Examining the online customer experience during a utilitarian search for online business advisory information and services

Graeme McLean

Department of Marketing

Thesis submitted in accordance with the requirements of the

University of Strathclyde for the Degree of

Doctor of Philosophy

November 2015

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This thesis is the result of the author's original research. It has been composed by the author and has not been previously submitted for examination, which has led to the award of a degree.

Parts of this thesis have been presented and published in various Academic events during the development of the research (2012 – 2015).

McLean, G. and Wilson, A. (2015) Evolving the online customer experience- is there a role for online customer support? *International Conference of RESER Service Development and Innovation*, Roskilde University, Copenhagen.

McLean, G. and Wilson, A. (2015) An investigation into the online customer experience, *QUIS14 Service Excellence in Management*, China Europe International Business School, Shanghai.

McLean, G. (2015) The online customer experience - establishing the role of online social interaction: The case of searching for business advisory services, *4th International Conference in Marketing*, University of Strathclyde, Glasgow.

McLean, G. (2013) The role of interaction in enhancing online business advisory, *2nd International Conference in Marketing*, University of Strathclyde, Glasgow.

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Date:

DEDICATION

I dedicate this thesis to my mum and dad, for everything they have done for me in my life and continue to do; this is for you, mum and dad.

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ACKNOWLEDGEMENTS

My PhD has been an enjoyable and challenging journey, during which I have had many great experiences. I would firstly like to thank Scottish Enterprise for their funding for this PhD research. In addition, I would like to thank the Research and Analytics team at Scottish Enterprise for their support over the past three years.

Moreover, I am very grateful to those organisations and individuals who participated in the research in order to provide insightful findings.

A special thanks goes to Professor Alan Wilson who has supported the research during each stage with valuable advice and support. Without Professor Wilson's support my PhD journey may not have been as enjoyable and insightful. I look forward to continuing to work with Professor Wilson in the future. I would also like to thank Dr Michael Harker for his suggestions throughout the PhD and the wider marketing department.

I would also like to express a special thank you to all of my fellow PhD friends who have made the journey enjoyable when needed, as well as the great discussions on each of our research areas.

I would like to thank my mum and dad, Isabelle and James, for all of their support in my life and their continued encouragement, to which I will always be in their debt.

Last but not least, I would like to thank my fiancée Sophie. You have had to listen to me talking about my research for the past 3 years... Without your support and understanding Soph, it may not have been possible.

ABSTRACT

This research aims to further our understanding on online information seeking and the customer's experience during search. The primary focus of this research is to explore the online customer experience during a utilitarian search for business advisory information and services. Previous research has provided an understanding on the process of information seeking, however this research advances our limited theoretical knowledge on the online customer experience moving beyond service quality and the outcomes of the customer experience, thus understanding variables capable of influencing the customer experience while searching for information during a customer's online journey on a business advisory website. In line with this, the research has answered five research objectives: (1) Establish which variables influence the online customer experience during a utilitarian search for online business advisory information and services. (2) Investigate the role of customer emotions while searching for online business advisory information and services. (3) Establish the role of online customer support through social interaction in relation to a customer's experience. (4) Examine the effect of a customer's search success on the online customer experience (5) Develop a comprehensive online customer experience model incorporating variables influencing the customer experience during the initial customer journey to find business information and services.

A mixed methods approach was adopted in the research within a pragmatic philosophical underpinning. Due to the limited research within the area of the online customer experience an initial qualitative element was used in order to refine the proposed theoretical framework in the study. The qualitative research was developed based on the literature reviewed with the aim of providing an initial insight into the variables to be tested in the quantitative phase of the study, thus providing comprehensiveness and parsimony. 16 semi structured in-depth interviews were conducted with SMEs from an array of industries. The interviews provided in-depth insight into the variables capable of influencing the online experience and identified those variables to be examined in the quantitative phase of the research.

The main quantitative phase of the research consisted of an online experiment aligned with an online questionnaire. The online experiment was conducted on three selected business advisory websites offering business advisory information and services with a sample of 160 participants. Tasks were set up on each website for participants to complete. After the completion of the set of tasks on each website, participants completed the online questionnaire. All 160 responses were completed and usable to test the proposed theoretical model and thus made it suitable for structural equation modelling.

The findings of the research outline a number of variables that have been previously overlooked in relation to influencing the online customer experience. The new context of exploring the online customer experience during a utilitarian search for information has furthered our limited theoretical understanding of the online customer experience and online information seeking. This research found that the quality of the information, the credibility of the website, the perceived length of time spent on the website, the success of the search as well as the requirement of online customer support all have an influence on the online customer experience during a utilitarian search for business advisory information and services. In addition, the findings also illustrate an underlying latent variable comprised of website aesthetics, level of control, information quality, website credibility and flow combining together to influence the online customer experience. The findings illustrate a role for the previously unexplored online customer support through synchronised social interaction via functions such as live chat and online help desks. The findings illustrated, should customers require to spend longer searching on the website than perceived necessary or have an unsuccessful search they will require online customer support. Previous research exploring the online customer experience has predominantly explored the outcomes of a positive customer experience, this research has responded to calls for research (Verhoef et al, 2009) and established the variables influencing the customer at specific points during the customer's journey to finding the required information and services on business advisory websites.

Key managerial implications for online business advisory providers are discussed in relation to improving the online customer experience. Managers need to be conscious of the variables capable of influencing the customer experience, particularly the length of time customers are required to spend on the website which plays a key mediating

role on other influential variables. The focus for managers has been on the importance of customers spending a prolonged period of time on the website as a benchmark of a successful website. This study however highlights to managers of business advisory websites to use such a benchmark with caution as this research finds that the longer customers spend searching on a website for business advisory information and services, the less likely they are to have a positive experience as well as being less likely in having a successful search and requiring online customer support.

The key contributions of this research include:

- The development of a new online customer experience model incorporating the variables capable of influencning the online customer experience including website aesthetics, level of control on the website (ease of use and customisation), the credibility of the website, the quality of the information and flow, while involving the mediating effect of the perceived length of time spent on the website, the need to seek online customer support and the success of the search.
- The research has introduced and developed a new scale to measure the perceived length of time customers are willing to spend on the website.
- The reseach has introduced the need for online customer support, with the perceived length of time spent on the website driving the need to seek online customer support.
- The research has established the sequence of variables influencing the online customer experience during a utilitarian search for business advisory information and services.
- The research has confirmed a measure for the online customer experience involving cognitive satisfaction with the experience and customer emotions.
- The research has extended our theoretical understanding of the online customer experience in a new context.

CHAPTER 1

INTRODUCTION TO THE RESEARCH

1.0 Introduction

Only over recent years have researchers adopted an interest in the online customer experience (OCE), moving beyond service quality. The Internet has become a fundamental channel in service delivery and has changed the way we communicate and conduct business. The Internet has become the key source for information conciliation and delivery for both businesses and customers. Yet, we have little understanding in what influences the customer experience within the online environment during information seeking. Research to date regarding the online customer experience has focused on the online shopping environment. However, it is important that we expand our knowledge and understanding and explore the online customer experience in other important contexts. Much remains unknown on what influences the customer experience during a utilitarian search for information and services, in particular a search for business advisory information and services. This research seeks to introduce the proposed research, which aims to fill the identified research gap. This chapter will outline the background to the research, the research problem and rationale including the aims and objectives of the research, the methodological approach and the thesis framework.

1.1 Background to the Research

Over recent years we have seen a management shift in thought from product centred to a service dominant logic centred approach, which outlines the differences between marketing products and services (Lush and Vargo 2004). The shift in management thought highlights the need for organisations to deliver higher levels of service across all channels. Originally, the driver behind the increase in online-based business was the perceived low cost characteristics of the web with low investment and maintenance costs, offering organisations the opportunity to deliver services and a direct channel of

communication between the organisation and the customer (Chang and Chen 2008). However, due to technological advances, customers now have higher expectations within the online environment (Greenberg 2010). Thus, service quality has been much of a marketers concern both in academia and industry (Gronross 2013). Numerous researchers have explored service quality and its impact on customer behaviour (Parasuraman et al 1988). At one point, researchers suggested that service quality differentiated an organisation's offering of goods and services (Reinartz and Ulaga 2008). However, Meyer and Schwager (2007) and earlier Schmitt (1999) highlight that service too has become increasingly standardised across organisations, now the customer seeks more than simply competent 'quality' service, rather the customer requires an effective experience that meets expectations (Novak et al 2001). The shift from the importance of online service quality to the online customer experience has somewhat established from the transition of website development in the change from static websites (both e-commerce and informational sites) to dynamic and interactive websites offering customers the ability to customise and interact with the online web environment.

The customer experience can be seen as a holistic process made up from the customer journey, deriving from the sequence of touch-points a customer has with an organisation (Voss, 2008). A stark difference between customer experience and service quality is the inclusion of customer emotions within the customer experience (Edvardsson et al 2007; Lee and Lin 2005). Prior to this, service quality research focused solely on cognitive assessments, ignoring the role of customer's emotions (Edvardsson 2005). Despite the importance of the customer experience, only over recent years have researchers developed an interest in exploring the area, thus research remains somewhat scant (Ahmed 2011) as the focus of research has remained on service quality. Verohof et al (2009) outlines that most research regarding the customer experience is more concerned with the outcome of customer experience, yet little knowledge is known on the variables capable of influencing the customer experience in numerous searching and buying contexts. Thus, this research responds to calls for research examining the variables capable of influencing a customer's experience during the customer's journey to searching for online business advisory information and services.

Information search has been outlined as a complex process involving both an individual's cognitive and affective components (Robson and Robinson, 2015), thus the holistic process of searching for information is intertwined with experiences (potentially positive, negative and neutral) during the journey of searching for information. Kuhlthau (1996) highlighted the need for intervention during search to help guide individuals to information. Services delivered online were once considered a relatively impoverished experience due to the inability to interact with service personnel, however the advancements in technology over recent years as discussed by Truel and Connelly (2013) has established new mediums such as live chat technology and online help desks that offer social interaction and customer support online. In spite of this, we have little understanding on the external variables capable of influencing a customer during their search for information and thus their experience. Klaus (2013) highlights that previous studies have failed to provide empirical evidence on the customer experience relying primarily on conceptual thinking and thus calls for empirical research within a multitude of contexts to truly understand the online customer experience, which this study aims to do.

1.2 Research Problem and Rationale

While researchers have developed some of the foundations of the customer experience, further research is required on the online customer experience. A review of the literature finds little research exploring the online customer experience (Hoffman and Novak 2009; Rose et al 2012; Nambisan and Watt 2011; Klaus 2013). Thus, researchers have called for further exploration into the online customer experience due to its increasing importance in business and academia (Verhoef et al 2009; Lemke et al 2011). Further to this, Klaus (2013) suggests that researchers ought to conduct context specific research to further our knowledge on the online customer experience within multiple contexts. To date the majority of research with regard to the online customer experience has been conducted within hedonic online shopping environment.

Thus, this research explores the online customer experience in a utilitarian context of businesses searching for online business advisory information on business advisory websites. A utilitarian context is goal directed with the task carried out for a purpose and not considered for pleasure. Numerous organisations provide online business

advisory services on business growth, leadership, developing employees, exporting, funding, and critical day-to-day advice on running a business with information and services on tax and law. With over 1 billion searches worldwide each month around keywords of business advisory information and services (Alexia 2015), in addition to the economic impact of businesses receiving effective online business advisory services, managers need to understand what influences an individual's online experience. This goal-directed utilitarian context aims to shed light on a novel online search context.

Previous research into the online customer experience has established some variables capable of influencing a customer's experience during the purchase of products (Rose et al, 2012; Klaus, 2013; Hoffman and Novak; 2009). However, much remains unknown on the variables capable of influencing a customer's online experience during their journey while searching for information and services. The economic impact that can emerge from understanding how to provide an exceptional online experience to businesses searching on business advisory websites provides significant cause to explore the area. Large proportions of private and public money are spent on the development of web services to provide businesses online advisory services, yet we have little understanding on what can influence a customer's experience in this online environment. If managers were able to better understand the variables influencing a customer's experience during search, they could better tailor their services to the needs of their customers.

As a result, the principal aim of this research is to understand the variables capable of influencing the online customer experience while searching for online business advisory information and services and exploring the role of online customer support via synchronised social interaction in relation to the customer's online experience. In particular, the research objectives of this study are:

(1) Establish which variables influence the online customer experience during a utilitarian search for online business advisory information and services.

(2) Investigate the role of customer emotions while searching for online business advisory information and services.

(3) Establish the role of online customer support through social interaction in relation to a customer's experience.

(4) Examine the effect of a customer's search success on the online customer experience.

(5) Develop a comprehensive online customer experience model incorporating variables influencing the customer experience during the initial customer journey to find business information and services.

1.3 Methodological Approach

This study is grounded with a pragmatic philosophical underpinning. The researcher believes that a pragmatic research philosophy yields the understanding required to investigate the aforementioned research objectives due to the researcher being able to deploy qualitative and quantitative research methods to gain an interpretive and quantifiable insight into the research area, which pure positivitist or interpretivist philisophicaly underpinings may have restricted. As previously outlined, research into the customer experience has received attention from numerous researchers. However, research into the online customer experience is somewhat scant with most research studies focusing on either the outcomes of the online customer experience or studying the online customer experience within the confined area of the online shopping environment. With this study exploring the online experience that business people have when searching for business advisory information and services as well as exploring the role that online customer support may play in relation to the online customer experience, it was decided that a mixed methods approach should be adopted. First of all an initial qualitative element was used in order to refine the proposed theoretical framework in the study to those variables most relevant and pertinent to the study. Thereafter a quantitative element was used to test the proposed theoretical framework in order to produce a new online customer experience model and further answer the research objectives.

The qualitative element in the study was developed based on the literature reviewed with the aim to reduce the number of examined variables to be tested in the quantitative phase, thus providing comprehensiveness and parsimony. 16 semi structured in-depth interviews were conducted with SMEs from an array of industries (including: creative industries, financial services, technology and manufacturing). 96 businesses were approached to take part in the study, of which all had searched for business advisory information on a business advisory website within the last 30 days. The interviews provided in-depth insight into the variables capable of influencing the online experience confirming some of the basic structure and temporal order of the variables, while identifying those variables of most value for the second phase of the research.

The main quantitative phase of the research consisted of an online experiment aligned with an online questionnaire. The online experiment was conducted on three selected business advisory websites offering business information and services with a sample of 160 participants. Tasks were set up on each website for participants to complete. After the completion of the set of tasks on each website, participants would complete the online questionnaire. Using an online experiment provided each respondent with the experience of searching for business advisory services. As the questionnaire was carried out face-to-face and researcher administered, all 160 responses were complete and usable to test the proposed theoretical model and thus made it suitable for structural equation modelling.

1.4 Thesis Structure

In order to produce rigorous research to provide insight into the online customer experience during a utilitarian search for business advisory information and answer the research objectives, this thesis is structured as shown in figure 1.1.

Figure 1.1 Thesis Structure

Chapter 1
This chapter provides a background on the research introducing the online customer experience. The context of the study was outlined along with the research problem and rationale, as well as the research aim and objectives. The best-fit methodology

and the philosophical underpinnings of the study were detailed as a pragmatic mixed methods approach.

Chapter 2

This chapter explored offline and online information seeking identifying the cognitive and affective process involved during information search. The models and theories on information seeking from information science were outlined to provide a theoretical understanding of how customers search for information, illustrating the stages customers go through during a search for information.

Chapter 3

This chapter explored trust, information quality and website credibility. This chapter outlined the importance of information quality and website credibility during a customer's online search for information. Trust was identified as the property of an individual while a website can convey credibility in order to gain an individual's trust. Numerous models and theories were discussed in relation to website credibility evaluations and information quality evaluations.

Chapter 4

This chapter specifically examined the customer experience and those variables that have been previously discussed as influencing the customer experience within the online environment stemming from studies focusing on a hedonic shopping context. From the intervention theory outlined in chapter two and the ISCM model, as well as the social presence theory outlined in chapter 4, online customer support in the form of social interaction was introduced, with discussions on new technology such as live chat, social networks and online help desks.

Chapter 5

This chapter discussed the emergent knowledge gaps from the literature review and refined the literature pertinent to the study's initial qualitative interviews. The temporal order in which variables may influence the online customer experience

were outlined in order to establish conceptual thinking towards the development of the theoretical framework in the study.

Chapter 6

This chapter provided a discussion on part one of the methodological approach for the study. First of all the adopted philosophical stance of pragmatism was discussed with the ontological and epistemological assumptions outlined. The qualitative method of in-depth interviews used in the study was outlined and justified, along with the sampling procedure, data collection and analysis.

Chapter 7

This chapter provided the findings of the initial qualitative element of the research. This exploratory stage through the use of 16 in-depth interviews provided in-depth details on the variables capable of influencing the customer during their online search and provided the parsimony and comprehensiveness required from the depth interviews. Definitions of each of the variables to be tested in the quantitative phase of the study were outlined in this chapter along with the conceptual framework and research hypothesis to be tested in the study.

Chapter 8

This chapter provided a discussion on part two of the methodological approach introducing the quantitative phase of the research. The use of an online experiment and associated questionnaire was outlined. A discussion on the experimental design stage, data collection, the creation of the questionnaire and the measurement scales adopted in the study was provided. Lastly the sample selected for the study was outlined before the limitations of the method.

Chapter 9

This chapter outlined the findings and analysis from the online experiment and questionnaire. Numerous statistical analyses were conducted including repeated measures ANOVAs, MANOVAs, Reliability analysis, Normality analysis,

exploratory factor analysis and confirmatory factory analysis. Structural Equation Modelling was adopted in order to test the conceptual model and produce a comprehensive online customer experience model.

Chapter 10
This chapter provided a discussion on the findings and analysis conducted in chapter 7 and 9 from both the qualitative and quantitative research and in relation to previous research studies. This chapter provided a discussion in relation to the research objectives and offered insight into the stage at which variables influence the customer experience during their journey to find information as well as identifying the role of online customer support in the form of one-to-one social interaction. This chapter also outlined the final theoretical model from the results of the online experiment.

Chapter 11
The final chapter discussed the final conclusions and implications of the research from the results of the in-depth interviews and the online experiment. The theoretical contributions from the research were outlined as well as the practical managerial implications. Finally this chapter outlined limitations and opportunities for future research arising from such limitations.

1.5 Summary

This chapter has provided an introduction to the research. The background to the research was discussed, outlining the importance of the online customer experience moving beyond online service quality. The importance of furthering our limited understanding on the online customer experience and the variables capable of influencing the customer experience within new contexts were highlighted as part of the research problem and rationale for the research. The context of the study exploring the OCE during a utilitarian search for business advisory information and services was outlined before illustrating the research's principal aim and objectives. The

methodological approach and philosophical stance was outlined as a mixed methods approach through the use of in-depth interviews and an online experiment with pragmatic philosophical underpinnings. Finally, the structure of the thesis was displayed in order to outline the approach to answer the research objectives of the study. The subsequent chapter begins the review of the literature important to the study in order to develop grounded theoretical and managerial implications.

CHAPTER 2

UNDERSTANDING A CUSTOMER'S SEARCH FOR INFORMATION

2.0 Introduction

The purpose of this chapter is to explore how customers search for information, in particular the cognitive and affective process customers move through during information seeking. Numerous models and theories have been proposed on the information search process. The aim of this chapter is to identify the general information search process of customers in both an offline and online context, before moving on to how customers successfully complete a search for information and conversely the reasons for abandoning search.

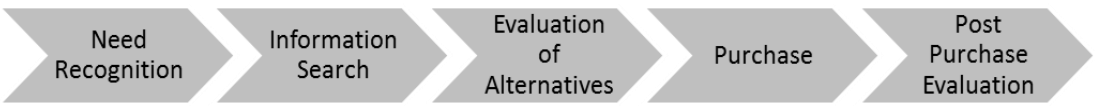
Research on the broad topic of information behaviour has provided interesting insights into information seeking. There is a clear indication that information seeking is a complex task and involves both the cognitive and affective states of a customer and often requires a form of communication with peers, friends, family or experts. This chapter will review and discuss the various theories and models of information seeking and will identify the search process of individuals online.

2.1 Consumer Decision Making Process

The consumer decision-making process has received much attention over recent years particularly with the growth of the Internet and its access to a mass of information (Bettman et al, 1998; Guo, 2001). Bagozzi (1992) argues that customer choice is the fundamental reason for study in consumer research. The choice now available to individuals in terms of products, services and information has eclipsed that of ever before due to the significant rise of the Internet (Alba et al, 1997). According to Alba et al (1997) and more recently Wang et al (2012), the Internet has changed the amount, type and format of information that customers can use to help inform decision-making.

The extensive amount of research surrounding information behaviour and information seeking along with its associated models and theories could be due to its integration with the wider consumer decision-making process (Bettman et al 1998). In most research papers discussing customer behaviour we see a description or a graphical representation of the consumer decision-making process as shown in figure 2.1. While the exact terminology of each stage of the process as proposed by Engel et al (1978) may not be universally agreed, depending on the researcher's background, the context remains consistent. The five steps outlined by Engel et al (1978) consist of need recognition, information search, alternative evaluation, purchase (decision making) and post purchase decision evaluation.

Figure 2.1 Consumer Decision Making Process



Adapted from: Engel et al (1978)

In relation to searching for information or services, we can see similarities to the decision-making model in relation to purchasing products or services in figure 2.1. Information search theories as presented in the subsequent sections of this chapter similarly outline that a search first of all commences when there is a 'need recognition' (Pettigrew et al, 2001). Following the need recognition, individuals search for information involving a cognitive and affective process during search (Kuhlthau, 2004). Thirdly the customer 'evaluates alternatives' through looking at alternative information before the 'purchase' stage, which in the case of information search can be seen as the consumption of the information, before lastly evaluating the information collected.

As we discuss the information seeking models, similarities can be seen with the aforementioned consumer decision-making process. The terminology of each of the stages in the process can somewhat vary, often depending on the background of the researcher. The term 'Information Search can often be used interchangeably with

'Information Seeking' and 'Information Acquisition' (Kuhlthau, 1988; Wilson, 1981; Jacoby et al 1978). It can be seen that within marketing studies, much attention has been focussed on the end purchase and the process of reaching a purchase. However, this chapter will focus on the element of information search and the consumption of information while borrowing theories from information science to help us understand the actual process of searching for information.

2.2 Information Seeking

In the same way in which it is important for marketers to understand the consumer decision-making process, so that consumption behaviour can be understood (Ariff et al, 2013), it is important that marketers go one step further and understand the complex process of information seeking, so that customers can be provided with the service and experience they expect. Many scholars have suggested different ways in which humans understand and seek information in a variety of contexts. Having the ability to seek out information is deemed as being information literate (Cullen et al, 2011) which can be defined as, 'the ability to use techniques and skills for the wide range of information tools as well as primary sources in moulding information solutions to problems' (Zurkowski, 1974).

Information seeking is often seen as a complex and overwhelming process involving a significant level of uncertainty (Mills et al, 2013). Much attention has been given to information seeking in Information Science literature, Human Computer Science literature, Library literature, Management literature and Marketing literature through the exploration of consumer behaviour theories. Information seeking behaviour has been researched by numerous leading researchers including, Dervin (1983), Belkin (1980), Taylor (1968), Ellis (1989), Kuhlthau (1989) and Wilson (1981) amongst many others. Wilson (2000) defines information behaviour as, 'the totality of human behaviour in relation to sources and channels of information, including both active and passive information seeking and information use.' Additionally, Pettigrew et al (2001) refer to information behaviour as, 'the study of how people need, seek, give and use information in different contexts, including the workplace and everyday living.'

Information seeking has often been compared to the logical problem solving process, where a gap in knowledge triggers a search for information. It can be argued that this is applicable in some cases, however in most situations the information seeking process is somewhat dynamic and changeable (Heinstrom, 2003). It is suggested that information seeking is often dependent on the context (Utilitarian or Hedonic) and to a great extent, the individual performing it (Solomon, 2002), with an individual's inner feelings and processes playing a significant part on how they achieve their information goals (Heinstrom, 2003).

Many models of information seeking behaviour exist (Wilson, 1999), as extensively discussed by Case (2012), which help us to conceptualise the information seeking process and adopt these models in research and practice (Hyldegard, 2009). For example, Wilson (1981) developed the 'Model of Information Seeking Behaviour', Dervin's (1983) 'Sense Making Theory', Ellis's (1989 and 1993) 'Behavioural Model of Sense Making Strategies', Kuhlthau's (1989) 'Information Search Process Model' (Known as the ISP Model), Belkin's (1980) 'Anomalous States of Knowledge Model' (Known as the ASK Model), Taylor's (1968) 'Levels of Information Needs Model' and Grover's (1993) 'Information Diagnosis Model'. This list is not exhaustive, but provides a list of the leading models within the area of study.

Research suggests that information-seeking behaviour occurs as a consequence of a need or an information problem perceived by an individual. In order to satisfy that need the individual, 'makes demands upon formal or informal information sources or services, which result in success or failure to find relevant information' (Wilson, 1999). If successful, the individual then uses the information found and may either fully or partially satisfy the perceived need or, on the contrary, may fail to satisfy the need and have to reiterate the search process. The aforementioned models highlight that part of the information seeking behaviour may involve other people through information exchange and communication (Mills, 2013; Robson and Robinson, 2013).

