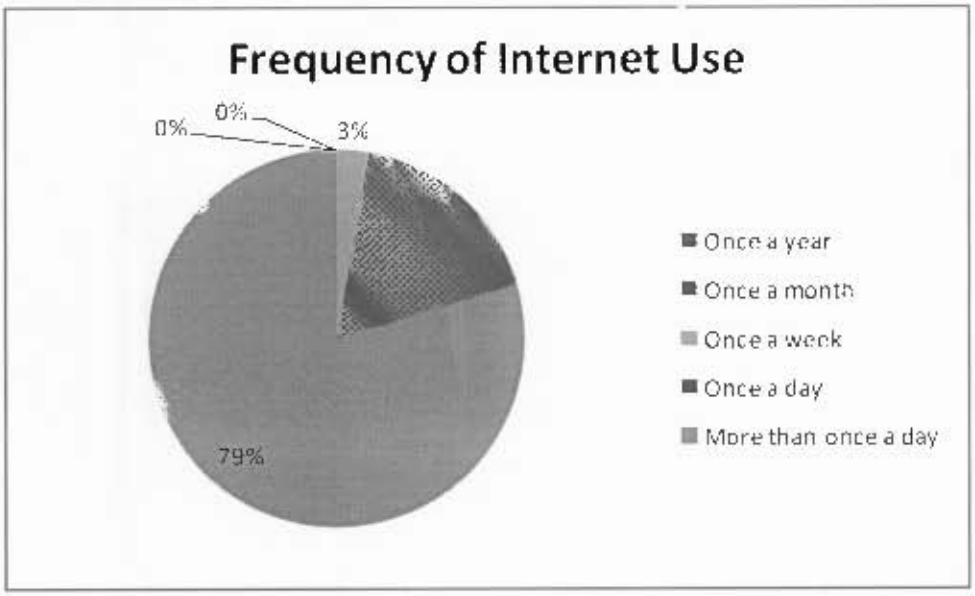

Figure 10: Respondents' Frequency of Internet Use

5.2.5 Internet Usage

Figure 11 shows that most respondents used the Internet for general surfing and educational research. 60 respondents purchased goods/services online and thus represented typical e-commerce users. In addition to the options provided in the questionnaire, respondents indicated that they used the Internet for other purposes, such as advertising, communications through email, chat and Skype, social networking (through Facebook), conducting product searches and comparisons, and reading the news.

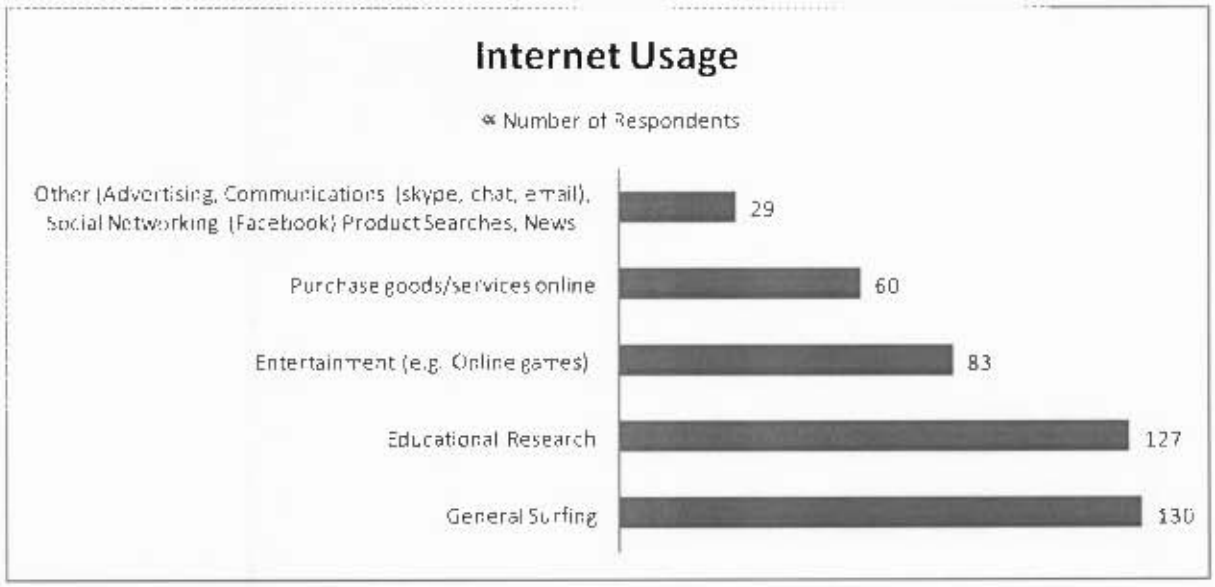

Figure 11: Respondents' Internet Usage

5.2.6 Air Travel Frequency

Of the 142 respondents, 112 indicated that they travelled by plane on more than three occasions. This represented approximately 79% of the sample, showing that the sample had previous actual experience with an airline company. It also means that the majority of respondents were familiar with the terminologies used on an airline website (e.g. seat position, loyalty programs, mileage, check-in service). Only 8 of the respondents indicated that they have never travelled by plane before.

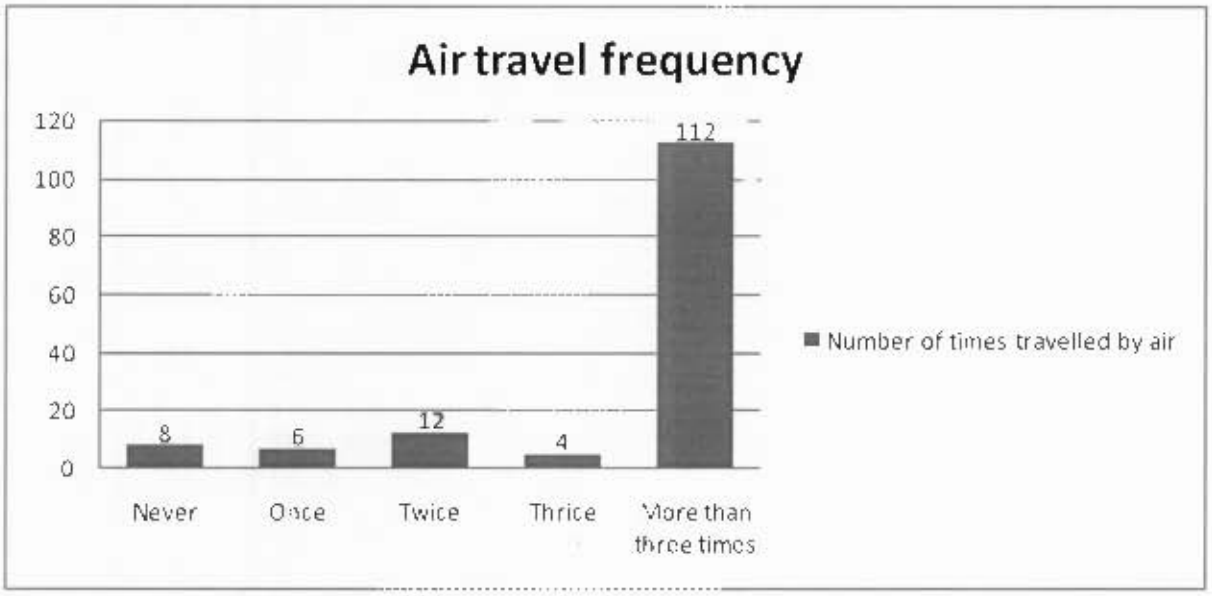

Figure 12: Respondents' Air Travel Frequency

5.2.7 Booking Channels

The last question in Section 3 of the questionnaire asked the respondents which booking channels they used to book their flights. 66.9% of respondents indicated that they booked their flights on the Internet while 46.5% indicated that they booked their flights via a travel agency. Only 16.2% of respondents specified that they booked their flights through an airline company representative. These results show that many people are currently using the Internet to book their flights and to make travel arrangements. The growth in online airline bookings is a worldwide phenomenon (Benckendorff, 2006). For instance, an evaluation of over 2000 users of travel and airline websites indicated that 70% of customers with Internet access booked air travel online (Keynote Systems, 2005). Another study conducted in the US by Claria Corporation (2005) found that 88% of US consumers have used the Internet to research or purchase their trips. According to Card, Chen, and Cole (2003), airline tickets were the most commonly purchased travel products online. Figure 13 shows the results of the choice of respondents booking channels in the current study.

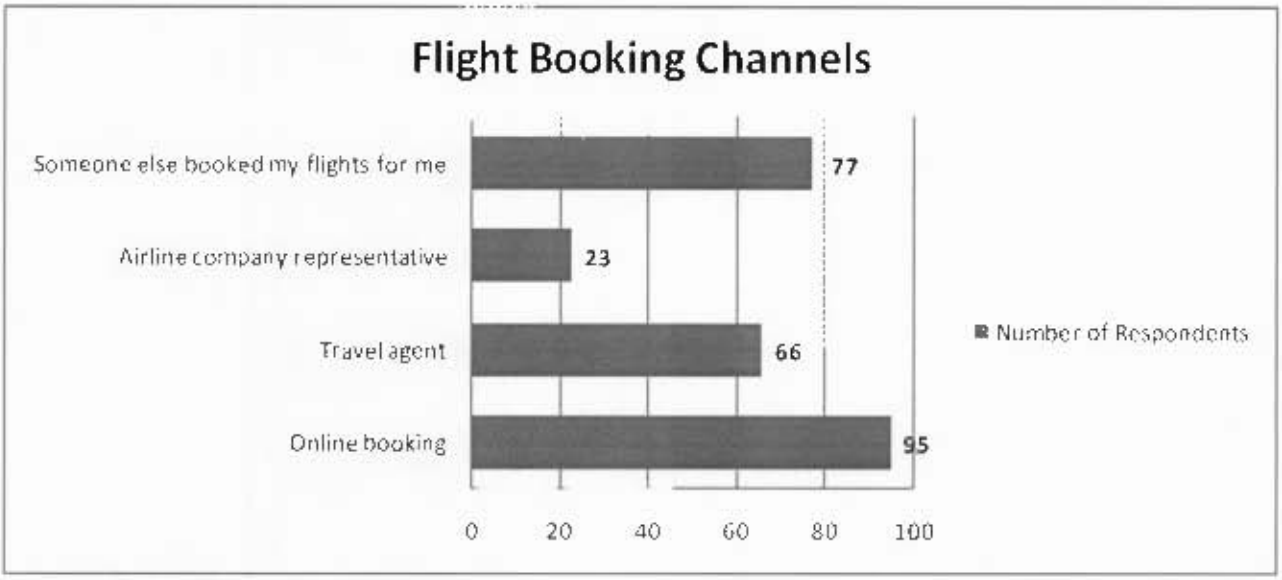

Figure 13: Respondents' Flight Booking Channels

5.2.8 Airlines chosen by respondents

Figure 14 illustrates the number of airlines chosen by respondents per Region. 51% of respondents chose to evaluate an airline website from Africa while 25% selected an airline website from Europe and Middle East. 16% of respondents chose to assess an airline website from Asia and Australia and the remaining 8% selected airline websites from North America. Because the study sample was drawn from the South African population and from a research university having a majority of African students, most participants chose to evaluate airline websites from the African region.

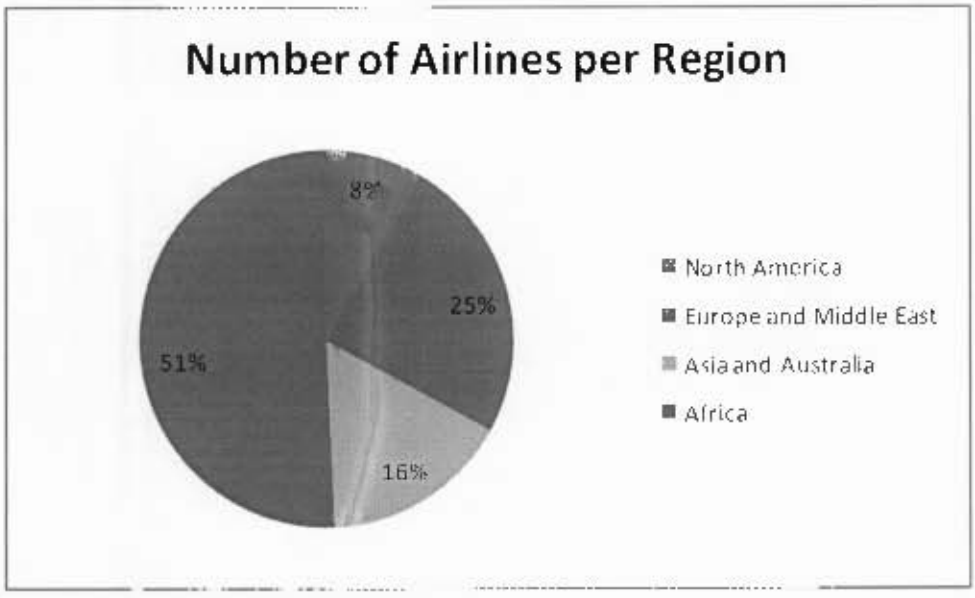

Figure 14: Airlines chosen by Respondents in each Region

In terms of choice of specific airlines, the most popular choices were South African Airways, from the African region (chosen by 14.1% of respondents), followed by Emirates Airlines, from Europe and Middle East (chosen by 12.7% of the respondents). Figure 15 shows a detailed breakdown of airline choices (used for evaluation) of respondents. These results are once again consistent with the assumptions made before the study was undertaken. Respondents chose to evaluate airlines predominantly from South Africa and the African region due to the context in which the study was undertaken. It was however interesting to find that a high number of respondents chose to evaluate Emirates Airlines. A reason for this might be that Emirates Airlines, a full service airline based in the United Arab Emirates, is one of the fastest growing airlines in the world and has received more than 300 international awards for excellence since its launch in 1985 (Emirates Group, 2008). Another reason might be that, in June 2007, Emirates Airlines increased its South African presence to 18 weekly flights as demand increased for convenient air travel connections between South Africa and cities in the Middle East (SouthAfrica.info, 2007). The airline company also started offering economic flight options from South Africa (SouthAfrica.info, 2007).

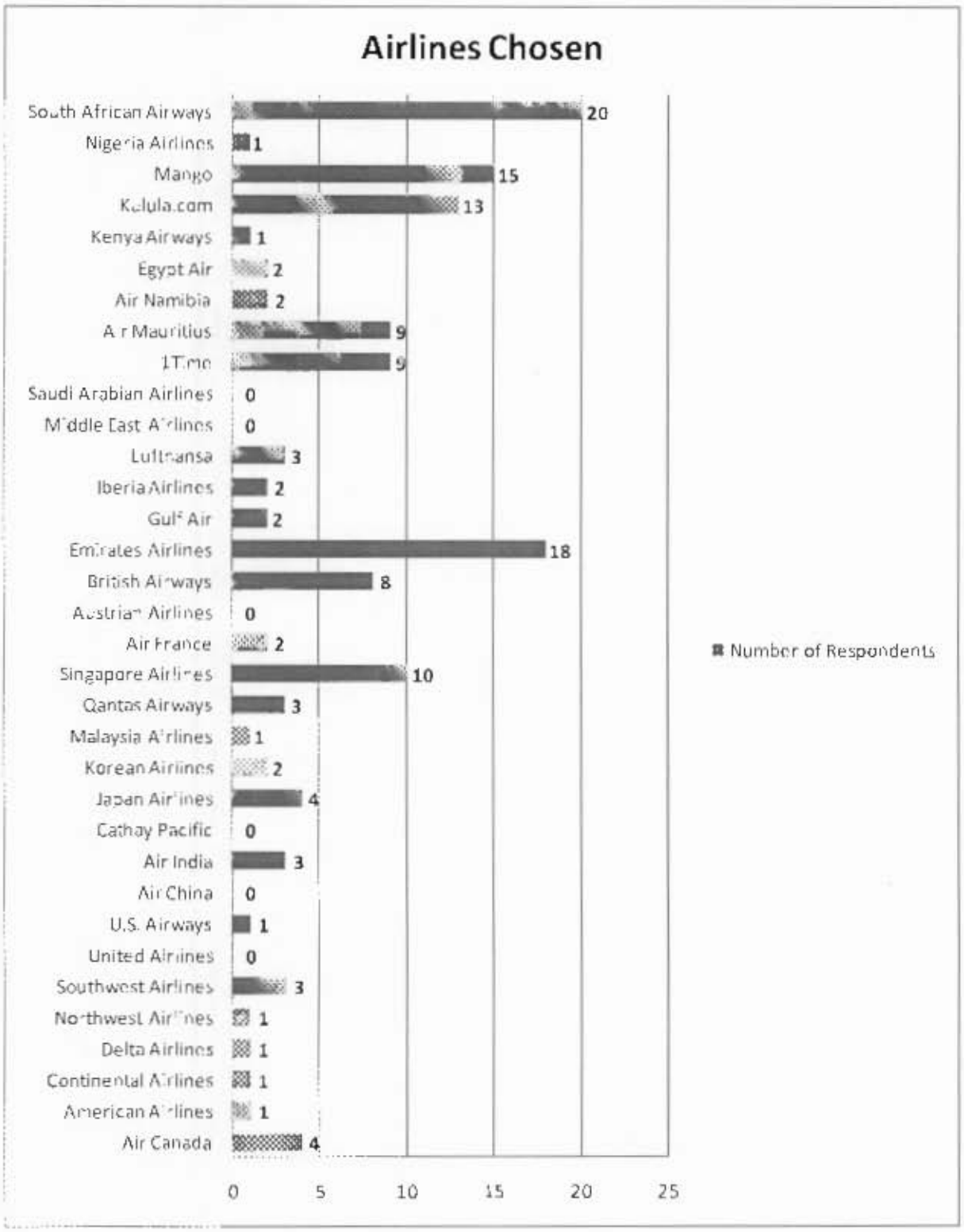

Figure 15: Airlines chosen by Respondents

Breakdown of Airlines within each Region

The following charts show the breakdown of airlines chosen by respondents within each of the four regions.

Africa

Within the Africa region, South African Airways was rated by most respondents. Being one of the first national airlines worldwide, South African Airways is the largest and most important African airline and has received many "Best African Airline" awards from different magazines and international organisations (Star Alliance, 2008a). This might explain the high number of respondents which chose to evaluate the airline's website.

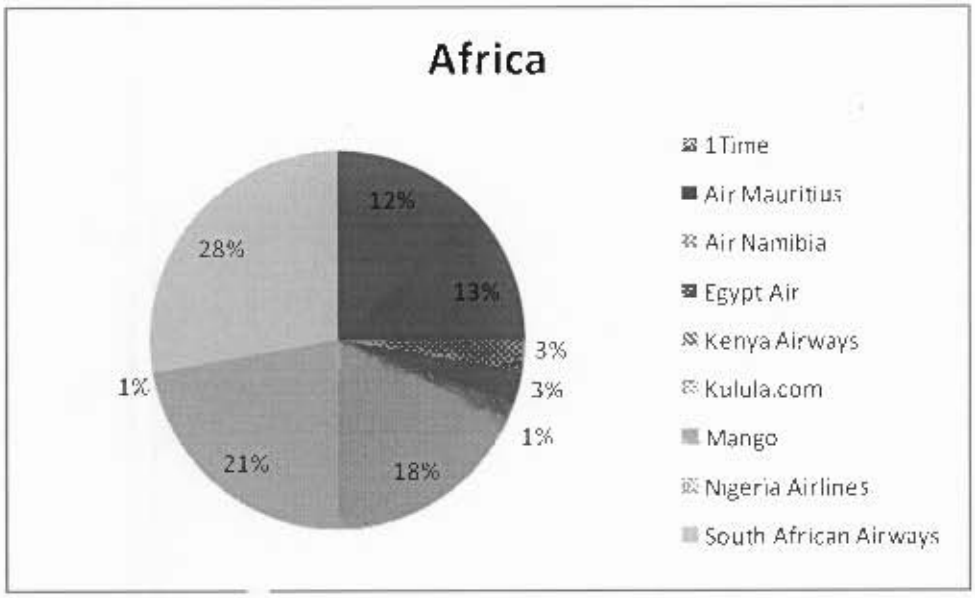

Figure 16: Airlines chosen by Respondents in Africa Region

Asia & Australia

Within Asia and Australia, Singapore Airlines emerged as the favourite choice for respondents. Singapore Airlines is also recognised as one of the world's leading carriers with a remarkably efficient in-flight service (Wirtz & Johnston, 2003). A reason for the high selection rate for Singapore Airlines might be that some of the respondents might have had good experiences while actually flying with the airline and thus decided to choose to evaluate its website amongst others.

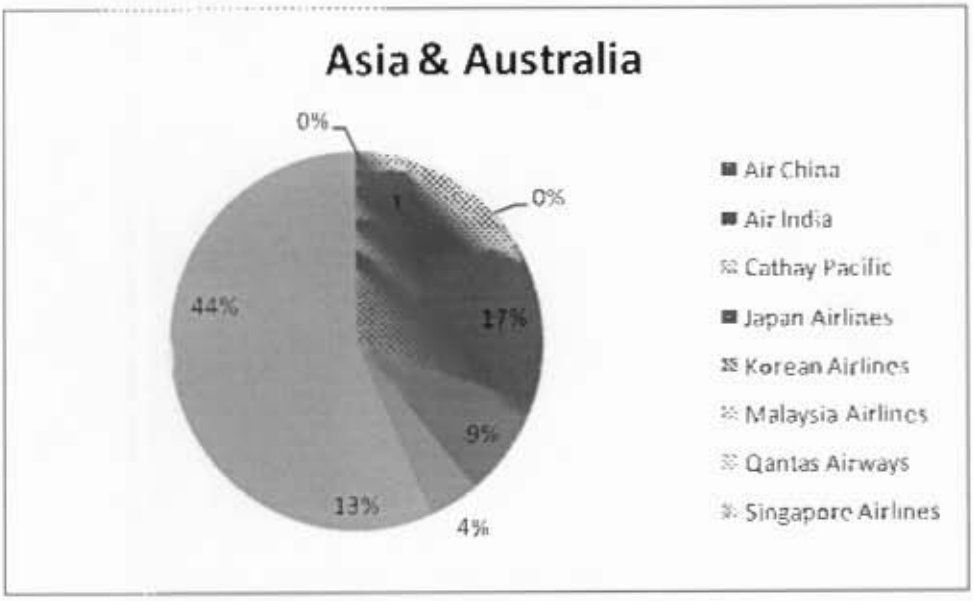

Figure 17: Airlines chosen by Respondents in Asia & Australia Region

Europe & Middle East

Respondents who chose to assess an airline from the Europe and Middle East region selected Emirates Airlines above all the others.

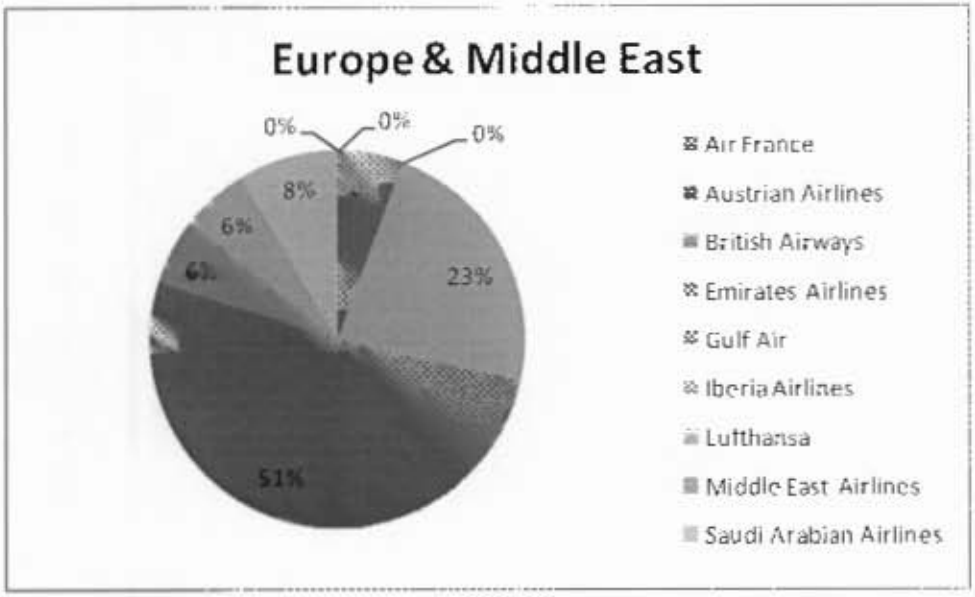

Figure 18: Airlines chosen by Respondents in Europe & Middle East Region

North America

Not many respondents chose to rate airline websites from the North American region. However, most of those who did, selected to evaluate Air Canada, Canada's largest full service airline. Air Canada has received numerous awards including "Best Airline in North America" by the world's largest survey of air travellers conducted by the independent UK-based research firm Skytrax between August 2006 and June 2007, the prestigious Airline Industry Achievement Award in 2007 for Market Leadership, 'Best Airline in North America' and 'Best Airline in Canada' by readers of the US magazine, Global Traveller and 'Best Business Class to Canada' by readers of the US magazine, Business Traveller (Star Alliance, 2008b).

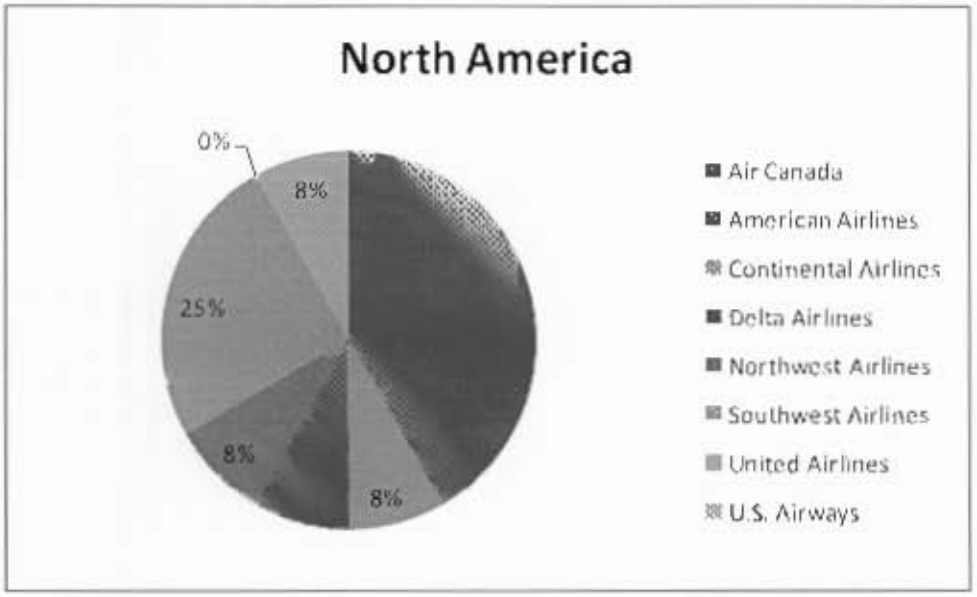

Figure 19: Airlines chosen by Respondents in North America Region

5.3 Descriptive Statistics for Questionnaire Items

Descriptive statistics were performed for each of the questionnaire items. A detailed breakdown of these results can be found in Appendix D. To facilitate the description of the results, Table 7 illustrates the respective codes used to identify each item from the questionnaire.

Code	Item	Code	Item
INFO1	1. The information of the airline website is pretty much what I need to carry out my tasks.	EA4	19. I have a negative feeling when I use the airline website.
INFO2	2. The airline website adequately meets my information needs.	VA1	26. The airline website displays visually pleasing design.
INFO3	3. The information on the airline website is effective.	VA2	27. The airline website is visually appealing.
TAIL1	4. The airline website allows me to interact with it to receive tailored information.	VA3	28. The airline website is visually pleasing.
TAIL2	5. The airline website has interactive features, which help me accomplish my task.	INNOV1	29. The airline website design is innovative.
TAIL3	6. I can interact with the airline website in order to get information tailored to my specific needs.	INNOV2	30. The airline website is creative.
OC1	7. The airline website allows transactions online.	INNOV3	31. The airline website is innovative.
OC2	8. All my business with the airline company can be completed via the website.	CI1	32. The website projects an image consistent with the airline company's image.
OC3	9. Most of the business processes can be completed via the airline website.	CI2	33. The website fits my image of the airline company.
RA1	10. It is easier to use the website to complete my business with the airline company than it is to telephone, fax, or mail a representative.	CI3	34. The website's image matches that of the airline company.
RA2	11. The airline website is easier to use than calling an organisational representative agent on the phone.	RESPT1	35. When I use the airline website, there is very little waiting time between my actions and the website's actions.
RA3	12. The airline website is an alternative to calling customer service or sales.	RESPT2	36. The airline website loads quickly.
EOU1	20. The display pages within the airline website are easy to read.	RESPT3	37. The airline website takes long to load.
EOU2	21. The text on the airline website is easy to read.	USRSAT1	38. I am satisfied with my decision to visit and use the airline website.
EOU3	22. The airline website labels are easy to understand.	USRSAT2	39. My choice to visit and use the airline website was a wise one.
IO1	23. Learning to operate the airline website is easy for me.	USRSAT3	40. I feel badly regarding my decision to visit and use the airline website.
IO2	24. It would easy for me to become skilful at using the airline website.	USRSAT4	41. I think I did the right thing by visiting and using the airline website.
IO3	25. I find the airline website easy to use.	CONTINT1	42. If I needed this product or service in the future, I would be likely to buy it from this airline website.
TR1	13. I feel safe in my transactions with the airline website.	CONTINT2	43. If I needed this product or service in the future, I would probably revisit and reuse this airline website.
TR2	14. I trust the airline website to keep my personal information safe.	CONTINT3	44. If I needed this product or service in the future, I would not revisit and reuse this airline website.
TR3	15. I trust the airline website administrators will not misuse my personal information.	CONTINT4	45. I would recommend this airline website to a friend interested in this product or service.
EA1	16. I feel happy when I use the airline website.		
EA2	17. I feel pleased when I use the airline website.		
EA3	18. I have a positive feeling when I use the airline website.		

Table 7: Codes for Questionnaire Items

Items 19 (EA4), 37 (RESPT3), 40 (USRSAT3) and 44 (CONTINT3) were the only items that were negatively phrased. As such, the data related to these items had to be modified. Since data followed a five-point Likert scale, this was done by subtracting all items 19, 37, 40 and 44 data from 6 as follows:

Value used in data analysis (19, 37, 40 & 44) = 6 – Original value (19, 37, 40 & 44)

It was found that the mean score for Item 7 (OC1) was the highest (4.49) while the mean score for Item 30 (INNOV2) was the lowest (3.20). This implies that the responses for Item 7 (OC1) ranged between Agree and Strongly Agree on the five-point Likert scale and those for Item 30 (INNOV2) ranged between Neutral and Agree on the Likert scale. The mean scores for each of the 3 items related to INFO, OC, RA, EOU and IO were generally high with most of the item mean scores greater than 4.01 out of the scale of 5.

The standard deviation of Item 37 (RESPT3) was the highest (1.13) while that of Item 1 (INFO1) was the lowest (0.64). The standard deviation for items 10 (RA1), 35 (RESPT1), 36 (RESPT2), 37 (RESPT3), 42 (CONTINT1), 43 (CONTINT2) and 44 (CONTINT3) were greater than 1.0, indicating that the range of students' responses for these items were broad.

5.4 Descriptive Statistics for Questionnaire Constructs

Descriptive statistics were performed for each of the questionnaire constructs (12 relating to website quality, 1 to user satisfaction and 1 to continuance intention). Table 8 shows the results of this analysis.

	Valid N	Mean	Minimum	Maximum	Std.Dev.
INFO	142	4.138498	2.333333	5.000000	***0.579724***
TAIL	142	3.962441	1.333333	5.000000	0.685432
OC	142	***4.359155***	2.333333	5.000000	0.627796
RA	142	4.131455	1.000000	5.000000	0.823184
TR	142	3.650235	1.000000	5.000000	0.841522
EOU	142	4.039906	2.000000	5.000000	0.669595
IO	142	4.262911	1.666667	5.000000	0.726435
EA	142	3.651408	1.000000	5.000000	0.803338
VA	142	3.723005	1.333333	5.000000	0.855126
INNOV	142	***3.220657***	1.000000	5.000000	0.815422
CI	142	3.934272	1.000000	5.000000	0.784241
RESPT	142	3.427230	1.000000	5.000000	***1.035513***
USRSAT	142	3.883803	2.000000	5.000000	0.713759
CONTINT	142	3.799296	1.000000	5.000000	0.937421

Table 8: Descriptive Statistics for Questionnaire Constructs

The above table shows that Innovativeness (INNOV) had the lowest mean (3.22) of all the website quality constructs. On the other hand, Online Completeness (OC) had the highest mean (4.36). This can be explained by the fact that respondents valued the completeness of the information provided on the airline website more than how innovative the airline website was to them. Interestingly, the mean scores for all the constructs (website quality, user satisfaction and continuance intention) were all above 3.22 out of a scale of 5 (i.e. ranging from Neutral to Strongly Agree).

Similar to the results of the questionnaire items, the standard deviation of the Response Time construct (RESPT) was the highest (1.03) while that of Informational Fit-to-Task (INFO) was the lowest (0.58). The variation in responses for Response Time can be explained by the varying Internet connection speed during different times of the day at the research university.

Students who rated the airline website during peak hours might have experienced problems with the proper loading of the airline website and were thus quite biased when assessing the response time of the airline website.

5.5 Descriptive Statistics for the Second-Order Categories

A descriptive statistical analysis was performed on the five second-order categories of website quality (Usefulness, Ease of Use, Trust, Response Time and Entertainment) and on the User Satisfaction and Continuance Intention constructs (with results similar to the descriptive statistics in 1.10). It is useful to note that the results of the descriptive statistics for the second-order categories are the ones that are more important to consider. Table 9 shows the results of this analysis.

	Valid N	Mean	Minimum	Maximum	Std.Dev.
USEFULNESS	142	4.147887	2.166667	5.000000	***0.509310***
EASEOFUSE	142	***4.151408***	2.000000	5.000000	0.608873
TRUST	142	3.650235	1.000000	5.000000	0.841522
RESPTIME	142	***3.427230***	1.000000	5.000000	***1.035513***
ENTMNT	142	3.633803	1.538462	4.769231	0.626062
USRSAT	142	3.883803	2.000000	5.000000	0.713759
CONTINT	142	3.799296	1.000000	5.000000	0.937421

Table 9: Descriptive Statistics for Questionnaire Second-Order Categories

The above table shows that Ease of Use (EASEOFUSE) had the highest mean (4.15) of all the website quality constructs. On the other hand, Response Time (RESPTIME) had the lowest mean (3.43). Interestingly, the mean scores for all the second-order categories of website quality (USEFULNESS, EASEOFUSE, TRUST, RESPTIME and ENTMNT) and the two constructs of User satisfaction (USRSAT) and Continuance Intention (CONTINT) were mostly above 3.43 out of a scale of 5 (i.e. ranging from Neutral to Strongly Agree).

Similar to the results of the descriptive statistics for both the questionnaire items and constructs, the standard deviation of the Response Time second-order category (RESPTIME) was the highest (1.04) while that of Usefulness (which consists of INFO construct) was the lowest (0.51). Once again, the variation in responses for the Response Time second-order

category can be explained by the changing Internet connection speed during different times of the day at the research university.

Chapter 6: Testing for Reliability & Validity

It is important to test the data for reliability and validity before it can be used to perform any significant statistical test.

6.1 Testing for Reliability

One of the most widely and commonly used indicators of instrument quality is internal consistency reliability (Brown & Jayakody, 2008). The recommended measure of internal consistency is provided by the coefficient alpha or Cronbach's Alpha (Brown & Jayakody, 2008; Molla, 2002). Cronbach's Alpha (α) is a reliability coefficient that indicates how well the items in a set are positively correlated to one another (Cavana, Delahaye, & Sekaran, 2001). Generally, an alpha coefficient of 0.8 or higher is accepted. However, some authors, such as Nunally (1978) suggest 0.6 and above is acceptable, especially for initial investigations (Cavana et al., 2001). Tan and Teo (2000) advocates that a Cronbach's Alpha (α) value greater than 0.70 is indicative of a highly reliable set of questions underlying the construct that they are intended to measure.

For the purposes of this study, an Item Analysis was conducted on all the items relating to the constructs of website quality and those for constructs of User Satisfaction and Continuance Intention. As a requirement for Item Analysis, the construct being tested should contain at least three questions (items) (Hart, Esat, Rocha, & Khatieb, 2007). Each construct from the questionnaire met this requirement. The results of the Item Analysis can be found in Appendix G. Table 10 summarises the results of Appendix G and illustrates the Cronbach's Alpha (α) values for each second-order categories of website quality and constructs of User Satisfaction and Continuance Intention.

Construct/Second-order Category	Constructs	No. of Items	Cronbach α
USEFULNESS	INFO, TAIL, OC, RA	12	0.85
EASEOFUSE	EOU, IO	6	0.84
TRUST	TR	3	0.89
RESPTIME	RESPT	3	0.93
ENTMNT	VA, INNOV, EA, CI	13	0.91
USRSAT	USRSAT	4	0.91
CONTINT	CONTINT	4	0.94

Table 10: Item Analysis Results Summary

The 5 second-order categories (Usefulness, Ease of Use, Trust, Response Time and Entertainment) and the 2 constructs (User Satisfaction and Continuance Intention) yielded Cronbach's Alpha values exceeding 0.80. Based on these results, the items for each of the constructs and second-order categories can be regarded as very reliable measures of the constructs/second-order categories and are thus acceptable. These results confirm the strong reliability of the WebQual instrument and are thus consistent with studies conducted by Loiacono et al. (2007).

6.2 Testing for Validity

According to Hair, Black, Babin, and Anderson (2006), factor analysis can be used to examine the underlying patterns for a large number of variables and to determine whether the information can be condensed or summarised in a smaller set of factors with minimum loss of information. There are two types of factor analyses namely: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). EFA attempts to determine the nature of the constructs influencing a set of responses while CFA tests whether a specified set of constructs is influencing responses in a predicted way (DeCoster, 1998). For the purposes of this study, EFA was deemed the most appropriate factor analysis tool to use to examine the validity of the constructs.

According to Nunally (1978), the general criterion is that if the items for each variable load together in factor analysis and do not cross load onto other factors, then there is evidence of construct validity. Factor loadings indicate the degree of correspondence between the variable and the factor, with higher loadings making the variable representative of the factor (Hair et al., 2006). Hair et al. (2006) further state that for a sample size of 150, factor loadings of 0.45 or above are significant. To increase the accuracy, a factor loading of 0.6 was adopted. Using 0.6 as a cut-off value is higher than most research of this nature.

EFA was conducted on all the variables relating to website quality at a cut-off value of 0.60. The Varimax Normalised Rotation method was used to re-align the factors and simplify the columns in the factor matrix, in order to improve the interpretability of the data (Hair et al., 2006).

The EFA results can be found in Table 11. 12 factors were initially specified but the EFA showed the presence of only 9 distinct factors. The results indicate that the items generally loaded onto the factors matching their constructs (website quality) and the item loadings were generally greater than 0.6. An exception, however, was the Intuitive Operations (IO) construct, for which none of the three items loaded on any of the 9 factors. All the three questionnaire items for Informational Fit-to-Task (INFO) and two of the items for Tailored Communications (TAIL) loaded on the same factor (Factor 4), showing that they possibly group together as a single construct. The other item for Tailored Communications (TAIL3) had a factor loading of 0.56 which is very close to 0.6. All the items for Online Completeness (OC), Trust (TR), Ease of Understanding (EOU), Visual Appeal (VA), Innovativeness (INNOV), Consistent Image (CI) and Response Time (RESPT) grouped together and loaded on separate distinct factors with item loadings generally greater than 0.7, thereby matching their constructs.

Another interesting finding was that items for Relative Advantage (RA) and Emotional Appeal (EA) grouped together and loaded on the same factor, showing that they should possibly be grouped together as a construct and not as separate variables. The WebQual instrument had already been used in previous studies (Liu & Goodhue, 2008; Loiacono et al., 2002; Loiacono et al., 2007) and was shown to have strong validity and reliability. Based on this, the researcher did not expect any major issues during the EFA. The EFA results confirmed this. As mentioned before, a slight variation of one of the original Emotional Appeal items (from the original WebQual) was made after the pilot study but that did not seem to have any negative impact on of the construct validity of the instrument.

Two other variations of the EFA, one with a cut-off value of 0.5 and the other with a cut-off value of 0.6 but with only 5 factors, were also conducted. These are shown in Appendix E & F respectively.

Factor Loadings (Varimax normalized) Extraction: Principal Components (Marked Loadings are > 0.600000)									
Variable	**Factor 1**	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**	**Factor 7**	**Factor 8**	**Factor 9**
INFO1				*0.627817*					
INFO2				*0.798831*					
INFO3				*0.627189*					
TAIL1				*0.666022*					
TAIL2				*0.620398*					
TAIL3				0.564248					
OC1			*0.638023*						
OC2			*0.715998*						
OC3			*0.833941*						
RA1							*0.715857*		
RA2							*0.733333*		
RA3							*0.648414*		
TR1						*0.803371*			
TR2						*0.895188*			
TR3						*0.846780*			
EOU1					*0.684223*				
EOU2					*0.813056*				
EOU3					*0.763339*				
IO1									
IO2									
IO3									
EA1							*0.612515*		
EA2							*0.631712*		
EA3							*0.653620*		
EA4							*0.632407*		
VA1									*0.750576*
VA2									*0.731417*
VA3									*0.798001*
INNOV1		*0.733936*							
INNOV2		*0.727496*							
INNOV3		*0.775193*							
CI1								*0.816359*	
CI2								*0.805638*	
CI3								*0.866665*	
RESPT1	*0.857861*								
RESPT2	*0.910517*								
RESPT3	*0.879206*								

Table 11: Results of Exploratory Factor Analysis

6.3 Eigenvalue Analysis

Eigenvalue analysis illustrates how much of the variance is explained by each factor and accumulates this variance (Hart et al., 2007). The questionnaire items related to website quality (Item 1-37 on the questionnaire) loaded onto 9 factors which cumulatively accounted for 73.1% of variance, thereby suggesting sound overall construct validity. These results support the fact that the WebQual instrument is a strongly validated instrument, as tested by Loiacono et al. (2007) in their study. The results of the Eigenvalue analysis are shown in Table 12.

	Eigenvalue	% Total variance	Cumulative Eigenvalue	Cumulative %
Factor 1	12.16816	32.88693	12.16816	32.88693
Factor 2	2.86362	7.73952	15.03179	40.62645
Factor 3	2.34951	6.35004	17.38130	46.97649
Factor 4	2.25223	6.08710	19.63353	53.06359
Factor 5	1.80322	4.87357	21.43675	57.93716
Factor 6	1.77484	4.79686	23.21159	62.73402
Factor 7	1.57310	4.25162	24.78469	66.98564
Factor 8	1.18942	3.21465	25.97410	70.20028
Factor 9	1.08858	2.94210	27.06268	***73.14239***

Table 12: Results of Eigenvalue Analysis

Chapter 7: Results & Discussion

The testing of the hypotheses from section 3.5 was conducted in two stages. The first stage involved a Correlation Analysis using Spearman Rank Correlation and the second stage involved a Multiple Regression Analysis.

7.1 Correlation Analysis

Correlations between the 5 second-order categories of Website Quality and the User Satisfaction (USRSAT) and Continuance Intention (CONTINT) constructs were calculated using a non-parametric statistical test known as Spearman Rank Correlation, as the sample data comes from a Likert scale (i.e. a ranked scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Spearman Rank Correlation was also used since it does not require any distribution assumptions (Hart et al., 2007). The purpose of the correlation analysis test using Spearman Rank Correlation was to measure the strength of the relationships between the constructs/second-order categories. Table 13 illustrates the correlation matrix.

	USEFULNESS	EASEOFUSE	TRUST	RESPTIME	ENTMNT	USRSAT	CONTINT
USEFULNESS	1.000000						
EASEOFUSE	*0.497638*	1.000000					
TRUST	*0.342191*	*0.262957*	1.000000				
RESPTIME	*0.331537*	*0.369680*	*0.262243*	1.000000			
ENTMNT	*0.610154*	*0.597888*	*0.385679*	*0.347368*	1.000000		
USRSAT	*0.593058*	*0.629598*	*0.328041*	*0.399546*	*0.686664*	1.000000	
CONTINT	*0.521041*	*0.531831*	*0.328662*	*0.311884*	*0.693042*	*0.673846*	1.000000

Table 13: Results of Correlation Analysis

The results of the correlation analysis from Table 13 show that all the constructs and second-order categories were significantly and positively correlated with each other ($p < 0.05$). At the 5% significance level, the correlation between Entertainment (ENTMNT) and Continuance Intention (CONTINT) was the most significant, yielding a correlation value (r) of 0.69. This indicates that there is a relatively strong positive relationship between Entertainment (ENTMNT) and Continuance Intention (CONTINT). Furthermore, other strong significant positive correlations were between Entertainment and User Satisfaction ($r = 0.69$), User Satisfaction and Continuance Intention ($r = 0.67$), Ease of Use and User Satisfaction ($r = 0.63$), Usefulness and Entertainment ($r = 0.61$), Ease of Use and Entertainment ($r = 0.60$), and Usefulness and User Satisfaction ($r = 0.59$). The least strongly correlated constructs/second-order categories were those between Ease of Use and Trust ($r = 0.26$) as well as Trust and Response Time ($r = 0.26$).

Table 14 shows a summary of the Correlation Analysis, specifically for the hypothesised relationships in the research model.

Hypotheses	Constructs/Second-order Categories tested	Correlation Value (r value)	Relationship
H_1	USEFULNESS vs. CONTINT	0.52	Positive
H_2	USEFULNESS vs. USRSAT	0.59	Positive
H_3	EASEOFUSE vs. USEFULNESS	0.50	Positive
H_4	EASEOFUSE vs. USRSAT	0.63	Positive
H_5	EASEOFUSE vs. TRUST	0.26	Positive
H_6	EASEOFUSE vs. CONTINT	0.53	Positive
H_7	TRUST vs. USRSAT	0.33	Positive
H_8	TRUST vs. USEFULNESS	0.34	Positive
H_9	TRUST vs. CONTINT	0.33	Positive
H_{10}	RESPTIME vs. USRSAT	0.40	Positive
H_{11}	RESPTIME vs. CONTINT	0.31	Positive
H_{12}	RESPTIME vs. USEFULNESS	0.33	Positive
H_{13}	ENTMNT vs. CONTINT	0.69	Positive
H_{14}	ENTMNT vs. USRSAT	0.69	Positive
H_{15}	USRSAT vs. CONTINT	0.67	Positive

Table 14: Summary of Correlation Analysis

Surprisingly, all the variables were positively correlated, showing that they are all related to each other to some degree. Further analysis using Multiple Regression Analysis will help confirm the specific relationships and which of the hypotheses will be accepted or rejected.