The term 'information seeking' can be defined as, 'those activities a person may engage in when establishing their own needs for information, searching for such information in any way, and using or transferring that information' (Wilson, 1999). Models and theories on information seeking proposed by Dervin (1983), Belkin (1980), Taylor

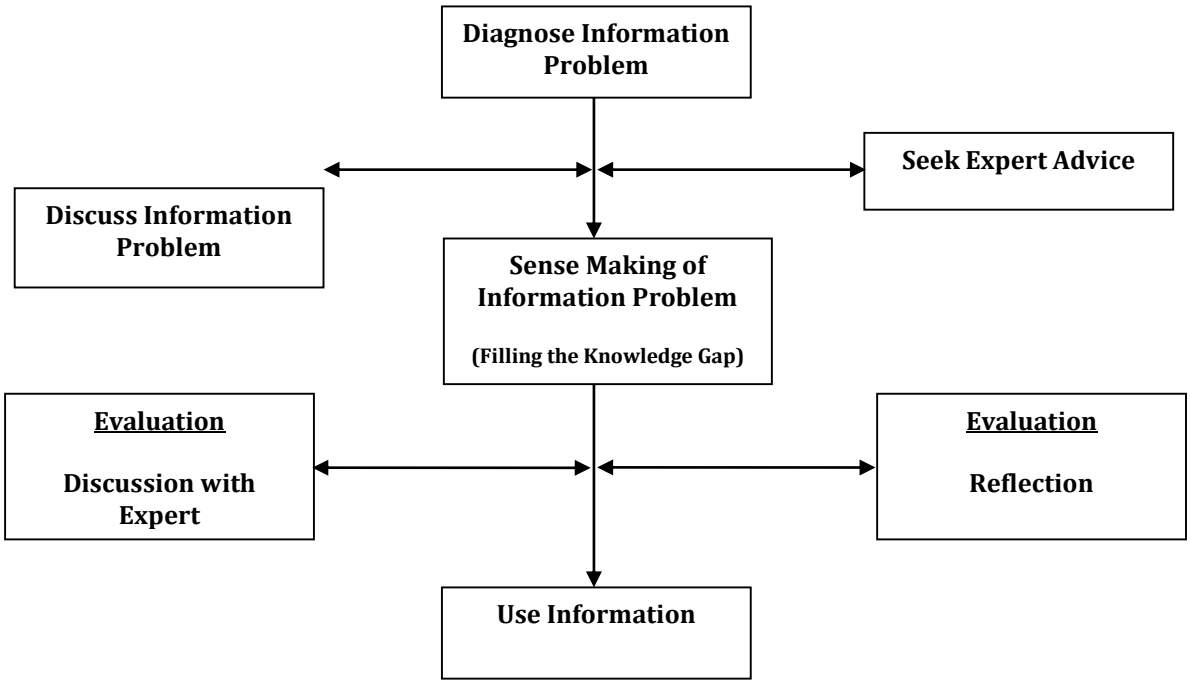
(1968) and Grover (1993) all have a similar approach to establishing information needs, be it by diagnosis tools (Grover, 1993), through levels of needs (Taylor, 1968), overcoming information problems (Belkin, 1980) and sense making to fill information problems (Dervin, 1983). Due to the similarities of each of these models, the author deems it appropriate to summarise each model in figure 2.2 to help provide an overview and simple understanding of these information seeking models.

The aforementioned researchers suggest that the first stage of the process is identifying the information gap or 'information problem' that exists when attempting to fill information needs (Thomas, 2004).

Before making it to the next stage of the model (figure 2.2), 'sense making of the information problem' and filling the knowledge gap, individuals may seek 'expert advice' or 'discuss the information problem' with others. Dervin (1983), Belkin (1980) and Taylor (1968) and more recently Robson and Robinson (2015) all highlight the interaction of seeking expert advice or discussing the information problem as being most often a critical point in understanding and filling information needs.

Dervin (1983), Belkin (1980), Taylor (1968) and Grover (1993) all agree that the next stage of the information needs process is 'filling the knowledge gap', 'making sense of the information' and the 'treatment' phase (Grover, 1993) of information needs. However the process does not stop there, the aforementioned researchers identify that before proceeding to use the information gathered, individuals often evaluate the information they have obtained and frequently seek further advice through discussions with others/experts or through reflection, which can involve others or even assessment on the topic area with a list of open-ended questions to be answered (Grover, 1993).

Figure 2.2 Summary of Information Needs Models



(Author developed model from Dervin (1983), Belkin (1980), Taylor (1968) and Grover's (1993) information needs theories)

Each of these theories outline the individual's information needs, however these theories do not establish the discrete cognitive and emotional process or stages individuals go through when seeking information. Ellis's (1989) research on information seeking highlights features of information search that individuals may go through but not necessarily in any particular order. With no particular procedure other than the 'Starting' feature and 'Ending' feature, Ellis (1989) suggests individuals undertake the features of 'Chaining' following citations, 'Browsing', 'Differentiating', 'Monitoring', 'Extracting' and 'Verifying'. Ellis (1989) points out that interaction with any of the features highlighted will depend on the unique circumstances of the information seeking task and the complexity of the information problem.

Kuhlthau's (1988) ISP model on the other hand offers definitive stages that individuals go through during information seeking and highlights how the process develops over an extended period of time (Hearst, 2009). These stages include cognitive thinking stages, affective feelings stages as well as the physical aspect associated with each of these stages (Savolainen, 2015). The Information Search Process model, being one of the most highly cited models in the field of information science, is argued as an important model for understanding both day-to-day and complex information seeking tasks (Wilson, 1999; Wiley and Williams, 2015). The ISP model is based on empirical research and has been further tested in subsequent studies (Wilson, 1999; Kuhlthau et al, 2008; Savolainen, 2015). The model is said to be general enough to apply to any information-seeking situation. The model has been tested with high school/college students, librarians, lawyers, securities analyst and general healthcare information seeking and revisited in 2008 to be tested in the online environment.

Ellis's (1989) model outlines that the different behaviours involved in information seeking are not set out in a diagrammatic model like Kuhlthau's, and makes no claims that different sets of behaviours are applicable to particular stages of information seeking. Kuhlthau's (2004) continually developed model was revolutionary in that it combined both the cognitive and affective aspects of information search. While the ISP model itself does not take account for the individual's information needs or context in which they arise (Robson and Robinson, 2013), the model provides a sound theoretical basis to understand information seeking behaviour. Despite the number of models that have been proposed with regard to information seeking and information search, many remain in a conceptual state and thus have a lack of theoretical support (Robson and Robinson, 2013). Due to Kuhlthau's model being empirically tested in multiple contexts (Beheshti et al, 2013) and thus more generalisable as well as the acknowledgement of both cognitive and affective processes in information seeking, this study will continue to explore the use of the ISP model as the theoretical basis for exploring information seeking attitudes and behaviours.

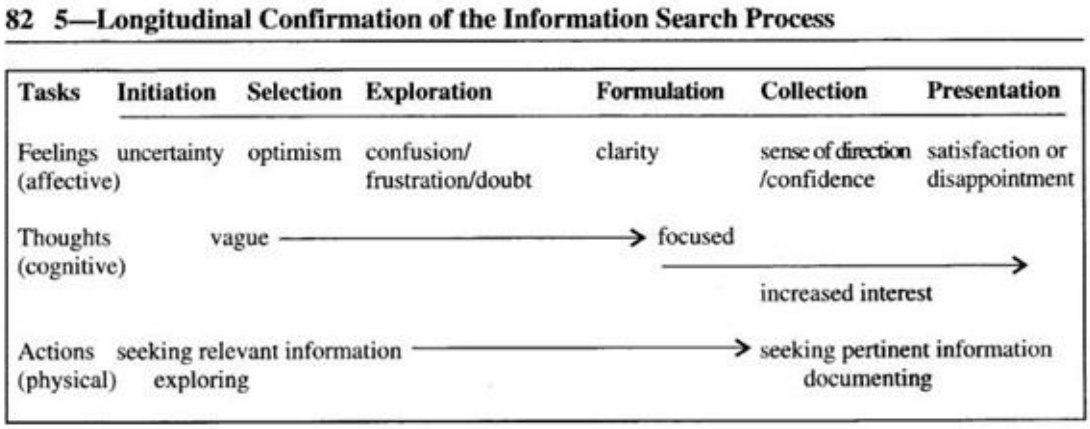
2.3 Kuhlthau's ISP Model (Information Search Process)

It can be seen that like the consumer decision making process outlined in figure 2.1, the models of information search further support the concept that decision making and information search are a sequence of behaviours and cognitive processes. Kuhlthau (2004) created and developed a model for inquiry-based information seeking, which focuses on understanding the holistic process involved in information search. Building on Kelly's (1968) personal construct theory, Kuhlthau's (1988) constructivist approach identified that a sequence of cognitive and affective process exists when individuals search for information (Shannon, 2002).

The development of the Information Search Process model is the result of more than two decades of empirical research (Kuhlthau et al, 2008). The Information Search Process was developed from a qualitative study of secondary school students, which saw the emergence of the initial ISP model and reveled the search process as a complex and constructive process (Kuhlthau, 1989). The model was then 'verified' and 'refined' through quantitative and longitudinal methods of a diverse range of library users and developed further with case studies on individuals in the workplace, showing its relevance within other areas. Seven cognitive stages are highlighted in Kuhlthau's model as shown in figure 2.3 along with corresponding affective feelings during the search process (Kuhlthau, 2004).

Holliday and Quin (2004) highlighted that individuals often felt frustrated during their information search with the assumption and perception that information seeking would be an easy task to complete, but in contrast they were confronted with the complexities of information seeking (Savolainen, 2015). Kuhlthau's ISP model focuses on 'cognitive learning theory' as it sees information seeking as a constructive sense-making process that starts with the feeling of uncertainty and anxiety (Beheshti et al, 2013). The process outlines 'what is going on' in the searcher's mind from the beginning to the end of the process where the individual establishes meaning and knowledge from the information gathered. It can therefore be argued that the ISP model is actively involved with an individual during information seeking (Adams, 2009).

Figure 2.3 Information Search Process Model (ISP Model)



(Kuhlhau, 2004)

Task Initiation, Stage 1 of the model, is where the individual identifies if there is a gap in knowledge and a need to search for information. The information seeker is contemplating the information problem and identifying possible issues or questions to pursue, at this stage feelings of uncertainty and apprehension are common (Kuhlthau, 1991).

Stage 2 of the model, 'Selection', is the selection of the topic or issue where information is required. At this point the individual is engaging in the question to explore. Cognitive thoughts are centred on 'weighing prospective topics against the criteria of task requirement, time allocated, personal interest and information available' (Kuhlthau, 1991). Typically, at this stage individuals will confer with others in order to confirm the selection of the topic (Wiley and Williams, 2015). Feelings at this point usually change from uncertainty to a feeling of optimism as progress has been made in terms of knowing what information is now required (Wilson, 1999).

At Stage 3 of the process, the information seeker may encounter inconsistency or incompatibility and confusion in the information they find (Shannon, 2002). The task here is to search for information to extend knowledge beyond the individual's own personal understanding of the topic area. The actions the individual will undertake involve locating information on the general topic, reading information to become informed, and relating new information to what is already known (Kuhlthau, 1994). The information individuals use at this point can come from formal or informal sources

(Mills, 2013). The information obtained at this stage seldom meets the original thoughts previously held and therefore can result in individuals feeling discouraged or even threatened, resulting in a sense of inadequacy, frustration and doubt (Hearst, 2009). It is argued that at this point some individuals may be inclined to abandon their search process due to high levels of confusion and frustration (Spink et al, 2002; Wiley and Williams, 2015). It is therefore understandable that Kuhlthau (1991) identifies 'exploration' as the most difficult stage of the ISP process as the information encountered can significantly increase uncertainty as seen in stage 1 and prompt a dip in confidence.

Stage 4 of the ISP is focus formulation. At this stage the individual is able to form a focused perspective from the information they have obtained. Formulation is deemed as the 'turning point' in the model as feelings of uncertainty decrease and replaced with feelings of confidence (Shannon, 2002). It is believed the information seeker will start to identify and select ideas from the information they have gathered in order to develop a focus for the topic. Kuhlthau (1991) suggests that a focus is similar to a hypothesis in the process of construction. The focus developed at this stage is likely to gradually become clearer as the individual starts to construct the information they have obtained (Pontis and Blandford, 2014). The individual's feelings change yet again at this point to a sense of confidence and clarity. When developing the focus of the information needed, the individual may also reconsider the four criteria used to select the initial search problem. Task; What am I trying to accomplish? Time; How much time do I have? Interest; What do I find personally interesting? Availability; What information is available to me? (Kuhlthau, 2004).

Stage 5 of the ISP model is collection. This is where the individual gathers and documents the information from the previous formulation stage. The individual will further define, extend and support the focus. Additionally, the information seeker will start to select the information that is most relevant to the topic and the focus outlined at the previous stage (Shannon, 2002). General information on the topic is now no longer needed as the information gathered at this point is targeting the specific information need. It is suggested that feelings of confidence increase as uncertainty subsides, as the

individual becomes more interested and deeper into the topic and is closer to achieving the information required (Beheshti et al, 2013).

Stage 6 of the model is presentation. At this point feelings of relief and satisfaction are common if the search process has gone well and the information has overcome the information problem (Hyldegard, 2006). However, disappointment is the most dominant feeling if the search process has not been successful (Kuhlthau, 2004). If the search process has been successful individuals should be able to present or use their findings, otherwise the individual may need to return to previous stages of the model (Kuhlthau, 2004). Information seekers will likely use their findings along with their own personal thoughts as well as those thoughts of others in order to overcome their information problem.

More recently, the ISP model and added a 7th stage named 'assessment' (Kuhlthau, 2001), as seen in figure 1.2. At this stage the information seeker is believed to reflect on the learning process and the information that was obtained. This assessment stage can be undertaken in multiple formats including peer communication and self-evaluations (Thomson, 2004).

It is clear to see that Kuhlthau's research, also supported by Savolainen (2015) confirm a clear relationship between the cognitive thinking and affective feelings experienced during information search. Kuhlthau (1994) suggests that individuals move back and forth between the stages outlined in figure 2.3, highlighting the process as not simply a gradual procedure, similar to Ellis (1989). For example, the research problem established in stage one of the model may change after exploring the problem in stage two, therefore the individual may need to return to stage one. This can occur at any point when searching for information. In line with numerous other scholars Dervin (1983), Belkin (1980), Taylor (1968), Grover (1993) and Ellis (1989), Kuhlthau (2001) argues that this confirms the need for instructional intervention and guidance in learning from the information collected and support far beyond merely leading individuals to sources, as individuals often encounter problems that can be difficult to overcome (Wiley and Williams, 2015).

Kuhlthau (1994) suggests that interaction with an instructor or expert helps individuals create and develop a focus (stage four of the ISP model). In particular, Kuhlthau et al (2008) findings indicated that individuals need support during the initial stages of the information search process as well as latter stages (Wiley and Williams, 2015). Kuhlthau (1993) subsequently developed an intervention model with five zones for intervention that can occur at any point within the ISP. This model relates to individuals within a library educational setting, but can be applied to various information search contexts as previously highlighted (Kuhlthau, 2004, Kuhlthau and Tama 2001, Kuhlthau and Todd, 2008). Figure 2.6 later in the Chapter discusses this model.

2.4 The information seeker

Kuhlthau's (1989) work on the ISP was among the first to explore the affective experiences or feelings in the process of seeking information along with the associated cognitive experience and established a correlation between the two (Hyldegard, 2009). Models prior to the ISP including Belkin (1980), Taylor (1968), Grover (1993) explored the cognitive dimension of information seeking, however the affective dimension had not been recognised as a notion in effecting general information seeking (Taylor, 2011). A key finding of Kuhlthau's (1989) research was the discovery of a significant increase in uncertainty and decrease in confidence upon the initiation of a search. As previously discussed individuals find that they will often encounter a 'dip in confidence' with uncertainty, confusion and anxiety as dominant feelings until a focus is developed, this therefore highlights how critical it is in understanding the affective dimension of individuals in information seeking (Dinet et al, 2012).

The ISP illustrates information seeking as a process of construction, influenced by Kelly's (1963) personal construct theory. Using the personal construct theory Kuhlthau (2001) identified the underlying principal of information seeking as it involves construction in a holistic process where the individual actively pursues understanding and seeks meaning from information encountered over a period of time. The process is built (constructed) as a progression of thoughts (cognitive) and feelings (affective) that move from 'vague' and 'anxious' to 'clear' and 'confident' as the search develops (Kuhlthau, 1989; Cole, 1997 and George et al, 2006).

Kelly (1963) highlights the emotional (affective) experience of constructing meaning from new information in general. Information is gathered over a period of phases, commencing with confusion/uncertainty (Kuhlthau, 1989; Bilal, 2000; Heinstrom, 2002; Hyldegard, 2006; Dinet et al, 2012). The feeling of confusion then increases as inconsistencies and incompatibilities are confronted between the information and the constructs the person already holds (Case, 2012). Confusion often intensifies and can cause doubt in the individual's ability to obtain new information. The problem caused by the new ideas from the newly obtained information may become so threatening that the new information is discarded and construction abandoned (Kuhlthau, 2004; Pontis and Blandford, 2013).

Savolainen (2015) highlights that information search is not just about finding and replicating information, the process is about 'seeking meaning' and fully understanding information so it can be used to solve a problem. As a result, the information search process is the construction that involves exploration and formulation but this does not necessarily come straight from selection and collection as a customer's experience can play a significant part in the decisions that are made throughout the information seeking process. Kuhlthau (1999) suggests that studies of the information search process in the workplace identify that an individual's experience of the stages in the ISP is linked directly to how much the person knows about the problem and the degree of construction required during information seeking. In regular everyday tasks, where the aim is to answer a simple question, individuals do not usually experience all stages in the ISP (Wilson, 1999). On the other hand, medium to complex tasks, where the aim requires considerable construction and learning, individuals will go through the process as illustrated in the ISP model.

2.5 The Pivotal Point of Focus Formulation

Dinet et al (2012) highlights the focus formulation stage as the pivotal point in the search process. Developing a focus allows the information seeker to reflect on the information that they have encountered and gathered at the exploration stage of their search and allows the individual to develop a direction to concentrate on in order to complete the process (Case, 2012). Information seekers often find the previous stage to focus formulation, 'exploration' as one of the most difficult stages in information

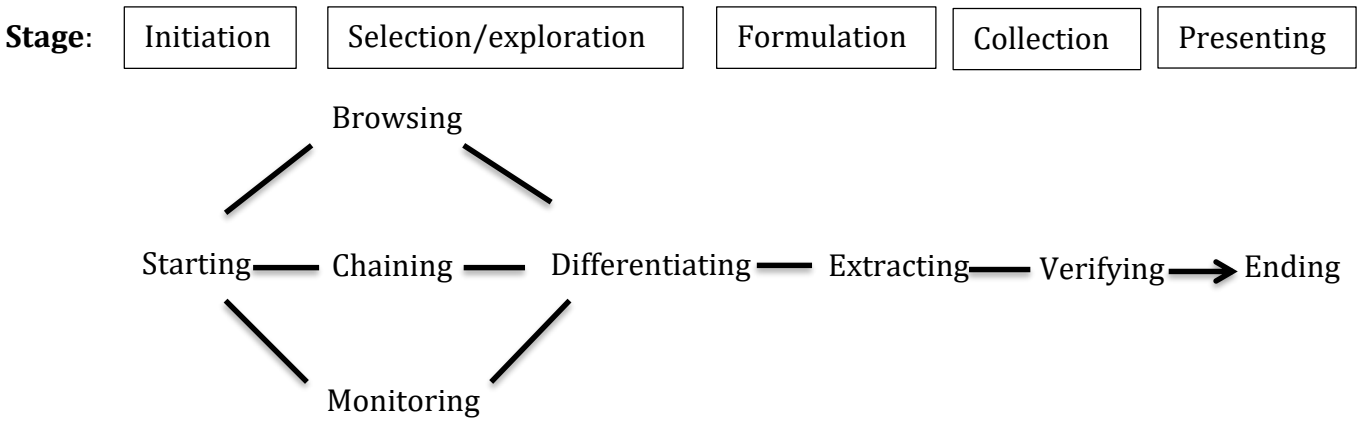
seeking as they can experience anxiety and frustration as individuals encounter information from multiple perspectives, which may not be in line with their specific need or own personal knowledge (Savolainen, 2015). A clear relationship between feelings and formulating is apparent from the increase in confidence that parallels the rise in clarity as formulation unfolds (Hyldegard, 2009). Kuhlthau (1991) suggests that the formulation stage of an information seeker's search is often misunderstood when individuals view the search process as a collection of information and not a construction of information.

Despite individuals often finding the exploration phase as one of the most difficult, it facilitates formulating a focus. Shannon (2002) highlights that information seekers often try to move directly from selection of information to collection without the critical exploration in order to achieve a formulation that provides direction for the search. Information seekers need to be able to handle the increasing uncertainty experienced in the exploration stage as this eventually helps with formulation and generating the focus required (Kuhlthau, 2004). Without each of the exploration stage and formulation stage, information seekers are unable to properly reflect on the information they have obtained. True understanding of the topic only develops through extending and defining a topic by reflecting on the information gathered in order to obtain a personal understanding (Wilson, 1999).

2.6 Integration of Kuhlthau and Ellis

Interestingly, Wilson (1999) proposes a merger of both Kuhlthau (1989) ISP model and Ellis's (1989 and 1993) Behavioural Model of Sense Making Strategies in order to highlight similarities between both models.

Figure 2.4 Joined Ellis and Kuhlthau framework

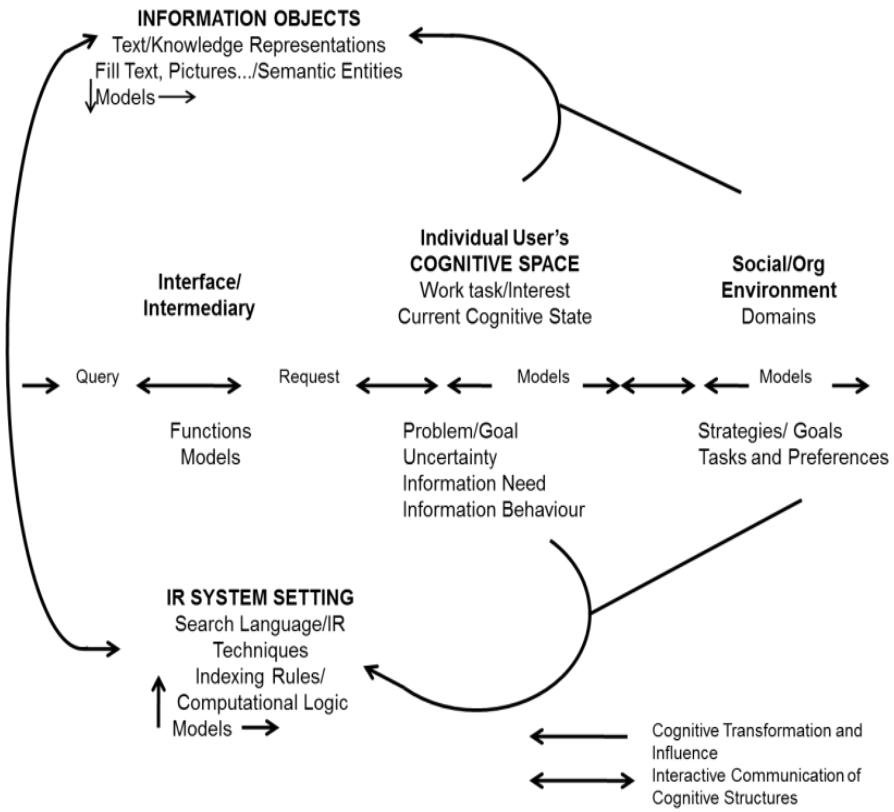


Adapted from Wilson (1999)

Wilson (1999) highlights in Figure 2.4 the similarities between each model. Although Ellis (1993) does not suggest any particular order or stages, he suggests that information seeking involves elements of behaviour that may occur in different sequences with different people (Robson and Robinson, 2013). However, Wilson (1999) shows how each of these sequences can be established in an order in relation to Kuhlthau's (1988) ISP, where individuals go through set stages but may go back and forth at particular points. While presented in a liner process, it can be seen that a similarity exists with the consumer decision-making process outlined earlier in figure 2.1. Information search within the consumer decision-making process can be thought as an information decision-making process within the wider consumer decision-making process, with distinctively similar actions applied to each.

In addition to the behaviours of information seeking, Ingwersen (1996) explored three key components, the information user, search and the information retrieval system (IR system).

Figure 2.5 Ingwesen (1996) Information Retrieval Model



Adapted from Ingwersen (1996)

Ingwersen's (1996) model is the only information-seeking model to consider the role of the information system used during information retrieval and its subsequent influence in evaluating the information. Ingwersen (1996) suggests that information behaviour results from the dynamic interactive processes, which occur at the cognitive space level and the information space level of digital information retrieval systems. The individual users' cognitive space as well as their environment, strategies and goals of information search is presented in the model, which is believed to have an impact on the information retrieval system and the information objects obtained. As can be seen in figure 2.5, a loop exists between the IR system and information objects stages. If insufficient information is returned, the search continues between both.

Ingwersen's (1996) model suggests that the IR system itself and any differences between IR systems and information objects outlined in figure 2.5 can have an impact on the cognitive ability of the information user to obtain and evaluate information from the system. Research regarding online information search and evaluation (for example,

Hu et al, 2008; Ho et al 2012; Dinet et al, 2012) confirmed Ingwersen's (1996) claim that the cognitive ability of the individual impacts upon the evaluation of information online and that the system can play a role on how individuals evaluate that information.

Ingwersen's (1996) acknowledgement to the influence of the system being used is relevant in this study as we explore the online experience within the context of searching for information and services on business advisory websites. Subsequently in this Chapter a discussion on 'online' information seeking will be provided.

2.7 Principal of uncertainty in information seeking

The adage that obtaining information reduces uncertainty is not necessarily the individuals experience in information seeking, in some instances new information can actually increase uncertainty and cause an uncomfortable experience (Case, 2007 and Kuhlthau, 2004). Like Kuhlthau (1999), numerous researchers (Ellis, 1993; Mignerey et al, 1995; Ramirez et al, 2002 and Wilson 1996) highlight uncertainty as one of the most significant factors that cause individuals to abandon an information search, therefore it would be appropriate to discuss the affective notion of uncertainty. On the one hand information organisation (on a website for example) is based on a principal of certainty and order, where information is organised in an intelligent system that allows for 'collecting', 'classifying' 'organising' and 'retrieving' information that has been developed in order to meet specific search queries (Kuhlthau et al, 2008). On the other hand, many of the information needs that individuals have cannot be expressed in one single question and cannot be found in one single source (Chowdhury and Landoni, 2006). As a result, numerous researchers argue that uncertainty and confusion characterise most if not all information problems. In turn, information seekers can become easily frustrated with systems that are developed to meet specific search queries, as they are unable to handle a complex search (Spink et al, 2002; Ho et al, 2012).

The findings from studies on information seeking, clearly indicates the necessity of recognising the affective notion of uncertainty in the information search process (Chowdhury, et al, 2011). An uncertainty principle would therefore acknowledge feelings of anxiety and lack of confidence and recognise the uncertainty, confusion, and

frustration associated with vague and unclear thoughts about a problem or topic (Spink et al, 2002). The uncertainty principle would acknowledge the complex constructive process of progressing from uncertainty to understanding and the interventions and interaction required to help individuals move from uncertainty to understanding (Kuhlthau, 1993). In spite of this, Fainburg (2009) suggests that the notion of uncertainty may only be relevant at the start of information seeking rather than during the entire process with Dewey finding the notion of uncertainty and perplexity only important at the early stages of information seeking. In contrast to this Kuhlthau, (1993); Ellis (1989) and Wilson, (2000) argue that uncertainty can arise at any stage of an individual's search process, however particular emphasis is at the start of information seeking. Hyldegard's (2006) research goes further to highlight that within group information search some group members may go through the entire search process and finish with feelings of uncertainty and confusion.