7.2 Multiple Regression Analysis

The second stage of hypothesis testing involved the running of a multiple regression analysis. Multiple regression analysis is a statistical technique that is used to examine the relationship between a dependent variable and several independent variables (Cavana et al., 2001; Hair et al., 2006). It is done by calculating the beta value (β) of each relationship hypothesised and proportion of the variance of the dependent variable that is explained by the independent variables, referred to as the coefficient of determination (R^2) (Van der Heijden, 2003; Lederer, Maupin, Sena, & Zhuang, 2000).

The basic formulation of a multiple regression analysis equation is as follows:

$$Y_1 = b_1X_1 + b_2X_2 + ... + b_nX_n + c$$

Where

Y_1 = independent variable

X_1, X_2, X_n = dependent variables

b_1, b_2, b_n = regression coefficients representing the amount the dependent variable Y changes when the corresponding independent variable changes 1 unit.

c = constant where the regression line intercepts the y axis, representing the amount the dependent variable Y will be when all the independent variables (X_1, X_2, X_n) are 0. (Garson, 2008)

For the purposes of the current research, the following multiple regression equations were built to test the hypothesised relationships in the research model:

Equation 1: **CONTINT** = $a + h_1 * USEFULNESS + h_{15} * USRSAT + h_6 * EASEOFUSE + h_9 * TRUST + h_{11} * RESPTIME + h_{13} * ENTMNT$

Equation 2: **USRSAT** = $b + h_2 * USEFULNESS + h_4 * EASEOFUSE + h_7 * TRUST + h_{10} * RESPTIME + h_{14} * ENTMNT$

Equation 3: **USEFULNESS** = $d + h_3 * EASEOFUSE + h_8 * TRUST + h_{12} * RESPTIME$

Equation 4: **TRUST** = $e + h_5 * EASEOFUSE$

Where h1 to h18 represent the beta values (β) corresponding to the hypotheses they represent and a, b, d & e are the constants.

7.2.1 Regression Analysis Results for Equation 1

According to Pindyck and Rubinfield (1998), recursive simultaneous equation models such as Equations 1 to 4 can be estimated using multiple linear regressions applied to each question separately. As such, multiple linear regression tests were first performed on Hypotheses H_1, H_6, H_9, H_{11}, H_{13} and H_{15} (Equation 1). In these instances, the independent variables were Usefulness (USEFULNESS), User Satisfaction (USRSAT), Ease of Use (EASEOFUSE), Trust (TRUST), Response Time (RESPTIME) and Entertainment (ENTMNT), whilst the dependent variable was Continuance Intention (CONTINT). Table 15 illustrates the results of the multiple regression analysis for Equation 1.

	Regression Summary for Dependent Variable: CONTININTENT (Masters.sta) R= .77989966 R²= .60821318 Adjusted R²= .59083208 F(6,135)=34.934 p<0.0000 Std.Error of estimate: .59963					
N=142	Beta	Std.Err of Beta	B	Std Err of B	t(135)	p-level
Intercept			-0.902297	0.444973	-2.02776	0.044553
USEFULNESS	0.031759	0.073932	0.058455	0.136077	0.42957	0.668190
EASEOFUSE	0.024890	0.077512	0.038321	0.119492	0.32070	0.748935
TRUST	0.040088	0.061484	0.044657	0.068491	0.65201	0.515506
RESPONSETIME	-0.020175	0.062749	-0.018264	0.056805	-0.32151	0.748319
ENTMENT	0.403811	0.083640	0.604638	0.125236	4.82799	0.000004
USERSAT	0.392582	0.086146	0.515601	0.113141	4.55717	0.000011

Table 15: Regression Analysis Results for Equation 1

The coefficient of determination (R^2) value for the multiple regression model of Equation 1 was 60.82%. This means that 60.82% of the total variation in Continuance Intention (CONTINT) can be explained by the independent variables (Usefulness, Ease of Use, Trust, Response Time, Entertainment and User Satisfaction). The results of hypothesis testing are further explained in Section 7.3.

Equation 1 thus becomes:

$$\textbf{CONTINT} = -0.902 + 0.058*USEFULNESS + 0.516*USRSAT + 0.038*EASEOFUSE + 0.045*TRUST - 0.018*RESPTIME + 0.605*ENTMNT$$

7.2.2 Regression Analysis Results for Equation 2

Multiple linear regression tests were then performed on Hypotheses H_2, H_4, H_7, H_{10} and H_{14} (Equation 2). For this equation, the independent variables were Usefulness (USEFULNESS), Ease of Use (EASEOFUSE), Trust (TRUST), Response Time (RESPTIME) and Entertainment (ENTMNT), whilst the dependent variable was User Satisfaction (USRSAT). Table 16 illustrates the results of the multiple regression analysis for Equation 2.

N=142	Regression Summary for Dependent Variable: USERSAT (Masters.sta) R= .78036456 R²= .60896884 Adjusted R²= .59459270 F(5,136)=42.360 p<0.0000 Std.Error of estimate: .45446					
	Beta	Std.Err. of Beta	B	Std.Err. of B	t(136)	p-level
Intercept			-0.392712	0.335559	-1.17032	0.243919
USEFULNESS	0.210791	0.071337	0.295407	0.099974	2.95485	0.003688
EASEOFUSE	0.247629	0.074279	0.290286	0.087075	3.33376	0.001104
TRUST	0.034032	0.061132	0.028855	0.051850	0.55670	0.578647
RESPONSETIME	0.188707	0.060328	0.130072	0.041583	3.12802	0.002153
ENTMENT	0.312578	0.078822	0.356363	0.089863	3.96563	0.000118

Table 16: Regression Analysis Results for Equation 2

The coefficient of determination (R^2) value for the multiple regression model of Equation 2 was 60.90%. This means that 60.90% of the total variation in User Satisfaction (USRSAT) can be explained by the independent variables (Usefulness, Ease of Use, Trust, Response Time, and Entertainment).

Equation 2 thus becomes:

USRSAT = -0.393 + 0.295**USEFULNESS* + 0.290**EASEOFUSE* + 0.0289**TRUST* + 0.130**RESPTIME* + 0.356**ENTMNT*

7.2.3 Regression Analysis Results for Equation 3

Equation 3 was then tested using multiple linear regressions on Hypotheses H_3, H_8 and H_{12}. For this equation, the independent variables were Ease of Use (EASEOFUSE), Trust (TRUST) and Response Time (RESPTIME) whilst the dependent variable was Usefulness (USEFULNESS). Table 17 illustrates the results of the multiple regression analysis for Equation 3.

N=142	Regression Summary for Dependent Variable: USEFULNESS (Masters.sta) R= .58688597 R²= .34443514 Adjusted R²= .33018373 F(3,138)=24.168 p<.00000 Std.Error of estimate: .41683					
	Beta	Std.Err. of Beta	B	Std.Err of B	t(138)	p-level
Intercept			2.079814	0.250974	8.286956	0.000000
EASEOFUSE	0.411718	0.078122	0.344394	0.065348	5.270178	0.000001
TRUST	0.161362	0.076249	0.097669	0.046147	2.116267	0.036113
RESPONSETIME	0.167217	0.076215	0.082245	0.037486	2.194026	0.029907

Table 17: Regression Analysis Results for Equation 3

The coefficient of determination (R^2) value for the multiple regression model of Equation 3 was 34.44%. This means that 34.44% of the total variation in Usefulness (USEFULNESS) can be explained by the independent variables (Ease of Use, Trust and Response Time).

Equation 3 thus becomes:

USEFULNESS = 2.080 − 0.344**EASEOFUSE* + 0.098**TRUST* + 0.082**RESPTIME*

7.2.4 Regression Analysis Results for Equation 4

Lastly, Equation 4 was tested using multiple linear regressions on Hypotheses H_5. For this equation, the independent variable was Ease of Use (EASEOFUSE) while the dependent variable was Trust (TRUST). Table 18 illustrates the results of the multiple regression analysis for Equation 4.

	Regression Summary for Dependent Variable: TRUST (Masters.sta) R= .38322876 R²= .14686428 Adjusted R²= .14077045 F(1,140)=24.101 p<.00000 Std Error of estimate: .78005					
N=142	Beta	Std.Err. of Beta	B	Std Err of B	t(140)	p-level
Intercept			1.451402	0.452656	3.206412	0.001665
EASEOFUSE	0.383229	0.078063	0.529659	0.107891	4.909226	0.000003

Table 18: Regression Analysis Results for Equation 4

The coefficient of determination (R^2) value for the multiple regression model of Equation 4 was 14.69%. This means that 14.69% of the total variation in Trust (USEFULNESS) can be explained by the independent variable (Ease of Use). This was quite low as compared to the R^2 for the other three equations.

Equation 4 thus becomes:

TRUST = 1.45 + 0.530**EASEOFUSE*

7.3 Results of the Hypothesis Testing

Based on the two stages outlined in section 7.1 and 7.2 (correlation analysis and multiple regression analysis), the results of the hypothesis testing is outlined below.

Hypothesis	Independent Variable	Dependent Variable	Beta Value β	p-level ($p < 0.05$)	Hypothesis Supported
H1	Usefulness (USEFULNESS)	Continuance Intention (CONTINT)	0.058	0.668190	No
H2	Usefulness (USEFULNESS)	User Satisfaction (USRSAT)	0.295	***0.003688***	***Yes***
H3	Ease of Use (EASEOFUSE)	Usefulness (USEFULNESS)	0.344	***0.000001***	***Yes***
H4	Ease of Use (EASEOFUSE)	User Satisfaction (USRSAT)	0.290	***0.001104***	***Yes***
H5	Ease of Use (EASEOFUSE)	Trust (TRUST)	0.530	***0.000003***	***Yes***
H6	Ease of Use (EASEOFUSE)	Continuance Intention (CONTINT)	0.038	0.748935	No
H7	Trust (TRUST)	User Satisfaction (USRSAT)	0.029	0.578647	No
H8	Trust (TRUST)	Usefulness (USEFULNESS)	0.098	***0.036117***	***Yes***
H9	Trust (TRUST)	Continuance Intention (CONTINT)	0.045	0.515506	No
H10	Response Time (RESPTIME)	User Satisfaction (USRSAT)	0.130	***0.002153***	***Yes***
H11	Response Time (RESPTIME)	Continuance Intention (CONTINT)	-0.018	0.748319	No
H12	Response Time (RESPTIME)	Usefulness (USEFULNESS)	0.082	***0.029907***	***Yes***
H13	Entertainment (ENTMNT)	Continuance Intention (CONTINT)	0.605	***0.000004***	***Yes***
H14	Entertainment (ENTMNT)	User Satisfaction (USRSAT)	0.356	***0.000118***	***Yes***
H15	User Satisfaction (USRSAT)	Continuance Intention (CONTINT)	0.516	***0.000011***	***Yes***

Table 19: Results of Hypothesis Testing

A more detailed outline of the hypotheses and whether they were supported or not, follows. A tick (✓) represents Hypothesis Supported and a cross (✗) shows that the hypothesis was not supported:

Hypothesis	Hypothesis Description	Supported/ Not Supported
H_1	*Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has a positive effect on Continuance Intention for an airline website.*	✗
H_2	*Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has a positive effect on User Satisfaction with an airline website.*	✓
H_3	*Ease of Use (ease of understanding, intuitive operations) has a positive effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website.*	✓
H_4	*Ease of Use (ease of understanding, intuitive operations) has a positive effect on User Satisfaction with an airline website.*	✓
H_5	*Ease of Use (ease of understanding, intuitive operations) has a positive effect on Trust with an airline website.*	✓
H_6	*Ease of Use (ease of understanding, intuitive operations) has a positive effect on Continuance Intention for an airline website.*	✗
H_7	*Trust has a positive effect on User Satisfaction with an airline website.*	✗
H_8	*Trust has a positive effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website.*	✓
H_9	*Trust has a positive effect on Continuance Intention for an airline website.*	✗
H_{10}	*Response Time has a positive effect on User Satisfaction with an airline website.*	✓
H_{11}	*Response Time has a positive effect on Continuance Intention for an airline website.*	✗
H_{12}	*Response Time has a positive effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website.*	✓
H_{13}	*Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has a positive effect on Continuance Intention for an airline website.*	✓
H_{14}	*Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has a positive effect on User Satisfaction with an airline website.*	✓
H_{15}	*User Satisfaction has a positive effect on Continuance Intention for an airline website.*	✓

Table 20: Outline of Hypothesis Testing Results

7.4 Hypothesis Testing and Discussion

This section discusses the results of the hypothesis testing from the previous section. Each of the hypotheses is discussed and compared to the relevant literature that initially suggested that these hypotheses should be tested.

7.4.1 Hypothesis 1: Not Supported

$H_0 1$: Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has no effect on Continuance Intention for an airline website.

$H_1 1$: Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has a positive effect on Continuance Intention for an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_1	Usefulness (USEFULNESS)	Continuance Intention (CONTINT)	0.668190	Do not reject null hypothesis ($H_0 1$)

Table 21: Hypothesis 1 – Results Summary

An overall p-value of 0.668190 was obtained from the regression analysis for H_1. Since the p-value is greater than 0.05, this means that the null hypothesis should not be rejected and it can be concluded that there is sufficient evidence to infer that Usefulness has no effect on the Continuance Intention for an airline website. This implies that even if online airline website users find the website useful (in terms of the information that it provides, its completeness and its relative advantage to other media of communication with the airline), they did not think that they would continue using or buying from it in the future. It is also possible that the respondents rated airline websites which they did not find useful enough to believe that they would continue using them in the future.

These results are in contradiction to research conducted by Bhattacherjee (2001), which found that perceived usefulness was a key determinant in influencing customer intentions to continue using an e-commerce system. The researcher believes that this contradiction could be attributed to the fact that an airline website is a different kind of e-commerce system from the one investigated by Bhattacherjee (2001). It might also be that users of an airline website enjoy a much more personalised interaction with an airline website than with an online brokerage system (investigated by Bhattacherjee (2001)). However, further research can be

done with a different sample (for e.g. business people instead of students) to investigate the association between Usefulness and Continuance Intention for an airline website.

7.4.2 Hypothesis 2: Supported

$H_0$2: Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has no effect on User Satisfaction with an airline website.

$H_1$2: Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) has a positive effect on User Satisfaction with an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_2	Usefulness (USEFULNESS)	User Satisfaction (USRSAT)	0.003688	Reject null hypothesis ($H_0$2)

Table 22: Hypothesis 2 - Results Summary

The results provided support for this hypothesis. Since the p-value (0.003688) was less than 0.05, the null hypothesis can be rejected and it can be concluded that there is strong evidence to infer that Usefulness has a positive effect on User Satifaction with an airline website. This implies that the more useful an airline website is (in terms of information fit-to-task, tailored communications, online completeness and relative advantage), the more satisfied the user is with the website. These results are consistent with previous research conducted by Rai et al. (2002) who observed that perceived usefulness positively influenced user satisfaction with an information system. The results are also supported by Brown and Jayakody (2008).

7.4.3 Hypothesis 3: Supported

$H_0$3: Ease of Use (ease of understanding, intuitive operations) has no effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website.

$H_1$3: Ease of Use (ease of understanding, intuitive operations) has a positive effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_3	Ease of Use (EASEOFUSE)	Usefulness (USEFULNESS)	0.000001	Reject null hypothesis ($H_0$3)

Table 23: Hypothesis 3 - Results Summary

As shown in Table 23, p-value (0.000001) is less than 0.05. Hence, there is overwhelming evidence to reject the null hypothesis and infer that Ease of Use has a positive effect on the Usefulness of an airline website. These results are confirmed by Dutta-Bergman (2004) and Mukherji and Mukherji (1998) who showed that perceived ease of use had a positive effect on perceived usefulness. Furthermore, it is important to mention that Ease of Use → Usefulness (i.e. Ease of Use positively influences Usefulness) is a key association in the Technology Acceptance Model of Davis (1989). The results are also consistent with Loiacono et al. (2007).

7.4.4 Hypothesis 4: Supported

$H_0$4: Ease of Use (ease of understanding, intuitive operations) has no effect on User Satisfaction with an airline website.

$H_1$4: Ease of Use (ease of understanding, intuitive operations) has a positive effect on User Satisfaction with an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_4	Ease of Use (EASEOFUSE)	User Satisfaction (USRSAT)	0.001104	Reject null hypothesis ($H_0$4)

Table 24: Hypothesis 4 - Results Summary

A p-value of 0.001104 was obtained from the regression analysis for H_4. Since the p-value is less than 0.05, the null hypothesis can be rejected. It can thus be concluded that there is overwhelming evidence to infer that Ease of Use has a positive effect on User Satisfaction with an airline website. In other words, if users of the airline website perceive the website as easy to understand and provides them with intuitive operations that enhance their online experience, then they would be satisfied with the website. These results are consistent with studies conducted in other contexts such as e-learning systems (conducted by Sun et al., 2008) and health information websites (conducted by Kim & Chang, 2007), where perceived ease of use increases customer satisfaction with the website/online system.

7.4.5 Hypothesis 5: Supported

$H_0$5: Ease of Use (ease of understanding, intuitive operations) has no effect on Trust with an airline website.

$H_1$5: Ease of Use (ease of understanding, intuitive operations) has a positive effect on Trust with an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_5	Ease of Use (EASEOFUSE)	Trust (TRUST)	0.000003	Reject null hypothesis ($H_0$5)

Table 25: Hypothesis 5 - Results Summary

From the multiple regression results, it can be deduced that there is overwhelming evidence to infer that Ease of Use has a positive effect on Trust with an airline website (p-value = 0.000003). The easier it is for the user to understand the airline website content and perform intuitive operations, he/she will have more trust in the website and feel more comfortable in conducting online e-commerce transactions on the website. These findings are consistent with research conducted by Koufaris and Hampton-Sosa (2004) and a very recent study by Tung et al. (2008) where they investigated the association between perceived ease of use and trust in an electronic logistics information system. This shows the possible generalisability of the original hypothesis.

7.4.6 Hypothesis 6: Not Supported

$H_0$6: Ease of Use (ease of understanding, intuitive operations) has no effect on Continuance Intention for an airline website.

$H_1$6: Ease of Use (ease of understanding, intuitive operations) has a positive effect on Continuance Intention for an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_6	Ease of Use (EASEOFUSE)	Continuance Intention (CONTINT)	0.748935	Do not reject null hypothesis ($H_0$6)

Table 26: Hypothesis 6 - Results Summary

The results did not support the hypothesis. Since the p-value (0.748935) was greater than 0.05, there was not enough evidence to reject the null hypothesis. Hence, there was sufficient evidence to infer that Ease of Use had no effect on Continuance Intention for an airline website. These findings are inconsistent with research conducted by a recent study conducted

by Roca and Gagné (2008) on e-learning systems. A possible explanation could be that an e-learning system differs significantly from an airline website. The study sample which assessed the airline websites did not intend to continue using or buying from the websites in the future even if the websites' contents were easy to understand and allowed them to perform intuitive operations.

7.4.7 Hypothesis 7: Not Supported

$H_0 7$: Trust has no effect on User Satisfaction with an airline website.

$H_1 7$: Trust has a positive effect on User Satisfaction with an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_7	Trust (TRUST)	User Satisfaction (USRSAT)	0.578647	Do not reject null hypothesis ($H_0 7$)

Table 27: Hypothesis 7 - Results Summary

As can be seen from Table 27, there is sufficient evidence not to reject the null hypothesis. Since the p-value (0.578647) is greater than 0.05, it can be inferred that Trust has no effect on User Satisfaction with an airline website. This was particularly surprising since it was expected that if users of the airline website perceive it to be trustworthy in terms of the security of monetary transactions, they would be satisfied with the website. However, the results of the multiple regression analysis do not seem to support this hypothesis. This is in contradiction to studies conducted by Wang and Head (2007), Molla and Licker (2001) as well as Kim et al. (2003), which provided empirical support for the association between trust and user satisfaction. The researcher believes that such an inconsistency could be attributed to the fact that many of the students within the sample might have visited the airline websites for flight information only without conducting any monetary transactions.

7.4.8 Hypothesis 8: Supported

$H_0$8: Trust has no effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website.

$H_1$8: Trust has a positive effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_8	Trust (TRUST)	Usefulness (USEFULNESS)	0.036117	Reject null hypothesis ($H_0$8)

Table 28: Hypothesis 8 - Results Summary

The results showed significant statistical evidence to support this hypothesis. The p-value for this hypothesis was 0.036117 (i.e. less than 0.05), thus providing strong evidence to reject the null hypothesis and to conclude that Trust has a positive effect on the Usefulness of an airline website. In other words, if users of an airline website trust the website, they are more likely to perceive it to be useful. These results further verify a recent study conducted by Tung et al. (2008) on electronic logistics information systems, where they provided empirical evidence of the influence of trust on perceived usefulness. The results are also in accordance with studies conducted by Brown and Jayakody (2008), Horst et al. (2007) and, Agarwal and Karahanna (2000).

7.4.9 Hypothesis 9: Not Supported

$H_0$9: Trust has no effect on Continuance Intention for an airline website.

$H_1$9: Trust has a positive effect on Continuance Intention for an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_9	Trust (TRUST)	Continuance Intention (CONTINT)	0.515506	Do not reject null hypothesis ($H_0$9)

Table 29: Hypothesis 9 - Results Summary

There was sufficient evidence to infer that Trust has no effect on Continuance Intention for an airline website (p-value = 0.515506). Even if users of an airline website trust the website, in terms of performing monetary transactions and security of their personal information, they do not seem to be willing to continue using the airline website in the future. These results contradict the association between trust and future e-commerce system usage, proposed by Liao et al. (2006) in their study.

7.4.10 Hypothesis 10: Supported

$H_0$10: Response Time has no effect on User Satisfaction with an airline website.

$H_1$10: Response Time has a positive effect on User Satisfaction with an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_{10}	Response Time (RESPTIME)	User Satisfaction (USRSAT)	0.002153	Reject null hypothesis ($H_0$10)

Table 30: Hypothesis 10 - Results Summary

Since the p-value (0.002153) was less than 0.05, there was overwhelming evidence to reject the null hypothesis and infer that Response Time has a positive effect on User Satisfaction with an airline website. These results were expected by the researcher since Internet bandwidth was a considerable issue within the university environment in which the study was undertaken. The faster the airline website would load, the more satisfied the user would be. It also shows the quality of the airline website (Delone & McLean, 2003).

7.4.11 Hypothesis 11: Not Supported

$H_0$11: Response Time has no effect on Continuance Intention for an airline website.

$H_1$11: Response Time has a positive effect on Continuance Intention for an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_{11}	Response Time (RESPTIME)	Continuance Intention (CONTINT)	0.748319	Do not reject null hypothesis ($H_0$11)

Table 31: Hypothesis 11 - Results Summary

The hypothesised association between Response Time and Continuance Intention for an airline website was not found. Since the p-value (0.748319) was much greater than 0.05, there was strong evidence not to reject the null hypothesis. As such, results showed that even if the airline website loads quickly and responds fast enough to user actions, it does not necessarily mean that the user will continue using the website in the future.

7.4.12 Hypothesis 12: Supported

$H_0$12: Response Time has no effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website.

$H_1$12: Response Time has a positive effect on the Usefulness (information fit-to-task, tailored communications, online completeness, relative advantage) of an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_{12}	Response Time (RESPTIME)	Usefulness (USEFULNESS)	0.029907	Reject null hypothesis ($H_0$12)

Table 32: Hypothesis 12 - Results Summary

The multiple regression results shown in Table 32 (p-value = 0.02997, i.e. $p < 0.05$) illustrate that there is strong evidence to infer that Response Time has a positive effect on the Usefulness of an airline website. In other words, the amount of time that the airline website takes to respond to user actions can positively influence the user's perceived usefulness of the website (in terms of the accuracy and completeness of the information the website offers as well as its relative advantage over other media of communications with the airline company).

7.4.13 Hypothesis 13: Supported

$H_0$13: Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has no effect on Continuance Intention for an airline website.

$H_1$13: Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has a positive effect on Continuance Intention for an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_{13}	Entertainment (ENTMNT)	Continuance Intention (CONTINT)	0.000004	Reject null hypothesis ($H_0$13)

Table 33: Hypothesis 13 - Results Summary

A p-value of 0.000004 (i.e. less than 0.05) provided overwhelming evidence to reject the null hypothesis. These results allowed the researcher to conclude that Entertainment has a positive effect on Continuance Intention for an airline website. As expected, the entertainment side of an airline website (in terms of its visual appeal, innovativeness, the emotional appeal it provides to the user and the consistency of the image it projects to them) influences the user to continue using or perhaps make a future purchase (online flight booking or any other type of monetary transactions) from the website. These findings are in agreement with the view

that some consumers seek to be entertained while they browse Internet pages and that if a website provides them with a certain level of entertainment they are more likely to continue browsing (Loiacono et al., 2007).

7.4.14 Hypothesis 14: Supported

$H_0$14: Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has no effect on User Satisfaction with an airline website.

$H_1$14: Entertainment (visual appeal, innovativeness, emotional appeal, consistent image) has a positive effect on User Satisfaction with an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_{14}	Entertainment (ENTMNT)	User Satisfaction (USRSAT)	0.000118	Reject null hypothesis ($H_0$14)

Table 34: Hypothesis 14 - Results Summary

The results supported this hypothesis. Since the p-value was less than 0.05, there was overwhelming evidence to reject the null hypothesis and infer that Entertainment has a positive effect on User Satisfaction with an airline website. Similar to the previous hypothesis (Hypothesis 13), the fact that the airline website provides the user with some kind of entertainment (in terms of its visual appeal, innovativeness, the emotional appeal it provides to the user, and the consistency of the image it projects to them) increases their satisfaction with the website. Given the age distribution of the sample (see section 5.4), these findings were not surprising. A young sample may more likely to consider Entertainment as a major determinant of satisfaction with an airline website.

7.4.15 Hypothesis 15: Supported

$H_0$15: User Satisfaction has no effect on Continuance Intention for an airline website.

$H_1$15: User Satisfaction has a positive effect on Continuance Intention for an airline website.

Hypothesis	Independent Variable	Dependent Variable	p-level	Conclusion
H_{15}	User Satisfaction (USRSAT)	Continuance Intention (CONTINT)	0.000011	Reject null hypothesis ($H_0$15)

Table 35: Hypothesis 15 - Results Summary

The multiple regression results shown in Table 35 illustrate that there is overwhelming evidence to reject the null hypothesis and infer that User Satisfaction has a positive effect on Continuance Intention (p-value = 0.000011) for an airline website. In other words, the more satisfied the user is with an airline website, the more likely he/she will continue using or

making a future purchase (online flight booking or any other type of monetary transactions) from the website. These findings are consistent with the similar relationships identified by Jeong et al. (2001) and tested by Bhattacherjee (2001) and Lin et al. (2005). Similar results were also identified by Chiu et al. (2005) and in a more recent study by Brown and Jayakody (2008). These previous studies were conducted in different online contexts. The results of this research therefore add to the generalisability of the original hypothesis.

7.5 Summary of Results and Refined Model

The researcher initially hypothesised that the following second-order categories of website quality had an impact on user satisfaction and continuance intention with an airline website:

a. Usefulness: Information fit-to-task, tailored communications, online completeness and relative advantage.
b. Ease of Use: Ease of understanding and intuitive operations.
c. Trust: Trust.
d. Response Time: Response time.
e. Entertainment: Visual appeal, innovativeness, emotional appeal and consistent image.

Furthermore, additional relationships between these second-order categories were identified from literature leading to more hypotheses being created for testing and validation within the context of the airline industry. A total of fifteen hypotheses were established for investigation.

The data analysis revealed that there was support for only ten of the fifteen hypotheses. These findings provide a basis for refining the initial research model. The refined model of airline website quality, user satisfaction and continuance intention is shown in Figure 20.

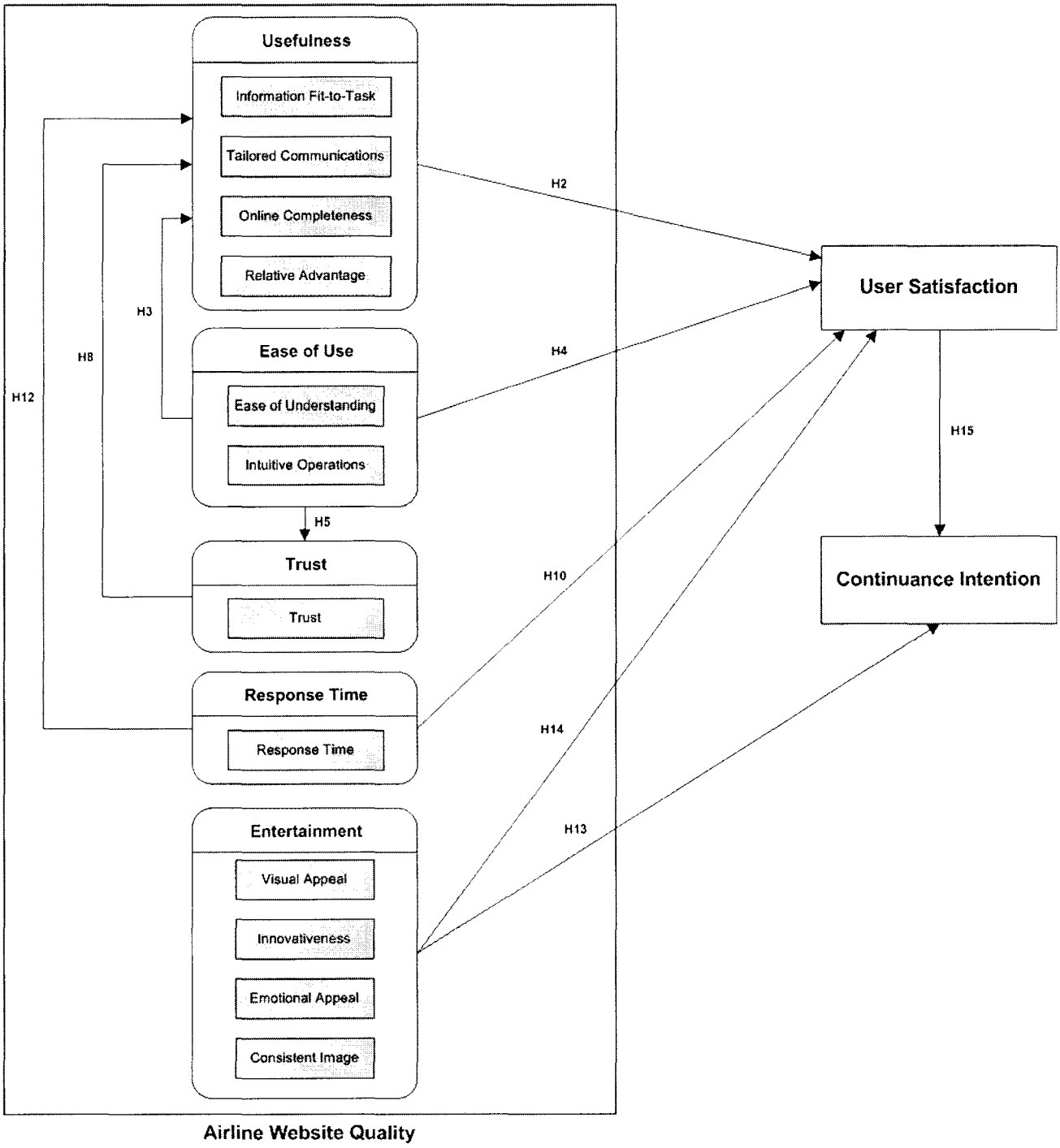

Figure 20: Refined Model of Airline Website Quality

The model shown in Figure 20 is a refined version of Figure 5. The strongest and most significant influences identified were those of Ease of Use → Usefulness (p-value = 0.000001), Ease of Use → Trust (p-value = 0.000003), Entertainment → Continuance Intention (p-value = 0.000004), User Satisfaction → Continuance Intention (p-value = 0.000011) and Entertainment → User Satisfaction (p-value = 0.000118). The positive influence of Ease of Use on Usefulness was expected as this relationship has been heavily emphasised in previous studies, particularly those involving the Technology Acceptance

Model by Davis et al. (1989). Literature also provided strong empirical evidence for the association between User Satisfaction and Continuance Intention. This relationship was further confirmed by the results of the current study (with a strong positive correlation of 0.67 and a p-value of 0.000011), within the context of the airline industry.

Amongst the five second-order categories of airline website quality, only Trust did not have an effect on User Satisfaction and Continuance Intention. This was quite surprising since it was expected that with online users being more security-conscious in this new century (Chu, 2001), trust would be a major factor for them in deciding whether they should continue to use the airline website.

Results indicate that online users seem to be very interested in the entertainment side of airline websites, more specifically in their visual appeal, innovativeness, emotional appeal and consistent image. All the three hypotheses related to the Entertainment second-order category were supported. An implication that arises out of these results is that in order to target more online users, airline websites must focus more on the previously mentioned website features while designing and updating their websites.

7.6 Additional Findings

Additional analyses were conducted on the data collected. The first analysis is a comparison of website quality across the four different regions that were being investigated (i.e. North America, Europe & Middle East, Asia & Australia and Africa). The second analysis is a comparison of website quality between the five airline websites which most respondents chose to evaluate. The purpose of these further investigations was to gain some more insights on the state of global airline website quality.

7.6.1 Cross-region comparison of website quality

Airline websites from each of the four regions demonstrated their own characteristics and it is thus possible that there may be a difference in the relative importance of the core website quality attributes. To clearly understand whether there were in fact significant differences between the four regions, one-way ANOVAs were conducted to test each second-order category as well as each of the constructs that make up these categories. An ANOVA test is used to find out if there is a significant difference between two or more group means.

However, it does not tell what means there is a significant difference between. To resolve this, a Tukey's HSD post hoc test can be designed to perform a pairwise comparison of the means to identify where the significant difference is. Tukey's HSD test is more appropriate than Fisher's LSD test in this case since more than three comparison groups are being analysed (Jones, 2002). Since unequal sample sizes are being used (12 for North America, 35 for Europe & Middle East, 23 for Asia & Australia, 72 for Africa), a variation of Tukey's HSD test, namely Tukey's Unequal N HSD test (also known as Tukey-Kramer test) can be used. As such, one-way ANOVA tests followed by Tukey's Unequal N HSD tests were conducted. Levene's test confirmed homogeneity of variances between the groups for all the website quality attributes, except Trust (Appendix K). However, P-Plots for all the second-order categories (Appendix L) showed that most of the residuals were close enough to the regression line to assume normality of data.

The process of delineating the WebQual model into its different constructs resulted in a large number of separate tests. A detailed breakdown of these tests can be found in Appendix O. Table 35 shows a summary of the results.

Second-Order Categories and Constructs	**Mean and Standard Deviation**				**Sig. ($p < 0.05$)**
	North America (n = 12)	**Europe & Middle East (n = 35)**	**Asia & Australia (n = 23)**	**Africa (n = 72)**	
Usefulness	4.24 (0.41)	4.26 (0.44)	4.09 (0.59)	4.09 (0.52)	0.359
Information Fit-to-task	4.17 (0.48)	4.25 (0.52)	4.03 (0.72)	4.12 (0.57)	0.536
Tailored Communications	4.03 (0.54)	4.11 (0.70)	3.94 (0.73)	3.88 (0.68)	0.430
Online Completeness	4.33 (0.62)	4.43 (0.62)	4.49 (0.58)	4.29 (0.65)	0.490
Relative Advantage	4.44 (0.52)	4.26 (0.64)	3.91 (0.98)	4.09 (0.88)	0.225
Ease of Use	4.11 (0.87)	4.26 (0.51)	3.95 (0.64)	4.17 (0.59)	0.295
Ease of Understanding	3.92 (1.10)	4.15 (0.61)	3.75 (0.71)	4.10 (0.57)	0.104
Intuitive Operations	4.31 (0.82)	4.36 (0.60)	4.14 (0.79)	4.25 (0.75)	0.724
Trust	3.44 (0.38)	4.03 (0.67)	3.72 (1.02)	3.48 (0.86)	***0.010***
Trust	3.44 (0.38)	4.03 (0.67)	3.72 (1.02)	3.48 (0.86)	***0.010***
Response Time	3.78 (1.06)	3.70 (0.84)	3.35 (1.24)	3.26 (1.03)	0.129
Response Time	3.78 (1.06)	3.70 (0.84)	3.35 (1.24)	3.26 (1.03)	0.129

Entertainment	3.56 (0.83)	3.80 (0.50)	3.51 (0.69)	3.60 (0.62)	0.276
Visual Appeal	3.75 (1.09)	4.00 (0.79)	3.58 (0.96)	3.63 (0.79)	0.158
Innovativeness	2.97 (0.67)	3.45 (0.79)	3.01 (0.92)	3.22 (0.80)	0.151
Emotional Appeal	3.77 (0.81)	3.79 (0.67)	3.52 (0.90)	3.60 (0.83)	0.537
Consistent Image	3.69 (1.09)	3.98 (0.72)	3.90 (0.90)	3.96 (0.73)	0.712

Table 36: Results of Cross-region comparison

The results showed that there were no significant differences within the Usefulness, Ease of Use, Response Time and Entertainment second-order categories. This means that there were also no significant differences between the constructs of these second-order categories across the four different regions. However, even if all the constructs displayed relatively strong results (i.e. an average range of 3.75 - 4.05) across the four regions, an interesting finding, as shown in Table 36, was the differences found in the construct/second-order category of Trust. A p-value of 0.010 (i.e. < 0.05) was obtained for this second-order category/construct. Further analysis using Tukey's Unequal N HSD test revealed that this significant difference occurred between Europe & Middle East, and Africa. In order to further investigate these differences, a Fisher's LSD test was also conducted. This test confirmed the significant differences in Trust between Europe & Middle East, and Africa. It further revealed significant differences between North America and Europe & Middle East. According to Carlson et al. (2003), trust and trust building are expected to be a major predictor and differentiator of future success for companies involved in e-commerce. The low mean values for Trust in North America and Africa regions possibly imply that online trust is still a major issue of concern as perceived by respondents who rated airline websites within these two regions. On the other hand, the high mean score obtained by airline websites within the Europe & Middle East region possibly indicate that respondents are more familiar with airline websites within this region (such as Air France, British Airways, Lufthansa, Emirates Airlines) and thus are more willing to conduct monetary transactions on these websites.

7.6.2 Comparisons between the five most rated airline websites

Further data analyses were conducted to identify any significant differences in website quality between the five most rated airline websites within the study. Using data collected from Section 1 of the questionnaire (Airline websites), it was found that the five most rated airline websites were as follows:

1. South African Airways (20 respondents)
2. Emirates Airlines (18 respondents)
3. Mango (15 respondents)
4. Kulula.com (13 respondents)
5. Singapore Airlines (10 respondents)

It was interesting to see that three South African airlines featured in the top 5 airline websites rated by respondents. As mentioned in section 5.9, a reason for this was because the sample was drawn from a South African population, meaning that it might have been biased as to the choice of airline website to evaluate for this research.

With this data, a further comparison was made to identify whether there were any significant differences between the five airlines in terms of the constructs/second-order categories of website quality. Similar to the previous comparisons (section 7.6.1), one-way ANOVAs were conducted to test each second-order category as well as each of the constructs that make up these categories. Levene's test confirmed homogeneity of variances between the groups for all the website quality attributes, except for Ease of Use and Trust (Appendix M). However, none of these second-order categories violated the assumptions of normality. P-Plots for all the second-order categories (Appendix N) showed that most of the residuals were close enough to the regression line to assume normality of data. Once again, due to unequal sample sizes and more than three comparison groups, Tukey's Unequal N HSD tests were

used to indicate where the significant differences occurred. A detailed breakdown of these tests can be found in Appendix P. Table 37 shows a summary of the results.

Second-Order Categories and Constructs	Mean and Standard Deviation					Sig. (p < 0.05)*
	South African Airways (n = 20)	Emirates Airlines (n = 18)	Mango (n = 15)	Kulula.com (n = 13)	Singapore Airlines (n = 10)	
Usefulness	4.03 (0.49)	4.28 (0.48)	4.22 (0.29)	4.41 (0.41)	4.30 (0.36)	0.144729
Information Fit-to-task	4.12 (0.47)	4.28 (0.54)	4.16 (0.56)	4.33 (0.49)	4.50 (0.48)	0.334202
Tailored Communications	4.00 (0.51)	4.20 (0.63)	4.07 (0.55)	4.08 (0.60)	4.07 (0.62)	0.873067
Online Completeness	4.05 (0.83)	4.30 (0.71)	4.51 (0.45)	4.56 (0.39)	4.63 (0.43)	0.067051
Relative Advantage	3.97 (0.77)	4.33 (0.58)	4.16 (0.55)	4.67 (0.61)	4.00 (0.89)	***0.048964***
Ease of Use	4.03 (0.52)	4.19 (0.50)	4.21 (0.27)	4.49 (0.42)	4.15 (0.64)	0.132897
Ease of Understanding	4.07 (0.49)	4.15 (0.56)	4.09 (0.39)	4.28 (0.45)	3.83 (0.93)	0.434768
Intuitive Operations	4.00 (0.78)	4.24 (0.60)	4.33 (0.40)	4.69 (0.48)	4.47 (0.42)	***0.022823***
Trust	3.55 (0.85)	3.87 (0.53)	3.53 (0.76)	3.82 (0.81)	3.60 (1.26)	0.668421
Trust	3.55 (0.85)	3.87 (0.53)	3.53 (0.76)	3.82 (0.81)	3.60 (1.26)	0.668421
Response Time	3.12 (0.89)	3.72 (0.74)	2.91 (0.71)	3.77 (1.06)	3.90 (0.75)	***0.005672***
Response Time	3.12 (0.89)	3.72 (0.74)	2.91 (0.71)	3.77 (1.06)	3.90 (0.75)	***0.005672***
Entertainment	3.48 (0.49)	3.83 (0.52)	3.85 (0.55)	4.01 (0.48)	3.68 (0.69)	0.061197
Visual Appeal	3.42 (0.57)	4.31 (0.49)	3.76 (0.82)	4.23 (0.70)	3.67 (0.90)	***0.000772***
Innovativeness	3.25 (0.72)	3.48 (0.72)	3.64 (0.82)	3.59 (0.60)	3.27 (0.84)	0.467448
Emotional Appeal	3.51 (0.65)	3.75 (0.84)	3.93 (0.39)	3.90 (0.74)	3.98 (0.56)	0.263171
Consistent Image	3.72 (0.55)	3.81 (0.73)	4.02 (0.80)	4.36 (0.54)	3.70 (1.04)	0.103268

Table 37: Results of comparison of website quality across the 5 most rated airline websites

The results from Table 37 showed that there were significant differences within Relative Advantage, Intuitive Operations, Response Time and Visual Appeal between the five most rated airline websites. All the constructs within the Usefulness second-order category were rated highly by respondents (Mean range of 3.97 - 4.67). For the Relative Advantage construct, a p-value of 0.048964 (i.e. < 0.05) was obtained, indicating that there were significant differences between the five most rated airline websites. However, since a

Tukey's Unequal N HSD test could not reveal where these differences were occurring, a Fisher's LSD test was conducted. It was found that differences in Relative Advantage occurred between South African Airways and Kulula.com (p-value = 0.005118), and Kulula.com and Singapore Airlines (p-value = 0.022621). The mean rating for South African Airways was lower than that of Kulula.com, showing that the sample perceived Kulula.com to give them a better relative advantage (in terms of the ease of using the website to complete their business with the airline company instead of using other alternative media) than South African Airways. With regard to Kulula.com and Singapore Airlines, the same argument can justify the higher mean rating attributed to Kulula.com. Respondents found that the airline website offered them a significant advantage over alternative channels of communications with the airline company. As a new distribution channel, the Internet offers an unprecedented level of access for the general public (Bai et al., 2008). Furthermore, the new paradigms of the Internet medium present a whole set of benefits for customers and companies by allowing them to make use of new ways of exchanging information, communicating, and conducting business (Hoffman & Novak, 1996; Shchiglik & Barnes, 2004). It allows prospective travellers to research different options, seek out the best prices and book their flights online (Laudon & Traver, 2002).

Within the Ease of Use second-order category, a one way ANOVA test identified significant differences in the Intuitive Operations construct for the five airlines. Tukey's Unequal N HSD test showed that these differences occurred between South African Airways and Kulula.com (p-value = 0.028480). A further analysis using Fisher's LSD revealed two additional significant differences; between Emirates Airlines and Kulula.com, South African Airways and Singapore Airlines. These results demonstrated that respondents perceived some of the airlines to be easier to use than others. The difference between South African Airways and Singapore Airlines was that a higher mean rating was obtained by Singapore Airlines on the Intuitive Operations construct. Kulula.com obtained the highest mean ratings showing that the airline website allowed users to perform more intuitive operations than the other websites. Interestingly, the word "Kulula" means "easy" in one of the 11 official languages of South Africa (i.e., Zulu). The results obtained confirm this. Being the oldest low-cost airline in Africa and with more than 2 billion South African rands in revenue each year and over 650000 unique browsers monthly, Kulula.com prides itself as being the largest online retailer in South Africa (Mohale, 2008). The airline has centred itself primarily on its web presence and initially focused on online travel (Mohale, 2008). However, its new focus

includes a diversification of its online market strategy by creating additional sub-brands (namely Kulula air, Kulula travel and Kulula connect) (Mohale, 2008).

Significant differences were also found between the five airline websites in terms of their response time. Since Tukey's Unequal N HSD test could not indicate where these differences were occurring, a Fisher's LSD test was conducted. This test revealed the following differences:

- Between South African Airways and Emirates Airlines
- Between South African Airways and Kulula.com
- Between South African Airways and Singapore Airlines
- Between Emirates Airlines and Mango
- Between Mango and Kulula.com
- Between Mango and Singapore Airlines

Interestingly, the three most rated airline websites from South Africa featured within each of these 6 significant differences identified. These websites are most probably hosted within South Africa itself by a local Internet Service Provider. It was expected that their response time would be better as compared to the other two airline websites (Emirates Airlines and Singapore Airlines). However, after looking at the mean ratings, it appeared that respondents found the websites of Emirates Airlines and Singapore Airlines to respond better to their online operations than the three South African airline websites. It is also useful to point out once again that Internet speed was a major problem in the context that the study was undertaken (i.e. within the research university). This might also have influenced students' responses, thereby leading to these significant differences. Significant differences in response time were also identified between Mango and Kulula.com, and Mango and Singapore Airlines. This can be attributed to the low mean rating (2.91) obtained by Mango in terms of Response Time as compared to those of Kulula.com (3.77) and Singapore Airlines (3.90).