2.8 Zone of Intervention

In order to aid information seekers in overcoming 'uncertainty' or more generally negative affective emotions and problems, Kuhlthau (1996) developed a model of intervention. Kuhlthau (2001) suggest that information seekers often require interaction and communication with others in order to move through their search process. Kuhlthau's (1996) 'Zone of Intervention' model is a concept modeled on Vygotsky's (1978) zone of proximal development. Vygotsky's work has had a significant influence on learning theory as his work developed a concept of identifying a point or zone in which intervention would be most useful to an individual (Kuhlthau, 1996). Vygotsky's (1978) zone of proximal development is 'the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined by problem solving under professional guidance or in collaboration with more capable peers' (Kuhlthau, 2007). Vygotsky's (1978) theory provides a way of understanding how intervention works in the constructive process of information seeking and can therefore be used to develop the 'zone of intervention'.

According to Todd (2004) identifying when intervention is needed and determining what intervention is helpful requires diagnostic or analytical skills. An Intervention when an information seeker is self-sufficient is deemed as being unnecessary in

addition to being intrusive in the individuals search process (Wilson, 1999 and Shannon, 2002). However, Intervention when individuals are unable to proceed on their own or can only proceed with a high level of difficulty is seen as 'enabling' and 'enriching' (Kuhlthau, 1999; Wiley and Williams, 2015). When an individual is unable to do a task alone without assistance then this is a zone of intervention.

2.8.1 The Five Zones of Intervention

Individuals arrive at a situation, be it an offline or an online environment, to retrieve information with differing levels of knowledge and at different stages of their search process. Kuhlthau (1996) suggests that these different stages of processes and knowledge require intervention that can be organised within five zones.

At zone one (Z1) the problem is usually self-diagnosed with a search conducted by the information seeker. From zone two (Z2) to zone five (Z5) the information problem is diagnosed through a form of interaction with another individual to extract a problem statement and background information on what the search is for (Thomas, 2004). In the context of a library setting, a request for information or a specific piece of literature or the revelation of an information problem will initiate the interaction outlined (Kuhlthau, 1996).

Using the theoretical framework of the ISP and the uncertainty principal, the expert is able to identify the information seekers situation as either a 'product problem' or a 'process problem' (Kuhlthau, 2004). A product problem is simpler to address and can be done so with a source of information that is available (Kuhlthau, 1996). If a product problem is identified Z2 to Z4 intervention is deployed working through the required zones outlined below in table 2.6. A process problem on the other hand is far more complex and requires being resolved in a holistic process as seen in the ISP (Shannon, 2002). According to Kuhlthau (1996) a process problem places the individual in one of the ISP's constructive stages. When a process problem is identified Z5 intervention is required. Zone 5 intervention involves communication, collaboration and conversing. Table 2.1 below outlines the 'Zone of Intervention' model.

Table 2.1 Kuhlthau (1996) Intervention Model

Intervention Zone	Level of Mediation	Intervention	Example
Zone 1	Organiser	Self Service	No assistance
Zone 2	Locator	Single Source	Introduction to the reference assistance
Zone 3	Identifier	Group of Sources	Assistance in locating and using a variety of relevant resources
Zone 4	Advisor	Sequence of Sources	Identification and use of relevant resources in a sequence
Zone 5	Counsellor	Process Intervention	Assistance in understanding the process, In development of search strategies, In the formulation of a focus, and determining relevance of retrieved items,

(Adapted From: Kuhlthau, 1996)

2.8.2 Levels of Mediation

Kuhlthau (1996) identified individuals operating at Zone 1 (Z1) require no direct intervention, although their ability to conduct research (ISP) assumes access to a resource that is well organised and fit for purpose to search for information. In other words, a searchable environment must be provided. At this zone, the level of mediation is at the 'Organiser' level, which may include signposts (navigational aids) to information or some form of guideline.

At Zone 2 (Z2), an individual may be able to locate general information but will require help in finding specific information in order to solve a question (McCarthy, 2009). The locator is able to point the information seeker towards a single source in response to a specific query (Kuhlthau, 1996).

At Zone 3 (Z3) individuals are believed to require assistance and instruction in finding and using resources, the expert will take on the role of 'instructor' and the information seeker will play the role of 'identifier' (Shannon, 2002). Both will work together in order to find information sources through collaboration (Kuhlthau, 2004). The

instructor provides a reference intervention to a sequence of sources that may help the information seeker meet their aim.

Zone 4 (Z4) intervention responds to the advisor level mediation. The individual's information problem is presented to the expert. This results in a group of sources recommended to use in a specific sequence and instruction in their use (McCarthy, 2009).

The last and highest level of mediation is the counsellor level responding to zone 5 (Z5) intervention. Zone 5 is the only level that goes further than pointing individuals to sources and providing guidance on sources (Shannon, 2002). The information problem is identified through communication that leads to the development of a strategy, sources needed, and continuing an iterative procedure in the Information Search Process. Kuhlthau (1996) highlights the 'holistic learning experience as an integral part of the mediation'. Truel and Connelly (2013) also highlight that intervention can help to deliver a tailored and customised service. Kuhlthau's (1996) intervention theory highlights the need for social interaction during information seeking.

2.8.3 Intervention Strategies

Kuhlthau (1993) suggests five activities that are a useful framework when process intervention is required. These are considered as the five 'C's' Collaborating, Conversing, Continuing, Choosing, Charting, and Composing.

Firstly, 'Collaborating' identifies the added value of social interaction in information seeking and critical thinking. As individuals brainstorm, mentor, coach, network and learn together by working on joint projects, collaboration can help information seekers to obtain the information they require (Thomas, 2004). Process intervention becomes a natural occurrence through collaboration.

Secondly, 'Continuing' acknowledges the on-going nature of information seeking within projects that extend over time and the series of cognitive and affective processes individuals experience as they move from uncertainty to personal understanding (Anderson, 2006). 'Continuing' intervention addresses the frequently changing

information problems. As information seeking is a holistic process individuals are 'continuing' to encounter new problems and issues (Hyldegard, 2009). 'Continuing' intervention supports individuals throughout the entire search process.

'Conversing' acknowledges the importance of interpersonal communication in the process of information seeking. For example, peer-to-peer communication can help in understanding information (Thomas, 2004). This dialogue can also help an expert understand an individual's level of knowledge within the topic area. Conversations allow the 'counsellor' the opportunity to listen to the information seeker and recommend strategies for specific stages in the search process (Kuhlthau, 1996).

Conversations encourage information seekers to discuss their ideas from the information they have encountered, which in turn allows the counsellor to guide them in their information search (Kuhlthau, 2004). By conversing, the counsellor is able to help the information seeker acknowledge the presence of feelings in the search process, shifting from uncertainty to understanding and comfort the individual by informing them that uncertainty and anxiety is normal particularly at the selection and exploration stage (Anderson, 2006).

Kuhlthau (1996) suggests that 'Charting' provides an excellent basis for conversing with individuals. 'Charting' allows an individual to develop a 'mental picture' of their information search process all the way from initiation to evaluation stage. This can be displayed in a number of formats such as a timeline, diagrams, graphs, images or journal (Thomas, 2004). Charting intervention is a creative way to visually demonstrate information, for example demonstrating the ISP model can aid in presentation and using the information found.

Finally, 'Composing' also known as journaling allows an individual to track their thoughts, ideas, reflections and conversations in a diary format. This allows the information seeker to identify their progress or for a counsellor/expert to identify progress (Kuhlthau, 2004). Through composing, both cognitive and affective dimensions in the search process can be identified by the individual and the counsellor, which can aid the counsellor greatly in determining the required intervention strategy.

It is argued that the information search process as highlighted by Kuhlthau (1988) as well as other leading researchers, Dervin (1983), Belkin (1980), Taylor (1968), Ellis (1989) and Grover (1993), can be an enduring and difficult process for some individuals (Savolainen, 2015). It is suggested that the intervention becomes particularly important for those individuals in providing direction and support.

Irving (1985) argues that selecting appropriate information sources is impossible without some knowledge of the subject area, again highlighting the need for interacting with a more knowledgeable individual. Engeldinger (1988) believes that we would be doing a major disservice to individuals if they are only guided to a mass of information and desert them. Engeldinger (1988) believes individuals need to be provided guidance during a search process. Through the significant arguments of many information science and human information behaviour researchers, it can be seen that interaction and communication with others in the information search process and truly understanding information is somewhat important in order to achieve an individual's goal (Robson and Robinson, 2015).

2.9 Information Seeking and Communication

It can be argued that the current trends in information seeking emphasise the need of social interaction and communication with active participation between peers and or experts within the field (Chattaraman et al, 2012). Researchers have highlighted this need within numerous contexts including learning, searching and buying (Thomas, 2004; Jin, 2010; Mumm and Mutlu, 2011; Turel et al, 2013).

Social engagement is now deemed an essential part of information science, educational literature, management literature and consumer behaviour literature and a fundamental part of the learning and information search process. Like Kuhlthau (2004), Wang et al (2012) highlight the importance of 'affective bonds' between individuals and suggest that the need for a supportive, trusting advocate is critical for individuals experiencing information problems.

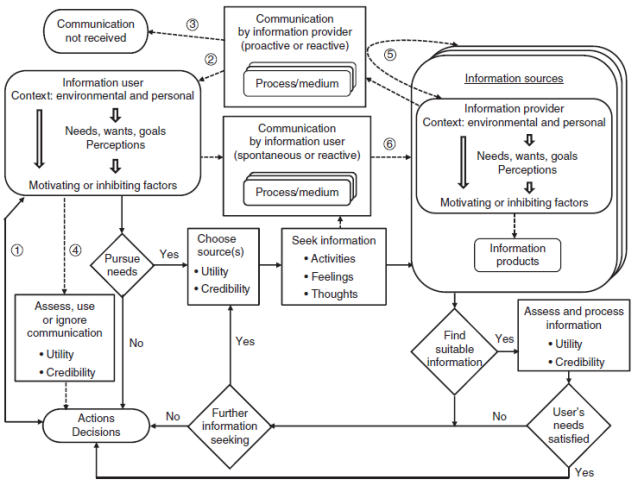
Research carried out by Todd and Kuhlthau (2003) cited in Thomas (2004) identified that it wasn't the library that helped individuals find information they were seeking, but

the librarians who were able to 'intervene' and guide students to information. Again this supports the point made by numerous scholars (Kuhlthau 2004, Ellis 1989 and Wilson, 1999) that intervention and interaction in the search process will result in a higher achievement level than what would have been obtained had individuals been left to achieve their information goals alone.

George et al (2006) research highlights that people play a significant role in individuals search process. The results of George et al (2006) research showed that other people including experts within the field, friends, networks and peers influence information seekers behaviour. One individual commented that with any piece of information required 'I do not bypass the people phase of information seeking'. In general George et al (2006) and Foster (2005) find that the social interaction of people in information seeking can be seen as the second stage of information seeking after an initial search.

Further to this, Robson and Robinson (2013 and 2015) conceptualise and empirically test a model of information seeking and communication. Robson and Robinson (2015) developed the information seeking and communication model (ISCM) that combines information science theory with communications theory/diffusion of innovation theory (Rogers, 2003) to provide a comprehensive overview of information seeking and the role of communication as seen in figure 2.6.

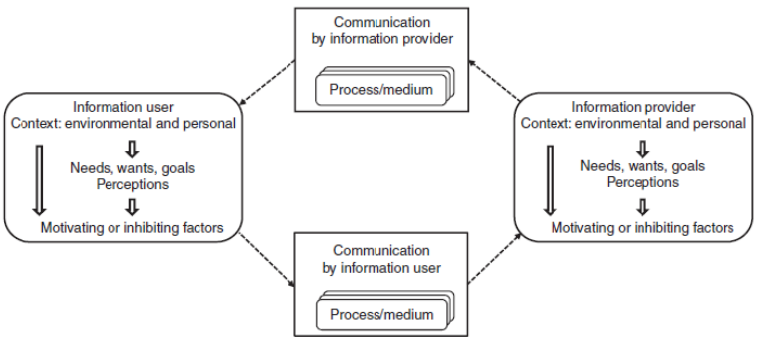
Figure 2.6 ISCM



(Robson and Robinson, 2015)

Incorporating previously discussed information seeking models, Robson and Robinson (2013) outline that communication both proactive and reactive from a provider can be useful for individuals during information search. In addition, during search individuals often seek the support of others and communicate with colleagues, peers and experts to clarify information in order to fulfil their information need. Robson and Robinson's (2015) study identified that healthcare professionals often seek the support of other healthcare professionals during information search to help clarify and understand the information found. The ISCM illustrates that during information search, communication can be two-way between a service provider and the information seeker, i.e. the information user may communicate with the service provider as well as the service provider communicating with the information seeker. Robson and Robinson (2015) provide a further breakdown of the ISCM shown in figure 2.7 illustrating the flow of communication between the information seeker and the service provider.

Figure 2.7 Broken-down version of the ISCM



(Robson and Robinson, 2015)

Figure 2.7 illustrates that information seeking and information behaviour can be an interactive process involving other people including the service provider in order to achieve information goals (Beheshti et al, 2013). The model illustrates that information seekers communicate with information providers, which can be other information seekers. Previous research has outlined that during information search, information seekers only have one role, to search for information, however, the ISCM highlights that information seekers may in fact help to provide others with information during the course of their search as well as the actual service provider (Robson and Robinson, 2015), helping to co-create value in the service delivery (Vargo and Lush, 2008). Thus,

previous research has identified a role for communication and social interaction during information seeking. Chapter 4 will further elaborate on social interaction in the online environment and the tools available to service providers and information seekers.

2.10 Online Information Search

The previous sections have provided a comprehensive overview of information seeking in the offline environment. The following sections will examine information search in the online environment. It can be seen that 45% of the world's population, a staggering 3.2 billion people are online (Internet World Stats, 2015). If this population were a country, it would be by far the biggest country in the world. According to Pew Research (2012) the number one activity people engage in online is to search for information. Ho et al (2012) argue that the most frequent Internet behaviours are searching for information and social communication. 91% of people beginning their search on a search engine (Pew, 2015) with Google, an Internet search engine, the most visited website in the world (Alexa, 2015) with around 34,000 searches per second (Thierer, 2011). The web has developed into 'a critical channel of communication and a vital vehicle for information dissemination and retrieval' (Martzoukou, 2005, pp. 1).

It can therefore be said with little doubt that the Internet has changed individuals' patterns of search since the days of finding information solely in a library or within an organisation (Davies, 2011). It is believed that information retrieval systems and search engines assist users in their interaction with the web (Liaw and Huang, 2006). These information tools are said to allow individuals to find information in a quicker and in a more efficient way, however information search models and theorist may suggest differently (Branch, 2003; Davies, 2011). Numerous researchers have highlighted a number of variables as discussed in chapter 4 that can influence an individual online and subsequently their experience. Traditionally online information search and online information search behaviour has been extensively researched and studied from the decision-making and economic perspectives.

Flavian-Blanco et al (2010) suggest that the mainstreams have been established in an economic perspective. From an economic point of view individuals search for information online taking into account the trade-offs between the costs and efforts

required to obtain and process information. From a decision-making perspective the need for benefits and accuracy are required from the search outcome (Alba et al, 1997 and Klein and Ford, 2003). Additionally, Liaw and Haung (2006) identified that human factors such as 'experience, age, cognitive skill and perceptions relating to search performance have helped researchers understand online search behaviour'.

According to Flavian-Blanco et al (2011) and in line with Kuhlthau et al (2008) the information search process of an individual cannot be seen as just a trade-off between costs and benefits perceived by an individual. Online searching is not a simple means of learning a technique to achieve a particular result. The affective feelings or emotions experienced (both consciously and unconsciously) during an online search can determine significantly the result of the search and the actions taken during it, for example continuing due to a positive experience and satisfaction or abandoning the search due to anxiety and frustration (Browne et al, 2007; Kao et al, 2008; Bilal and Kirby, 2002 and Kuhlthau et al, 2008).

Flavian-Blanco et al (2011) identify that recent research within the field of Psychology, Neuroscience, Information Science and Marketing have acknowledged the fact that individual's emotions influence their decision making (Rose et al, 2012). As a result, the importance of understanding the emotional component in an individual's online search behaviour can be seen as critical, as these emotional outcomes are likely to influence all subsequent actions an individual performs online (Bilal and Kirby, 2002).

Previous marketing literature has also emphasised the importance of the affective component in influencing a customer's online behaviour (Rose et al, 2012; Hofffman and Novak, 2009). Emotions can be seen to play a role in all areas of customer behaviour and particularly so in an online environment. In line with offline information seeking and decision-making, as previously highlighted, emotions can influence an individual before the development of any action, during the particular action and post action when seeking information online (Bagozzi et al, 1998; Flavian-Blanco et al, 2011).

Individuals usually search for information trying to maximise their knowledge on a research problem. When information searched online is limited, users tend to choose

alternatives that are satisfactory rather than optimal and those that require minimal cognitive effort (Garbarino and Edell, 1997). Peterson and Merino (2003) suggest that individuals choose this process in order to reduce uncertainty and risk. In line with Lim et al (2013) and Flavian-Blanco et al (2011) uncertainty is an emotion that is likely to play a critical role in online information search.

Within the field of marketing, much research attention has focused on online consumer decision-making rather than online information seeking. However, similarities can be seen between online decision-making and online information searching as outlined earlier in this chapter. Research on online consumer decision-making has focused on how material from an online environment may have an impact on individuals' emotional response to a website and how it affects generating either positive or negative attitudes towards purchase intention (Rose et al, 2012). As like online information seeking, research on consumer decision-making has highlighted 'trust' and 'risk' as two key components that affect consumer decision-making (Kim et al, 2008). The oxford dictionary (2015) defines the word uncertainty as 'a state that causes times of doubt, insecurity and risk'. As a result, uncertainty can be seen as an overarching problem in both consumer decision-making and information seeking that can have an impact on trust and risk.

2.11 Online Emotions in Information Seeking

In spite of the research that has been carried out on online search behaviour, the users emotional state, which is argued to play a critical role in every human activity, has been somewhat neglected until recent years (Flavian-Blanco et al, 2011). Flavian-Blanco et al (2011) suggest that not only are the perceived success or failures of a particular search process important to understand, but also the emotional outcomes that could have implications for particular actions that online users may perform on the Internet. Kellar et al (2005) identify information gathering as, 'the most complex task to perform on the web, with individuals spending more time completing this type of task, viewing more pages and using the web browser functions the most than any other online task'. As a result, it is not surprising that Kuhlthau (2004) and Chowdhury et al (2011) highlight that the search for information online contains a significant emotional state of 'uncertainty', which creates feelings of anxiety and confusion. These feelings are said

to affect online information search behaviour due to changes on physical actions, cognitive processes and affective outcomes of the search (Nahl, 2004). As a result, when individuals search for information with a search engine or within a websites search facility, they are usually 'uncertain whether the results will match their information needs' (Branch, 2003).

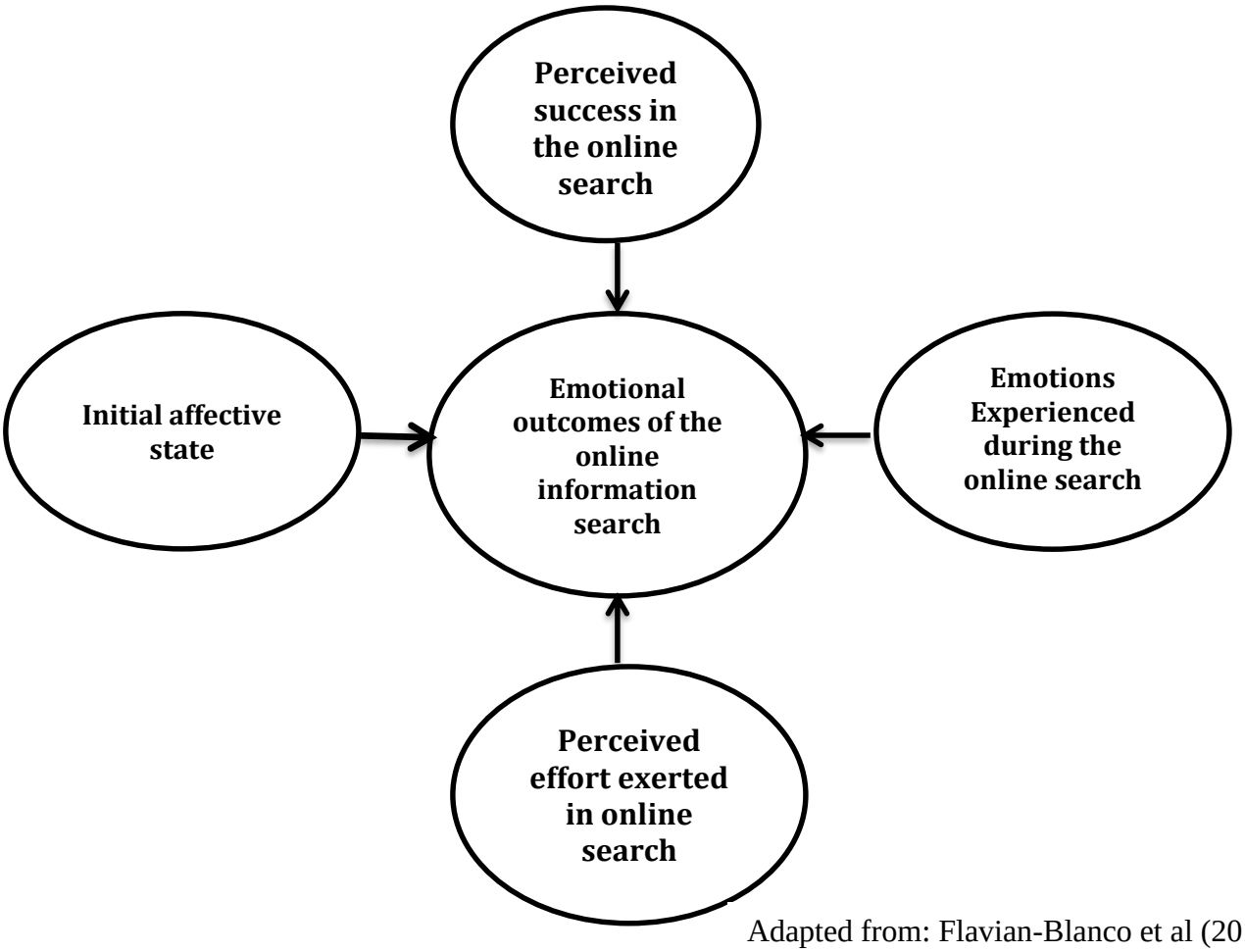
As Bagozzi et al (1998) previously highlighted, individuals have emotions prior to search, during search and post search. Flavian-Blanco et al (2011) take this notion further to identify the overall emotional outcomes of the search. In figure 2.8 Flavain-Blanco et al (2011) show that the emotions resulting from a search activity depends on an individual's initial affective state, the emotions experienced during the search process, along with the perceived success and effort exerted. As has been previously highlighted an individual's 'initial' affective state will have an impact on their emotions when seeking information. Kuhlthau (2004) and Chowdhury et al (2011) argue that an individual's initial affective state is most often uncertainty. However, this initial state can be influenced by an individual's motivations for the search and an individual's mood (Louro et al, 2005). As a result, Flavain-Blanco et al (2011) argue that an individual's motivation to carry out an online search, provided by the individual's initial affective state will influence the emotional outcomes of the search.

Figure 2.8 further outlines that the emotions experienced during the online search process have an effect on the emotional outcomes of the information search. Nahl (2004) suggests that individuals use emotions that prevail during the online search to evaluate the information they are encountering, therefore acting as 'affective filters'. In some cases when information seekers have previous experience they express difficulty in adopting the alternatives that the new information may recommend, which in turn may increase emotions of confusion and uncertainty (Ho et al, 2012).

The perceived success of an online search and the effort exerted also has an impact on the emotional outcome of the online information. Depending on whether the results of the online search are positive or negative the individual's feelings will vary. Flavian-Blanco et al (2011) conceptually suggest, if the information search is successful this will develop positive emotions, however if the search is unsuccessful or the individual experiences stumbling blocks, this will elect negative emotions. The effort individuals

perceive to put into the search by selecting particular information produces a set of emotions that can vary from accomplishment to frustration. Individuals aim to minimalise the effort they exert when seeking information (Bettman, 1979), as a result Flavian-Blanco et al (2011) suggest that the perceived effort will have an impact on the overall emotional outcomes of online information seeking.

Figure 2.8 Emotions Prior, During and Post Information Search



Adapted from: Flavian-Blanco et al (2011)

Understanding the emotion of an online information search and acknowledging that emotions exist prior, during and post search can help in determining appropriate tools to guide individuals or intervene in an online information search.

2.12 Taking Information Search Models Online

According to Ho et al (2012) the information search process is one of the most important aspects when studying Internet behaviour. The Information Search Process model is deemed to be a valid process regardless of the environment or format, i.e. online or offline (Kuhlthau et al, 2008). According to Branch (2003) and as highlighted previously, the same cognitive (construction) and affective stages as well as the physical actions of the ISP model exist, with often the increased need for intervention and interaction in Internet searching, due to the emotional state individuals are often in. Ho et el (2012) outline that the information search models used for offline information seeking have been tested in studies examining the online search process, including Kulthau's ISP model, with results showing that the same processes exist (Kulthau et al, 2008). Research suggests that the affective issues of uncertainty, confusion and frustration may be deeper when searching in an online environment (Branch, 2003) often due to the excessive amount of information available online (Metzger et al, 2010). Branch (2003) identifies that individuals expect to find information quickly online, however when encountering problems, they become highly frustrated and confused, further raising the level of uncertainty. Prior research suggests that the Internet's constantly available information has changed individuals' concept of information search, in the fact that they expect to find information quickly, timely and effortlessly (Holliday and Li, 2004), which in most cases is of the contrary (Hilligos and Reih, 2008). As highlighted by Branch (2003) and Whitmire (2003) when individuals encounter problems and obstacles online they become confused and highly frustrated which coincides with stages of the ISP model.

Internet information search behaviour is consistent with previous conceptual, analytical and empirical research on traditional information search behaviour (Peterson and Merino, 2003). Browne et al (2007) highlight that most information seeking tasks completed on the Internet are unstructured in nature and are completed in a holistic approach, as seen in Kuhlthau's ISP model. Kuhlthau's (2004) Information Search Process model as well as Ellis's (1993) Behavioural Model of Sense Making and Dervin's (1983) Sense Making theory have been applied to online information seeking in a number of studies and therefore shows the models applicability in understanding online information seeking. In Choo and Martin's (2003) study, as seen in figure 2.3

the two models of Ellis's and Kuhlthau's research were combined to help identify the search process online. Other uses of the ISP model in relation to the online search process has been seen in Spink and Cole (1992), Kuhlthau et al (2008), Fourie (2007), Choo and Marton (2003) Flavian-Blanco et al (2011), Chowdhury et al (2011), Dinet et al (2012). Ho et al (2012) also suggest that the Information Search Process as proposed by Kuhlthau (2004) and Ellis (1997) is similar online.