Within the Entertainment second-order category, the only construct that showed significant differences across the five most rated airline websites was Visual Appeal. The p-value obtained for this construct (i.e. 0.000772) was the smallest amongst all the other constructs of website quality, showing a highly significant difference. Tukey's Unequal N tests showed that these differences in Visual Appeal were occurring between South African Airways and

Emirates Airlines, and South African Airways and Kulula.com. Further analysis using Fisher's LSD revealed additional differences, namely between Emirates Airlines and Mango, and Emirates Airlines and Singapore Airlines. This implied that respondents differed significantly in the ways they perceived the visual attractiveness of the five airline websites. The higher mean rating for Visual Appeal were obtained for Emirates Airlines (4.31) and Kulula.com (4.23). As mentioned before, Kulula.com focuses a lot on its web presence. Through the use of its trusted online platform and strong IT skills, Kulula.com has always provided its visitors with a unique online experience through its user-friendly interface (Mohale, 2008). Similarly, Emirates Airlines has heavily invested in advanced technology as part of their global strategy for ensuring long-term growth (NetOp, 2008). Providing a visually appealing and pleasing website is a way of achieving this.

Chapter 8: Conclusions

8.1 Background

During the past few years, commerce on the Internet, or e-commerce, has experienced a massive leap forward (Kim et al., 2006). In response to the fast pace of the information age, airline companies have been working hard to develop their own websites to facilitate e-commerce transactions. These websites are not only informative but are also functional (Chu, 2001). Airline websites allow Internet users to search for flight information, book flights online, make car and hotel reservations and perform other key functions. On the customer side, with increased sophistication and demanding attitudes, customers are looking for the right combination of products and services at the best price within the shortest delivery lead-time (Chu, 2001). The driving force behind information technology developments in the airline industry has been the customers' insistence upon convenience, ease of use and accurate information (Connolly & Olsen, 2000; Kim et al., 2006). Consequently, ever changing customer demand and increased global competition mean that airline companies must seek continuous improvements in their product development. In other words, having established the Internet as a suitable distribution channel, airline companies now have to look for ways to optimise their websites to improve user satisfaction and continuance intention, and ultimately gain competitive advantage over others in this dynamic industry (Benckerdorff, 2006).

In view of this inevitable business dynamic, a study was conducted that aimed to identify and gain an understanding of the characteristics of website quality that have an impact on user satisfaction and continuance intention within the global airline industry. The main goals of the study were to develop a conceptual model and empirically validate it within the context of the airline industry. The conceptual research model was developed by carefully reviewing previous academic literature on website quality (Loiacono et al., 2007), user satisfaction (Anderson & Srinivasan, 2003; Oliver, 1980; Spreng et al., 1996) and continuance intention (Bhattacherjee, 2001; Brown & Jayakody, 2008; Mathieson, 1991). After screening the vast amount of research instruments available in literature, the WebQual instrument was deemed to be the most appropriate instrument to measure user-perceived website quality. This instrument was adapted to the context of the airline industry and expanded to include items of satisfaction and continuance intention. It was then used to test the conceptual research model.

8.2 Testing of Conceptual Model

In order to test the conceptual model, the most appropriate research methodology was first identified, a relevant study sample group was selected and raw data was collected through the research instrument (adapted WebQual instrument). The study sample was chosen based on previous research which provided strong support for the use of students in research of this nature. After testing the questionnaire for face and content validity, data collection was conducted in the different computer laboratories of a research university. In total, 148 questionnaire responses were obtained, of which 6 were unusable and were hence excluded from the analysis process. The remaining data was used to statistically test the hypotheses (derived from past literature), and hence the conceptual research model. Basic descriptive statistics and graphical representations were used to illustrate the demographic profile of the sample as well as their air travel history. Descriptive statistics was also used to explain the questionnaire items, constructs and second-order categories under investigation. After exploring the reliability and validity of the research instrument based on the data obtained, correlation test and multiple linear regression analysis were conducted on the data to test the hypotheses.

8.3 Key Findings

8.3.1 Reliability and Validity of Research Instrument

The analysis suggests that the WebQual instrument is a highly reliable and valid research instrument. Cronbach's Alpha values greater than 0.80, were obtained for all the constructs/second-order categories (including User Satisfaction and Continuance Intention). Exploratory Factor Analysis showed that most of the constructs loaded on separate factors except for Information Fit-to-task and Tailored Communications, and Relative Advantage and Emotional Appeal, which loaded on the same factors. However, Eigenvalue analysis showed that the questionnaire items cumulatively accounted for 73.1% of the variance, pointing to sound overall construct validity. These results are in accordance with research conducted by Loiacono et al. (2007) and Carlson et al. (2003) amongst others, who also proved that the WebQual was a strongly reliable and valid instrument.

8.3.2 Testing of Hypotheses

The validation of the initially formulated research model in Figure 4 showed that the 5 second-order categories of website quality were all related to User Satisfaction and

Continuance Intention. However, the results provided sufficient support for 10 out of the 15 hypotheses that were formulated. Hypothesis testing delineated direct and indirect relationships between the core set of second-order categories of website quality, and user satisfaction and continuance intention. This led to the refined model in Figure 20. Overall, only Entertainment (Visual Appeal, Innovativeness, Emotional Appeal, and Consistent Image) was found to directly influence the ultimate dependent variable, Continuance Intention. User satisfaction, on the other hand, was directly impacted by four of the five second-order categories of website quality, namely Usefulness, Ease of Use, Response Time and Entertainment. Trust was found to have no significant effect on User Satisfaction. As expected by the researcher, User Satisfaction directly had a positive influence on Continuance Intention. This was consistent with the results of the numerous studies that previously investigated this link in other contexts.

Interrelationships between the second-order categories of website quality were also investigated. Ease of Use had a strong influence on Usefulness, thereby providing additional support for this relationship in the Technology Acceptance Model of Davis (1989). Ease of Use also had a significant impact on Trust. This means that the easier the airline website was for respondents to use and perform intuitive operations, they would perceive it as being more trustworthy. Furthermore, Usefulness was directly influenced by Response Time.

The confirmation of the five second-order categories of website quality and the set of 10 direct relationships provides for a parsimonious way of understanding and evaluating airline website quality and its impact on user satisfaction and continuance intention.

8.3.3 Cross-region comparison of website quality

A cross-region comparison of website quality was also conducted to identify whether there were any significant differences between the constructs/second-order categories of website quality between the four different world regions (i.e. North America, Europe & Middle East, Asia & Australia, and Africa) investigated in this paper. It was found that there were no significant differences between the four different regions in terms of Usefulness, Ease of Use, Response Time and Entertainment provided by airline websites within these regions. However, Trust was identified as the only construct/second-order category which differs between regions. Further analysis revealed that there were significant differences in Trust between Europe & Middle East and Africa, and Europe & Middle East and North America.

This means that people are still concerned about trusting African-based and North American-based airline websites, while in Europe & Middle East, they feel safer about conducting monetary transactions online on airline websites.

8.3.4 Comparison of website quality across the five most rated airline websites

Another interesting comparison that was made from the data gathered was that of website quality across the five most rated airline websites. After identifying these five airlines (i.e. South African Airways, Emirates Airlines, Mango, Kulula.com, and Singapore Airlines), it was found that there were significant differences between them in terms of their Relative Advantage, Intuitive Operations, Response Time and Visual Appeal. Table 38 summarises these findings.

Construct	Airlines that exhibited significant differences	Significant Differences
Relative Advantage	South African Airways & Kulula.com	South African Airways was perceived to offer a better relative advantage than Kulula.com.
	Kulula.com & Singapore Airlines	Kulula.com was perceived to offer a better relative advantage than Singapore Airlines.
Intuitive Operations	South African Airways & Kulula.com	Highest mean obtained by Kulula.com showing that respondents perceived Kulula.com's website to be easier to use than the South African Airways & Emirates Airlines.
	Emirates Airlines & Kulula.com	
	South African Airways & Singapore Airlines	Singapore Airlines obtained a higher mean than South Africa Airways.
Response Time	South African Airways & Emirates Airlines	Emirates Airlines obtained a higher mean than South African Airways.
	South African Airways & Kulula.com	Kulula.com obtained a higher mean than South African Airways.
	South African Airways & Singapore Airlines	Singapore Airlines obtained a higher mean than South African Airways.
	Emirates Airlines & Mango	Mango obtained the lowest mean, thereby justifying the significant differences found between its website and those of Emirates Airlines, Kulula.com and Singapore Airlines.
	Mango & Kulula.com	
	Mango & Singapore Airlines	

Visual Appeal	South African Airways & Kulula.com	Kulula.com's strong focus on web presence and user-friendliness (in terms of visual appeal) justified its higher mean score.
	South African Airways & Emirates Airlines	Highest mean obtained by Emirates Airlines showed that respondents perceived the website to be more visually appealing and pleasing to them.
	Emirates Airlines & Mango	
	Emirates Airlines & Singapore Airlines	

Table 38: Key findings of comparison of website quality across the 5 most rated airline websites

8.4 Implications for Academics

Many studies have previously been conducted to assess website quality from the user's perspective. However, few of these have looked at the airline industry in particular. This research contributes to the body of IS and IT literature on the airline industry since it provides meaningful insights into the importance of website quality in this industry. The use of a strongly validated and reliable instrument, namely the WebQual, to assess user-perceived airline website quality can provide a stepping-stone for subsequent quantitative research studies to further explore the quality of other types of B2C websites (such as travel, insurance and banking websites). Furthermore, the expansion of the instrument to further assess user satisfaction and continuance intention is a significant contribution to the IS research field. The refined instrument should be able to support a wide range of important IS, marketing and tourism studies as researchers attempt to understand a variety of issues related to the electronic market space.

8.5 Implications for Practitioners

The results of this study can have immediate significant implications for airline companies operating on the Internet. First, airline companies can use the adapted version of the WebQual instrument (as used in this study) to test user perceived quality of airline websites under development and detect which elements need improvement prior to public release. In this light, airline companies can have a clearer focus for corrective action if they know that their website is lacking on a particular construct/second-order category.

It is also believed that findings from this study can provide useful insights and understanding for airline companies to develop tailor-made and customised websites that more effectively caters for the needs of today's sophisticated travellers. Knowledge about the perceptions of users of airline websites about website quality can help airline companies to design and target their marketing strategies more effectively. This will in turn allow them to establish long-term relationships with their customers.

This study can also provide airline managers and web developers with an understanding of which constructs of website quality impact on user satisfaction and continuance intention, thereby enabling them to meet the demands of their consumer market more effectively. A poor website can cause bad press, customer dissatisfaction and customer loss (Gruman, 1999; Loiacono et al., 2007). Results of the study can also offer unique insights to airline managers on how to manage customer satisfaction and retention. By making the airline website easy to understand and by allowing users to perform intuitive operations, airline companies can make their website easy to use and hence, increase user satisfaction. Airline companies must also ensure that the information they provide on their websites are accurate, complete and tailored to user's needs and expectations. This will most likely have an impact on users' perceived usefulness and increase their satisfaction with the airline website. Furthermore, airline managers must ensure that the airline website provides the user with an advantage over other media of communications with the airline company. If it takes one hour to use the airline website to book a flight that can be done in 20 minutes by phone, then the website serves no use. Web designers of airline websites must pay particular attention to the response time of the website since this also has a major impact on user satisfaction. Airline websites should avoid flashing banners, dark graphics or other features that use too much bandwidth and slow the site.

The study found that the Entertainment side of an airline website has a big impact on Continuance Intention. Therefore, by providing innovative features, improving the visual interface, ensuring that website users formulate a positive overall impression of the image of the airline and incorporating features that would increase the emotional appeal of the website to users, airline companies can be certain that users will continue using the airline website in the future as well as recommend it to others. Airline websites should be pleasing to the eye and employ designs that make sense to its users.

Additional findings in the study showed that airline companies such as Emirates Airlines and Kulula.com are establishing themselves as leaders in terms of online website quality. Singapore Airlines, Mango and South African Airways were also found to have good airline websites. By paying particular attention to the findings of this research, these five airline companies, as well as the other airline companies that were investigated, can identify the website quality constructs that need improvement and work on these to enhance the quality of their websites and increase user satisfaction and generate website revisits.

8.6 Limitations and Further Research

Several limitations of this study, encompassing the nature of the sample and data collection procedures should be considered when interpreting the results and developing future research to extend its scope. This study was based on the perceptions of higher-level undergraduate and postgraduate students about airline website quality. As previously mentioned these respondents are typical of a substantial body of Internet users but are not necessarily representative of the whole population of Internet users. Many of these respondents were also not ongoing customers of the websites selected for evaluation. Furthermore, the student sample was required to perform a few e-commerce operations up to the point where a payment notice was displayed on their screens. This was a limitation to this study since the whole airline e-commerce experience was not captured. For example, the students did not make a complete flight booking with payment. Further research could investigate the impact of airline website quality on user satisfaction and continuance intention using broad samples of consumers (for e.g. business managers and executives, or actual airline passengers at the airport).

The study used a sample of participants who mostly evaluated South African airline websites. As such, the detailed results might not be generalisable to airline websites of other countries, but the overall findings would most definitely be relevant to most airline websites. Further research could possibly obtain perceptions of participants from the actual country hosting the airline website. That would mean using an online questionnaire rather than a paper-based one as used in the current study.

The university's slow Internet connection speed/bandwidth was a major problem for the study, especially during peak hours of the day when all students/staff members were using

the Internet. It was thus expected that the study sample would have some issues to assess the response time of the airline website they would be visiting. To counter this problem, the researcher tried to schedule the survey sessions during the afternoon where the bandwidth was expected to be much better than during the day. In addition, the questionnaire had a set of instructions relating to the assessment of the Response Time construct/second-order category to ensure that the Internet connection speed does not affect the students' responses to other second-order categories/constructs being evaluated by the questionnaire.

There were no major demographic requirements for the study except that respondents were required to have used the Internet before. Except for descriptive statistics and graphical representations, no major statistical analysis was done to investigate the effect of sample demographics on perceptions of website quality. Further research may take a step further to explore the differences between perceptions of website quality based on the demographic profiles of the sample.

According to Cheng et al. (2008), a relatively small part of an airline's online customer base accounts for the majority of its profits. As such, it is in the best interest of the airline company to build a long-term relationship with these users/visitors to ensure repeat visits to their websites. Airline companies are famous for establishing customer loyalty programs as a means of building long-term customer relationships. Increased customer loyalty is thus a major component of continuance intention. Future research may consider extending the current research model used in this study to include variables such as customer loyalty.

The study found that there were significant differences between the ways respondents trust airline websites within the four different regions of the world. These significant differences were explained in terms of the continued concerns that online users have about conducting monetary transactions on the Internet. However, these differences might also attributed to cultural differences across the four different regions. Many previous studies have investigated the effects of cultural differences on website design (for e.g. Cyr et al., 2005; Gould, Zakaria, & Affedi, 2000; Kim & Lee, 2006). As such, this avenue of research would be enhanced by looking at the effects of culture on website quality and its consequent impact on user satisfaction and continuance intention.

Only two additional analyses from the data collected were conducted, thereby adding more value to the major findings of the research. An interesting analysis that could have been done is a comparison of website quality constructs between low-cost airlines and full service carriers. However, the list of airline websites used in this study did not allow the researcher to conduct such an analysis since it mostly consisted of full service carriers. Future research could use a different set of airline websites, with a set number of low-cost airlines and full service carriers and conduct a comparison of website quality constructs between these two airline types.

Limitations notwithstanding, the study highlights the characteristics of airline website quality that have an impact on user satisfaction and continuance intention.

8.7 Conclusion

This study proposed a model that represents the important characteristics of airline website quality that have an impact on user satisfaction and continuance intention. Through empirical data collection and analysis, four dimensions of website quality including the perceived usefulness of the website, its perceived ease of use, its response time and the entertainment it provides to the user, were identified as having a statistically significant influence on the user's satisfaction with the airline website. Furthermore, it was found that only the entertainment side of the airline website can directly influence user's intention to continue using the airline website or making a future purchase on the airline website or even recommend the airline website to somebody else. This study enhances the current body of knowledge on the use of the Internet in the airline industry, specifically our understanding of the impact of website quality on user satisfaction and continuance intention. It is hoped that this study will stimulate further scholarly discussion on website quality in other industries that use the Internet as a source of competitive advantage. It is also believed that the results of this research can have direct implications for airline companies operating on the web.

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Appendix A: Glossary of Terms

B2C	Business to Consumer
CI	Consistent Image
CONTINT	Continuance Intention
EA	Emotional Appeal
E-Commerce	Electronic Commerce
ENTMNT	Entertainment
EOU	Ease of Understanding
HSD	Highly Significant Differences
INFO	Information Fit-to-Task
INNOV	Innovativeness
IO	Intuitive Operations
IS	Information Systems
IT	Information Technology
LSD	Least Significant Differences
OC	Online Completeness
RA	Relative Advantage
RESPTIME	Response Time
TAIL	Tailored Communications
TAM	Technology Acceptance Model
TR	Trust
USRSAT	User Satisfaction
VA	Visual Appeal

Appendix B: Cover Letter

Department of Information Systems
Leslie Commerce Building
Engineering Mall. Upper Campus
OR Private Bag. Rondebosch 77001
Cape Town
Tel: 650-2261
Fax No: (021) 650-2280

A Survey on Website Quality in the Airline Industry

Dear Sir/Madam,

As an Information Systems Masters student at the University of Cape Town, I am completing my dissertation on website quality in the airline industry and its impact on user satisfaction and continuance intention.

Your participation in this research will be greatly appreciated. Your input will allow me to understand the dimensions of website quality that have an impact on user satisfaction and user's intention to continue using an airline website, whilst allowing me to complete my Masters degree successfully. The survey should take about 30 minutes of your time.

Participation is voluntary. Data collected will be stored electronically and will be kept strictly confidential. Participation will be anonymous as no sensitive personal details such as name and address will be collected. However, if you wish to receive a copy of the final results of the research, you are welcome to give me your email address and the final results will be sent to you.

The survey is associated with a lucky draw competition, with prizes such as flash drives and multimedia VOIP headsets. Your email address will only be used to contact you if you turn out to be a winner in the competition. The questionnaire that will be administered has been approved by the University of Cape Town Ethics Committee and thus, meets all ethical requirements imposed by the University.

If you have any further queries, please feel free to contact either the researcher or Mr. Adrie Stander. The researchers' contact details are provided below.

Thank you for your time and cooperation.

Sincerely,

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University of Cape Town

Appendix C: Questionnaire

AIRLINE WEBSITE SURVEY

This survey consists of three sections and should take you approximately 30 minutes to complete.

Section 1: Airline Websites

INSTRUCTIONS

- Please choose only **ONE** airline company from the list provided on the next page. **Tick** the one that you chose.

- Please note that you must rate the website of the airline company that you chose.

- On the homepage of the airline website you chose to evaluate, please make sure that you select **English** as the language in which you want to view the website.

- Some of the airline websites in the list on the next page require that you specify the country that you come from on the main page of the website. Most of them do not have South Africa listed. If this is the case, please choose another country (e.g. United Kingdom) in which English is the first language to make sure that the website loads in the English language.

Region	Airline Company	Airline Website	Airline Chosen
North America	Air Canada	http://www.aircanada.ca	
	American Airlines	http://www.aa.com	
	Continental Airlines	http://www.flycontinental.com	
	Delta Airlines	http://www.delta-air.com	
	Northwest Airlines	http://www.nwa.com	
	Southwest Airlines	http://www.iflyswa.com	
	United Airlines	http://www.ual.com	
	U.S. Airways	http://www.usairways.com	

Region	Airline Company	Airline Website	Airline Chosen
Asia and Australia	Air China	http://www.airchina.com.cn	
	Air India	http://www.airindia.com	
	Cathay Pacific	http://www.cathaypacific-air.com	
	Japan Airlines	http://www.japanair.com	
	Korean Airlines	http://www.koreanair.com	
	Malaysia Airlines	http://www.malaysiaairlines.com.my	
	Qantas Airways	http://www.qantas.com.au	
	Singapore Airlines	http://www.singaporeair.com	

Region	Airline Company	Airline Website	Airline Chosen
Europe and Middle East	Air France	http://www.airfrance.com	
	Austrian Airlines	http://www.aua.com	
	British Airways	http://www.british-airways.com	
	Emirates Airlines	http://www.emirates.com	
	Gulf Air	http://www.gulfair.com	
	Iberia Airlines	http://www.iberia.com	
	Lufthansa	http://www.lufthansa.com	
	Middle East Airlines	http://www.mea.com.lb	
	Saudi Arabian Airlines	http://www.saudiairlines.com	

Region	Airline Company	Airline Website	Airline Chosen
Africa	1Time	https://www.1time.aero	
	Air Mauritius	http://www.airmauritius.com	
	Air Namibia	http://www.airnamibia.com.na/	
	Egypt Air	http://www.egyptair.com	
	Kenya Airways	http://www.kenya-airways.com	
	Kulula.com	http://www.kulula.com	
	Mango	http://www.flymango.com	
	Nigeria Airlines	http://www.nigeriaairlines.com	
	South African Airways	http://www.flysaa.com	

Section 2: Airline Website Rating

INSTRUCTIONS

- The Internet connection speed at the university is quite poor. If you are having some problems with the loading of the airline website that you chose to evaluate, please **DO NOT** change to another website. Furthermore, when you are rating the **"Response Time"** section of the questionnaire, make sure you rate it based on your overall browsing experience with the website and not based on the specific amount of time it takes to load one page.

- All the airline websites in the above list have two common functionalities. They all have a search engine and a booking engine.

- Please note that you **MUST** perform the following transactions before rating the website:
  - *Search for flight information*
    - *If you chose an airline from a region (e.g. North America), search for flight information between two cities within that region (e.g. Atlanta – New York) since the airline might not offer flights to other regions across the world.*
    - *You must try search for the cheapest flight available.*
  - *Book a flight (Make sure you complete the flight booking up to the point where you are required to provide your payment details)*

- You must simulate what you would normally do on an airline website. You can look at other aspects of the website if you want to and if you feel that these aspects will help you provide a good assessment of the website.