The use of the intervention model could be an interesting concept when in an online environment. As earlier described in offline information seeking, intervention and interaction is often needed for complex information seeking tasks (Kuhlthau, 1996). Since online information seeking appears to follow the same principals, it may be appropriate to assume that intervention will be required in online information seeking. As Chowdhury et al (2011) identified uncertainty is prevalent online and in some cases can be even deeper (Branch, 2003). Intervention and interaction is seen as helping individuals to overcome their issues of uncertainty and ultimately helps individuals complete their information seeking tasks as seen in George et al (2006) research. Chapter four further discusses online interaction in relation to intervention and aiding individuals online.

2.13 Interaction in Online Information Search

Furthermore, interaction and intervention in information seeking can help individuals overcome information problems and help information seekers move through the stages in their search process (George et al, 2006). Kuhlthau and Tama's (2001) research with law professionals highlighted that lawyers undertake information seeking tasks expecting that computer systems would help them find information easily. However, the results often ended in disappointment, as the information retrieval system (website) would not deliver to fill the individual's information needs, particularly for more complex search tasks and search queries, thus resulting in a poor online experience. Kuhlthau and Tama's (2001) results found that individuals require improved information retrieval systems/websites in order to make the search for information as easy as possible. Rather than a system where the user is required to enter keywords with each page containing those keywords being returned, a system or a method that can

handle complex search problems would help individuals better find the information they are seeking (Dabholkar and Sheng, 2012).

In general, the potential of the Internet is extraordinary, and has changed the way in which individuals and organisations communicate with each other (Wang et al, 2012; Paterson and Maria, 2003). The Internet is seen as a 'powerful capacity' for storing, sharing, organising and searching for information (Schlosser, 2011; Paterson and Maria, 2003). However, many websites are unable to carryout complex searches as highlighted by Kuhlthau and Tama (2001). Al-Maskari and Sanderson (2010) suggest that, 'the main aim of an information retrieval system is to satisfy the needs of the user'. It can be seen that individuals are often dissatisfied with online information retrieval systems due to the limited capabilities they offer. In turn this has an adverse effect on individual's emotions during their information search and overall experience with the website (Meyer and Schwager, 2007).

Interactivity is possibly one of the most widely proclaimed capabilities of the Internet (Mollen and Wilson, 2011). In spite of this, online search has continued to remain fixed to relatively basic search facilities that are unable to handle complex queries. The Internet has the ability to facilitate many different forms of interaction including 'one-to-one, one-to-many and many-to-many interactions' due to the introduction of web 2.0 (Constantinides and Fountain, 2008). These interactions can be carried out via human-to-human, human-to-machine, machine-to-human and machine-to-machine (Chaffey, 2011). The enormous amount of information the Internet holds is of little value if individuals are unable to locate and receive the information they are seeking through poor retrieval and navigational systems (Dailey, 2004). As search engines and search facilities often require precise information before they can be used in an information search, the individual needs to know specifically what they are looking for. In most cases as highlighted by Kuhlthau (2004) individuals are uncertain of the information they are looking for, therefore coming up with a search query may prove difficult and in turn lead to individuals abandoning their search.

The different forms of online interaction as highlighted by Chaffey (2011) may provide individuals with a better form of searching. Human-to-Human interaction may be the answer to help individuals overcome search problems, as individuals are able to

understand a more complex search query. As a result, web 2.0 functionality may aid customers in their search as they aim to overcome the pitfalls of automated online search services (Kaplan and Haenlein, 2010). In line with Robson and Robinson (2015) ISCM model, this type of interaction, providing communication between two parties may allow individuals to obtain the information they require or pointed in the right direction and in turn have a satisfactory experience (Song and Zinkhin, 2008). In a machine-to-human context, the personalisation of information based on search queries could again help individuals to obtain the information they need. Tam and Ho (2005) define online personalisation as, 'the right content to the right person in the right format at the right time'. Kuhlthau and Tama (2001) and Al-Maskari and Sanderson's (2010) research highlight that information seekers require a web that can provide advanced results and produce relevant information to the user.

2.14 Stopping and Completing a Search

With individuals spending large quantities of their time searching for information online and the vast amount of information available on the Internet, it is important to understand how individuals successfully stop and complete their online information search (Browne et al, 2005). Almost all problem solving and decision making behaviour relies on information searching (Simon, 1981), therefore understanding why individuals stop or complete their online information search is of upmost importance, as it can help us to understand how a successful information search is completed, which can aid in providing value for practice in running effective online services and in turn offering an effective online experience.

It is suggested that cognitive and affective rules 'stop' information seeking (Kuhlthau, 2004; Browne et al, 2007; Flavian-Blanco et al, 2011 and Kim, 2001). Browne et al (2007) argue that the cognitive stopping rule can vary due to the complexity of the information problem, the information available and thinking you have obtained enough information. Pitts and Browne (2004) argue that in some cases when a decision maker believes they have acquired all the necessary information to make a comprehensive decision, no additional information is therefore required and the information seeker can move on after the successful completion of their search and therefore can be deemed as being 'satisfied' with their search experience. Browne et al (2007) identify two types

of information search that have differing 'cognitive stopping rules', a structured search and an unstructured search.

A structured information search is one where an individual knows what information they are looking for. For example, searching for information about a new television. In this case Browne et al (2005) argue that individuals use cognitive stopping rules of a mental list and a single criterion seen in table 2.2. These well-structured tasks are usually of low to medium complexity and often searches for which individuals have some kind of past experience or expertise.

Table 2.2 Cognitive Stopping Rules (structured tasks)

Cognitive Stopping Rule	Description	Example
Mental list	Person has a mental list of items that must be satisfied before they will stop collecting information.	In searching for information concerning the purchase of a home, a person continues until they satisfy all the elements on their mental list (e.g., number of bedrooms, size of yard, and quality of school district).
Single Criterion	Person decides to search for information related to a single criterion and stops when they have enough information about that criterion.	To choose a university to attend, a high school student searches only for information concerning the quality of the universities' overseas programs.

(Table 2.2 Adapted from Brown et al, 2005)

With this kind of search individuals are unlikely to require much assistance (through communication with others) if any, with possibly only referring to Z1 to Z4 of Kuhlthau's (1994) intervention strategy as seen previously in table 2.1.

An unstructured information search on the other hand, which is usually seen in more complex information seeking tasks, is where the individual does not know exactly what they are looking for (Browne et al, 2007). It is therefore this lack of structure and experience that leads to a holistic approach of construction to overcome the information need as seen in Kuhlthau's (2004) information search process model. Browne et al (2005) research highlights that during an unstructured information search individuals are likely to use stopping rules seen in table 2.3.

Table 2.3 Cognitive Stopping Rules (unstructured tasks)

Cognitive Stopping Rule	Description	Example
Representational Stability	Person searches for information until their mental model or representation stops shifting and stabilises. The focus is on the stability of the representation.	To diagnose a patient's illness, a doctor may ask the patient to describe their symptoms. When the doctor reasons that his or her mental model of the patient's condition is no longer changing, he or she stops asking the patient further questions.
Difference Threshold	Person sets a priori difference level to gauge when they are not learning anything new. When the individual stops learning new information, they stop their information search.	In gathering requirements for a new information system, a systems analyst interviews users until they determine that they are no longer learning new information. At that point, he or she terminates the requirements elicitation process.
Magnitude Threshold	Person has a cumulative amount of information that they need before they will stop searching. The focus is on having "enough" information.	When perusing a newspaper article, a reader may skim the article until they have enough information to develop an idea of what it is about.

(Table 2.3 Adapted from Brown et al, 2005)

These stopping rules in table 2.3 effectively highlight that once an individual has made their way through the constructive cognitive stages of the information search process and gathered the information they require they will stop and complete their search (Pitts and Browne, 2004 and Browne et al, 2007). However, Browne et al (2005) fail to consider the affective emotions in completing an information search. As highlighted by Kuhlthau (2004) and Flavian-Blanco et al (2011) as well as Frow and Payne (2007), the affective emotions of individuals play a crucial role in information seeking and as a result, in the rational for stopping or completing a search. According to Kuhlthau (2004), Flavian-Blanco et al (2011) and Hyldegard (2009) when individuals experience emotions of confidence, satisfaction and accomplishment, these act as cues for completing and stopping a search for information. It is therefore important to acknowledge the role emotions play in why individuals stop and complete an online search.

Additionally, social interaction in offline information seeking has seen individuals being able to complete complex information seeking tasks (George et al, 2006 and Kuhlthau, 1996). Research has shown that the ability to communicate with others when searching for information significantly increases the likelihood of obtaining the information required, which can help individuals move from uncertainty to optimism (Kuhlthau, 2004). Interaction in an online search through web 2.0 technology may help individuals to move through the stages in the search process and ultimately help individuals complete a successful search (Chattaraman et al, 2012).

2.15 Abandoning Search

In spite of some individuals being able to successfully complete an online information search, numerous information seekers find themselves abandoning their search, despite high levels of search experience and domain expertise. Establishing the reasons why individuals abandon their search can help to identify the actions that can be taken to help individuals stopping their Internet participation. As has been suggested by numerous researchers including Wilson (1999) and Kuhlthau (2004) individuals often abandon their information search, as they do not have enough information or skills to

proceed to the next stage of the process. However, it is believed that having a less than adequate experience online can result in a search being abandoned (Rose et al, 2011).

The economic assumption for information seekers abandoning a search is often due to costs outweighing the value of the information (Klein and Ford, 2003). However, in the decision-making and the information search process it is far more complex (Pitts and Browne, 2004). The stages outlined in the ISP in figure 2.2 outline the steps individuals often take in order to complete a medium to complex information task. However, as Kuhlthau (2004) and subsequent others (Adams et al, 2005; Campbell and Wabby, 2003) have highlighted the affective stopping rules causing individuals to abandon a search can come from feelings of uncertainty, anxiety and frustration. Feelings of uncertainty surrounding an information search may be so intense that an individual is unable to proceed with their search (Hyldegard, 2009 and Chowdhury et al, 2011). The information being collected may conflict with the individuals previously held opinions, which again can result in the search being abandoned due to levels of frustration and anxiety (Kuhlthau, 1994). It is clear to see that individual's affective emotions; in particular uncertainty is a significant victim of causing search abandonment. Being able to overcome these emotions would result in more successful searches.

As suggested by Daily (2004) and Browne et al (2007) website designers need to understand the types of tasks individuals perform on a particular website. Browne et al (2007) argue that for complex unstructured search tasks, designers need to build a structure that reduces complexity and provide information to help individuals offering an effective experience. For simpler tasks, simple navigation and a clear design helps users find the information they are looking for and can help them overcome negative feelings when searching for information and ultimately provide the user with a good experience. Added features on websites where the search mechanism reports lists of results highlighting the most relevant to the user and including rich content such as images, videos and diagrams (Jenkins et al, 2003) can help to prevent individuals abandoning their search. As well as effective navigation, other factors such as, information quality, credibility, enjoyment, control and numerous other variables outlined in chapter 3 and 4 may be influential in causing individuals to abandon their search online. Establishing the significance of each of these variables is important to identify how to develop an environment that will allow individuals to complete their

search successfully and have a positive online experience. The subsequent chapters of this literature review will address these experiential factors outlined.

2.16 The Role of Credibility and Information Quality

While we can see some of the reasons for completing an online search or abandoning a search, website credibility and information quality are believed to be influential factors during a customer's search for information (Robson and Robinson, 2015; Lucassen, 2013). According to Metzeger (2007) customers may abandon a website if it does not seem trustworthy and credible. With the enormous amount of information available online and with no real gatekeeper, individuals are somewhat subjected to information on websites and websites themselves that may not be of much value (Metzeger, 2007). Hilligos and Rieh (2008), Fogg (2003), Sundar (2008), Lucassen (2013) and Westerwick (2013) established online credibility evaluation models, identifying the ways in which customers may evaluate a website and the quality of the content on that particular website. The information search models and theories outlined in this chapter have highlighted that individuals' carryout an evaluation of the information collected. Understanding the ways in which customers evaluate the credibility of a website and information quality can be beneficial for organisations in outlining the actions that can be taken to help enhance the perceived credibility of the organisation's particular website as well as the information quality. The subsequent literature review chapter will explore the role of, website credibility and information quality during a utilitarian search for information.

2.17 Conclusion

This Chapter introduced the current literature on information seeking from Information Science, Human Computer Science, Marketing and Consumer Behaviour. Models and theories developed by Dervin (1983), Belkin (1980), Taylor (1968) and Grover (1993) on information needs were combined in one collective model to provide an overview of the similarities in each. Ellis's (1989) Behavioural Model of Sense Making Strategies was discussed before moving on to Kuhlthau's (1989) Information Search Process Model (ISP). The ISP model provided a theoretical grounding through outlining the in-depth cognitive and affective process involved in information seeking. The model

highlighted the complex nature of information seeking and allowed the research to discuss the cognitive and affective notions that exist in every information-seeking task. The requirement of intervention and interaction (communication) with others during search was discussed in its use in overcoming the customary uncertainty and difficulties that surrounds information search.

Furthermore, the chapter then moved on to discussing the information search process in an online environment. The Internet's revolutionary effect on information search was firstly identified, before discussing the role of individuals' emotions in online information seeking. The aspect of online interaction in information seeking was introduced, before the chapter identified how individuals successfully complete an online search and in contrast, why many individuals abandon their search. The chapter outlined the consistencies with traditional offline information seeking with online information seeking. The same cognitive and affective experiences of information seekers can be seen as being significant in online information search. The information seeking models, in particular Kuhlthau's ISP model, provides the study with a theoretical understanding of how customers search for information, from which this study can develop a model of variables influencing the online customer experience during search and the sequence of varibales influencing the infromation search process. The chapter highlights the need to explore additional variables with the potential to influence the customer's experience during a utilitarian search for business advisory information and services. Each of these factors will be explored in the subsequent literature review chapters.

CHAPTER 3

WEBSITE CREDIBILITY AND INFORMATION QUALITY EVALUATIONS

3.0 Introduction

The purpose of this chapter is to explore the role of website credibility and information quality during online information search. Chapter two outlined individual's information seeking behaviour and illustrated the cognitive stages individuals go through when searching for information online along with the associated affective feelings. The previous chapter highlighted that a successful information search can be influenced by the quality of the information provided by a service provider and the credibility of the source (website). This chapter aims to understand the role of trust leading to credibility, website credibility evaluations and information quality evaluations and its relative cause to approach or avoidance behaviour of a website.

While this chapter focuses on website credibility and information quality evaluations that individuals conduct on websites, this chapter first of all discusses the definition and concept of trust, to provide an understanding on how the credibility of a website and the quality of the information on the website influences the website user. Subsequently the chapter moves on to discuss how individuals carry out evaluations on the credibility of the website and the quality of the information.

3.1 What is trust?

The literature on the topic of trust is very broad with numerous definitions of trust falling across multiple disciplines including philosophy, psychology, sociology, management and marketing (Kuriyan et al, 2010). As a result, a universally agreed definition of trust does not exist. However, a theme between the definitions of some kind of 'dependency' is somewhat apparent, with all researchers from all disciplines

agreeing in the value of trust (Kracher et al, 2005) and the need for trust to exist (Sutherland and Tan, 2004).

From a Sociology point of view, trust is 'a feature of social organisation that makes possible coordination and cooperation between people' (Kracher et al, 2005). It is argued from both a sociology and philosophy point of view that without trust then society as a whole would not be possible (Brenkart, 1998). However, from a psychology perspective, trust is a way of decreasing the level of complexity in a world that has many complex situations. Barber (1983) argues that from a psychology perspective and philosophy perspective, trust is fundamental for the development of personality and for the development of relationships.

Moreover, from a marketing point of view Ganesan (1994) argues that trust leads to long term relationships and allows individuals to depend and rely on others. Forming these relationships through the notion of 'trust' is a key principal of relationship marketing. Overall, according to Kracher et al (2005) there is a widespread agreement that trust is vital for a range of human experiences. As has been previously highlighted it is clear to see that from sociology, psychology, philosophy and marketing there is a congruent theme of 'dependency' and 'vulnerability' and the requirement of a relationship between individuals involved in the notion of trust.

Both sociology and psychology often share a similar perspective on the notion of trust (Kracher et al, 2005). Like sociology, psychology often confuses trust with states of faith, confidence, competence, benevolence and cooperation (Lewicki and Bunker, 1995). While many researchers have argued that each of these states have an impact on trust and may well be required in order to achieve trust (Deutsch, 1958), Lewicki and Bunker (1995) suggest that trust is a separate notion in itself. While there is no universally agreed definition of trust, researchers do agree that trust is a difficult notion to define as it can apply to a vast range of different types of relationships that vary from context to context (Deutsch, 1958).

In spite of the objection to an agreed definition, Rotter (1971) argues that trust is 'an expectancy held by individuals that the word, promise, written or verbal statement can be relied on'. This definition is still widely applied today in much work on trust

(Kracher et al, 2005). It is believed that the written and verbal components of the definition help to emphasise the importance that communication plays within trust, particularly in the process of learning. However, risk is believed to play a central role in trust and the requirement for trust, as if no risk existed then the individual is not forced to make a judgment on the trustworthiness of the subject (Sutherland and Tan, 2004). Numerous researchers argue that the definition of trust should include some form of vulnerability, a willingness to be vulnerable and therefore taking a risk (Mayer and Davis, 1995 and Tan and Theon, 2001). Rousseau et al (1998) take the notion of vulnerability further suggesting that trust is a psychological state with the intention to accept being vulnerable on the intentions and behaviours of others. Rousseau et al (1998) suggest that vulnerability can be tracked back to Deutsch's (1958) definition of trust where the individual believes that they will be worse off to trust if trust is not fulfilled than not to trust at all. As a result, the individual is taking a risk and being vulnerable, whilst in the hope that the other subject will deliver in their promise, which links back to Rotter's (1971) definition of trust. Mayer and Davis (1995, p.712) provide us with their definition of trust,

"The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party."

Within psychology Deutsch (1958 and 1962) identified that different types of trust exist, these being interpersonal trust and mutual trust. With interpersonal trust, the trustee may not be aware that they are being trusted and therefore may be more likely to violate the trust (Deutsch 1960 and Kracher et al, 2005). To put this in context, an individual may have a casual conversation with a friend that they have received advice from in the past, due to previous experience and faith in the friend, the individual may trust the information given by the friend without the friend knowing that a decision may be taken from their advice. Mutual trust on the other hand is where both sides understand each other in terms of intent and trust. As a result, Deutsch (1960) argues that in order for mutual trust to be established there needs to be an initiation of co-operation between two parties, if this co-operation does not exist then a mutual trust cannot be formed. Kracker et al (2005) highlight that most research has focused on mutual trust, however understanding that both exist is of significant importance.

Deutsch (1960) highlights the problematic nature of trust in that during co-operation; if each person is individually oriented to take the maximum gain at the minimum cost to benefit themself then there could be a negative reward for all or one party. As a result, Deutsch (1960) in line with Rotter (1980) argues that in order for trust to be established between two parties, each party needs to know that they will co-operate with each other and promise to deliver.

3.2 Online Trust and Credibility

Online trust and credibility has been the subject of much research over recent years within e-commerce (Pennanen, 2008). With an enormous amount of information available online with no real 'gatekeeper' on the quality and credibility of the information, individuals are left in a position where they may obtain information that is of low credibility and quality and in turn not trustworthy (Flanagin and Metzger, 2007). Specifically, in an online environment, researchers have highlighted the aspect of vulnerability as being significant (Lucassen, 2013 and Lim and Kwon, 2010), with individuals being vulnerable to the lack of quality and credibility in the information published online. Corritore et al (2003, p.740) define online trust as,

"*An attitude of confident expectation in an online situation of risk that one's vulnerabilities will not be exploited."*

In this particular definition of online trust, the trustee (or other party) has been removed as Lim and Kwon (2010) suggest that the trustee is often unknown in the online environment. Lucassen (2013) argues that Internet users could potentially be opening themselves up to being vulnerable when interacting online, as a result this somewhat suggests that there is a risk involved when trusting someone or something online. Metzger (2007) and Rieh (2002) argue that users aim to reduce the element of risk, therefore poor information is likely to cause users to regard the information as having low levels of credibility, quality and trustworthiness and may cause the individual to abandon their search. For example, an individual receiving the wrong financial advice for their business due to poor information with inaccuracies could potentially be detrimental for the organisation. Understanding how individuals assess the quality of

information is critical for marketers and the wider organisation.

Hovland and Weis (1951) and Self (2009) describe credibility from a cognitive psychology point of view. They suggest that credibility has two key elements, trustworthiness and expertise. The trustworthiness is believed to refer to, "the willingness to provide correct information" (Lucassen, 2013, p. 11), i.e. having a good intention. The expertise on the other hand refers to the ability to provide accurate information, this being the knowledge. In spite of this, other researchers suggest that any negative experience online can hinder the level of trust a customer has towards an organisation's website (Sundar, 2008). Fogg (2003) argues that if a user believes that a website lacks credibility in the services the site provides then it may not be trustworthy, which often results in users abandoning their search on the site and seeking information elsewhere to fulfil their needs.

Fogg and Tseng (1999) further comment that trust and credibility are often confused with one and other within literature and are often used interchangeably, however there are differences. For instance, Fogg and Tseng (1999) and Lucassen et al (2013) highlight that trust is the act of the user and on the other hand credibility is seen as a property of the information or subject. Thus, a website can convey credibility but cannot have 'trust'. Therefore, this study will explore the website credibility and information quality evaluations that individuals conduct during their online search.

3.3 Quality and Cognitive authority in online Information

Credibility and cognitive authority can be seen as closely related concepts that are difficult to define explicitly (Savolainen, 2007). This is largely due to the fact that the concepts of both overlap on a number of closely related concepts including, information quality, believability of information, reliability of information and the trustworthiness of information (Fogg and Tseng, 1999 and Savolainen, 2007). Rieh (2010) argues that trustworthiness is a core aspect of credibility as it identifies the 'goodness and morality' of a source. Cognitive authority is not only confined to individuals (Rieh, 2002). This authority can be found in libraries, journals, websites, and quality newspapers (Savolainen, 2007). The information in each of these sources is deemed as trustworthy when it seems to be reliable, unbiased and fair.

Rieh (2002) suggests that Taylor's (1986) definition of quality helps us to understand the concept of information quality; quality is defined as, 'a user criterion, which has to do with excellence or in some cases truthfulness in labelling' (Taylor, 1986). Rieh (2002) then uses Wilson's (1983) definition of cognitive authority, arguing, 'cognitive authority refers to the influences that a user would recognise as proper because the information therein is thought to be credible and worthy of belief'. Wilson (1983) was the first to coin the term 'cognitive authority' in relation to credibility and as a result cognitive authorities are regarded as credible sources of quality information. Overall Rieh (2002) therefore suggests that information quality is where the individual believes the information is understandable, useful, good, current and accurate, with credibility being the extent to which the information can ultimately be trusted, resulting in becoming a cognitive authority.

When it comes to online information, understanding how individuals perceive the value of the information in terms of its trustworthiness and credibility is critical to understand (Chung et al, 2012). Credibility evaluation was once the job of a professional in the offline world. However, credibility evaluation is now the responsibility of the end user who often lacks the motivation and skills to complete the task (Flanagin and Metzger, 2007). Most often cited as one of the best qualities of the web is its 'grant of access to a great amount and wide variety of information' (Rieh, 2002). However, Rieh (2010) outlines that making judgment on the quality of the information and its credibility and trustworthiness is particularly difficult due to the absence of any quality control mechanism that regulates the information on the web. The great amount and wide variety of information that individuals can find on the web may actually be of little value. Lucassen et al (2013) point out that the second wave of Internet technology; web 2.0 may actually have amplified this particular problem as anyone can publish anything on the Internet.

Spink and Greisdorf (2001) highlighted that previous studies suggested 'topic relevance' within the search results of the information retrieval system as the main evaluator of quality and trustworthiness. In other words, if the top search result displayed the exact match to the search query, then the user would see the information on the website as being more trustworthy and credible (Huvila, 2013). However,

numerous studies have subsequently acknowledged that there are far more factors that effect user's relevance judgments and quality judgments of information than merely topic relevance (Spink and Griosdorf, 2001). Savolainen (2007) highlights that the choice of information sources is particularly influenced by the source's credibility and perception of cognitive authority. The quality of the information and cognitive authority are believed to be two critical factors in judging information online (Rich, 2002). The 7th Stage of Kuhlthau's (2001) ISP model 'assessment', suggests individuals can reflect and evaluate the information they have obtained. In spite of this Rieh (2002) argues that individuals make judgments on information quality and credibility throughout the entire information search process, constantly evaluating the information they obtain. However, in spite of the last stage of Kuhlthau's (2001) search process being the focus of evaluation and reflection, as the whole search process is holistic in its nature and the development of constructs, it is argued that information seekers are constantly questioning the value of the information gathered (Huvila, 2013).

3.4 Online Quality and Credibility Assessments

As has been previously highlighted the quality of information published online could potentially be poor due to no control mechanism, particularly when compared to printed publications (Rieh, 2002). Robson and Robinson (2013) outline that during information search; individuals assess the credibility and quality of the source. Janes and Rosenfield (1996) point out that in the traditional printing world of publications, most publications are reviewed or have refereeing processes to go through before publication, which helps to ensure quality, with individuals being able to identify reputable publishing organisations as a quality indicator. Rieh (2010) suggests that with the growth of the Internet, we now see a mass of information with varying quality, which is a major reason for considering the quality and credibility of information online. With this in mind, it is therefore important to understand the ways in which individuals are able to conduct a credibility assessment of a website (Metzger, 2007).

Fogg (2003) argues that there are four types of credibility when assessing information and information systems, these being presumed credibility, reputed credibility, surface credibility and experienced credibility. Presumed credibility is how much the individual believes someone or something based on the underlying assumptions that the individual

holds. For example, individuals may believe that their friends and family may be more likely to provide credible and trustworthy information as compared to a sales person. Reputed credibility on the other hand is how much an individual believes something or someone based on information that third parties have reported. For example, if an individual sees assessments by consumer reports and recommendations from friends and family, they may see this as an unbiased view and therefore a credible and trustworthy view. Surface credibility is based on individual's simple observation. This may be looking at the homepage of a website, or relying on the type of language used or style of the site as credibility cues. Finally, experience credibility identifies the believability based on first hand experiences, as interaction takes place over time individuals are able to asses expertise, trustworthiness and credibility (Rieh and Danielson, 2007).

Rieh (2010) suggests that when availability of information is no longer the problem, the perceived relevance and preferences of online sources and search results is based on factors of credibility, trustworthiness and information quality. Rieh (2010) argues that the increased amount of information available online has opened the need to consider the factors of trustworthiness, credibility and quality.

3.4.1 Online Information Quality

Information quality online is often associated with accuracy, relevance, how current and the usefulness of information provided on a website (Guo et al, 2012; Flanagin and Metzger, 2000). Kim and Park (2003) define online information quality as how customers perceive the quality of the information provided by a website. Kateranttanakul (2002) suggests that the reliability of content on a website can have an influence on a customer's disposition to trust and perceive lower risks and thus help the customer to make a decision, in turn having an influence on the customer's level of satisfaction. According to Guo et al (2012) this is in line with Daft and Lengel's (1986) Media Richness Theory that stressed the importance of the quality, reliability and accuracy of information exchanged through a particular medium. Christy and Matthew (2005) and Lui et al (2008) found that the level of information quality provided on a website has an effect on a customer's level of satisfaction. Ludin and Cheng (2014) research also found that websites should provide customers with informative and

valuable information as this helps to reduce the amount of time searching for information or completing a task. Delaraso and Susilo (2013) also agree with Ludin and Cheng (2014) that online web providers ought to provide customers with up-to-date, useful, accurate and complete information in order to fulfill the information needs of customers and result in customer satisfaction.

Information quality online and online credibility are somewhat intertwined (Flanagin and Metzeger, 2000). Numerous models have been proposed in the literature on the process in which customers evaluate the credibility and quality of the information provided on a website. The following sections outline some of the most popular models from Rieh (2002), Fogg (2003), Metzeger and Flanagin (2007), Sundar (2008), Lucassen (2013), Hilligoss and Rieh (2008) and Westerwick (2013).

3.4.2 Judgement of Quality and Cognitive Authority Model

Based on Hogarth's (1987) theory of predictive and evaluative judgment in choice behaviour. Rieh (2002) developed a model of 'Judgment of information Quality and Cognitive Authority' that helps us understand how individuals evaluate online credibility, as can be seen in figure 3.1. Rieh's (2002) research suggests information seekers make two distinctive judgments that affect their decision and selection behaviour online.

Individuals make a predictive judgment and an evaluative judgment. The predictive judgment is based on which page to select when looking for information. The evaluative judgment is where information seekers evaluate the information they have obtained. However, in both predictive judgment and evaluative judgment, quality and credibility are seen as being central to decisions made on each (Rieh, 2002). Rieh (2002) suggests that the judgment of information quality and credibility should be seen as the central process in information retrieval that takes place between the website and the information seeker. Rieh's (2002, 2010) theory of a predictive judgment on web information's trustworthiness and credibility can be traced back to Deutsch's (1958) theory on trust. As previously highlighted, Deutsch (1958) argued that the concept of trust requires a predictable element. Deutsch (1958) and Rotter (1980) argue that the

most critical ability of a trustor is being able to somewhat predict the behaviour of the trustee. The results of Rieh's (2002) study shows that when participants were browsing a website, they would make predictions on what the next page would contain after clicking a link. In this case, this is clearly an example of Rieh's (2002) 'predictive judgment'. Following this, with a new page opening on a web site, individuals are then able to evaluate the content that the page contains; this is what Rieh (2002) refers to as enabling individuals to make 'evaluative judgments'. If the evaluation of the page does not meet the needs of the information seeker in terms of quality, trustworthiness and credibility then the user may have to navigate to another page or another website. At each of these stages Rieh (2002) noted participants' predictive comments as 'It is likely to be good', 'It would be a good search engine' and 'it will give me reliable databases', these statements clearly having predictions, anticipations and expectations. Additionally, evaluative comments of, 'It turned out it wasn't what I expected' and 'I did find this article useful' showed the evaluation constructed on the pages visited.

Rieh (2002) model, which has been further cited in more recent studies from Savolainen (2007) Rieh and Danielson (2007), Hilligoss and Rieh (2008), Huvila (2013) and Lucassen (2013), suggests that the judgment of information quality and credibility should be considered a central process in information retrieval. In other words, evaluating the trustworthiness of content is at the centre of information search.

Figure 3.1 Online Judgment of information Quality and Cognitive Authority

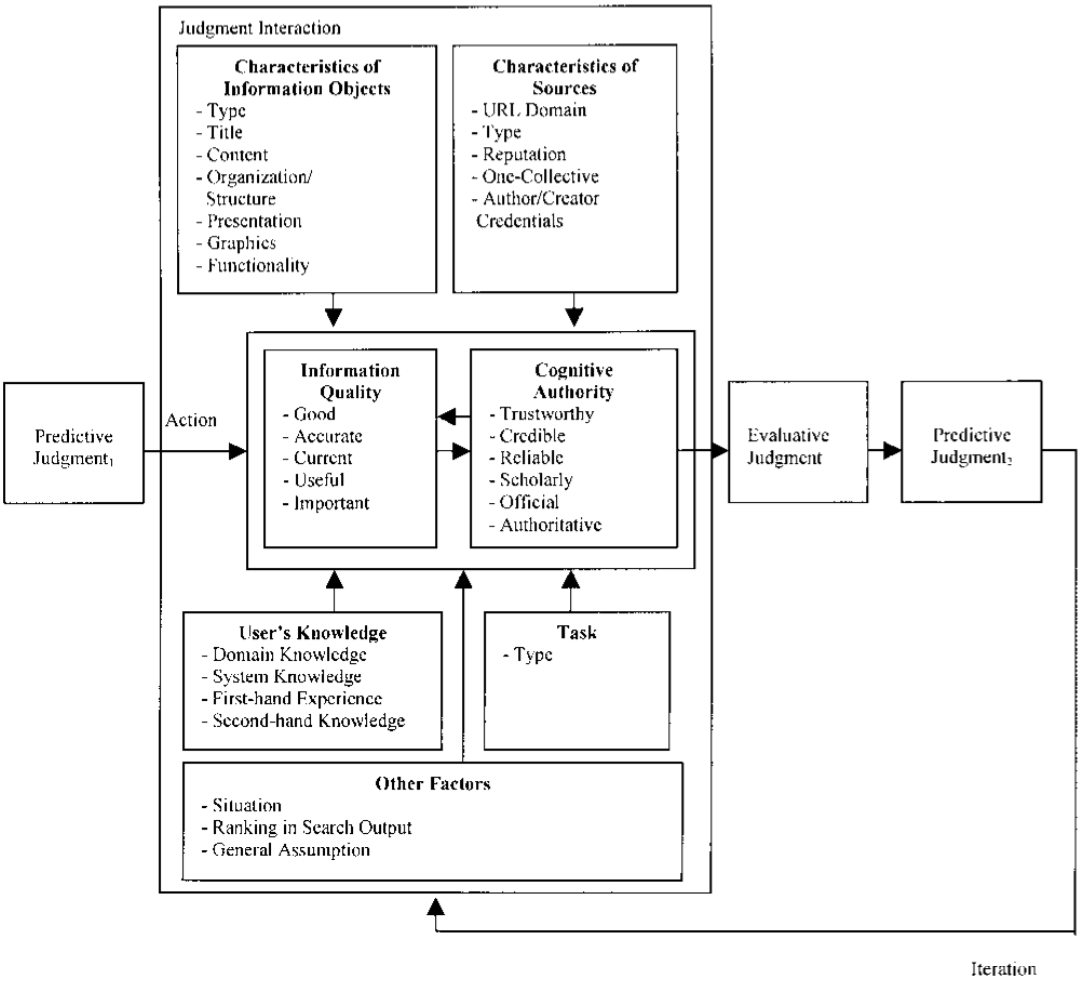


Figure 3.1 Adapted from: Rieh (2002)

Rieh (2002) argues that the iterative process seen in figure 3.1 is central to an individual's decision making on trusting information online. While other researchers including Fogg (2003) suggest that an individual's judgment and evaluation commences once an individual notices something on a website to the extent that a judgment is made. Rieh's (2002) model argues that individuals make a predictive judgment on a website at an extremely early point which can even be before visiting the site, taking into consideration their perceptions of the brand. Rieh's (2002) research outlines that the factors that affect predictive judgments of information quality and cognitive authority are different to those factors influencing evaluative judgments.

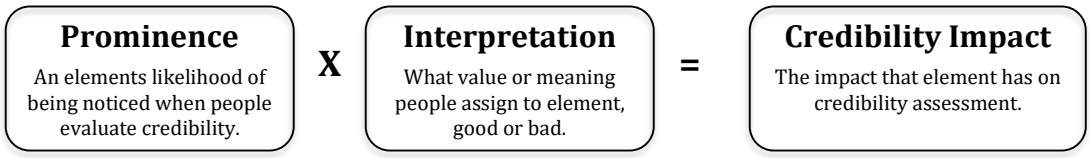
As can be seen individuals are believed to start off by developing a predictive judgment on the information contained within a website. Rieh's (2002) findings show that

individuals tend to use previous knowledge both in terms of systems (retrieval systems and particular websites) and topic area for making predictive judgments. Evaluative judgments on the other hand rely on 'the characteristics of information objects' including the title, content, structure and organisation, presentation, graphics and functionality. With the characteristics of sources including the URL domain, reputation and creator credentials (Rieh, 2005) being an important measure for both predictive judgments and evaluative judgments. Once both predictive and evaluative judgments have been made when retrieving the required information, the user is then able to make an evaluative judgment on the quality, trustworthiness, reliability and credibility of the information and website (Lucassen et al, 2013). Rieh (2010) highlights that other factors can influence both the predictive and evaluative judgment including the ranking in the search output, with higher ranked content more likely to be clicked on then lower ranking search results (Westerwick, 2013).

3.4.3 Prominence Interpretation Theory

On the other hand, Fogg (2003) turns his attention to the actual website itself. Fogg et al (2003) find that consumers' main consideration in credibility evaluations is the visual design elements of a website rather than the actual content or source information. Metzger and Flanagin (2013) suggest that this verification strategy to assess online credibility is often deployed, as it is the one that requires the least amount of effort. Fogg's (2003) Prominence Interpretation theory suggests two distinctive things need to occur for individuals to make a credibility assessment of a website. Firstly, the individual notices something on a website (this being the prominence). Secondly, the individual makes a judgment about what they have noticed (this being the interpretation). Fogg (2003) argues that if one or the other (the prominence or the interpretation) does not happen, then there is no credibility assessment on the website. Figure 3.2 outlines Fogg's (2003) Prominence-Interpretation theory for assessing website credibility.

Figure 3.2 Prominence-Interpretation Theory



Adapted From: Fogg (2003)

The notion of noticing an element and constructing an interpretation on a website is a continuous activity while navigating through a site, as the user goes through the site and continues to notice and interpret other elements this adds to the overall assessment of credibility. Fogg (2003) outlines that the prominence is the overall likelihood of a website element being noticed. It is argued that before an element on a website can have an effect on an individual's credibility assessment of a site, the user needs to first notice the element. If the web element is not noticed it will not have an impact on the credibility assessment. In contrast to this, Rieh (2002) as previously highlighted argues that individuals come to a site with a predictive judgment; as a result, Hilligoss and Rieh (2008) point out that an assessment of quality, credibility and trustworthiness is on-going even before the user visits a website. However, Fogg (2003) suggests that an individual may not notice a websites privacy policy and therefore this has no effect on the individual's credibility assessment. In comparison, a rotating banner with images on a site is likely to catch the user's eye and will have an impact on the user's credibility assessment. As a result, Fogg's (2003) prominence-interpretation theory is based on evaluating the surface characteristics of the site, with focus on the look and feel of the site, including the sites aesthetics, ambience, design and layout (Metzger and Flanagin, 2013).

Fogg (2003) further outlines five factors that can effect prominence 1) Involvement of the individual, this being the user's motivation and ability (knowledge) to inspect and assess the website's information. 2) The topic of the website, i.e. the overall genre of the site, whether it is entertainment, advisory information, news information. 3) The task of the individual, whether they are searching for particular information, seeking entertainment, or making a purchase. 4) The experience of the individual, either a novice searcher or an expert in regard to the topic area and in regard to web browsing skills. 5) Individual Differences, this can contain numerous aspects including learning

style, browsing style, personality and overall cognitive ability. However, Fogg (2003) suggests that the involvement of the individual is the most significant factor affecting prominence. This being the user's ability and motivation to properly examine and assess the information the website contains. For example, when an individual goes to a website to obtain particular information it is argued that the user will notice more aspects about the site in their evaluation of the sites credibility and trustworthiness than they would if they were merely browsing for entertainment purposes (Fogg, 2003 and Hilligoss and Rieh, 2008). Fogg (2003, p.722) highlights that 'When user motivation and ability are both high more website elements will cross the cognitive threshold of being unnoticed to being noticed'. Metzger and Flanagin (2013) suggest that Fogg's (2003) research further confirms that individuals do not invest their full cognitive capability in online evaluation tasks as not all site elements are noticed. Metzger and Flanagin (2013) suggest that this low level of effort and motivation to thoroughly evaluate credibility online can be based on Simon's (1955) 'bounded rationality', that people are not always able to act perfectly rationally due to limitation imposed by the human mind. Metzger and Flanagin (2013) point out that a form of bounded rationality is 'satisficing' where individuals do not use all of their cognitive ability, rather they use just enough to provide an optimal outcome.

Interpretation on the other hand is the individual's judgment on the web element or website under scrutiny. For instance, a user may interpret a typographic mistake or missing page (an HTTP 404 page) as a sign that the website is not well maintained and therefore the information provided may not be accurate. In both cases the typographic mistake or missing page will likely lead to a lower credibility rating for the site. It is believed that various factors affect individuals' interpretation these being but not limited to, firstly an individual's assumptions, i.e. how the individual views the world including their culture, past experiences, heuristics and values. Secondly, skills and knowledge of the individual, this being the individual's level of ability in the websites subject area. Thirdly, the context, this involves the individual's environment, their expectations of the website and their situational norms (Fogg, 2003).

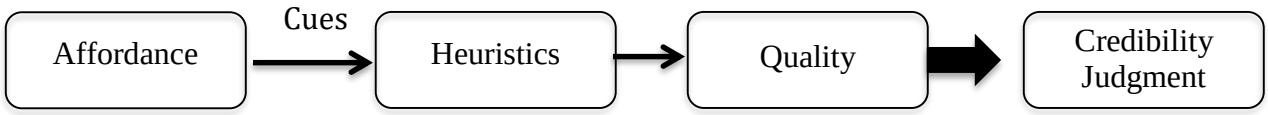
As each individual is different, users will interpret websites and website elements differently. An individual's culture and underlying assumptions are believed to play a significant role in terms of differences between users (Fogg, 2003). For example, a

news website that has a jokes section may influence people differently. Person 'A' may interpret the jokes as being inappropriate on the site and devaluing of the information the site provides and therefore results in a more negative credibility assessment. Yet person 'B' sees the jokes as an enjoyable aspect of the site, resulting in a more positive credibility assessment.

3.4.4 MAIN Model Credibility Assessment

In addition, Sundar (2008) developed the MAIN framework to help understand online credibility assessment also from a technological perspective, highlighting how individuals evaluate the actual website as well as the content through cognitive heuristics. Based on classic persuasion research (Hovland and Weiss, 1951) Sundar's (2008) research outlines what he refers to as four 'affordances' capable of cueing cognitive heuristics related to credibility (Hilligoss and Rieh, 2008). These four affordances being 'Modality' (M), Agency (A), Interactivity (I), and Navigability (N) are believed to be able to identify customers' cognitive heuristics (customers' rules of thumb) relating to credibility assessments. Sundar (2008) suggest, that each of these affordances act as somewhat of a moderator in a number of physiological ways in order to prompt cognitive heuristics individuals' hold. Sundar (2008) argues that each of the four affordances exist in most if not all digital media and have the capability to cue cognitive responses to credibility assessments due to the fact that they are structural features that underlie the design and surface level characteristics associated with the influential first impressions of a website (Reinecke et al, 2013). Each of these affordances can have both a positive and negative effect for websites. For example, if interactive features on a website made navigation easier then this would likely cue the convenience or enjoyment aspect of interactivity, and lead to a positive experience for the user (Sundar et al, 2013). On the other hand, if the interactive feature was somewhat cumbersome and got in the way of navigation then this would likely cue annoyance and frustration for the user and having an impact of the credibility assessment of the site (Sundar, 2008). Figure 3.3 outlines the process of Sundar's (2008) MAIN model.

Figure 3.3 MAIN Model



Adapted From: Sundar (2008)

As has been previously highlighted, 'affordances' can have a positive or negative influence on the overall credibility judgment as they can cue positive and negative heuristics (Flanagin and Metzger, 2013). From this, these heuristics can affect the individual's perception of quality before an overall judgment on credibility. Self-perception theory identifies that an individuals' attitude towards another subject is developed through interaction with that subject (Lumsden and Mackay, 2006). As a result, in order to interact individuals drew on cues from their experience and environment to determine their vulnerabilities and the nature of good will of the other party (Resnick, et al, 2000). Since individuals can only interact with an online provider to a certain extent, it is the job of web designers and marketers to provide a web experience that allows individuals to elicit trust informing cues (Kim et al, 2004 and Shneiderman, 2000). For example, the form of interactivity that produced a burden on navigation would likely cue a heuristic that the service is not good affecting the user's opinion on quality and resulting in a poor credibility judgment. This is why it is of upmost importance that users are provided with an effective online e-servicescape in order to help illicit trust informing cues (Sundar, 2008; Harris and Goode, 2010).

3.4.4.1 Modality (M) MAIN

Modality (M) is the affordance in Sundar's (2008) model most closely tied to the structure of a website. The Modality refers to the media or medium used on the site, this being text, video, audio and images. Therefore, it is argued that the media or medium used such as video or images can cue a particular heuristic. Sundar (2008) suggests that 'textual modality' could potentially appear to be the least credible medium in comparison to audio and video, as text has more intermediaries (i.e. the sender of the message or content has to write about something and then the receiver has to decode the writing with all its distinctions), which Sundar (2008, p.80) therefore suggests, 'leaves room for noise and deception'. Text in a way can often be understood differently from what the author's intentions were, whereas audio and video can be more easily

understood, as it is somewhat more lifelike and requires limited decoding. Reevs and Nass (1996) outline that audio is a significantly important characteristic in conveying realism, it seen as the closest thing to human-to-human interaction when interacting human-to-computer. As a result, Sundar (2008) argues that people may be more willing to trust audio-visual modality online as it is closely related to the real world, where the phrase 'the picture does not lie' is a belief of many (Sundar, 2008). Therefore, the heuristic of trusting things that we see rather than what we read may be elected here. At the same time Sundar (2008) and Hilligoss and Rieh (2008) suggest that multiple types of media can be overwhelming for a user and can cause information overload resulting in the individual being drained and therefore electing a distracting heuristic, or what Dabholkar and Sheng (2012) refer to as 'Internet Fatigue'.

3.4.4.2 Agency (A) MAIN

Agency in the MAIN model refers to the source of the information. Sundar (2008) highlights that the source of information could be seen as being from a variety of different sources. For example, the website may be considered the source of information or the device and application used by the individual may be considered the source, i.e. the computer, mobile device, tablet. Friends on social networks, social media sites, instant messenger and news aggregators can all be considered as sources. Sundar (2008) suggests that it is not unusual for an individual to say that they got information 'off the computer' or to say 'I got it from Google'. In each of these instances the computer is the agent and the search engine is the agent. Sundar and Nass's (2001) research showed that the psychological favourite of all sources was information from other users. When other individuals were accredited as the source of the information, users perceived the information as more credible and of higher quality. Sundar (2008) suggests this cue's the bandwagon heuristic that if others believe the information is good, then so should I (Hilligoss and Rieh, 2008). The notion of trusting what others say online and associating higher levels of credibility to the information provided by users falls in line with Lucassen (2013) and Knobloch-Westerwick et al (2005) research on online recommendation agents, for example when Amazon provides the customer with what other customers have bought. Knobloch-Westerwick (2005) and Lucassens (2013) research found that individuals are more likely to pick information that has been 'explicitly recommended' from consumer reviews such as

those found on Amazon. Sundar (2008) suggests that this clearly cue's individuals to use the bandwagon heuristic, which can be seen as being very influential as it suggests that there is endorsement for the information or content. Sundar (2008) however, suggests that user generated recommendations can also cue an 'authority' heuristic. For example, if someone well known and highly credible, with high levels of authority within their specialist field recommends a particular product or article online then this can prompt a positive credibility assessment.

However, websites or in particular, interfaces, the part of the web site that is visible to the web user (Alba et al, 1999), do not need to specifically convey authority in order to influence credibility assessments. According to Rieh and Hilligoss (2008) conveying a 'social presence' (Sundar, 2008), giving individuals the thought that they are communicating with a social entity, rather than just an organisations website within the interface, can help to increase credibility as individuals try to apply social rules when searching online (Reevs and Nass, 1996; Nass and Moon, 2000). Even in the absence of technology features the presence of personality within text can have a positive effect on credibility. However, Sundar (2008) suggest where technology is implemented, it increases social presence. For example, an online chat is exceptionally successful in establishing trust in users that have not experienced it. This may also invoke the 'helper' heuristic, where the online chat is able to provide the user with help in finding information they are looking for. This can be viewed in two ways. Firstly, the chat may be seen as an additional prompt service, therefore electing the good service heuristic or secondly, it could be seen as a tool to repair the poor navigation on the site (Sundar, 2008).

Interfaces that provide users with the ability to express the 'self' are becoming an important and prevalent part of digital media in general. Blogs, Podcasting, Social Networks, Video Sharing all allow individuals to express their 'self' (Sundar, 2008 and Bruhan, 2012). Sundar (2008, p.85) argues that the agency model of customisation has 'a powerful effect on attitudes because of its inherent egocentrism'. Sundar (2008) therefore comments that the 'identity' heuristic is likely to trigger when a user is given the opportunity to express their identity through the technology. The overall effect on credibility is argued to be extremely significant as individuals are able to make themselves part of a source (Hilligoss and Rieh, 2008 and Sundar, 2008). This in turn

can have an effect on the aforementioned bandwagon heuristic, where 'If others think this is good, then so should I'.

3.4.4.3 Interactivity (I) MAIN

Interactivity is most often seen as one of the most distinctive features of new media and websites. In very simple terms, computers and the Internet in general have more interactive features than any other type of media (Chu and Yuan, 2013). The computer requires the user to interact with it, for example inputting content with a keyboard and clicking on items with a mouse (Sundar, 2008). The required interaction for browsing a website can be either positive or negative depending on the user and the situation. Sundar (2008) offers an example based on Zillmann's (1988) mood management theory of someone having to interact with a site after a tiring days work will likely result in a negative connotation. However, those who want to be entertained and seeking an activity will be more likely to respond positively to interactivity. Sundar (2008) highlights that some forms of interaction will go beyond simply the click of a mouse and the input from a keyboard, where the interaction results in customisation and communication. Customisation online can come in multiple forms, through filtering of search results, to reducing the amount of information displayed, to selecting options to navigate, to geo location specific content (via IP address and GPS). The ability to have this user control can help to increase credibility by increasing the perceived value of the information (Sundar, 2008 and Airely, 2000) as well as increasing the relevance of content through specificity. Researchers have previously highlighted that too much information to choose from (too much choice) can result in information overload and create problems and ultimately overwhelm individuals rather than empowering them and have a negative effect on the trustworthiness of the information (Flavain-Blanco et al, 2011 and Sundar, 2008).

3.4.4.4 Navigability (N) MAIN

The navigability is the web features that allow users to move from one section of a website to another in order to move through the website (Dailey, 2004). Hoffman and Novak (1996) define navigation as 'the process of self-directed movement through a computer-mediated environment'. Fogg et al (2003) argue that well organised sites that are easy to navigate around are more credible in an individual's credibility evaluation. Sundar (2008) suggests that a trademark of an effective website is good web design.

Furthermore, Sundar (2008) points out that most web sites have navigational aids that are designed in order to help lead a user through a particular path on the site in order to enhance the user's experience. A well-organised hierarchical layout of links is believed to contribute to an unproblematic search, which ultimately provides effective navigation (Hornof, 2004). A site map is believed to be an effective navigational aid, which prompts individuals to think the site has been carefully planned (Sundar, 2008). This form of effective navigation is believed to elect heuristics of browsing and elaboration. Browsing allows individuals to be able to freely navigate through the site via links, elaboration allows individuals to explore deeper into the content on the site.

However, Sundar (2008) points out that increased visualisation with the use of maps and other navigational tools often provides increased performance, with individuals being happy to use navigational aids, expressing higher levels of satisfaction when the technology saves time and effort. The critical aspect of the navigability affordance in the MAIN model is giving the user cues related to the relevance and importance of the content the user comes across while navigating through the site. As outlined by Lucessen (2013) the information found online is not vetted, as it does not go through some of the stringent procedures offline publications do, therefore this often leaves individuals with levels of uncertainty regarding the quality of the information. In spite of this Sundar (2008) suggests that users have 'adapted' and use the method of heuristics that can be somewhat problematic but beneficial to evaluate some of the surface characteristics of a website. For example, when a user is delivered search results from a websites search engine, the top results are most likely to be the most prominent in terms of user click through. Therefore, the credibility of the navigation tool and to a larger extent the credibility of the site will be judged on the search facilities ability to meet the expectations of the user, created by the prominence heuristic. Sundar (2008) and Rieh (2002) point out that this is an aspect that most likely was never considered or envisioned by designers but an aspect that was widely adopted by web users, possibly due to habitual actions based on primacy cues that the most important information is always provided first.

In order to overturn this problem, search engine web elements and other web navigation tools have started adopting auto-generated cues based on the 'similarity' heuristic. Effectively this is based on the users browsing history to provide related information.

For example, when searching for information on how to fix a car, the website may recommend another piece of information on what tools may be required (Lucassen, 2013). Another example of this is the 'relevance ranking' that some web search elements provide, where each search result is provided along with a number ranking its suitability to the search query (Sundar, 2008). Based on Pirolli and Card's (1999) Information Foraging Theory, where similarities were found between the way individuals search for information online and how animals hunt for food, relevance ranking is to an extent an automated version of the theory (Sundar, 2008).

Within the Information Foraging theory, Pirolli and Card (1999) highlight the 'Information Scent' as the most important concept. The same way in which animals follow a scent to help them guide the way when hunting for food, individuals rely on the same cues in the information environment in order to fulfil their information needs. Individuals place an estimate (or make a predictive judgment) on the amount of useful information they are likely to gain going down a particular route. After obtaining information, the individual then compares the actual outcome with their prediction. When the information scent becomes 'weaker', in other words the user does not expect to find any further useful information, the user then may move on to another source until the information needs are fulfilled. Often the information scent on a website will be between 1-4 lines of text describing the information that lies ahead, for example the lines of information found at search results. However, it can simply be an image or a heading that can emit the scent of what lies beyond the link. This information acts as the scent, 'who's trail leads to information of interest' (Pirolli, 1997). Depending on the overall goals and objectives of the individual the scent may be strong or weak; this would then have an impact on the users' likelihood to click through. Sundar (2008) suggests that the decision on the strength of the heuristic could be determined by the 'similarity heuristic, i.e. the case of the perceived similarity between an individual's objectives and promised information.