Please rate the airline website you chose in Section 1 by CIRCLING your choice for each statement below.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Information Fit-to-Task					
1. The information on the airline website is pretty much what I need to carry out my tasks.	1	2	3	4	5
2. The airline website adequately meets my information needs.	1	2	3	4	5
3. The information on the airline website is effective.	1	2	3	4	5
Tailored information					
4. The airline website allows me to interact with it to receive tailored information.	1	2	3	4	5
5. The airline website has interactive features, which help me accomplish my task.	1	2	3	4	5
6. I can interact with the airline website in order to get information tailored to my specific needs (Searching for flight information and booking a flight).	1	2	3	4	5
Online Completeness					
7. The airline website allows transactions online.	1	2	3	4	5
8. All my business (in connection with a particular flight) with the airline company can be completed via the website.	1	2	3	4	5
9. Most of the business processes can be completed via the airline website.	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Relative Advantage					
10. It is easier to use the website to complete my business with the airline company than it is to telephone, fax, or mail a representative.	1	2	3	4	5
11. The airline website is easier to use than calling an organisational representative agent on the phone.	1	2	3	4	5
12. The airline website is an alternative to calling customer service or sales.	1	2	3	4	5
Trust					
13. I feel safe in my transactions with the airline website.	1	2	3	4	5
14. I trust the airline website to keep my personal information safe.	1	2	3	4	5
15. I trust the airline website administrators will not misuse my personal information.	1	2	3	4	5
Emotional Appeal					
16. I feel happy when I use the airline website.	1	2	3	4	5
17. I feel pleased when I use the airline website.	1	2	3	4	5
18. I have a positive feeling when I use the airline website.	1	2	3	4	5
19. I have a negative feeling when I use the airline website.	1	2	3	4	5
Ease of Understanding					
20. The display pages within the airline website are easy to read.	1	2	3	4	5
21. The text on the airline website is easy to read.	1	2	3	4	5
22. The airline website labels are easy to understand.	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Intuitive Operations					
23. Learning to operate the airline website is easy for me.	1	2	3	4	5
24. It would be easy for me to become skillful at using the airline website.	1	2	3	4	5
25. I find the airline website easy to use.	1	2	3	4	5
Visual Appeal					
26. The airline website displays visually pleasing design.	1	2	3	4	5
27. The airline website is visually appealing.	1	2	3	4	5
28. The airline website is visually pleasing.	1	2	3	4	5
Innovativeness					
29. The airline website design is innovative.	1	2	3	4	5
30. The airline website is creative.	1	2	3	4	5
31. The airline website is innovative.	1	2	3	4	5
Consistent Image					
32. The website projects an image consistent with the airline company's image.	1	2	3	4	5
33. The website fits my image of the airline company.	1	2	3	4	5
34. The website's image matches that of the airline company.	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Response Time					
35. When I use the airline website, there is very little waiting time between my actions and the website's actions.	1	2	3	4	5
36. The airline website loads quickly.	1	2	3	4	5
37. The airline website takes long to load.	1	2	3	4	5
User Satisfaction					
38. I am satisfied with my decision to visit and use the airline website.	1	2	3	4	5
39. My choice to visit and use the airline website was a wise one.	1	2	3	4	5
40. I feel badly regarding my decision to visit and use the airline website.	1	2	3	4	5
41. I think I did the right thing by visiting and using the airline website.	1	2	3	4	5
Intention to continue using the website					
42. If I needed this product or service in the future, I would be likely to buy it from this airline website.	1	2	3	4	5
43. If I needed this product or service in the future, I would probably revisit and reuse this airline website.	1	2	3	4	5
44. If I needed this product or service in the future, I would not revisit and reuse this airline website.	1	2	3	4	5
45. I would recommend this airline website to a friend interested in this product or service.	1	2	3	4	5

Section 3: Participant Information

1) What is your gender? *(Please circle one)*
   a. Male
   b. Female

2) In which age group do you belong? *(Please circle one)*
   a. 18 – 27
   b. 28 – 37
   c. 38 – 47
   d. 48 - 57
   e. > 57

3) What is your current level of education? *(Please circle one)*
   a. Undergraduate (Second year)
   b. Undergraduate (Third year)
   c. Postgraduate (Diploma)
   d. Postgraduate (Honours)
   e. Postgraduate (Masters)
   f. Postgraduate (Doctoral)

4) How familiar are you with using the Internet? *(Please circle one)*
   a. Not familiar at all
   b. Only know how to use e-mail
   c. Know how to search for basic information
   d. Know how to search for information relating to specific goods/services
   e. Know all aspects of the Internet

5) How often do you use the Internet? *(Please circle the closest one)*
   a. Once a year
   b. Once a month
   c. Once a week
   d. Once a day
   e. More than once a day

6) What do you use the Internet for? *(You may circle more than one)*
   a. General surfing
   b. Educational research
   c. Entertainment (e.g. online games)
   d. Purchase goods/services online
   e. Other (Please specify).....

7) How many times have you travelled by plane? *(Please circle one)*
   a. Never
   b. Once
   c. Twice
   d. Thrice
   e. More than three times

8) Please circle the booking channels that you have used to book your past flights. *(You may circle more than one)*
   a. Online booking
   b. Travel agent
   c. Airline company representative
   d. Someone else booked my flights for me

END OF QUESTIONNAIRE
THANK YOU FOR YOUR TIME. PLEASE PROVIDE YOUR CONTACT DETAILS TO THE RESEARCHER ON THE SEPARATE SHEET IF YOU WISH TO PARTICIPATE IN THE LUCKY DRAW COMPETITION

Contact Details Sheet for Lucky Draw Competition

1) If you are one of the winners of the competition, how do you wish to be contacted? *(Please circle one)*
   a. By email
   b. By phone

2) Please provide your contact details:
   Email Address: .....
   Phone Number: .....

3) If you wish to receive a copy of the results of the study, please provide your email address:

   Email Address: ..... (Do not fill if you have already provided your email address in 1)

THANK YOU FOR YOUR TIME

YOU WILL BE CONTACTED SOON WITH REGARDS TO THE LUCKY DRAW COMPETITION

Appendix D: Descriptive Statistics for Questionnaire Items

	Valid N	Mean	Minimum	Maximum	Std.Dev.
INFO1	142	4.232394	2.000000	5.000000	0.637654
INFO2	142	4.133803	2.000000	5.000000	0.654812
INFO3	142	4.049296	1.000000	5.000000	0.801837
TAIL1	142	3.852113	1.000000	5.000000	0.798466
TAIL2	142	3.880282	1.000000	5.000000	0.887121
TAIL3	142	4.154930	2.000000	5.000000	0.792659
OC1	142	4.485915	1.000000	5.000000	0.731615
OC2	142	4.274648	1.000000	5.000000	0.834915
OC3	142	4.316901	2.000000	5.000000	0.737734
RA1	142	4.147887	1.000000	5.000000	1.064896
RA2	142	4.140845	1.000000	5.000000	0.993536
RA3	142	4.105634	1.000000	5.000000	0.888921
TR1	142	3.739437	1.000000	5.000000	0.927741
TR2	142	3.626761	1.000000	5.000000	0.896084
TR3	142	3.584507	1.000000	5.000000	0.954593
EOU1	142	4.007042	1.000000	5.000000	0.903080
EOU2	142	4.063380	2.000000	5.000000	0.755263
EOU3	142	4.049296	2.000000	5.000000	0.774848
IO1	142	4.260563	2.000000	5.000000	0.778064
IO2	142	4.267606	1.000000	5.000000	0.866357
IO3	142	4.260563	1.000000	5.000000	0.804946
EA1	142	3.507042	1.000000	5.000000	0.889230
EA2	142	3.612676	1.000000	5.000000	0.929032
EA3	142	3.633803	1.000000	5.000000	0.879062
EA4	142	3.852113	1.000000	5.000000	0.914402
VA1	142	3.753521	1.000000	5.000000	0.961578
VA2	142	3.690141	1.000000	5.000000	0.923938
VA3	142	3.725352	1.000000	5.000000	0.860021
INNOV1	142	3.246479	1.000000	5.000000	0.916257
INNOV2	142	3.204225	1.000000	5.000000	0.871444
INNOV3	142	3.211268	1.000000	5.000000	0.889904
CI1	142	4.014085	1.000000	5.000000	0.842033
CI2	142	3.859155	1.000000	5.000000	0.927068
CI3	142	3.929577	1.000000	5.000000	0.872332
RESPT1	142	3.450704	1.000000	5.000000	1.062430
RESPT2	142	3.359155	1.000000	5.000000	1.132007
RESPT3	142	3.471831	1.000000	5.000000	1.134211
US1	142	3.901408	1.000000	5.000000	0.792785
US2	142	3.753521	1.000000	5.000000	0.843722
US3	142	4.035211	2.000000	5.000000	0.828670
US4	142	3.845070	2.000000	5.000000	0.737023
CONTINT1	142	3.676056	1.000000	5.000000	1.035191
CONTINT2	142	3.795775	1.000000	5.000000	1.041948
CONTINT3	142	3.894366	1.000000	5.000000	1.049875
CONTINT4	142	3.830986	1.000000	5.000000	0.959993

Appendix E: Factor Analysis with cut-off value 0.5 & 9 factors

Variable	Factor Loadings (Varimax normalized) (Masters.sta) Extraction: Principal components (Marked loadings are >.500000) Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
INFO1	0.130893	0.172733	0.320652	***0.627617***	0.129281	0.131007	0.038281	-0.027374	0.236763
INFO2	0.069570	0.169764	0.397141	***0.792831***	0.072576	-0.054976	0.093624	0.186664	0.008990
INFO3	0.170211	0.174294	0.252902	***0.627189***	0.060287	-0.166966	0.095108	0.229563	0.085172
TAIL1	0.075657	0.083450	0.106336	***0.666022***	0.232446	0.182025	0.207825	-0.020708	0.081140
TAIL2	0.090868	0.076444	0.026500	***0.620398***	0.088543	0.265566	0.410920	0.161523	0.207159
TAIL3	0.121816	0.093878	-0.019124	***0.564248***	-0.015305	0.090817	0.364679	-0.138219	0.262900
OC1	-0.084151	-0.141415	***0.626023***	0.241301	0.078575	-0.016306	0.233766	0.293240	0.090517
OC2	0.023170	0.115519	***0.715998***	0.127192	0.053940	0.097072	0.061141	0.159322	-0.081915
OC3	-0.003098	0.058727	***0.833941***	0.127881	-0.042572	0.112734	0.195227	0.023860	0.069719
RA1	0.119568	0.021396	0.087905	0.261759	-0.057358	0.178414	***0.715857***	0.153017	-0.045683
RA2	0.144472	0.129910	0.045567	0.239529	-0.007497	0.242727	***0.733333***	0.086924	0.054365
RA3	0.109629	-0.232095	0.032163	0.169776	0.060482	-0.059032	***0.648414***	0.141386	0.078861
TR1	0.090070	-0.025063	0.103712	0.110271	0.078360	***0.803371***	0.210823	0.105848	0.230304
TR2	0.134730	0.164054	0.126253	0.071574	0.130053	***0.895188***	0.057411	0.095822	0.045022
TR3	0.155628	0.104833	0.092208	0.029217	0.017832	***0.846780***	0.179009	0.054394	0.069437
EOU1	0.141327	0.097979	0.053519	0.141233	***0.684223***	0.172911	0.220412	0.035497	0.272528
EOU2	-0.037845	0.129170	0.036371	0.100770	***0.813056***	-0.083077	0.017473	0.141197	0.135587
EOU3	0.058526	0.222459	0.011720	0.131535	***0.763339***	0.123195	0.057718	0.097193	0.077966
IO1	0.258915	-0.034844	0.428650	0.076160	0.345545	0.146301	0.321645	0.146419	0.314092
IO2	0.331233	-0.031509	0.429247	-0.001433	0.389329	0.173609	0.382114	-0.049243	0.312051
IO3	0.266174	0.147961	0.356225	0.111639	0.437732	0.139910	0.366491	0.046747	0.333066
EA1	0.145039	0.386553	0.198925	0.081584	0.156015	0.097726	***0.612515***	0.058646	0.137847
EA2	0.087065	0.439561	0.252173	0.071048	0.262231	0.074316	***0.631712***	0.010850	0.099075
EA3	0.135978	0.391621	0.323215	0.047510	0.166723	0.101664	***0.653620***	0.033833	0.146567
EA4	0.130295	0.341168	0.267149	0.106554	0.240670	0.122749	***0.632407***	0.120812	0.077221
VA1	0.081938	0.309807	0.080479	0.125274	0.217757	0.195453	0.128189	0.222195	***0.750576***
VA2	0.080953	0.371182	0.076580	0.232307	0.121793	0.144718	0.154580	0.244744	***0.731417***
VA3	0.058046	0.257935	0.007457	0.225117	0.139635	0.081890	0.052991	0.210636	***0.798001***
INNOV1	0.140833	***0.733936***	-0.017495	0.197634	0.169020	0.129675	0.182473	0.081825	0.298371
INNOV2	0.081435	***0.727496***	-0.011982	0.203655	0.085637	0.086084	0.171496	0.193117	0.211620
INNOV3	0.037155	***0.775193***	0.083757	0.217745	0.256731	0.053472	0.077368	0.117990	0.264646
CI1	0.009268	0.134634	0.198468	0.021567	0.086751	0.036271	0.061836	***0.816359***	0.190444
CI2	-0.016345	0.087369	0.102552	0.076571	0.026722	0.044197	0.120777	***0.895638***	0.176234
CI3	0.108759	0.092476	0.064724	-0.011560	0.173349	0.168286	0.129759	***0.866665***	0.169322
RESPT1	***0.857861***	0.103200	-0.004551	0.176659	0.038614	0.141051	0.168092	0.125360	0.015664
RESPT2	***0.910517***	0.110459	0.016981	0.148074	0.045210	0.117596	0.100501	0.004936	0.095469
RESPT3	***0.879206***	0.025416	0.032003	0.060838	0.095352	0.108084	0.226288	-0.027259	0.066691
Expl.Var	2.924241	3.003575	2.693258	3.276218	2.726057	2.774091	4.276494	2.660445	2.726303
Prp.Totl	0.079034	0.081178	0.072791	0.088546	0.073677	0.074975	0.115581	0.071958	0.073684

Appendix F: Factor Analysis with cut-off value 0.6 & 5 factors

Factor Loadings (Varimax normalized) (Masters.sta) Extraction: Principal components (Marked loadings are >.600000)					
Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
INFO1	0.116409	0.086340	0.242183	0.575655	0.261077
INFO2	-0.027864	0.175059	0.147500	*0.765146*	0.113892
INFO3	0.032199	0.233307	0.228086	*0.663556*	0.118753
TAIL1	0.154794	-0.022595	0.266543	0.558086	0.226150
TAIL2	0.291994	-0.139912	0.296530	0.583132	0.228166
TAIL3	0.207411	-0.128892	0.198060	*0.602724*	0.149113
OC1	-0.116212	0.209326	*0.654851*	0.168524	-0.003894
OC2	0.027381	0.245833	0.559171	0.082957	0.031510
OC3	-0.013278	0.174061	*0.679897*	0.110992	0.024502
RA1	0.319528	0.043033	0.539906	0.337052	-0.004612
RA2	0.391552	-0.000376	0.497859	0.340283	0.146425
RA3	0.173131	0.002903	0.467153	0.227096	-0.031669
TR1	*0.615778*	0.215757	0.257122	-0.046969	0.207578
TR2	*0.651166*	0.206544	0.171145	-0.102946	0.255873
TR3	*0.680608*	0.145288	0.183910	-0.089671	0.169280
EOU1	0.225327	-0.008074	0.267037	0.055054	*0.643583*
EOU2	-0.120725	0.052377	0.150761	-0.016452	*0.658627*
EOU3	0.077065	-0.005171	0.158616	-0.001154	*0.616956*
IO1	0.291298	0.173129	0.537235	0.074057	0.343303
IO2	0.376347	-0.027322	0.563027	-0.035054	0.388544
IO3	0.315265	0.001385	0.493473	0.151616	0.523450
EA1	0.252364	0.011864	0.482320	0.252533	0.418689
EA2	0.168438	-0.045788	0.548057	0.221524	0.508341
EA3	0.240511	0.001108	0.597440	0.218355	0.448312
EA4	0.245215	0.056943	0.573132	0.230318	0.419431
VA1	0.234486	0.376447	0.060362	0.210670	*0.668699*
VA2	0.203353	0.399373	0.052869	0.353609	*0.624428*
VA3	0.143734	0.374978	-0.050745	0.318152	0.595445
INNOV1	0.209523	0.135714	-0.014765	0.383315	*0.669597*
INNOV2	0.130599	0.236081	-0.010142	0.443123	0.563414
INNOV3	0.044109	0.181396	-0.007085	0.365363	*0.725608*
CI1	0.025847	*0.815017*	0.101983	0.050279	0.183088
CI2	0.039577	*0.783086*	0.172621	0.104831	0.120320
CI3	0.202977	*0.793469*	0.160156	-0.015772	0.171600
RESPT1	*0.731499*	0.049517	0.044273	0.341988	0.027265
RESPT2	*0.744376*	-0.034220	-0.007009	0.330816	0.066382
RESPT3	*0.739614*	-0.102398	0.109261	0.260765	0.053243
Expl.Var	4.201559	2.928848	4.749485	4.023482	5.533375
Prp.Totl	0.113556	0.079156	0.128364	0.108743	0.149551

Appendix G: Item Analysis

Item Analysis for Usefulness (USEFULNESS)

Summary for scale: Mean=49.7746, Std.Dv.=6.11172 Valid N: 142

Cronbach alpha: 0.850869 Standardized alpha: 0.854069

Average inter-item corr.: 0.336507

Code	Item	Mean if deleted	Var. If deleted	StDv. if deleted	Itm-Totl Correl.	Alpha if deleted
INFO1	1. The information of the airline website is pretty much what I need to carry out my tasks.	45.54226	32.55807	5.705968	0.569319	0.837909
INFO2	2. The airline website adequately meets my information needs.	45.64085	32.52594	5.703152	0.556035	0.838395
INFO3	3. The information on the airline website is effective.	45.72535	31.83302	5.642076	0.512262	0.840049
TAIL1	4. The airline website allows me to interact with it to receive tailored information.	45.92253	31.38132	5.601903	0.569386	0.836119
TAIL2	5. The airline website has interactive features, which help me accomplish my task.	45.89437	30.03814	5.480706	0.647122	0.829753
TAIL3	6. I can interact with the airline website in order to get information tailored to my specific needs.	45.61972	31.96806	5.654031	0.503606	0.840647
OC1	7. The airline website allows transactions online.	45.28873	32.69833	5.718245	0.462993	0.843331
OC2	8. All my business with the airline company can be completed via the website.	45.50000	32.64437	5.713525	0.394818	0.848321
OC3	9. Most of the business processes can be completed via the airline website.	45.45774	32.72709	5.720759	0.454470	0.843856
RA1	10. It is easier to use the website to complete my business with the airline company than it is to telephone, fax, or mail a representative.	45.62676	29.23393	5.406841	0.586511	0.835284
RA2	11. The airline website is easier to use than calling an organisational representative agent on the phone.	45.63380	29.45745	5.427472	0.619020	0.831847
RA3	12. The airline website is an alternative to calling customer service or sales.	45.66901	31.99608	5.656508	0.430037	0.846400

Item Analysis for Ease of Use (EASEOFUSE)

Summary for scale: Mean=24.9085, Std.Dv.=3.65324 Valid N: 142

Cronbach alpha: 0.841222 Standardized alpha: 0.840468

Average inter-item corr.: 0.481742

Code	Item	Mean if deleted	Var. If deleted	StDv. if deleted	Itm-Totl Correl.	Alpha if deleted
EOU1	20. The display pages within the airline website are easy to read.	20.90141	8.90577	2.984254	0.658459	0.807541
EOU2	21. The text on the airline website is easy to read.	20.84507	10.20135	3.193955	0.516778	0.833909
EOU3	22. The airline website labels are easy to understand.	20.85916	10.07875	3.174705	0.525707	0.832538
IO1	23. Learning to operate the airline website is easy for me.	20.64789	9.65066	3.106552	0.622858	0.814662
IO2	24. It would easy for me to become skilful at using the airline website.	20.64084	9.08932	3.014849	0.656539	0.807603
IO3	25. I find the airline website easy to use.	20.64789	9.04503	3.007496	0.738658	0.791352

Item Analysis for Trust (TR)

Summary for scale: Mean=10.9507, Std.Dv.=2.52457 Valid N: 142

Cronbach alpha: 0.893989 Standardized alpha: 0.894763

Average inter-item corr.: 0.742488

Code	Item	Mean if deleted	Var. If deleted	StDv. if deleted	Itm-Totl Correl.	Alpha if deleted
TR1	13. I feel safe in my transactions with the airline website.	7.211267	3.039873	1.743523	0.755054	0.880123
TR2	14. I trust the airline website to keep my personal information safe.	7.323944	2.951398	1.717963	0.840883	0.807703
TR3	15. I trust the airline website administrators will not misuse my personal information.	7.366197	2.894068	1.701196	0.781616	0.858386

Item Analysis for Entertainment (ENTMNT)

Summary for scale: Mean=47.2394, Std.Dv.=8.13880 Valid N: 142

Cronbach alpha: 0.911594 Standardized alpha: 0.911326

Average inter-item corr.: 0.465040

Code	Item	Mean if deleted	Var. If deleted	StDv. if deleted	Itm-Totl Correl.	Alpha if deleted
EA1	16. I feel happy when I use the airline website.	43.73240	56.63261	7.525464	0.626541	0.905179
EA2	17. I feel pleased when I use the airline website.	43.62676	56.03675	7.485770	0.640685	0.904603
EA3	18. I have a positive feeling when I use the airline website.	43.60563	56.32335	7.504889	0.660406	0.903814
EA4	19. I have a negative feeling when I use the airline website.	43.38733	56.19505	7.496336	0.640391	0.904608
VA1	26. The airline website displays visually pleasing design.	43.48592	54.64417	7.392169	0.720828	0.901075
VA2	27. The airline website is visually appealing.	43.54930	54.62785	7.391066	0.756684	0.899611
VA3	28. The airline website is visually pleasing.	43.51408	56.71459	7.530909	0.644931	0.904472
INNOV1	29. The airline website design is innovative.	43.99296	55.62671	7.458332	0.683834	0.902771
INNOV2	30. The airline website is creative.	44.03521	56.30157	7.503438	0.668994	0.903485
INNOV3	31. The airline website is innovative.	44.02817	55.95695	7.480438	0.680674	0.902960
CI1	32. The website projects an image consistent with the airline company's image.	43.22535	58.39992	7.641984	0.520087	0.909284
CI2	33. The website fits my image of the airline company.	43.38028	58.19342	7.628461	0.477274	0.911440
CI3	34. The website's image matches that of the airline company.	43.30986	58.28427	7.634413	0.507348	0.909889

Item Analysis for Response Time (RESPT)

Summary for scale: Mean=10.2817, Std.Dv.=3.10654 Valid N: 142

Cronbach alpha: 0.925429 Standardized alpha: 0.925544

Average inter-item corr.: 0.808928

Code	Item	Mean if deleted	Var. If deleted	StDv. if deleted	Itm-Totl Correl.	Alpha if deleted
RESPT1	35. When I use the airline website, there is very little waiting time between my actions and the website's actions.	6.830986	4.703828	2.168831	0.818339	0.915865
RESPT2	36. The airline website loads quickly.	6.922535	4.198224	2.048957	0.889557	0.857524
RESPT3	37. The airline website takes long to load.	6.809859	4.351170	2.085946	0.838596	0.899962

Item Analysis for User Satisfaction (USRSAT)

Summary for scale: Mean=15.5352, Std.Dv.=2.85504 Valid N: 142

Cronbach alpha: 0.912902 Standardized alpha: 0.913283

Average inter-item corr.: 0.726304

Code	Item	Mean if deleted	Var. If deleted	StDv. if deleted	Itm-Totl Correl.	Alpha if deleted
USRSAT1	38. I am satisfied with my decision to visit and use the airline website.	11.63380	4.725055	2.173719	0.799170	0.887915
USRSAT2	39. My choice to visit and use the airline website was a wise one.	11.78169	4.410088	2.100021	0.843033	0.872353
USRSAT3	40. I feel badly regarding my decision to visit and use the airline website.	11.50000	4.588028	2.141968	0.798299	0.888524
USRSAT4	41. I think I did the right thing by visiting and using the airline website.	11.69014	5.016664	2.239791	0.771386	0.898167

Item Analysis for Continuance Intention (CONTINT)