Westerwick (2013) outlines that information foraging theory and the notion of uncertainty in information seeking suggest that search engines or web search elements can help individuals deal with the complexity of information seeking and reduce the level of uncertainty regarding the relevance of information individuals obtain during their search. As a result, Westerwick (2013) like Reih (2002) as previously mentioned

suggest that many individuals trust the relevance rankings of search engine results by selecting the top ranked search results.

The cues and heuristics that have been highlighted, are by no means exhaustive as more cues and heuristics exist, the number of cues within the four affordances outlined by Sundar (2008) that are likely to be elicited during an interaction can depend on the device being used, the individual themselves, the situation and context. However, Sundar (2008) suggests that these cues are significant in influencing an individual's assessment of overall credibility; they can amplify or diminish content effects, as the cues can be seen as a moderator or filter that the information and website goes through.

3.5 Heuristics and Systematic Evaluation

Like Sundar (2008), Petty and Cacioppo (1981, 1986) also point out the usefulness and importance of heuristics in developing credibility assessments. Petty and Caciopoo (1981, 1986) developed the Elaboration Likelihood Model (ELM), which provides a general understanding on the attitudinal changes in individuals when they encounter messages and the source of the message. Petty and Cacioppo (1981, 1986), identify two types of message processing, in which individuals engage in when encountering messages, these being systematic and heuristic. The systematic processing of a message is seen as being effort intensive and involves analysing the message based on factual cues from the content (Lucassen, 2013). Whereas, like Sundar's (2008) research has highlighted, heuristic processing is based on an individual's judgment of a message rather than the content, with the judgment based on the cues from the message and the source. This form of message/information processing is normally adopted as it takes less time, effort and motivation on the individual's part to analyse the credibility and quality of the information (Hilligoss and Rieh, 2008; Metzger and Flanagin, 2013).

Metzger (2007) developed the dual processing model of website credibility assessment. Within the model there are two key elements that determine whether a heuristic or a systematic evaluation of the site takes place. When an individual arrives at a website, they need to have the motivation to evaluate the websites information (Metzger, 2007; Sundar, 2008 and Lucassen, 2013). Metzger (2007, p. 2087) states that this motivation "stems from the consequentiality of receiving low-quality, unreliable, or inaccurate information". Metzger and Flanagin (2013) comment that individuals often lack the

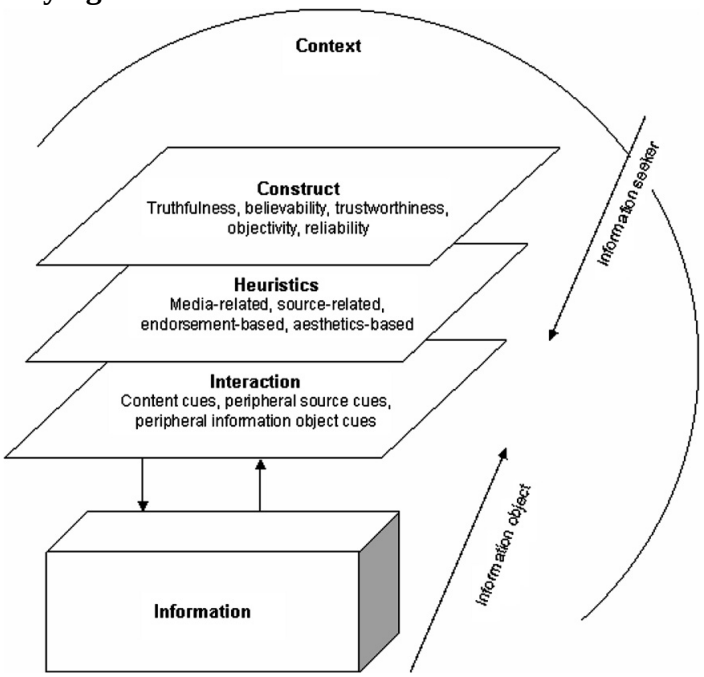
motivation and skill in order to carry out an evaluation of a website's credibility. The unmotivated web user will not perform an evaluation on the websites content; at the very most an unmotivated user may perform a heuristic evaluation, however as Metzger (2007) has outlined this will depend on the individual's ability, i.e. knowledge on how to perform an evaluation.

In spite of Metzger (2007) highlighting systematic processing as a key component of her model, Lucassen (2013) argues that online credibility evaluation is always heuristic to an extent. As the previous definitions of trust and in particular the earlier definition of online trust from Corritore et al (2003) highlights the concept of risk being involved in trust. Full systematic evaluation would require every single aspect relevant to credibility to be evaluated taking the level of risk to no risk at all. When in fact we know this is not possible as mostly all trust and credibility researchers have highlighted the existence of risk. Lucassen (2013) states that the logic of carrying out full systematic evaluation would replace trust with certainty. As a result, credibility evaluation can be deemed as always being somewhat heuristic (Lucassen, 2013; Fogg et al, 2003; Sundar, 2008).

3.6 Unifying Framework of Credibility Assessment

Heuristics also have a significant role in Hilligoss and Rieh's (2008) Unifying Framework of credibility assessment. Hilligoss and Rieh (2008) have three levels to their framework between the information seeker and the information item or object, these levels being, construct, heuristics and interaction as seen in figure 3.4.

Figure 3.4 Unifying Framework



Adapted From: Hilligoss and Reih (2008)

The construct level refers to how an individual constructs or defines credibility. This is an important level in the model as it acknowledges that each individual can have varying meanings of credibility. The heuristics level refers to the general rules of thumb that individuals adopt and links with Sundar's (2008) work on credibility assessment. These heuristics play a vital role in web credibility evaluation with individuals applying heuristic judgments even before evaluating the website or its information (Lucassen, 2013). The Interaction level on the other hand refers to the actual interaction between the user and the information, where particular attributes connected with specific information objects, and information sources take part in the user's credibility judgment. Unlike heuristics, which can be broad and applicable to multiple subjects, the interactive level judgments are unique to the particular object/subject or source in question. It is only at this interaction level from the source cues, content cues, and peripheral information object cues that systematic evaluation can occur.

3.6.1 Content Cues

The content cues refer to the actual message of the information. Petty and Caciopoo (1986) argue that content cues are the most challenging of the three kinds of interaction and requires the level of motivation discussed by Metzger (2007), which users often lack. Hilligoss and Reih's (2008) research highlights that individuals use their expertise and knowledge as the main way to assess the credibility of the actual content. Without a certain level of knowledge, it is difficult for a user to properly evaluate the credibility of information systematically (Hilligoss and Reih, 2008; Lucassen, 2013). However, one way in which Hilligoss and Reih (2008) and Flanagin and Metzger (2000) found that individuals were able to somewhat evaluate content was looking for multiple sources with concurring and consistent content, content that is complete, and able to identify if the content is opinion or facts, however this requires effort on the customer's part.

3.6.2 Source Cues

Hilligoss and Reih (2008) refer to source cues as any cue leading an individual to a particular source in order to aid their judgment on the credibility of the information. Sources can range from other individuals, groups, friends, family, and organisations. The source cues can be from past experience with the source, the sources education, their expertise, affiliation and reputation amongst numerous other aspects. Individuals may invoke a source cue due to the limited expertise they have on the particular subject area.

3.6.3 Peripheral Cues

The third type of interaction involves the peripheral cues coming from the information object. These cues tend to relate to the presentation and the overall appearance of the information on the site (Hilligoss and Reih, 2008). This includes the site aesthetics, which Robins and Holmes (2008) highlight as having a critical impact on information objects credibility assessment. Hilligoss and Reih (2008) offer an example from a participant in their research of where site aesthetics can come into play even in the largest of websites. A participant commented that he preferred to use Google over Yahoo! due to the fact when arriving at Google's homepage there was nothing other to see than the search box, whereas Yahoo's homepage is cluttered with news content and

adverts. The participant felt this made the site look less credible, as Yahoo! started to look more like an entertainment site. However, as well as the appearance and the site aesthetics, Hilligoss and Reih (2008) also highlight that the language used on a site can have a significant impact on an individual's credibility judgment of a website. For example, if poor language is used with 'instant messenger' or 'text message' grammar then the site is likely to be seen as less credible than one that applies well-rehearsed grammar. Conversely, where the language used is overly complex and results in the user not being able to understand the content can have an influence on an individual's credibility evaluation (Hilligoss and Reih, 2008). Overall judgments based on interactions with information objects are influenced by the peripheral cues relating to those objects.

Each of the levels Hilligoss and Rieh (2008) present in their Unifying Framework are interlinked and can be seen in action by individuals when searching for information. Any or all of the levels of the Unifying Framework can be involved in the assessment of the website's credibility and the information an individual encounters. Hilligoss and Reih's (2008) study shows that the credibility judgments taking place while interacting with a website are influenced by the credibility judgments made on the other two levels (interlinking levels). For example, an individual may have certain heuristics regarding the information found on commercial websites as being unreliable compared to the information found on a Government site. However, when the information is fully read on the commercial site the individual may trust the site, as it appears trustworthy. Once an individual experiences this, it may become a new heuristic. Much research has focused on the interaction level of credibility (Fogg, 2003; Rieh, 2002). However, credibility assessment needs to be considered and understood past simply the level of interaction, through including the broader perspectives due to the fact that individuals make credibility and quality judgments in the process of developing constructs relying on heuristics and taking account of the context (Hilligoss and Reih, 2008).

Lucassen (2013) as well as Hilligoss and Reih (2008) and Fogg (2003) highlight that the context in which the search for information is undertaken can have a significant impact on the judgment of credibility. As credibility is not a particular set attribute of information or sources of information, rather it is seen as relative to the context in which information seeking is undertaken and during this process credibility judgments are

made. The context influences credibility assessment by restraining the information customers' use. For instance, an individual may think that the information found in a textbook is credible, however since the professor of the class does not like the class textbook and does not think it is overly useful, the individual's assessment of the textbook's credibility will have likely decreased. This is an example of where the context of a situation can change an individual's heuristics and judgment on credibility.

3.7 The 3 'S' Model

As has been previously highlighted users only perform credibility and quality evaluations when they have the motivation to do so (Lucassen et al, 2013). However, the level of evaluation (heuristic or systematic) is dependent on the skills of the user. In turn a systematic evaluation can only be performed when the user is motivated and has the capability to carry out such a task (Lucassen et al, 2013).

Lucassen and Schraagen (2011) developed the 3 'S' model. Within this model three strategies of online credibility assessment are proposed, which further develop upon the notion of expertise and information skills influence on credibility assessments. Which somewhat provides a summarised model of the theories on credibility evaluations. As can be seen in figure 3.6, those with domain expertise are able to carry out a (S) semantic evaluation on the factual accuracy, completeness, scope and neutrality of the information; the user is able to compare the information presented with their own knowledge. Lucassen et al (2013) argue that following this strategy results in the most prominent aspect of credibility being addressed in factual accuracy.

However, when domain expertise is low or does not exist, it is suggested that it is impossible to carry out a semantic strategy to evaluate information (Lucassen et al, 2013). In this case users consider the (S) surface features of the information. These features relate to the way in which the information is presented on the site and the site aesthetics. It has also been shown through previous research that the design of a website is one of the most critical indicators of website credibility (Fogg et al, 2003; Hilligos and Reih, 2008; Lucassen et al, 2013). Furthermore, site aesthetics have shown to increase perceived credibility with effective and beautifully designed sites judged more credible (Robins et al, 2010; Li and Yeh, 2010). Lucassen et al (2013) suggests that the strategy of considering the surface features requires general information skills. These

particular skills involve how specific features relate to the concept of credibility.

Robins and Holmes (2008) help to highlight the role of aesthetics in terms of influencing credibility, by providing two types of aesthetic treatments, Low Aesthetic Treatment (LAT) and High Aesthetic Treatment (HAT). Low aesthetic treatment is an approach where the content is uploaded onto a website without any professional graphic design. There may be some visual graphics and some kind of layout to help the reader to understand the content, however the functions and layout are loosely implemented without much though for design. Robins and Holmes (2008) find that sites that take a LAT approach creates a 'low budget' impression and evokes a feeling of poor credibility in the user's mind.

Contrastingly, a high aesthetic treatment provides a professional look and feel to a website, appropriate to what the organisation represents (Robins and Holmes, 2008). Websites that adopt a HAT approach aim to provide an effective layout that helps to enhance communication and use colours and professional graphics in order to build or reflect a brand. Care is taken over the layout of the pages within the website and overall how they are presented. An attractive layout is believed to positively influence the user's emotions such as enjoyment or confidence and want to stay on the site (Dailey, 2004). Robins and Holmes (2008) in line with Hilligos and Reih (2008) as well as Lucassen et al (2013) find that a site with high aesthetic treatment invokes feelings of credibility towards a site.

The third strategy Lucassen et al (2013) propose is (S) source experience as a measure of credibility. In comparison to the first two strategies, source experience is a passive strategy, as the information itself is not evaluated but the source of where it came from. Lucassen et al (2013) suggest that when evaluating credibility, users will use one or more of these strategies in order to make a judgment on their level of trust towards the website. Figure 3.5 outlines the 3 'S' model with a visual understanding of the three strategies outlined.

Figure 3.5 3 'S' Model

Lucassen et al (2013) suggest that the semantic strategy could be thought of as a systematic approach and the surface strategy as a heuristic approach. However, this is not the case. For example, identifying facts that the user has previously learned can be considered as heuristic processing, but is deemed as a semantic strategy. Lucessen et al (2013) also suggest that considering the quality of references in a surface strategy is systematic processing but is deemed a surface strategy. As a result, both semantic and surface strategies can be carried out both systematically and heuristically. The source strategy on the other hand is based on heuristics, since the information is not actually considered in the evaluation rather the source of the information.

Overall, the 3 'S' model shows two particularly significant results. Firstly, domain experts' trust is influenced when a semantic feature shows low credibility. Secondly, for those with sufficient information skills, trust is influenced when specific surface features indicate low website credibility. This can be seen as being in line with Fogg's (2003) prominence-interpretation theory that suggests each cue within information has a particular prominence for a specific user. It is only when the cue is prominent that it influences the user. The 3 'S' model can be seen as building upon this theory by attributing specific user characteristics to specific information characteristics. Thirdly,

the model outlines and in line with Sundar (2008), Metzger and Flanagin (2013) and Metzeger et al (2010) that online credibility evaluation is always based on heuristics.

3.8 Sponsor (Brand) Credibility

However, Westerwick (2013) suggest that it is important to consider sponsor credibility as part of online credibility evaluations as it can cue credible heuristics. Many website credibility models have highlighted website design and site aesthetics as important cues for credibility assessments (Westerwick, 2013). As a result, information posted by an unknown organisation on a web site with effective web site design, may be perceived as being credible and comparable to the information found on websites of well know brand of high expertise. This therefore suggests that even if the information from a high expertise brand is of better quality, it can still be viewed as the same quality as the unknown organisation due to a more appealing website design (Westerwick, 2013).

However, the need to consider the website brand is of high importance in website credibility (Westerwick, 2013). Flanagin and Metzger (2007) suggest that users consider three types of web credibility evaluation, message quality, sponsor credibility and web site credibility, with sponsor credibility and web site credibility deemed the two most important credibility evaluations. Flanagin and Metzger (2007) first introduced Sponsor credibility as the logo used to represent the organisation, the name of the organisation or the organisation itself. Metzger et al (2010) study found that in the heuristic approach to website credibility, users often used a brand reputation heuristic to determine the sponsor of the website. If the sponsor is not known, then users turn to other heuristics such as friends or other users. Hu and Sundar (2010) also found similar results with individuals seeking information from health organisations, with users finding the information on a branded website more credible than the information from an individual's independent website.

Westerwick's (2013) study revealed that the brand is a significant factor in users' online web credibility assessments. The study showed that there is a relationship between the more credible the website brand is, then the higher users rate the credibility and quality of the message (content). In contrast to Lucassen (2013), Sundar (2008) and Hilligoss and Reih (2008), Westerwick (2013) that found the website design does not affect the user's credibility assessment of the content, even when designs are rated as being

differently appealing. As a result, Westerwick (2013) suggests that organisations or individual web site owners cannot enhance the perception of content credibility or quality through appealing web site design to somewhat compensate for lower quality information. In contrast higher brand credibility resulted in higher ratings of website design appeal.

Westerwick (2013) argues that if website design appeal does influence information assessments as identified by other studies including, Lucessen (2013) and Hilligos and Reih (2008), the salient cue of the website brand appears to reduce the significance and overtake the design cue. Westerwick (2013) suggests that the use of a design cue is likely only to have an impact when the sponsor cue does not exist or is weak. As in Sundar's (2008) MAIN model, the technological features used by an individual elect user heuristics in order to assess online information, Westerwick (2013) suggests that this study adds to that of Sundar's (2008) in that the sponsor credibility cue effects how the design cues influence users online credibility and quality assessments.

3.9 Expertise and Experience

The previous sections have outlined the various methods and theories behind information quality evaluation on a website and the evaluation of website credibility. However, personal characteristics are believed to play a role in the evaluation that takes place. As previously mentioned Lucassen and Schraagen (2011) outline that those with 'domain' or subject expertise/knowledge are able to evaluate the information differently from those with no such expertise. Additionally, those individuals with search experience have higher motivation to actually scrutinise the information provided on the website. The following sections will discuss the role of expertise and experience.

3.9.1 The Role of Expertise

Understanding whether 'domain expertise' has an impact on individuals' information seeking and in turn trust is important to understand. Those with domain expertise are believed to be able to more effectively evaluate the quality of the information they come across online by comparing the information in front of them with the information they have stored (Eastin, 2001), which Kuhlthau (2001) argues as a critical skill in information seeking. Westerwick (2013) points out that those with a higher level of

knowledge and care about specific subjects has an effect on the individual's credibility judgments. Lucassen and Schraagen (2011) suggest that domain experts are most influenced by what some suggest being the most significant aspect of credibility, factual accuracy (information quality) within a semantic evaluation. In contrast, the 'novice' searcher with little or no knowledge on the subject area, often do not notice factual errors in information online. As a result, Lucassen and Schraagen (2011) argue that domain experts are better equipped to assess the accuracy of information. Kelton et al (2008) also comment that the general need to have trust in information or trust in a particular subject is less likely when the user has a high level of expertise within the field. Fogg and Tseng (1999) highlight that when a user is familiar with a topic area they are more likely to stringently evaluate the content, and identify errors; as a result, the level of perceived credibility and information quality can often be lower for expert users. An expert user's level of uncertainty may well be lower due to their existing knowledge. However, if the information does not coincide with the experts pre-existing thoughts then this can have an impact on the user's level of uncertainty increasing (Kuhlthau, 2001).

Lucassen, et al (2013) highlight that 'domain novices' on the other hand are unable to make comparisons between the content they are provided and knowledge they have due to the novice having limited knowledge within the area. However, this is where user characteristics can be seen as having an impact on how individuals conduct evaluation assessments differently. Domain novices work around this by evaluating the surface level aspects of a website, they do not consider factual accuracy and rely on heuristics for evaluation of credibility and information quality (Lucassen, 2013 and Sundar, 2008). Lucassen and Schraagen (2011) provide an example where the trust of experts within the automotive engineering field was influenced by factual errors to the extent it caused a poor credibility evaluation of the information. On the other hand, the trust of novice searchers was not affected. Lucassen and Schraagen (2011) also acknowledge that the difference can be explained by the cues in the information that are used by experts and novice searchers, with experts focusing on the content and surface cues, and the novice searcher only focusing on the surface features.

3.9.2 Experience in Online Information Search

The concept of experience in information seeking and website evaluation is one that is closely linked with expertise (Lucassen, 2013 and Hilligoss and Rieh, 2008). Eagly and Chaiken (1993) and O'Keefe (1990) highlight that when either expertise (domain knowledge) is high or the individual holds a high level of search experience, individuals have an increased motivation to scrutinise the information they are provided. However, Jenkens et al (2003) suggests that only individuals with expert knowledge in the domain can assess the content in terms of its accuracy, quality and relevance. Those with a high level of search experience on the other hand are able to better locate information they are looking for using search tools and navigation skills as compared to those with poor search experience, even when domain expertise is high.

Information retrieval is seen as a complex activity to undertake online involving interactions between a user and an online system that provides information (Kuhlthau and Tama, 2001). Al Makari and Sanderson (2011) suggest that individuals who are experienced with information retrieval may make better and more effective use of an information retrieval system than those with little experience. This is where we see a critical difference between expertise and experience in information search. It is argued that those who have more experience of Internet browsing and web navigation are more likely to find the information they require online (Jenkins et al, 2003). Sutcliffe et al (2000) found that inexperienced web users had problems with generating appropriate search queries, carried out fewer searches and gave up more easily than more experienced web users. Domain experts can be seen as being 'content driven', using their extensive knowledge to evaluate the relevance of the information they have obtained. Those with search experience on the other hand use their experience to form 'search driven' procedures to develop sophisticated queries and use multiple search functions. In comparison to the domain experts, those with search experience encounter more difficulty in questions asked in search tasks and often spend less time reading the information they have received and in turn have a higher level of uncertainty over the relevance and trustworthiness of the results (Jenkins et al, 2003). Marchionini et al (1993) along with Fogg (2003) and Hilligoss and Rieh (2008) acknowledge that domain experts use 'pattern matching' ability to identify relevant results. Whereas users with search experience are more likely to evaluate results based on general heuristics (i.e.

source, date, etc) (Jenkins et al, 2003).

3.10 Summary

The notions of website credibility, information quality, experience in information seeking and domain expertise have been discussed in this chapter in relation to seeking information online. Each of the variables highlighted have an impact on customers when searching and obtaining information online and can have an impact on the customer's decision to use information they have found from a particular website. We can see that heuristics are used for all types of credibility and quality evaluations and it is only those individuals that have domain expertise that can carry out semantic, factual accuracy credibility and quality evaluations. Other users rely on surface characteristics in order to evaluate the credibility and quality of a website and its content. The review of the literature outlines the overlapping features of website credibility and information quality.

It has been much of the marketer's attention to ensure online service quality and more recently to ensure customers have an effective customer experience in the online environment. Research on the online customer experience has neglected the importance of website credibility and information quality as variables that could potentially influence a customer's experience. Understanding the cognitive and affective process individuals go through when searching for information online along with the website credibility and information quality evaluations that customers conduct provides further understanding on how to provide the optimal customer experience. Further understanding the variables capable of influencing the customers experience is important to explore, which the subsequent chapter aims to provide.

3.11 Conclusion

This chapter has explored the role of trust, credibility and information quality online. The chapter commenced with an introduction on the concept of trust, exploring the issues of defining trust and coming to a common theme on trust involving vulnerability, risk and relationships. This chapter found that customers base their level of trust on website credibility and information quality, as trust can be seen as the property of the user while credibility as well as quality, the property of the information or object (i.e. website). This chapter explored online credibility and information quality in detail and

discussed the relevant models and theories regarding website credibility and information quality evaluation. Numerous theories exist ranging from semantic evaluations, to surface characteristic evaluations, to heuristic evaluations and brand evaluations. However, the review of the literature shows that all credibility evaluations can be considered to use heuristics. Subsequently the role of personal characteristics including expertise and information seeking experience were discussed in relation to its impact on completing an online search for information.

The literature has provided an understanding of the cognitive and affective processes involved in information seeking and the role of website credibility and information quality during a customer's online search for information and services. The first literature review chapter outlined the complex cognitive and affective process of online information seeking. This chapter has provided further insight into the evaluations customers conduct during their search. The subsequent chapter will now discuss the online customer experience and the variables that previous studies have identified as having an influence on the online experience.

CHAPTER 4

THE CUSTOMER EXPERIENCE

4.0 Introduction

The following Chapter explores the online customer experience and identifies the variables capable of influencing the customer online. The first literature review chapter identified the cognitive and affective process in which individuals go through when searching for information, identifying that individuals often abandon their search due to negative emotions. The second literature review chapter identified that website credibility and information quality evaluations are conducted during a customer's search for information and services online. It is important that this chapter explores the variables capable of influencing the customer's experience from past research studies in order to help develop a comprehensive online customer experience model. This chapter commences with a general discussion on service delivery, followed by the customer experience before going on to discuss numerous variables identified from the literature with the potential to influence the online customer experience. Following on from chapter two, the notion social interaction as a method of online customer support is discussed before outlining the outcomes of a positive online customer experience.

4.1 Service Delivery

According to Turel and Connelly (2013, p. 674) 'delivering high quality customer service is vital for companies that wish to remain competitive'. Over recent years the well-documented management shift from product centred to a service dominant logic centred approach outlines the differences between marketing products and services (Lush and Vargo 2004). The shift in management thought highlights the need for organisations to deliver higher levels of services across all operating channels. The focus for services marketing researchers over recent years has been service quality and perceived value. Numerous researchers have explored service quality and its impact on customer behaviour (Parasuraman et al 1988). SERVQUAL, a multi item scale has been deployed by numerous services researchers over recent years in the attempt to measure

service quality in a multitude of contexts (offline shopping, online shopping, banking, hotel and tourism). Parasuraman et al (1988) define service quality as a customer's judgement with regard to an organisations excellence or superiority, outlining service quality as an antecedent of perceived value. However, Gronroos (2013) suggests that value is possibly the most ill-defined notion in services marketing. Despite this, conceptualisations of value have been provided, such as a trade-off between benefits and sacrifice (Zeithaml, 1988).

Vargo and Lusch's (2004) shift to a new dominant logic outlined the importance of the new role of the customer, where customers are somewhat empowered and help to co-create value through active participation. Gronroos (2011) suggests that not only is the determination of value controlled by customers but also the value creation, where an element of social interaction takes place between the customer and service provider to add value to the service. It is from this that Gronroos (2013) suggests that the customer acts as a function within the customer's own experience. Heinonen et al (2010) point out that while the customer may be involved in co-creating value through participation, service providers can take steps in becoming involved with customers by providing access to platforms that allow communication and participation.

However, more recently value can be seen in a more experiential perspective, where value comes from the combination of holistic experiences. Vargo and Lusch (2008) comment that the customer must experience a 'service', thus service touch points either created or facilitated by the service provider or co-created with the customer can be viewed as holistic experiences. This chapter will continue to discuss the customer experience and outline the factors that can influence the customer's experience online.

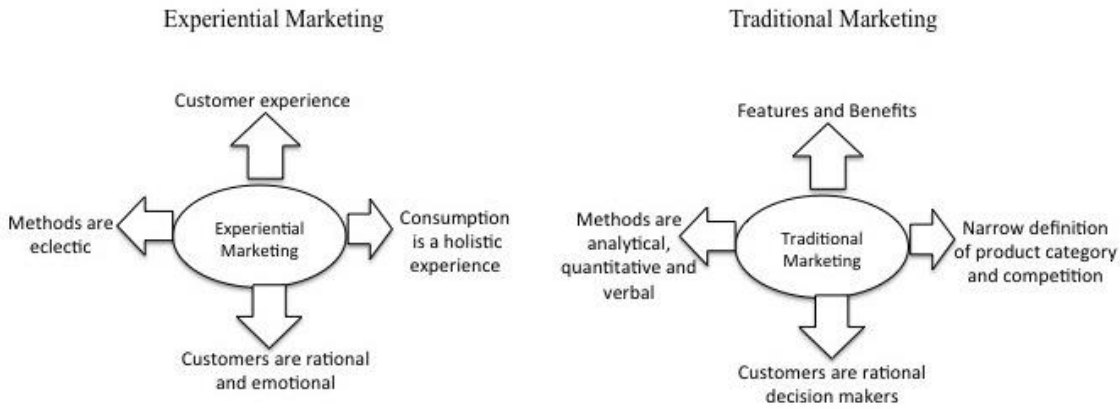
4.2 Customer Experience

Only over recent years have researchers developed an interest in exploring the customer's experience with regard to their service encounter (Verhoef et al, 2009). However, empirical research remains limited on the customer experience as researchers have continued to focus on service quality (Edvardsson, 2005). It is important for both academia and industry to extend research and understand how the customer experience can affect the customer online in a number of different searching and buying contexts.

Much of the previous research in relation to customer experience has focused on measuring customer satisfaction and service quality and design (Verhoef et al, 2009). According to Verhoef et al (2009) although more recently researchers have discussed customer experience, large proportions have been attempting to measure customer satisfaction. Meyer and Schwager (2007) highlight that the problem of only measuring customer satisfaction is that it does not tell us how to achieve it. In the most part, customer satisfaction can be seen as the collection of positive customer experiences minus the negative experiences (Meyer and Schwager, 2007), however it is important that we have an understanding on what variables influence a customer's experience.

In spite of this, Schmtt (1999) explored the customer experience and highlighted that in traditional marketing customers are viewed as rational decision-makers who only care about functional features and benefits, whereas from an experiential marketing point of view customers are rational and emotional beings who are concerned about a pleasurable experience. Figure 4.1 outlines the contrasting characteristics of experiential marketing and traditional marketing.

Figure 4.1 Experiential Marketing vs. Traditional Marketing



Schmtt (1999) identified five different types of experiences marketers can create for customers including: sensory experiences 'sense', affective experiences 'feel', cognitive experiences 'think', physical and lifestyle experiences 'act' and social identity experiences 'relate'. Sensory experiences relate to individual's senses through sight, sound, touch, taste and smell. Feel experiences relate to customers' inner feelings and emotions. In order for 'feel' experiences to have an influence on the customer, a detailed understanding of what stimulus can evoke particular emotions is required. Think experiences relate to problem solving experiences that stimulate customers creatively. Act marketing is believed to enrich customers' lives by targeting physical experiences, offering alternative means of doing something, alternative lifestyles and interactions. Finally, relate marketing contains elements of sense, feel, think and act. However, 'relate' marketing extends beyond the individual and relates to self-recognition, the need to be perceived positively by others. It can be seen how 'parts' of each of the elements making up experiential marketing can be applied in the online environment.

Berry et al's (2002) research also found in order for organisations to compete, service providers need to deliver customers the ultimate experience and provide 'cues' that customers detect during their service encounter. Early research on the customer experience (Schmitt 1999) focused on what can be deemed as 'experiential activities' of hedonic value. However, Vargo and Lusch (2006) posit that experience is a key part of a utilitarian value and thus, research must explore both contexts. In spite of the importance attributed towards the customer experience, the focus of service marketing

literature has been the measurement of customer satisfaction and service quality (Verhoef et al 2009). However, other early adopters of research on the customer experience (Sieders et al 2005) are challenging the current definition of service quality, its overall usefulness and how it is measured, suggesting the customer experience is the key indicator of service quality evaluation.

4.3 Defining Customer Experience

A stark difference between customer experience and service quality is the inclusion of customer emotions within the customer experience (Edvardsson et al 2007; Lee and Lin 2005). Services researchers have expanded beyond the domain of marketing to further knowledge through applying psychology theories in adopting the PAD model of affect (Mehrabian and Russell 1974), the PANAS theory (Watson et al 1988) and the differential emotion theory (Izard 1977), to aid in the understanding of the customer experience and provide a measure for the customer experience. Prior to this, service quality research focused solely on cognitive assessments, ignoring the role of customer's emotions (Edvardsson 2005).

Additionally, Voss et al (2008) highlights that the customer experience is a holistic process made up from the customer journey, deriving from the sequence of touch-points a customer has with an organisation. Payne et al (2008) outline that the customer experience goes beyond 'service quality' due to the customer journey often preceding the service encounter and continuing after it. Mayer and Schwager (2007) take this notion further by defining the customer experience as the internal and subjective response to any direct or in-direct contact with the organisation during a customer's journey across multiple touch-points.

The direct contact highlighted by Meyer and Schwager (2007) usually occurs at any touch point with the service provided by the company, thus during the course of purchase, use and service and is most often initiated by the customer. Indirect contact on the other hand is seen as unplanned encounters with the company's services, brand and products and could be through recommendations, word of mouth, advertising, reports, blogs and online searching amongst numerous other activities. Meyer and Schwager (2007) provide an example of indirect contact when searching for

information. A user searching for information on a search engine such as Google and finds the URL of an organisation or a logo of an organisation can have an impact indirectly on the user's experience.

Meyer and Schwager's (2007) definition of the customer experience again highlights the holistic nature of the customer experience, which is again further emphasised through Verhoef et al (2009) and Teixeria et al's (2012) research who suggest, the customer experience is a holistic process as it is the development of variables, and involves the customer's cognitive, affective, emotional, physical and social responses to the service provider. Verhoef et al (2009) believe that this experience is not created solely by the factors that a service provider can control including, the interface, atmospherics and navigational layout of a website. It also includes the influence of others, reason for search and numerous others. Verhoef et al (2009) believe that the customer experience comprises the complete experience, i.e. the search process of the information, exchange, consumption and post consumption experiences. The psychological constructs of cognition and affection have been quite consistently identified as variables that have an effect on customer behaviour and the customer experience (Frow and Payne, 2007).

4.4 The Role of Customer Experience

The theoretical basis of the customer experience is found on the concept that the customer experience is the combination of all cues and touch-points with an organisation to create an overall experience (Payne et al 2008; Mossberg 2007). Thus, the purpose of customer experience is to create 'take-away impressions' (Carbone and Haeckel, 1994) that are developed from the touch points of interaction with an organisation and is subsequently stored in the memory of the customer (Mathwick et al, 2001; Schmitt, 1999; Pine and Gilmore, 1998). The development of an impression is something that is highly personal to each individual customer. In the same way in which credibility judgements can be influenced by the characteristics of the customer, a customer's perception and impression can also be affected by their personal characteristics (Carbone and Haeckel, 1994 and Teixeria et al, 2012).

Pine and Gilmore (1999) suggest that experiences are the new economic offerings. No

longer are customers satisfied with simply exchange of goods or services, customers are now expecting an experience (Ahmed, 2011). It can be seen that experiential marketing involves the marketing of a service or product through an experience, such that the customer becomes emotionally involved and part of the experience (Mathurs, 1971). An effective experience is believed to engage the individual, become memorable, lead to strong beliefs and attitudes towards either the product or service (Klein, 2003). In contrast to traditional marketing where the focus is gaining satisfaction, the role of experiential marketing is to create an emotional attachment that can lead to satisfaction, loyalty, trust and revisit/repurchase (McCole, 2004). Poulsson and Kale (2004) suggest that in order to provide customers with a successful customer experience, the experience ought to offer personal relevance, novelty, surprise, learning and engagement.

4.5 Online Customer Experience (OCE)

Exploring the link between a customer's perceptions of the online environment and the quality of the service has been the focus of services researchers (Klaus, 2013). Only recently have researchers adopted an interest in the online customer experience and thus empirical research remains scant (Ahmed, 2011). While researchers have developed some of the foundations of the customer experience, further research is required on the online customer experience. Similarly to offline services marketing research, most research studies focused on customers' perceptions of websites and the overall service quality introducing E-SERVQUAL (Parasuraman et al 2005). A review of the literature finds little research exploring the online customer experience (Hoffman and Novak 2009; Rose et al 2012; Nambisan and Watt 2011; Klaus 2013).

However, Klaus (2013) notes a shift towards exploring the OCE. This shift has somewhat established from the transition of website development in the change from static websites (both e-commerce and informational sites) to dynamic and interactive websites offering customers the ability to customise and interact with the online web environment. With the rise of web 2.0 technologies over recent years including, interactive customer-to-customer conversations customer-to-organisation conversations, recommendations, ratings, live chat and social networking sites, a number of challenges and opportunities have arisen for online providers to provide customers with the optimal experience (Balasubramanian et al, 2005, Rose et al, 2012).

Like much of the early information search researchers discussed in chapter 2, Hoffman and Novak (2009) explore the online customer experience (OCE) from a cognitive view of online interaction. Novak et al (2000, pp. 22) define the online customer experience as 'the cognitive state experienced during navigation'. However, Rose et al (2012) advance Novak et al (2000), and Hoffman and Novak's (2009) as well as Edvardsson's (2005) offline research by drawing on the emotional element involved in the online customer experience and include emotions in understanding the online customer experience and the feelings associated with searching online. Sambhanthan and Good (2013) further elaborate on the outcome of a positive user experience online as it has an influence on the continued use of the website. Thus, if the site does not provide a positive user experience from the offset, customers will be unlikely to return.

Rose et al (2012, pp. 309) suggest that the online customer experience is 'a psychological state manifested as a subjective response to the service provider's website'. Thus, numerous variables are capable of influencing the customer's experience online. Like Kuhlthau's (2004) ISP model highlighted, customers will engage in cognitive and affective processing of information from a website (Rose et al, 2012). Faiola et al (2013) suggest that cognitive approaches to research on human computer information and online behaviour have somewhat underestimated the importance of emotions and pleasurable factors that have an influence on the customer experience. In line with Kuhlthau (2004), Norman (2004) stresses that affect is linked to attitudes, expectations, and motivations, which in turn develops an emotional response that plays an important role in an individual's thinking. Faiola et al (2013) stress that psychology research has shown that cognition is influenced by the emotional state the individual is in.

The online customer experience is an important and complex area of study as customer satisfaction is believed to be a consequence of positive cognitive and affective states of online customer experience (Rose et al, 2011). Rose et al's (2011) study further confirms that of Janda and Ybarra's (2005) study who found a relationship between superior online customer experience and satisfaction. In addition, Khalifa and Liu (2007) find that a relationship exists between satisfaction with the online shopping experience and online repurchase (re-usage) intention. Rose et al (2012) and Ha et al

(2010) also highlight from the retail and tourism environment that achieving satisfaction through an effective online experience has an influence on the customer's overall level of trust in a website. A number of challenges are posed in in delivering an effective online customer experience due to the characteristics of the online environment (Lu et al, 2011). Thus, it is now important to explore the variables highlighted in previous studies capable of influencing the customer's experience in the online environment.

4.6 Variables influencing the OCE

The literature highlights numerous variables that are capable of influencing the online customer experience. As previously mentioned much of the work surrounding the online customer experience has focused on the online shopping environment and thus variables are derived from such studies. From a review of the literature and in addition to emotions, information quality and credibility identified through the previous literature chapters, 14 variables have been identified as having the potential to influence the online customer experience. These variables include, flow, telepresence, enjoyment, concentration, engagement, web skills, challenge, interactivity, interactive speed, control, ease of use, customisation, connectedness and website aesthetics. (see: Rose et al, 2012; Hoffman and Novak, 2009; Ding et al, 2009; Mollen and Wilson (2010); Faiola et al (2013); Lee et al (2011); Guthrie et al (2004); Brodie et al, 2011; Mathwick et al, 2001; Lui, 2003; Macmillan and Hwang, 2002; Song and Zinkhan, 2008; Gefen, 2003; Lee and Chen, 2010; Ghani et al, 1991; Koufaris, 2002; Chen et al, 2000; Kim and Zhang, 2010; Nah et al, 2010; Hilligoss and Rieh, 2008; Van Noort et al, 2012; Wu et al, 2013; Liu and Shrum, 2002; Agarwal and Karahanna, 2000; Ajzen, 1991; Davis et al, 1993; O'Cass and Carlson, 2010; Daley, 2004; Lee and Cranage, 2011; Lee and Jeong, 2010; Mckinney, 2004; Harris and Goode, 2010.) The mentioned studies provide some insight into the variables that have been previously identified as influencing the online customer experience. Some variables can be seen as antecedent variables of each other, which will be discussed in more detail within this chapter.

4.7 The Concept of Flow

Over recent years, much attention has been paid to the concept of flow, which was first coined by Hoffman and Novak (1996) in the context of browsing online. Originally Csikszentmihalyi (1997) described flow as 'a situation in which an individual has completely focused motivation and where the individual is fully immersed, absorbed and engaged in the task at hand, with a loss of self-consciousness and experiencing enjoyment in the process'. Csikszentmihalyi (1997) analysed how flow existed in games such as chess, rock climbing and dancing. More recent research has explored the existence of flow in sports, online shopping and virtual games. Hoffman and Novak (2009) suggest that the critical aspect of the concept of flow is full concentration and immersion in an activity. Chen et al (2000) highlight that those that have experienced the state of flow normally report feelings of absorbed interest, immersed pleasure, focussed attention and the acceleration of time. Kim et al (2012) highlight that immersive tendency can be seen as a predictor of 'human-computer interaction' as it determines the psychological state an individual is in while they interact with stimuli in the online environment. Kim et al (2012) suggest that the immersion individuals experience during flow is known to significantly influence users' feelings of social presence. Hoffman and Novak's (2009) research confirmed that flow can occur for both goal directed and experiential activities online, with flow being more prevalent in goal directed activities than those that are carried out simply for fun.

4.7.1 Debate Surrounding Flow

From the review of the current body of literature it can be seen that there is much debate around the concept of flow, which makes defining flow incredibly difficult (Hoffman and Novak, 2009). What one researcher argues as a consequence of flow another researcher may consider it as an antecedent, thus continuing to highlight the infancy of research on the online customer experience. In addition, flow has been measured in multiple forms that can be seen in chapter 7 (table 7.1), which again adds to its complexity. However, despite the variations in meaning Hoffman and Novak (2009) argue that there are some consistencies regarding the marketing consequences of flow. Hoffman and Novak (1996) first outlined that flow contributes to 'increased learning', 'perceived behavioural control', 'exploratory mind-set' and 'positive subjective experience', these outcomes have been further confirmed in subsequent work, as well

as uncovering that flow has an influence on key consumer behaviour sequence of attitudes, behaviour, behavioural intentions and the likelihood to retain information read (Van Noort et al, 2012).

As well as Hoffman and Novak (2009) Mollen and Wilson (2010) outline flow as one of the most important variables that has the potential to influence the online customer experience. Ding et al (2009) and Faiola et al (2013) highlight that flow is often referred to as the 'optimal online experience'. Rose et al (2012) research confirms that of Hoffman and Novak (2009) that flow has an impact on the cognitive state in the online shopping environment. Numerous studies including Hoffman and Novak (2009) highlight telepresence, challenge, skill and interactive speed as antecedent variables of flow. However, in contrast to Hoffman and Novak's (2009) research, Rose et al (2012) suggest that 'level of skill' and 'interactive speed' are two concepts, which are not as significant in influencing the cognitive experiential state of flow as once suggested. In addition, Faiola et al (2013) also point out that interactive speed may no longer be an antecedent variable of flow as broadband connections and improved online servers have in reality eliminated this issue.

Flow can be considered a significant area of study in exploring the factors that lead to an optimal customer experience. As previously outlined numerous variables in addition to flow have been highlighted as being capable of influencing the online customer experience and will be subsequently discussed in this chapter. Some researchers highlight some of these variables as having the ability to influence the variable of flow.

4.8 Telepresence

Lee et al (2011) suggest that telepresence is a feeling of being present in a virtual environment that is more dominant than the actual real life physical world that the individual lives in and has the potential to influence a customer while operating in the online environment. Hoffman and Novak (2009) suggest that individuals experiencing telepresence forget about their immediate surroundings when searching online, while an individual's body may be in a physical room or environment, their mind is in the 'virtual space' in which the individual is engaged in and often the individual can find

the virtual world more real than their real life world. Faiola et al (2013) argue that telepresence may be a critical aspect of users feeling the sense of 'being there' in other words being completely immersed and engaged in the activity they are completing, in turn experiencing a distorted sense of time (being unaware of time passing) and multiple positive emotions. In the cognitive mental state described of telepresence, the individual is transported to a virtual environment where their connection with real time and space slowly fades away into the background of consciousness. Previous research including Song et al (2006), Rose et al (2012) and Lee et al (2011) all found that telepresence has a positive influence on consumers' willingness to purchase online. Faiola et al (2013) highlights that telepresence can be seen as being closely related to the notion of flow and is often considered an antecedent variable.

4.9 Engagement

Moreover, Mollen and Wilson (2010) argue that engagement can be seen as a variable that can influence the online customer experience. Many researchers (Hoffman and Novak, 2009 and Lee et al, 2010) have suggested that engagement is part of telepresence, where individuals are fully immersed and lose themselves in the task at hand, hence engaged. However, Mollen and Wilson (2010) in line with Jones (1998) point out that the notion of telepresence is passive whereas engagement can be deemed as a state in which the individual is active and motivated. Mollen and Wilson's (2010) research agrees with that of Guthrie et al (2004) who argue that engagement outlines a psychological state that extends beyond merely the fulfilment of a task and is rather seen as the involvement, being energised, being active and extracting effort as well as the full use of the individual's cognitive capabilities and emotions. Mollen and Wilson's (2010) argument shows the differences that the researchers suggest exist between telepresence and engagement.

In spite of Mollen and Wilson's (2010) findings, numerous other researchers have suggested that engagement overlaps in other variables such as interactivity, telepresence, concentration, web skills and enjoyment, and is therefore not often considered as a separate variable on its own (Hoffman and Novak, 2009, Lee et al, 2011 and Rose et al, 2012). Despite the contrasting research, engagement can be seen as a significant area of discussion with regards to online consumer behaviour and thus the

online customer experience (Brodie et al, 2011), therefore this study views engagement as a separate variable capable of influencing a customer's experience.

4.10 Concentration/Focused Attention

According to Faiola et al (2013) and Lee et al (2011) concentration, also referred to in the body of literature as focused attention, is a variable that can influence the customer's experience. Like telepresence, concentration is often considered as being very close to the notion of flow and a variable that is most often used to measure flow. It is suggested that concentration within an Internet environment is where the individual loses focus on real world issues and thoughts. The web user becomes so engrossed in the task they are completing that they become irritated about any type of interruptions from the 'real world' and any interruptions in the online environment that influences their experience. Chen et al (2000) and Rose et al (2012) suggest that achieving a level of deep concentration often results in the loss of self-consciousness, which in turn allows individuals to relax while browsing. Past studies have shown that this level of high concentration has been a critical element of a user's satisfaction and in turn intention to purchase and re-visit a website in the online shopping environment (Rose et al, 2012; Lee et al, 2011). Kim and Zhang's (2010) research also confirmed that high levels of concentration positively influence user satisfaction in the virtual second life environment.

In addition, Lee and Chen (2010) outline concentration as one of the most important variables that can influence the online customer experience. Research has shown where individuals are able to concentrate on their task they are less likely to abandon their search. Further to this, Lee and Chen (2010) outline concentration as an important element that can lead to the aforementioned concept of flow. Many researchers have used concentration as a means of measuring flow.

4.11 Enjoyment

According to Lee et al (2011) and Faiola et al (2013) those individuals who do not experience enjoyment in an online task may seek alternative methods to complete the particular task, whether it be on a different website or through traditional offline

methods. For example, those individuals who do not enjoy the online shopping experience on a particular site may try another site; if the alternate site still fails to fulfil their enjoyment need, they may return to traditional shopping practices (Lee et al, 2011). As a result, previous studies suggest it is important that websites provide users with more than simply a functional method of carrying out a task and provide customers with an enjoyable experience, which in turn increases the likelihood of flow and an optimal experience (Rose et al, 2012 and Lee et al 2011). Originally Csikszentmihalyi (1997) stressed the need for enjoyment in order to experience flow. Csikezentmihalyi (2002) points out that one condition of flow is where the individual finds the experience of the activity as 'intrinsically rewarding' that the end goal is simply an excuse to carry out the task. Like telepresence, enjoyment has been a consistent antecedent of flow over the years of research carried out on the subject area. Enjoying the online experience is seen as an important element of flow. Like Csikezentmihalyi (1997), Hoffman and Novak (2009) suggest that if the individual does not enjoy what they are doing they are not going to achieve an optimal experience. However, Meyer and Schwager (2007) highlight that in a business-to-business (B2B) context, a good experience is not about an enjoyable or thrilling experience rather one that is trouble free.

4.12 Web Skills and Challenges

It has been highlighted by numerous researchers including Lee et al (2011), Ding et al (2009) and Hoffman and Novak (2009) that 'web skills' and 'challenges' are important variables that can affect a customer's experience online. Web Skills and challenges often have an impact on each other and therefore often discussed together. It is believed that customers will have an effective experience if the challenges that they experience are congruent with their web skills (Lee et al, 2011). If on the other hand customers experience challenges that are above their level of web skills and start to experience emotions of anxiety and frustration, then a satisfactory experience is unlikely to be achieved. However, Lee and Chen (2011) suggest at the other end of the spectrum, if individuals experience challenges that are below their level of skill they may become bored in their online experience, as the experience is not stimulating the customer enough. As a result, Nah et al (2010) suggest that it is important there is a balance between skills and challenge in order to achieve the ultimate online experience.

In spite of this Rose et al (2012) found that while the variable of challenge may remain an important variable that can influence the customer's experience, the level of skill required may be somewhat less influential on the online experience. Rose et al (2012) suggest that this may be due to individuals becoming more acquainted in using the Internet and browsing online. Nonetheless, we must be careful not to generalise such a contrasting finding as much pervious research has highlighted the importance of skill as a variable that can influence the customer's experience. In addition, Hilligoss and Rieh (2008) suggest that with the abundance of information available online it may no longer be the skill of obtaining the information rather the skill of understanding and filtering the relevant information. Rather than challenge and skills many researchers (Davis et al, 1993; Song and Zinkhin, 2008) are turning their attention to ease of use in the online environment, discussed subsequently in this chapter.

4.13 Control Online

Numerous researchers have outlined the importance of control as affecting the online customer experience (Song and Zinkhin, 2008; Rose et al, 2012; Liu, 2003). Rose et al (2012) suggest that control has an influence on the emotions of customers while online. Koufaris et al (2001) and Rose et al (2012) outline that online control is an attitudinal variable that helps to explain online customer behaviour. Agarwal and Karahanna (2000) highlight that having a sense of control reduces the perception of difficulty and has a positive effect on customer's emotions. Rose et al (2012) further suggest that technical difficulty and the mass of information available online makes control highly important for individuals. Rose et al (2012) and McMillan and Hwang (2002) outline two factors that can be seen as drivers for the need of control. First of all, a lack of time which leads to the need of efficiency and secondly, limited cognitive resources. According to the theory of planned behaviour (TPB) and the technology acceptance model (TAM), perceived control has an influence on actual behaviour carried out by an individual (Ajzen, 1991 and Davis et al, 1993). The vast amount of information available online has led to a more utilitarian customer requiring a higher level of control, higher efficiency and less effort while searching on the web (Koufaris, 2002).

Daley (2004) highlights that much of the previous research on control views the subject as a characteristic where individuals are motivated to have increased control over the

outcomes in their lives in general. Brehm's (1966) Theory of Psychological Reactance provides a focused view of control, suggesting that the motivation to control is specific to each situation. Within the theory of psychological reactance, when individuals expect to have control over behaviour and this control is threatened, psychological reactance is aroused as a result. Thus, the theory of psychological reactance highlights that customers do not expect to control everything, as they understand some elements are outwith their control, rather customers expect to have control in certain situations based on expectations and past experiences. Dailey (2004) highlights that the theory of psychological reactance and the theory of planned behaviour provide effective foundations for understanding the role of control online. Dailey (2004) further outlines that customers do expect to have a level of control online. Ease of use and customisation and connectedness are three variables that the literature has identified as making up the overarching variable of control, a discussion on each of these variables will be provided in the next section.

4.13.1 Ease of use and Navigational Control

Ease of use, simply refers to the level of difficulty when moving through a particular website (Song and Zinkhin, 2008). The ability to effectively navigate around a website provides a user with a level of control (Daley, 2004). Daily (2004, pp.799) defines navigation control as,

'The degree to which the customer can access information on an on-demand basis where the content, timing and sequence of the communication is under control of the consumer'.

Dailey (2004) further suggests that the design of a website in terms of its navigational atmosphere dictates the level of control a customer will have as well as the perceived ease of use. A website that offers users multiple navigational aids is believed to provide the user with a website that is easy to use, as well as a higher level of credibility (Sundar, 2013). Depending on the level of control an individual has, it can result in arousing reactance (Brehm, 1966). Brehm and Brehm (1981) define reactance as a motivational state that has behavioural influencing capabilities. The theory suggests that psychological reactance arousal results in negative emotions, negative attitudes and the

reassertion of control. Brehm and Brehm (1981) stress that a threat to control is any effect on the individual that makes it more difficult to exercise control and complete the task they are aiming to do.

According to Wicklund (1974) there are three categories of threats to control, social influence threats, self-imposed threats and barrier threats. Poor 'ease of use' in a navigational context falls under the category of 'barrier threats'. Wicklund (1974) suggests that a barrier threat is something that goes between an individual and their control over their behaviour to the extent that rewards no longer exist and the individual is required to exert extra effort. The level of this barrier threat influences the level of reactance expressed by the individual. For instance, if an individual's navigational control is threatened by the limited navigational cues on a website, reactance may be aroused and the customer may change their behaviour towards the site by halting any further search, leave the site and find an alternate website that is fit for their purpose and ultimately perceive the site as not being easy to use (Dailey, 2004). Dailey (2004) points out that navigational aids that offer users the least amount of control such as 'previous' and 'next' links are somewhat restrictive to the user and therefore likely to evoke high levels of reactance. However, a site that offers a navigation bar, site map as well as clearly labeled 'previous' and 'next' buttons provides the user with far more control and a site that is easier to use, thus less likely to evoke reactance.