Summary for scale: Mean=15.1972, Std.Dv.=3.74968 Valid N: 142

Cronbach alpha: 0.936836 Standardized alpha: 0.936770

Average inter-item corr.: 0.792373

Code	Item	Mean if deleted	Var. If deleted	StDv. if deleted	Itm-Totl Correl.	Alpha if deleted
CONTINT1	42. If I needed this product or service in the future, I would be likely to buy it from this airline website.	11.52113	7.939695	2.817746	0.852769	0.916681
CONTINT2	43. If I needed this product or service in the future, I would probably revisit and reuse this airline website.	11.40141	7.690984	2.773262	0.901598	0.900536
CONTINT3	44. If I needed this product or service in the future, I would not revisit and reuse this airline website.	11.30282	7.873090	2.805903	0.850558	0.917539
CONTINT4	45. I would recommend this airline website to a friend interested in this product or service.	11.36620	8.570125	2.927478	0.799141	0.933516

Appendix H: Tables for Descriptive Statistics

Number of Airlines per Region

Region	Number of Airlines
North America	12
Europe and Middle East	35
Asia and Australia	23
Africa	72

Airlines Breakdown per Region

North America		Asia & Australia	
Airline	Frequency	Airline	Frequency
Air Canada	4	Air China	0
American Airlines	1	Air India	3
Continental Airlines	1	Cathay Pacific	0
Delta Airlines	1	Japan Airlines	4
Northwest Airlines	1	Korean Airlines	2
Southwest Airlines	3	Malaysia Airlines	1
United Airlines	0	Qantas Airways	3
U.S. Airways	1	Singapore Airlines	10

Africa		Europe & Middle East	
Airline	**Frequency**	**Airline**	**Frequency**
1Time	9	Air France	2
Air Mauritius	9	Austrian Airlines	0
Air Namibia	2	British Airways	8
Egypt Air	2	Emirates Airlines	18
Kenya Airways	1	Gulf Air	2
Kulula.com	13	Iberia Airlines	2
Mango	15	Lufthansa	3
Nigeria Airlines	1	Middle East Airlines	0
South Africa Airways	20	Saudi Arabian Airlines	0

Gender of Respondents

Gender	Number of Respondents
Male	91
Female	51

Age of Respondents

Age Group	Number of Respondents
18-27	137
28-37	3
38-47	1
48-57	1
> 57	0

Current Level of Education of Respondents

Education Level	Number of Respondents
Undergraduate (Second Year)	37
Undergraduate (Third Year)	39
Postgraduate Diploma	5
Postgraduate (Honours)	50
Postgraduate (Masters)	9
Postgraduate (Doctoral)	2

Respondents' Familiarity with the Internet

Internet Experience	Number of Respondents
Not familiar at all	0
Only know how to use e-mail	0
Know how to search for basic information	5
Know how to search for information relating to specific goods/services	41
Know all aspects of the Internet	96

Respondents' Frequency of Internet Use

Frequency of Internet Use	Number of Respondents
Once a year	0
Once a month	0
Once a week	4
Once a day	25
More than once a day	113

Respondents' Internet Usage

Internet Usage Activities	Number of Respondents
General Surfing	130
Educational Research	127
Entertainment (e.g. Online games)	83
Purchase goods/services online	60
Other (Advertising, Communications [Skype, Chat, Email], Social Networking [Facebook], Product Searches, News)	29

Respondents' Air Travel Frequency

Air Travel Frequency	Number of Respondents
Never	8
Once	6
Twice	12
Thrice	4
More than three times	112

Respondents' Flight Booking Channels

Booking Channel	Number of Respondents
Online booking	95
Travel agent	66
Airline company representative	23
Someone else booked my flights for me	77

Appendix I: Cronbach's Alpha for all Questionnaire Items

	Mean if deleted	Var. If deleted	StDv. If deleted	Itm-Totl Correlation	Alpha if deleted
INFO1	169.6549	535.6626	23.14439	0.539390	0.956248
INFO2	169.7535	537.5942	23.18608	0.459748	0.956531
INFO3	169.8380	533.9104	23.10650	0.470748	0.956478
TAIL1	170.0352	532.9495	23.08570	0.499464	0.956347
TAIL2	170.0070	527.9225	22.97656	0.571782	0.955998
TAIL3	169.7324	534.7030	23.12365	0.454544	0.956549
OC1	169.4014	538.5643	23.20699	0.379321	0.956852
OC2	169.6127	538.3781	23.20298	0.333105	0.957134
OC3	169.5704	537.8084	23.19070	0.398345	0.956775
RA1	169.7394	524.6716	22.90571	0.537588	0.956253
RA2	169.7465	522.3582	22.85516	0.631814	0.955671
RA3	169.7817	536.3397	23.15901	0.360894	0.957059
TR1	170.1479	529.6472	23.01406	0.503605	0.956358
TR2	170.2606	531.3195	23.05037	0.481343	0.956458
TR3	170.3028	531.2956	23.04985	0.449942	0.956662
EOU1	169.8803	527.3307	22.96368	0.575624	0.955977
EOU2	169.8239	538.9197	23.21464	0.356151	0.956962
EOU3	169.8380	536.3752	23.15977	0.418287	0.956704
IO1	169.6268	528.7832	22.99529	0.632312	0.955758
IO2	169.6197	526.6019	22.94781	0.620463	0.955759
IO3	169.6268	524.1212	22.89369	0.739696	0.955240
EA1	170.3803	523.4610	22.87927	0.682794	0.955432
EA2	170.2746	522.0302	22.84798	0.686560	0.955387
EA3	170.2535	521.4146	22.83451	0.743647	0.955131
EA4	170.0352	520.2452	22.80889	0.742328	0.955101
VA1	170.1338	522.3412	22.85479	0.654628	0.955547
VA2	170.1972	522.6372	22.86126	0.675749	0.955447
VA3	170.1620	529.2203	23.00479	0.557355	0.956072
INNOV1	170.6408	525.1738	22.91667	0.619484	0.955747
INNOV2	170.6831	528.4277	22.98756	0.569820	0.956009
INNOV3	170.6761	527.3035	22.96309	0.585407	0.955928
CI1	169.8732	535.5755	23.14250	0.403014	0.956811
CI2	170.0282	534.5062	23.11939	0.387948	0.956964
CI3	169.9577	533.3362	23.09407	0.444320	0.956631
RESPT1	170.4366	526.4573	22.94466	0.501272	0.956470
RESPT2	170.5282	526.3760	22.94288	0.469140	0.956755
RESPT3	170.4155	526.1865	22.93876	0.471871	0.956740
US1	169.9859	524.5209	22.90242	0.740244	0.955255
US2	170.1338	522.9891	22.86896	0.734254	0.955217

US3	169.8521	521.9993	22.84730	0.775196	0.955039
US4	170.0423	528.8997	22.99782	0.665832	0.955654
CONTINT1	170.2113	519.0258	22.78214	0.677451	0.955402
CONTINT2	170.0916	515.2381	22.69886	0.755589	0.954931
CONTINT3	169.9930	514.1619	22.67514	0.773005	0.954821
CONTINT4	170.0563	521.7292	22.84139	0.670168	0.955461

Appendix J: Correlation Results for all Questionnaire Constructs

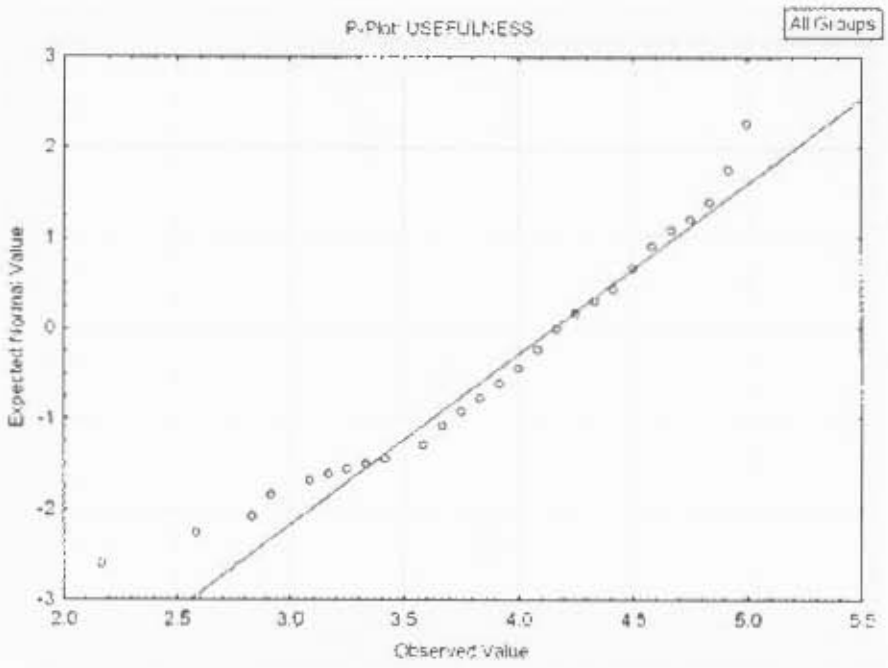
	Spearman Rank Order Correlations (Spreadsheet3) MD pairwise deleted Marked correlations are significant at p < .05000													
Variable	INFO	TAIL	OC	RA	TR	EOU	IO	EA	VA	INNOV	CI	RESPT	US	CONTINT
INFO	1.000000	0.615352	0.389139	0.246949	0.154758	0.373226	0.334277	0.355871	0.451595	0.404569	0.297641	0.295686	0.512384	0.371208
TAIL	0.615352	1.000000	0.321112	0.376170	0.257732	0.264551	0.281126	0.344331	0.359130	0.321431	0.177658	0.259668	0.471838	0.335676
OC	0.389139	0.321112	1.000000	0.350534	0.277325	0.249998	0.475225	0.430654	0.250267	0.208801	0.376843	0.119290	0.371740	0.363727
RA	0.246949	0.376170	0.350534	1.000000	0.245465	0.186286	0.385938	0.467969	0.261383	0.221213	0.277386	0.311062	0.424438	0.408434
TR	0.154758	0.257732	0.277325	0.245465	1.000000	0.199009	0.275126	0.330502	0.287463	0.266267	0.230994	0.262243	0.328041	0.328662
EOU	0.373226	0.264551	0.249998	0.186286	0.199009	1.000000	0.506255	0.446093	0.408986	0.428422	0.237065	0.260102	0.505375	0.389434
IO	0.334277	0.281126	0.475225	0.385938	0.275126	0.506255	1.000000	0.528988	0.390980	0.322843	0.359071	0.387971	0.592217	0.522509
EA	0.355871	0.344331	0.430654	0.467969	0.330502	0.446093	0.528988	1.000000	0.446766	0.451746	0.380650	0.306434	0.638258	0.690413
VA	0.451595	0.359130	0.250267	0.261383	0.287463	0.408986	0.390980	0.446766	1.000000	0.621101	0.422675	0.231687	0.507485	0.525048
INNOV	0.404569	0.321431	0.208801	0.221213	0.266267	0.428422	0.322843	0.451746	0.621101	1.000000	0.327980	0.208271	0.478734	0.431914
CI	0.297641	0.177658	0.376843	0.277386	0.230994	0.237065	0.359071	0.380650	0.422675	0.327980	1.000000	0.202364	0.392618	0.386966
RESPT	0.295686	0.259668	0.119290	0.311062	0.262243	0.260102	0.387971	0.306434	0.231687	0.208271	0.202364	1.000000	0.399546	0.311884
US	0.512384	0.471838	0.371740	0.424438	0.328041	0.505375	0.592217	0.638258	0.507485	0.478734	0.392618	0.399546	1.000000	0.673846
CONTINT	0.371208	0.335676	0.363727	0.408434	0.328662	0.389434	0.522509	0.690413	0.525048	0.431914	0.386966	0.311884	0.673846	1.000000

Appendix K: Levene's Test for Homogeneity of Variances (Cross-region comparison of website quality)

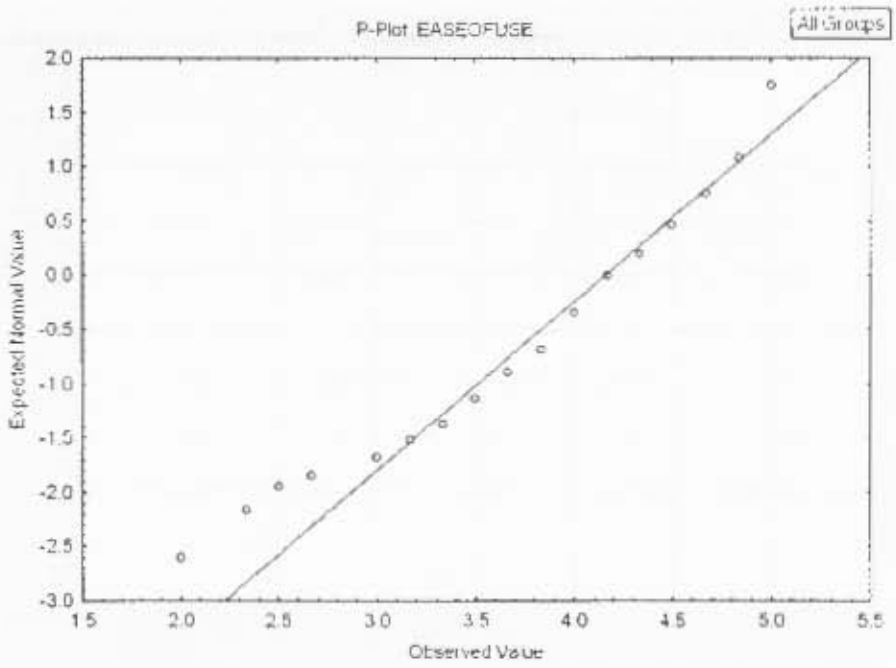
Second-Order Category	F	p
Usefulness	0.291161	0.831728
Ease of Use	1.247230	0.295111
Trust	3.408639	0.019434
Response Time	1.733146	0.163061
Entertainment	1.944236	0.125328

Appendix L: Normality Statistics (Cross-region comparison of website quality)

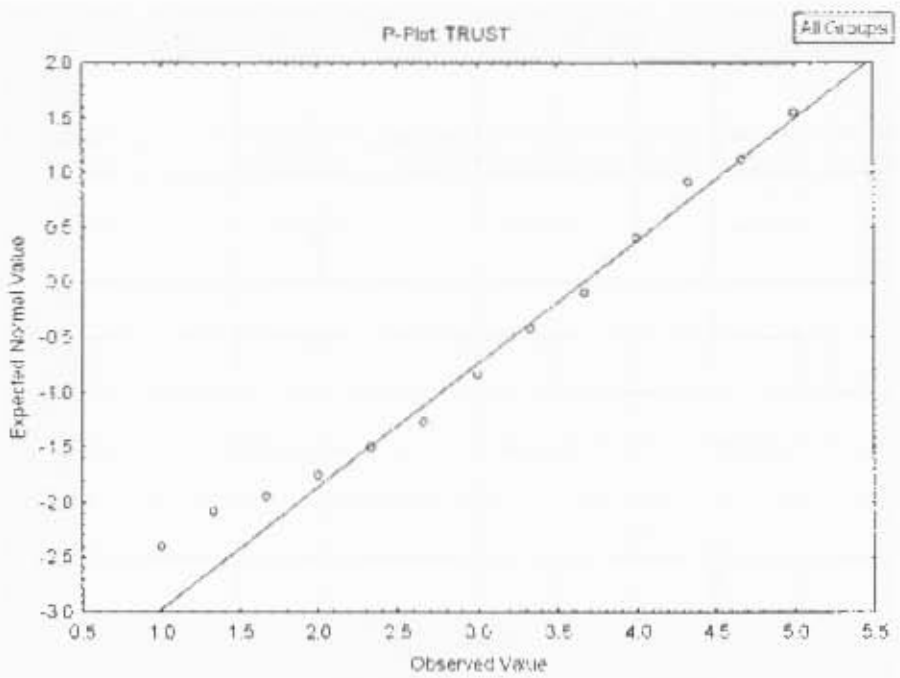
P-Plot for Usefulness



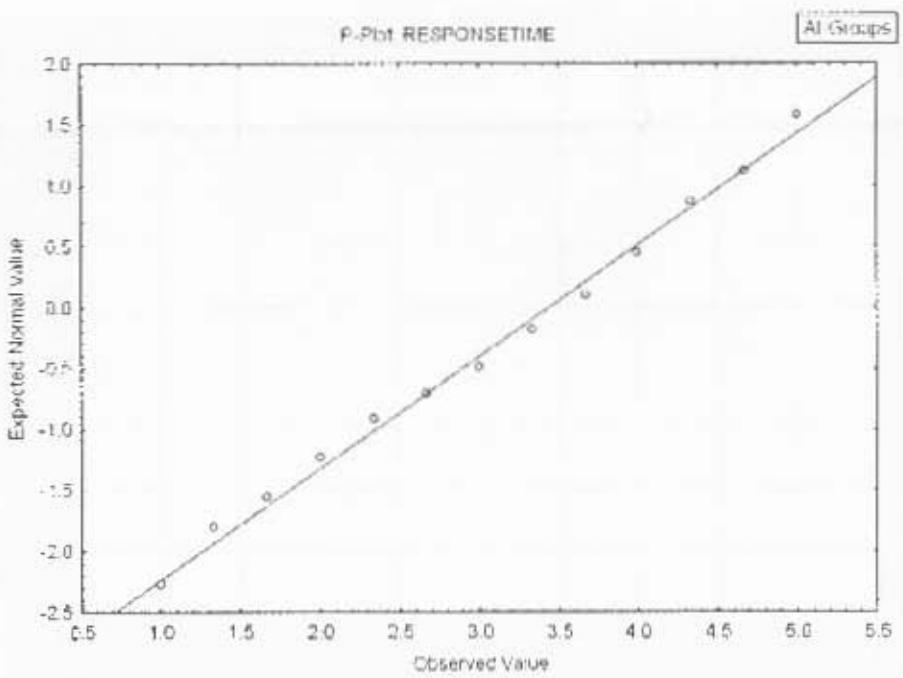
P-Plot for Ease of Use



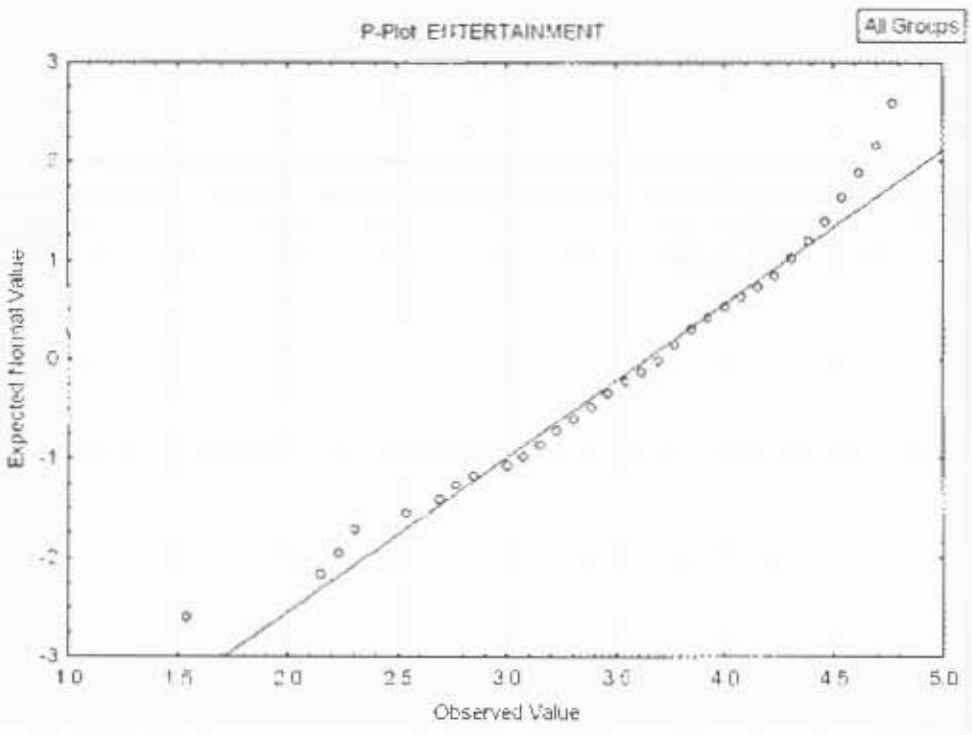
P-Plot for Trust



P-Plot for Response Time



P-Plot for Entertainment

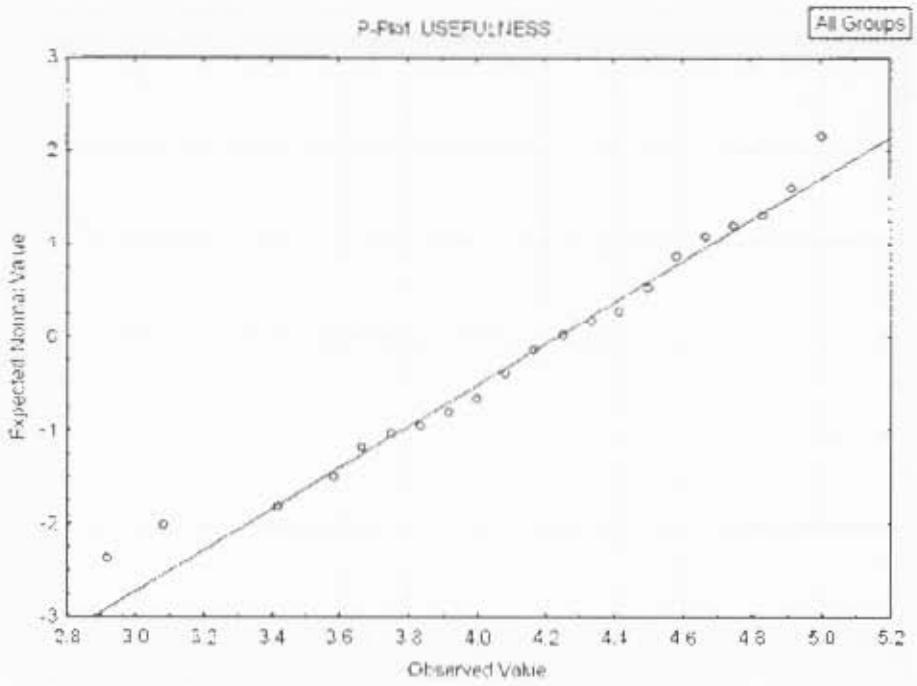


Appendix M: Levene's Test for Homogeneity of Variances (Comparison of website quality across five most rated airline websites)

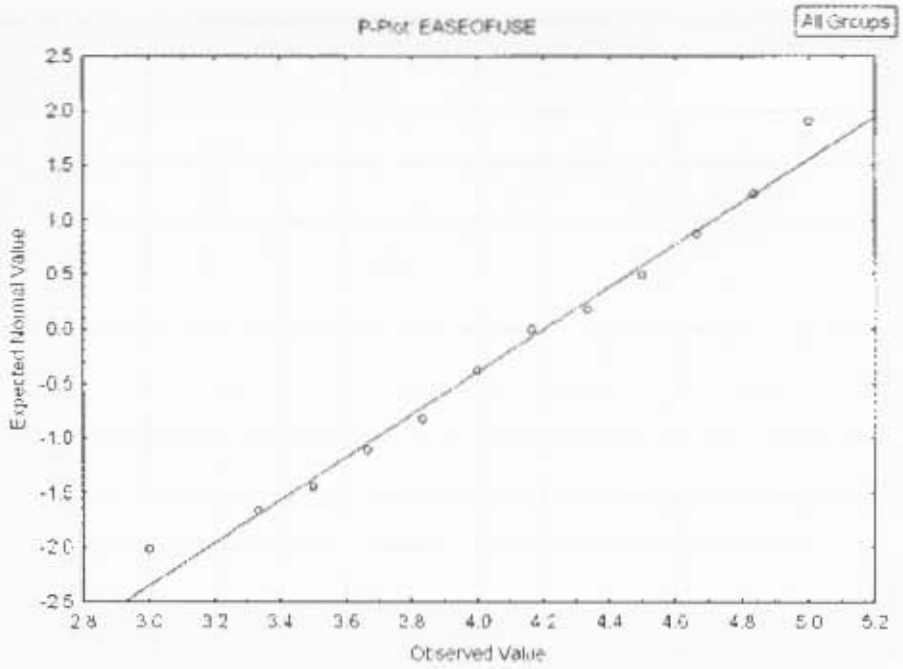
Second-Order Category	F	p
Usefulness	1.029744	0.397992
Ease of Use	2.548998	0.046581
Trust	2.654635	0.039883
Response Time	0.677882	0.609541
Entertainment	1.022862	0.401521

Appendix N: Normality Statistics (Comparison of website quality across five most rated airline websites)

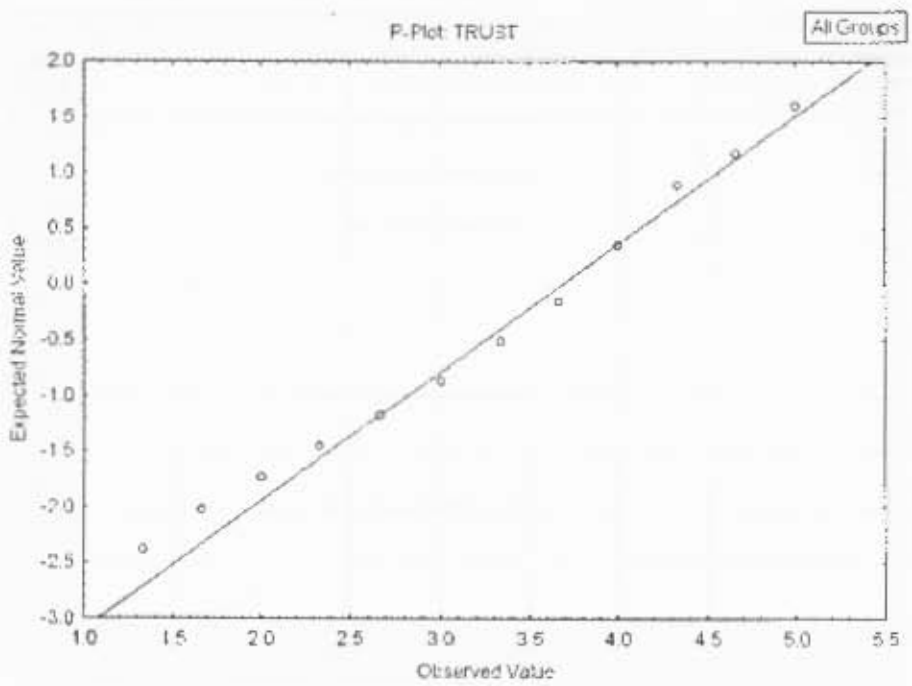
P-Plot for Usefulness



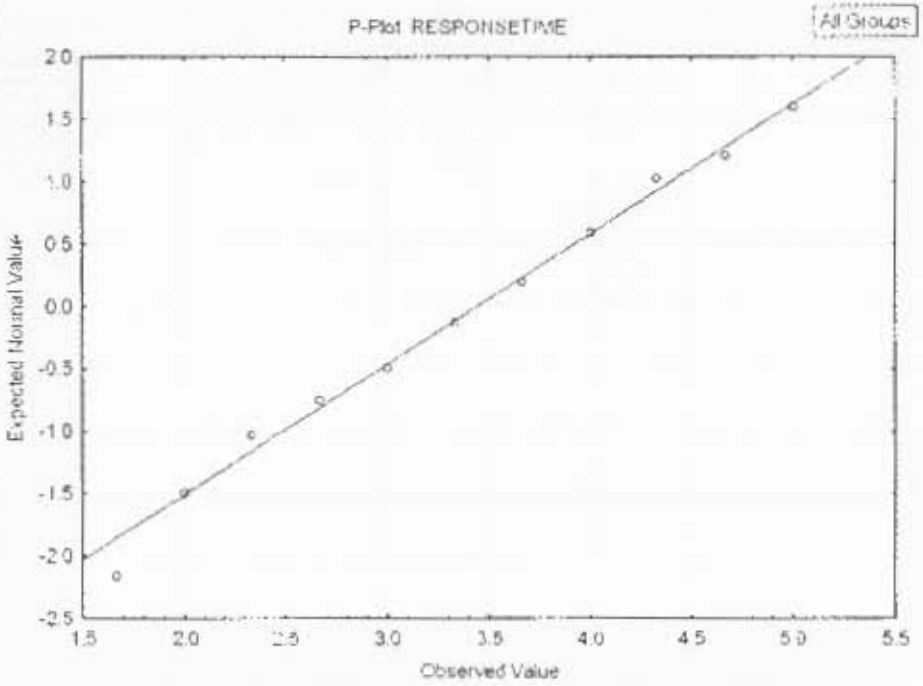
P-Plot for Ease of Use



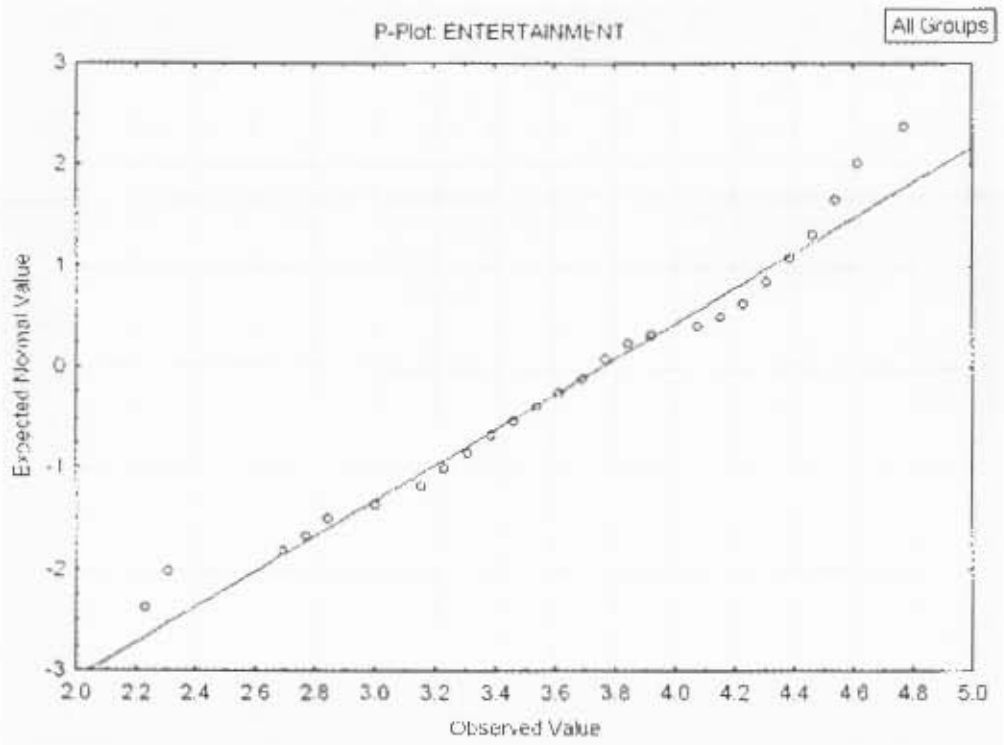
P-Plot for Trust



P-Plot for Response Time



P-Plot for Entertainment



Appendix O: Cross-region comparisons

Usefulness Second-Order Category across the 4 different regions

	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
Effect	Degr. of Freedom	USEFULNESS SS	USEFULNESS MS	USEFULNESS F	USEFULNESS p
Intercept	1	*1646.188*	*1646.188*	*6357.373*	*0.000000*
Region	3	0.841	0.280	1.083	0.358683
Error	138	35.734	0.259		
Total	141	36.575			

Informational Fit-to-task construct across the 4 different regions

	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
Effect	Degr. of Freedom	INFO SS	INFO MS	INFO F	INFO p
Intercept	1	*1619.884*	*1619.884*	*4792.154*	*0.000000*
Region	3	0.739	0.246	0.729	0.536277
Error	138	46.648	0.338		
Total	141	47.387			

Tailored Communications construct across the 4 different regions

Effect	Univariate Results for Each DV (ANOVA sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	TAIL SS	TAIL MS	TAIL F	TAIL p
Intercept	1	1506.383	*506.383	3201.306	0.000000
Region	3	1.308	0.436	0.926	0.429830
Error	138	64.936	0.471		
Total	141	66.244			

Online Completeness construct across the 4 different regions

Effect	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	OC SS	OC MS	OC F	OC p
Intercept	1	1817.851	1817.851	4593.698	0.000000
Region	3	0.962	0.321	0.810	0.490365
Error	138	54.610	0.396		
Total	141	55.572			

Relative Advantage construct across the 4 different regions

Effect	Univariate Results for Each DV (ANOVA sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	RA SS	RA MS	RA F	RA p
Intercept	1	1648.093	1648.098	2456.544	0.000000
Region	3	2.962	0.987	1.472	0.225008
Error	138	92.584	0.671		
Total	141	95.546			

Ease of Use Second-Order Category across the 4 different regions

Effect	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	EASEOFUSE SS	EASEOFUSE MS	EASEOFUSE F	EASEOFUSE p
Intercept	1	1606.181	1606.181	4355.231	0.000000
Region	3	1.379	0.460	1.246	0.295405
Error	138	50.894	0.369		
Total	141	52.272			

Ease of Understanding construct across the 4 different regions

	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
Effect	Degr. of Freedom	EOU SS	EOU MS	EOU F	EOU p
Intercept	1	1497.254	1497.254	3416.820	0.000000
Region	3	2.747	0.916	2.089	0.104456
Error	138	60.472	0.438		
Total	141	63.218			

Intuitive Operations construct across the 4 different regions

	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
Effect	Degr. of Freedom	IO SS	IO MS	IO F	IO p
Intercept	1	1718.933	1718.933	3218.637	0.000000
Region	3	0.707	0.236	0.441	0.723793
Error	138	73.700	0.534		
Total	141	74.407			

Trust Second-Order Category across the 4 different regions

Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition					
Effect	Degr. of Freedom	TRUST SS	TRUST MS	TRUST F	TRUST p
Intercept	1	1272.161	1272.161	1907.397	0.000000
Region	3	7.810	2.603	3.903	0.010307
Error	138	92.041	0.667		
Total	141	99.851			

Unequal N HSD; variable TRUST (ANOVA.sta) Approximate Probabilities for Post Hoc Tests Error: Between MS = .66696, df = 138.00					
Cell No.	Region	{1} 3.4444	{2} 4.0286	{3} 3.7246	{4} 3.4769
1	1		0.296839	0.835183	0.999672
2	2	0.296839		0.587205	0.024363
3	3	0.835183	0.587205		0.732475
4	4	0.999672	0.024363	0.732475	

LSD test; variable TRUST (ANOVA Data) Probabilities for Post Hoc Tests Error: Between MS = .66696, df = 138.00					
Cell No.	Region	{1} 3.4444	{2} 4.0286	{3} 3.7246	{4} 3.4769
1	1		0.034269	0.337009	0.898915
2	2	0.034269		0.167837	0.001321
3	3	0.337009	0.167837		0.207375
4	4	0.898915	0.001321	0.207375	

Response Time Second-Order Category across the 4 different regions

Effect	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	RESPONSETIME SS	RESPONSETIME MS	RESPONSETIME F	RESPONSETIME p
Intercept	1	1171.958	1171.958	1114.321	0.000000
Region	3	6.055	2.018	1.919	0.129359
Error	138	145.138	1.052		
Total	141	151.192			

Entertainment Second-Order Category across the 4 different regions

Effect	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	ENTMNT SS	ENTMNT MS	ENTMNT F	ENTMNT p
Intercept	1	1238.172	1238.172	3179.435	0.000000
Region	3	1.524	0.508	1.304	0.275561
Error	138	53.742	0.389		
Total	141	55.265			

Visual Appeal construct across the 4 different regions

	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
Effect	Degr. of Freedom	VA SS	VA MS	VA F	VA p
Intercept	1	1322.026	1322.026	1837.059	0.000000
Region	3	3.794	1.265	1.757	0.158215
Error	138	99.311	0.720		
Total	141	103.105			

Innovativeness construct across the 4 different regions

	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
Effect	Degr. of Freedom	INNOV SS	INNOV MS	INNOV F	INNOV p
Intercept	1	945.6457	945.6457	1446.279	0.000000
Region	3	3.5218	1.1739	1.795	0.150917
Error	138	90.2309	0.6538		
Total	141	93.7527			

Consistent Image construct across the 4 different regions

Effect	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	CI SS	CI MS	CI F	CI p
Intercept	1	1426.082	1426.082	2297.967	0.000000
Region	3	0.855	0.285	0.458	0.712012
Error	138	85.865	0.622		
Total	141	86.720			

Emotional Appeal construct across the 4 different regions

Effect	Univariate Results for Each DV (ANOVA.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	EA SS	EA MS	EA F	EA p
Intercept	1	1274.779	1274.779	1963.915	0.000000
Region	3	1.419	0.473	0.729	0.536585
Error	138	89.576	0.649		
Total	141	90.995			

Appendix P: Comparison of Top 5 airline websites rated

Usefulness Second-Order Category across the top 5 airline websites rated

Effect	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition Degr. of Freedom	USEFULNESS SS	USEFULNESS MS	USEFULNESS F	USEFULNESS p
Intercept	1	1292.557	1292.557	7106.989	0.000000
Airline	4	1.287	0.322	1.769	0.144729
Error	71	12.913	0.182		
Total	75	14.200			

Informational Fit-to-task construct across the top 5 airline websites rated

Effect	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition Degr. of Freedom	INFO SS	INFO MS	INFO F	INFO p
Intercept	1	1309.618	1309.618	5002.566	0.000000
Airline	4	1.219	0.305	1.164	0.334202
Error	71	18.587	0.262		
Total	75	19.806			

Tailored Communications construct across the top 5 airline websites rated

	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
Effect	Degr. of Freedom	TAIL SS	TAIL MS	TAIL F	TAIL p
Intercept	1	1193.571	1193.571	3587.696	0.000000
Airline	4	0.407	0.102	0.306	0.873067
Error	71	23.621	0.333		
Total	75	24.028			

Online Completeness construct across the top 5 airline websites rated

	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
Effect	Degr. of Freedom	OC SS	OC MS	OC F	OC p
Intercept	1	1393.162	1393.162	3536.446	0.000000
Airline	4	3.625	0.906	2.300	0.067051
Error	71	27.970	0.394		
Total	75	31.595			

Relative Advantage construct across the top 5 airline websites rated

Univariate Results for Each DV (Airlines.sta)
Sigma-restricted parameterization
Effective hypothesis decomposition

Effect	Degr. of Freedom	RA SS	RA MS	RA F	RA p
Intercept	1	1277.630	1277.630	2762.914	0.000000
Airline	4	4.653	1.163	2.515	0.048964
Error	71	32.837	0.462		
Total	75	37.490			

Unequal N HSD; variable RA (Airlines.sta)
Approximate Probabilities for Post Hoc Tests
Error: Between MS = .46249, df = 71.000

Cell No.	Airline	{1} 3.9667	{2} 4.3333	{3} 4.1556	{4} 4.6667	{5} 4.9000
1	1		0.491464	0.940991	0.076771	0.999970
2	2	0.491464		0.952251	0.722476	0.808084
3	3	0.940991	0.952251		0.318512	0.986033
4	4	0.076771	0.722476	0.318512		0.194750
5	5	0.999970	0.808084	0.986033	0.194750	

LSD test; variable RA (Airlines.sta)
Probabilities for Post Hoc Tests
Error: Between MS = .46249, df = 71.000

Cell No.	Airline	{1} 3.9667	{2} 4.3333	{3} 4.1556	{4} 4.6667	{5} 4.9000
1	1		0.101426	0.418840	0.005118	0.899650
2	2	0.101426		0.457088	0.182378	0.218049
3	3	0.418840	0.457088		0.051196	0.577049
4	4	0.005118	0.182378	0.051196		0.022621
5	5	0.899650	0.218049	0.577049	0.022621	

Ease of Use Second-Order Category across the top 5 airline websites rated

Effect	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition Degr. of Freedom	EASEOFUSE SS	EASEOFUSE MS	EASEOFUSE F	EASEOFUSE p
Intercept	1	1272.252	1272.252	5621.642	0.000000
Airline	4	1.655	0.414	1.828	0.132897
Error	71	16.068	0.226		
Total	75	17.723			

Ease of Understanding construct across the top 5 airline websites rated

Effect	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition Degr. of Freedom	EOU SS	EOU MS	EOU F	EOU p
Intercept	1	1194.171	1194.171	3800.742	0.000000
Airline	4	1.207	0.302	0.960	0.434768
Error	71	22.308	0.314		
Total	75	23.515			

Intuitive Operations construct across the top 5 airline websites rated

Univariate Results for Each DV (Airlines.sta)
Sigma-restricted parameterization
Effective hypothesis decomposition

Effect	Degr. of Freedom	IO SS	IO MS	IO F	IO p
Intercept	1	1352.805	1352.805	3948.411	0.000000
Airline	4	4.158	1.039	3.034	0.022823
Error	71	24.326	0.343		
Total	75	28.484			

Unequal N HSD; variable IO (Airlines.sta)
Approximate Probabilities for Post Hoc Tests
Error: Between MS = .34262, df = 71.000

Cell No	Airline	{1} 4.0000	{2} 4.2407	{3} 4.3333	{4} 4.6923	{5} 4.4567
1	1		0.731786	0.527997	0.028480	0.391688
2	2	0.731786		0.992582	0.292806	0.909407
3	3	0.527997	0.992582		0.525462	0.986249
4	4	0.028480	0.292806	0.525462		0.909794
5	5	0.391688	0.909407	0.986249	0.909794	

LSD test; variable IO (Airlines.sta)
Probabilities for Post Hoc Tests
Error: Between MS = .34262, df = 71.000

Cell No.	Airline	{1} 4.0000	{2} 4.2407	{3} 4.3333	{4} 4.6923	{5} 4.4667
1	1		0.209684	0.099872	0.001424	0.043211
2	2	0.209684		0.652306	0.037542	0.331087
3	3	0.099872	0.652306		0.110003	0.578623
4	4	0.001424	0.037542	0.110003		0.362522
5	5	0.043211	0.331087	0.578623	0.362522	

Trust Second-Order Category across the top 5 airline websites rated

Effect	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	TRUST SS	TRUST MS	TRUST F	TRUST p
Intercept	1	966.9666	966.9666	1405.670	0.000000
Airline	4	1.6321	0.4080	0.594	0.668421
Error	71	48.8065	0.6874		
Total	75	50.4386			

Response Time Second-Order Category across the top 5 airline websites rated

Effect	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	RESPONSETIME	RESPONSETIME	RESPONSETIM I	RESPONSETIME
Intercept	1	869.0640	869.0640	1231.737	0.000000
Airline	4	11.2430	2.8107	3.984	0.005672
Error	71	50.0947	0.7056		
Total	75	61.3377			

Cell No.	Airline	{1} 3.1167	{2} 3.7222	{3} 2.9111	{4} 3.7692	{5} 3.9000
1	1		0.205981	0.962217	0.286034	0.237925
2	2	0.205981		0.073163	0.999915	0.989592
3	3	0.962217	0.073163		0.080402	0.075280
4	4	0.286034	0.999915	0.080402		0.996845
5	5	0.237925	0.989592	0.075280	0.996845	

Unequal N HSD; variable RESPONSETIME (Airlines.sta)
Approximate Probabilities for Post Hoc Tests
Error: Between MS = .70556, df = 71.000

Cell No.	Airline	{1} 3.1167	{2} 3.7222	{3} 2.9111	{4} 3.7692	{5} 3.9000
1	1		0.029688	0.476060	0.032524	0.018646
2	2	0.029688		0.007306	0.878237	0.593207
3	3	0.476060	0.007306		0.008757	0.005198
4	4	0.032524	0.878237	0.008757		0.712392
5	5	0.018646	0.593207	0.005198	0.712392	

LSD test; variable RESPONSETIME (Airlines.sta)
Probabilities for Post Hoc Tests
Error: Between MS = .70556, df = 71.000

Entertainment Second-Order Category across the top 5 airline websites rated

Effect	Degr. of Freedom	ENTERTAINMENT	ENTERTAINMENT	ENTERTAINMENT	ENTERTAINMENT
Intercept	1	1017.171	1017.171	3561.441	0.000000
Airline	4	2.699	0.675	2.363	0.061197
Error	71	20.278	0.286		
Total	75	22.977			

Univariate Results for Each DV (Airlines.sta)
Sigma-restricted parameterization
Effective hypothesis decomposition

Visual Appeal construct across the top 5 airline websites rated

Univariate Results for Each DV (Airlines.sta) Sigma restricted parameterization Effective hypothesis decomposition					
Effect	Degr. of Freedom	VA SS	VA MS	VA F	VA p
Intercept	1	1076.222	1076.222	2320.218	0.000000
Airline	4	9.973	2.493	5.375	0.000772
Error	71	32.933	0.464		
Total	75	42.906			

Unequal N HSD; variable VA (Airlines.sta) Approximate Probabilities for Post Hoc Tests Error: Between MS = .46385, df = 71.000						
Cell No.	Airline	{1} 3.4167	{2} 4.3148	{3} 3.7556	{4} 4.2308	{5} 3.6667
1	1		0.001756	0.653269	0.026111	0.923435
2	2	0.001756		0.174183	0.997872	0.219919
3	3	0.653269	0.174183		0.393880	0.998457
4	4	0.026111	0.997872	0.393880		0.352689
5	5	0.923435	0.219919	0.998457	0.352689	

LSD test; variable VA (Airlines.sta) Probabilities for Post Hoc Tests Error: Between MS = .46385, df = 71.000						
Cell No.	Airline	{1} 3.4167	{2} 4.3148	{3} 3.7556	{4} 4.2308	{5} 3.6667
1	1		0.000125	0.149582	0.001276	0.346456
2	2	0.000125		0.021620	0.735578	0.018409
3	3	0.149582	0.021620		0.069745	0.750138
4	4	0.001276	0.735578	0.069745		0.052839
5	5	0.346456	0.018409	0.750138	0.052839	

Innovativeness construct across the top 5 airline websites rated

Effect	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	INNOV SS	INNOV MS	INNOV F	INNOV p
Intercept	1	850.5153	850.5153	1557.069	0.000000
Airline	4	1.9712	0.4928	0.902	0.467448
Error	71	38.7817	0.5462		
Total	75	40.7529			

Consistent Image construct across the top 5 airline websites rated

Effect	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition				
	Degr. of Freedom	CI SS	CI MS	CI F	CI p
Intercept	1	1101.711	1101.711	2122.054	0.000000
Airline	4	4.161	1.040	2.004	0.103269
Error	71	36.861	0.519		
Total	75	41.022			

Emotional Appeal construct across the top 5 airline websites rated

Effect	Univariate Results for Each DV (Airlines.sta) Sigma-restricted parameterization Effective hypothesis decomposition Degr. of Freedom	EA SS	EA MS	EA F	EA p
Intercept	1	1042.097	1042.097	2349.506	0.000000
Airline	4	2.380	0.595	1.341	0.263171
Error	71	31.491	0.444		
Total	75	33.871			