Dailey (2004) and Flavian et al (2009) suggest that numerous websites through effective website design provide users with high navigation control through using less restrictive navigational aids and in turn provide a website that is easy to use. In line with the psychological reactance theory and the theory of planned behaviour, once an individual experiences a website that provides high levels of navigational control and in turn a site that is easy to use, individuals will begin to expect high levels of control from all websites they use. As a result, prior experience creates a new expectation (Brehm, 1966). Furthermore, Brehm and Brehm (1981) stress that high levels of importance can lead to higher levels of reactance. Dailey (2004) therefore suggests that based on psychological reactance, threats to customer's navigational control evokes higher levels reactance during a customer's search experience. Websites with poor navigational aids and poorly perceived ease of use can lead to negative emotions of uncertainty, frustration and hostility towards the site (Dailey, 2004).

4.13.2 Customisation

The increasing role of technology for service delivery has seen an increase in the use of technology to provide customised services (Truel and Connelly, 2013). The literature outlines customisation as a component of control (Rose et al, 2012). Customisation refers to the personalisation or individualising of services and content to a customer's own preferences and interests (Lee and Cranage, 2011). In line with Vargo and Lush (2008) empowering customers through being able to co-create value, Chang et al (2010) suggest that customisation influence feelings of control and the ability to be an active part of their own experience. Previous studies have highlighted that customers are able to customise their own online experience due to web 2.0 technology and advanced search features (Song and Zinkhin, 2008; Rose et al, 2012). According to Tam and Ho (2005) customisation is the personalisation of delivering the right content to the right person at the right time. Providing this level of experience provides customers with the perception of having higher levels of control (Rose et al, 2012).

Many websites provide users with advanced functions to filter, search and change their own preferences, which is suggested to offer customers the feeling of being in control of what they are doing (Song and Zinkhin, 2008). Like navigational control and again in line with psychological reactance theory, when a customer experiences a website that allows customisation they begin to expect other websites to offer the same service, where a website does not offer such a service this can evoke negative feelings and opinions towards the site and can be seen as a threat on control (Dailey, 2004). Within Wiklund's (1974) three categories of threat to control, customisation can fall under the category of 'barrier threats'. Without an individual having the ability to customise their experience the customer's perceived level of control can be seen as being somewhat restricted (Dailey, 2004) and thus result in reactance affecting the customer's emotions towards the website.

4.13.3 Connectedness

Thirdly, Rose et al (2012) outline that connectedness refers to the ability to 'connect and share knowledge with others in virtual online environments', which can be seen as another component of control. It is argued that the greater the level of connectedness,

i.e. the ability to share knowledge, contribute knowledge and seek knowledge from others, individuals perceive a higher level of control and the ability to co-create their experience (Pentina et al, 2008; Vargo and Lush, 2008). Online communities, social networks and live chat systems all provide users with the ability to connect, share and contribute content (Brodie et al, 2011; Hun-Lee and Crange, 2011; Jean et al, 2011; Dabholkar and Sheng, 2012; Gerlitz et al, 2013; Cho and Acquisti, 2013; Nambisan and Baron, 2009; Truel and Connelly, 2013). The level of 'connectedness' varies from site to site and again based on Brehm's (1966) theory this can have an impact on the individual's assessment and perception of the site.

With regard to control, Rose et al's (2012) research highlighted that being able to share information about experiences is an important web feature for consumers, as well as the ability to learn from other users (Park and Cho, 2010). These features provide individuals with a sense of control over their own behaviour. This therefore highlights the role of the connectedness feature in terms of perceived control.

Connectedness is a variable that could potentially be affected by all three categories of threats to control as identified by Wiklund (1974). Social influence threats refer to the availability of social tools including the aforementioned online communities, social networks and instant live chat that allow customers to connect with each other and businesses (Mayfield, 2008). Websites that do not offer customers such tools can be seen as restrictive towards the users control and denying the user the ability to obtain social recognition (Cho and Acquisti, 2013). The non-availability of social tools can also be seen as a 'barrier threat' to the user as they are not able to carry out functions that are possible on alternative sites. Finally, 'self-imposed threats' to connectedness may also exist, for example if the individual is not part of a particular social network site or community due to their own decision not to be, they are therefore unable to share or seek information on these sites.

Overall, it can be seen that control appears to be an important variable capable of influencing the customer's online experience (Hoffman and Novak, 2009). The variables of ease of use, customisation and connectedness can influence an individual's perception of control. This chapter aims to provide a comprehensive overview of the variables that can influence a customer's experience. The next section will discuss the e-servicescape and its potential role in influencing a customer's experience online.

4.14 The e-Servicescape

The e-servicescape can be seen as a key contributor in influencing a customer's experience online, the environment in which the service is provided to the customer (Lee and Jeong, 2010; Mckinney, 2004; Harris and Goode, 2010). Hopkins et al (2010) suggest that the service setting or environment is a component of any service encounter and therefore is likely to affect a customer's experience. Zeithaml and Bitner (2000, p.257) highlighted that the way in which the servicescape is designed can 'enhance or inhibit the efficient flow of activities in the service setting'. Within services research much work has been conducted on the importance of the service setting, which Bitner (1992) coined as the servicescape. A servicescape describes an organisation's actual physical environment, including the general layout, design, decoration and aesthetics (Ezeh and Harris, 2007; Bitner, 2000; Vilnai-Yavetz and Rafaeli, 2006; Harris and Goode, 2010). According to Lee and Jeong (2010) the e-servicescape is the online progression of taking the physical environment servicescape attributes and applying them in the online environment. Thus, the e-servicescape involves the website aesthetics, ambiance, design, layout and more recently social elements. Each of these variables has been highlighted as key elements in previous e-servicescape literature (Lee and Joeng, 2010; Harris and Goode, 2010; Hopkins et al, 2010; Tombs and McColl-Kennedy, 2003; Yavetz and Rafaeli, 2006; Bitner, 1992). A discussion of each of these variables will be provided in the following sections.

4.14.1 Website Aesthetics

Aesthetics have been widely discussed in the offline environment, highlighting that customers can be influenced by the environment in terms of its design, layout, lighting and general atmospherics (Gilboa and Rafaeli, 2003). Much like the offline world, the online environment can be influenced by website aesthetics (Eroglu et al, 2003) aiding in the creation of the online experience. Reinecke et al (2013) research highlight that individuals often make quick judgments on websites based on very little information and thus website aesthetics can often be seen as the start of a customer's journey and first touch point of a customer's service encounter with an organisation.

Over recent years, a growing level of attention has been exerted by marketing and

human computer information researchers on the topic of website aesthetics (Kim and Lennon, 2012). The aesthetic features of a website have been studied in terms of their influence over the online shopping experience (Wang et al, 2011). Website aesthetics can be seen as an overarching term with many variables as outlined in the previous section. Website aesthetics can often be referred to as 'web atmospherics'. McKinney (2004, p.269) suggests web atmospherics are stimuli that 'result in a number of responses that includes enjoyment, satisfaction and usage intention'. Dailey (2004, p. 796) defines web atmospherics by altering Kotler's (1973) original offline definition,

'web atmospherics can be defined as the conscious designing of web environments to create positive effects (e.g., positive affect, positive cognitions, etc.) in users in order to increase favorable consumer responses (e.g. site revisiting, browsing, etc.)'.

Website aesthetics include the sites colour, graphics, images, layout and design (McKinney, 2004). Eroglu et al (2001) and Pons and Laroche (2007) suggest that these aesthetics act as cues that can influence customer's cognitive and affective responses during a service encounter, which in turn can influence outcome behaviours of satisfaction, revisit intention and trust (Rose et al, 2012).

As was previously discussed in Chapter 3, high aesthetic treatment (HAT) websites provide users with a professional look and feel to a site, with professional design and layout as well as effective navigational aids (Robins and Holmes, 2008; Dailey, 2004). Furthermore, the aesthetics are somewhat determined by the aforementioned ambience, design and layout. Each of these variables can be overlapping in features, but do have unique characteristics.

4.14.1.1 Ambience

According to Aubert-Gamet (1997, p.29) ambience conditions refer to 'the background conditions that exist below the level of immediate awareness'. We can see in the offline environment where the ambient conditions play a crucial role in the customer's experience, in terms of entertainment. Hopkins et al (2010) outlines restaurants such as the Rainforest Café or Planet Hollywood as venues where ambience plays a critical role offline and where the ambience adds to the entertainment provided to the customer.

Within an online environment, the ambience element describes how a website allows

for a pleasant and somewhat enjoyable atmosphere for customers when performing tasks online (Lee and Jeong, 2010). The ambience elements are related to the overall aesthetics and atmospherics previously outlined of the site, and refer to the overall mood created. Lee and Jeong (2010) further suggest that the ambience factors relate to the atmospherics of music, colour and background images. Jeong et al (2003) study highlighted the importance of colour in influencing online behavior; Reinecke et al (2013) find that colour is one of the most noteworthy features to activate an emotional response online and contributes to a user's immediate impression and perception of the site. Furthermore, Reinecke et al (2013) outline that a customers perceived visual complexity of a website can have an impact on the perceived ambience of the site and their overall evaluation of the site. The study found that the perceived visual complexity of a site is a more prominent feature for appeal at first sight. The provision of rich media tools such as video, images, audio and animation are believed to enhance the overall ambience as well as credibility of an online environment (Lee and Jeong, 2010; Sundar, 2008).

4.14.1.2 Website Design

The website design refers to the overall look and feel of the site, aiming to have a pleasing experience or effect on the user (Constantinides, 2004). As previously mentioned colour, images and graphics, which are part of the sites design help to communicate the websites atmosphere and overall ambiance of the site. Li and Yeh (2010) outline that the design of a website is crucial in influencing the online experience of a user, as how a site is presented can affect a user's psychological state. According to Reinecke et al (2013) web users make a decision on whether they like the look of a website within a split second of seeing it for the first time. This is in line with Rafeli and Vilnai-Yavetz (2004) research in that the website design is an important trigger of individual's emotional response to stimuli. The web user is believed to spend a short period of time on a website as compared to an offline store, therefore it is important that the sites design is appealing to capture the interest and attention of the user (Constantinides, 2004). Ganesh et al (2010) further point out the importance of website design in enhancing the customer's online experience and suggest that individuals are often motivated to continue their task on the website due to the stimulation from visual effects from particular websites. As a result, a well-designed website can enhance

customers' perceptions of a particular site and possibly wider, of the organisation, as online users respond to visual cues influencing individuals to return to the site and patronise the same organisation (Chang and Chen, 2008). Furthermore, Wang et al (2011) suggest that the interface of a website can be the primary element a customer perceives during their service encounter, as a result customers may be reluctant to continue their search if they dislike the look of the website's interface.

According to Wang et al (2011) no longer is the web simply a static conciliation of information, it is somewhat expected to provide customers with a lasting experience. According to Ganesh et al (2010) the task being completed online does not change the individual's needs, whether it is gathering information, shopping or chatting, individuals expect a positive experience. Thus a website that is beautifully designed and more appealing to the user's eye with complementary colours, well executed graphics and an overall sharp and professional design may be considered superior to less professional sites (Tuch et al, 2012 and Wang et al, 2011). As was highlighted in the previous chapter the website aesthetics and design (surface characteristics) play a role on the trust a user has towards a site and in turn the sites perceived credibility. Li and Yeh (2010) as well as Robins and Holmes (2008) find that the more visually pleasing the site is in terms of design, the more credible the website appears. In line with Brehm's (1966) Theory of Psychological Reactance, when an individual experiences a website that is visually pleasing with effective design; the user expects this from subsequent websites they visit. Those websites that do not match the customer's new expectations may leave them with negative emotions, which in turn can have an effect on the customer's experience.

4.14.1.3 Website Layout

The layout of a website can be seen as another antecedent variable of website aesthetics. Very much in line with website design, the particular layout of a site can have an influence on the user's perceptions of the website and also the usability of that particular site (Tuch et al, 2012). While the aforementioned website design and ambience of the site covers the areas of colour, images, graphics, and professional appeal as well as the overall attractiveness and allure of the site, the online layout refers to the arrangement, organisation, structure, and adaptability of a website (Harris and Goode, 2010).

Harris and Goode (2010) argue that the layout and information organisation of a website is an important aspect of the online servicescape and to an extent can be seen as a sub category of website design. According to Kwong et al (2002) the presentation of information on a website can have an influence over customers in their decision making process. Kwong (2002) further found that the organisation, structure and adaptability of the website influence customers' design ratings, and conversely information organisation can be influenced by design ratings. Furthermore, Kwong et al (2002) research finds that website layout has an effect on customer's perceptions of the information on the site and the sites overall ease of use.

Moreover, according to Thorlacius (2007, p.71), along with website design, the layout of a website can convey a feeling of 'superior aesthetic quality'. The effective arrangement and organisation of a website in terms of its structure and content can also have an influence on the sites ease of use and in turn the customer's ability to effectively navigate around a site (Daily, 2004).

Much recent research on website layout, design and ambience and the overall e-servicescape has been linked with ease of use and identifying if 'beautiful is really useable' (Tuch et al, 2012). Preece et al (2002) highlights that ease of use is about ensuring that websites are easy to learn, effective to use, and enjoyable from the user's perspective. Research conducted by Tractinsky et al (2000) found that the perceptions of website design including the layout of the site affected individual's evaluations of website ease of use. Lee and Koubek (2010) suggest after comparing two different website's information retrieval systems the results showed that before actual use customers' preferences were significantly affected by the differences in aesthetics but only slightly affected by the differences in ease of use. However, after actual usage of the systems, individuals' preferences were significantly influenced by the differences in both ease of use and aesthetics. According to Lee and Koubek (2010), regardless of the occurrence of actual use, user preference was highly correlated with both perceived ease of use and perceived aesthetics. However, Tuch et al (2012) study found that interface design does not affect the perceived ease of use of the website, whereas on the other hand poor interface ease of use has an effect on users' perceptions on website design. Overall Samhanthan and Good (2013) argue that users become frustrated with a website that is not easy to use and thus lower their ratings of the aesthetics of the

website.

4.15 Online Interactivity

Interactivity has received much attention over recent years in the online environment (Lee and Chen, 2010). Chung and Zaho (2004) suggest that interactivity is the key difference between new and old media, and therefore why it has become an important consideration for online researchers. According to Van Noort et al (2012) interactivity is a variable that many researchers have overlooked in relation to influencing a customer's online experience. A review of literature regarding online interactivity highlights that there is no clear definition of the concept (Mollen and Wilson, 2011; Van Noort et al, 2012; Johnson et al, 2006; Macmillan and Hwang, 2002; Song and Zinkan, 2008; Wu, 2006, Liu and Shrum, 2006), However we do know that most definitions are based on communication in some form within a two way process and somewhat characterised by the level of control the user has on a site and a level of synchronicity (Wu et al, 2013; Liu and Shrum, 2002). According to Mollen and Wilson (2011) many research papers adopt Steuer's (1992) definition of interactivity, 'The extent to which users can participate in modifying the form and content of the mediated environment in real time'.

However, it can be seen that more recent research papers tend to adopt Wu's (2006, pp.91) definition of interactivity, 'A psychological state experienced by a site user during his or her interaction with the website'. Wu (2006) believes that interactivity is a psychological state as it indirectly accounts for the cognitive processing and involvement in a task. Mollen and Wilson (2011) suggest that interactivity is an 'experiential phenomenon that occurs when a user interacts with a website'. As a result, Mollen and Wilson (2011) suggest that interactivity is the extent to which the individual perceives that the interaction or communication is two-way, responsive to their actions and controllable.

Van Noort et al (2012) suggest that higher levels of website interactivity lead to more intensive flow experiences. This confirms Hoffman and Novak (2009) conceptual thinking that suggested interactive features in the online environment might boost the individual's experience. Hoffman and Novak (2009) further suggested that control of

interactive features would lead to increased absorption and curiosity of the user. Despite disregarding the multidimensionality of online flow (Hoffman and Novak, 2009), Sicilia et al (2005) also found that the online flow experience in interactive websites was more intense than those non-interactive sites. Van Noort et al (2012) find that the more interactive features that are used in an online environment, users have a more positive experience. Robinson (2015) highlights that the comprehension of information as well as confidence in the source of information can be increased even by a 'modest' increase in interactivity. Van Noort et al (2012) further suggest that organisations that want customers to experience the optimal online experience and allow their customers to retain more of what they read and influence the customer's cognitive thinking, then organisations ought to develop interactive websites.

Van Noort et al (2012) highlight that research on website interactivity has yet to provide any significant effects in terms of behavioural response to interactivity. This may be again due to the aforementioned complexity of interactivity and that many users are unable to identify what interactivity actually is as well as researchers studying the topic too broadly. Sundar (2004) suggest that in order to understand interactivity online, researchers need to explore what requires interactivity. These underlying principles that Sundar (2004) suggests needs attention will help in providing understanding on the importance and use of interactivity.

As previously suggested, interactivity can be viewed as a multi-dimensional variable (Lui and Shrum, 2002; Macmillian and Hwang, 2002 and Song and Zinkhin, 2008). The first dimension can be seen as two-way communication, this being the availability of reciprocal communication between the website provider and the website user. The second dimension is the aforementioned variable of control (Van Noort et al, 2012). This being where the user of the website is able to have control and influence the communication process, select different functions on the website, filter content, change preferences and navigate freely throughout the site as previously discussed in this chapter (Song and Zinkhin, 2008).

From the review of the literature regarding interactivity it can be seen that many studies perceived interactivity as the presence or non-presence of specific website features (Song and Zinkhin, 2008). Thus, if one website allowed a user to select particular colours and set their own preferences or filter content relevant to them then the website

would be seen as offering the second dimension of more control and therefore perceived as more interactive (Wu, 2005 and Colye and Thorson, 2001).

The first dimension established of interactivity, communication, derives from Interactivity Theory (Rafaeli, 1988). Rafaeli (1988) suggested that the quality of information exchange is critical to interactivity. Song and Zinkhin (2008) outline that the feedback mechanisms discussed in the communication dimension of interactivity are derived from Interactivity Theory. Through adopting Rafaeli's (1988) Interactivity theory, MacMillan and Hwang (2002) and Sicilia et al (2005) point out that two-way communication methods provide a means for reciprocal relationships and as a result influences the perceptions of interactivity.

Much of the work carried out around Interactivity focuses on the 'perception' of interactivity rather than the use of it (Van Noort et al 2012; Song and Zinkhin, 2008; MacMillan and Hwang, 2002). The review of the literature on interactivity also outlines the attention paid to the perception of interactivity overall. However, in line with Lee (2000) this study aims to explore social interactivity in the form of online customer support and therefore further examine the dimension of communication in interactivity and its role on the customer's experience. The next section will discuss social interactivity.

4.16 Customer support through social interaction

Kuhlthau (1994) highlighted that intervention may aid individuals in their search for information. Kuhlthau's (1994) work on the zone of intervention as discussed in chapter 2 outlines the importance of social interaction with others in order to move through the search process. Information on a website may be considered as being in an ordered and certain fashion, in contrast however an individual's search task or need is characterised by uncertainty and confusion (Kuhlthau, 1990). As a result, it can be seen that a gap often exists between the 'systems' provision of information and a user's natural process of information search and use. The adoption of technology to provide customer support services are increasing in order to meet customer's evolving needs (Truel and Connelly, 2013).

As previously mentioned, interactivity theory highlights a role for communication online (Rafaeli, 1988). Song and Zinkhan (2008) suggest that the perception of communication can result in users having an enhanced overall experience. Liu and Shrum (2002, pp.54) discuss social interaction as communication between two individuals, 'the degree to which two or more communicating parties can act on each other, on the communication medium, and on the message and the degree to which such influences are synchronised'.

Pavlik (1998, pp.137) also highlights that, 'interactivity means two-way communication between source and receiver, or, more broadly multidirectional communication between any number of sources and receivers'.

In addition to Liu and Shrum (2002) and Pavlik (1998), McMillan and Hwang (2002) explain that researchers who examine ways in which websites allow for interaction often focus on the importance of two-way communication. Researchers suggest that two-way communication is made up of mutual discourse (Beniger, 1987; Bretz, 1983; Chesebro, 1985). However, as highlighted earlier some researchers regard control, time and response format as elements of interactivity (MacMillan and Hwang, 2002). Early research by Massey and Levy (1999) outlined that the internet provides social interaction or defined by Massey and Levy as 'Interpersonal Interactivity' as individuals are able to communicate with each other and the organisation on chat rooms and forums. More recently Song and Zinkhan (2008), Wang et al (2007) Truel et al (2013) and Etemad-Sajadi (2014) added live chat and social networks to this.

This level of communication is what Kuhlthau's (1994) intervention theory highlights in the offline environment as having the ability to aid an individual during search for information. The ISCM (the Information Seeking and Communication Model) outlined a role for two-way communication during information search between the individual and the information service provider (Robson and Robinson, 2015). Such support offered in the online environment may help individuals to find the information they are looking for. McMillan and Hwang (2002) highlight that communication online can provide an effective form of customer support and online service, thus assisting customers online. Truel et al (2013) have advanced such research by suggesting that online support can act as a full customer service platform. Papadopoulou (2007)

highlights that the online environment can become a real world equivalent for service providers where a full social experience can be delivered in line with what occurs in the 'real world'.

Sicilia et al (2005) highlight that the presence of two-way communication methods (live chat, forums and social networks) offers reciprocal relationships that may be beneficial to customers when searching online. Research to date has mostly considered the perception of interactivity online and communication online rather than the effects of such communication on the customer's experience and the variables leading to requiring online communication. The next section will discuss the presence of social elements in the online environment.

4.17 Social enabling Technology

Many service provides are now utilising technology in order to provide customer service and support online (Truel et al, 2013). Research has shown that in the offline environment, encounters with other customers and with service staff have an influence on the customer's experience during and after the service encounter (Tombs and McColl-Kennedy, 2003). Tombs and McColl-Kennedy's (2003) research finds that social interactions can give rise to individual's emotions and emotional displays, which in turn can influence the customer's behavior. Tombs and McColl-Kennedy's (2003) research extends that of Bitner's (1992) research with regards to her work on servicescapes, through including the social element.

Based on social response theory and social presence theory, much recent research within online commerce has highlighted the importance of human-to-computer interactions as individuals often see the computer as a social actor rather than simply a channel or medium (Lee and Jeong, 2010; Nass and Moon, 2000; Reevs and Nass 1994). In the context of offline information seeking it can be seen that individuals often have interactions with other humans. However, in an online context this interaction can be somewhat limited (Hassanein and Head, 2007). According to Wang et al (2007), socialisation is believed to be a significant contributor to positive customer emotions, which are believed to encourage revisits and patronage of a website. Therefore, it is much of the service providers concern to provide customers with a socially stimulating

environment, as the integration of social cues may heighten the perception of a socially rich and interactive website and thus enhance the customers experience (Wang et al, 2007).

Combining social presence theory (Nass and Moon, 2000; Reevs and Nas, 1994) and online behaviour, individuals may be influenced and react well to social cues visible on a website, in turn having an effect on their overall experience (Wang et al, 2007). Steuer and Nass (1993) suggest that four cues exist that are relevant in arousing social response: language, human voice, interactivity and social role. Language refers to written and spoken communication, the style of writing can create a personality for the website and can therefore be seen as adding a social presence to the site (Wang et al, 2007). The use of 'human voice' is another factor that is seen as a social cue. This voice may be in the context of video. Reevs and Nass (1996) point out that as voice is a unique capability of humans, thus it elicits rules associated with human-to-human interaction. Interactivity is the third social cue as identified by Steuer and Nass (1993). Interactivity refers to two-way communication and synchronicity of this communication (Wang et al, 2013). Where the individual also has a level of control over the communication and communication is somewhat simultaneous, it is believed that individuals feel like they are in a social or real life environment (Wang et al, 2007). Lastly, social role refers to an actual role that a website carries out, this may be as a help guide on the site. Where a role can be assigned this elicits the feeling of a social environment (Steuer and Nass, 1993).

Various technologies through the use of web 2.0 have been applied in the online environment to provide a social experience. For example, many websites offer a personalised 'welcome greeting' to users, as well as online virtual agents and avatar technology to represent virtual service staff of the organisation on their site as an online alternative to offline service staff (Lee and Jeong, 2010; Xiang and Gretzel, 2010). According to Wang et al (2007) the various social technologies that can be implemented as part of the online service offering, may influence a customer's affective response to the website and lead to a positive cognitive evaluation of the website's design, further enhancing the customer's online experience.

Numerous scholars including Hassanein and Head (2007, p.690) have commented that the online environment lacks human warmth and sociability as it is often seen as

'Impersonal, anonymous, and automated than traditional face-to-face means'. However, the aforementioned research on social presence theory suggests that new technology features can influence the perception of online social presence (Tu, 2002). As a result, the social presence cues as part of a website where other customers comment and share experiences in a C2C communication format may help to integrate human warmth and sociability on the site, in turn influencing consumer attitudes and perceptions (Wang et al, 2007; Kim, 2000; Hassanein and Head, 2007). Reevs and Nass (1996) research highlights that any form of humanlike attributes online results in individuals applying social rules, and thus treating the computer like a social actor. According to Kim (2000) and based on Maslow's Hierarchy of Needs (1943) these social cues may help to fulfill the social need individuals have (i.e. the need for belongingness to a particular group. According to Short et al (1976, p. 65) social presence is

'The feeling that communication exchanges are sociable, warm, personal, sensitive, and active or the degree to which a medium is perceived as conveying the presence of communicating participants'.

4.17.1 Web 2.0 Developments

Technological advancements with web 2.0 and social media has enabled the development for a more interactive social environment (Renard, 2013). Social media and web 2.0 have somewhat transformed the web into a new and dynamic form (Kaplan and Haenlein, 2010). The introduction of online social elements has developed what we see as the 'social customer' (Greenberg, 2010) raising the expectation on being able to communicate online. Customers now have the ability to comment and chat online, with website owners able to embed social plugins from social networks and live chat facilities to allow customers to communicate on their site (Greenberg, 2010; Xiang and Gretzel, 2010; Müller and Thiesing, 2011).

In order to provide online customer support and communication online there needs to be technological facilities that are capable of providing such a service. Social Media technologies made available through web 2.0 functionality can be seen as an extension of an individual's ability to exchange and collaborate with another entity (Fernando,

2010).

The shift in recent years has led to the proliferation of user-generated content (UGC) (Jean et al, 2011). Sorensen (2010) highlights that web 2.0 has opened a world that allows individuals to share content with each other, co-create with service providers, and communicate with other customers and service providers through social networks to seek support. According to Pantelidis (2010) user-generated-content allows individuals to learn from the past experience of other users helping customers to make decisions.

Although there does not appear to be a standard definition of web 2.0, O'Reilly's (2007) suggests that, web 2.0 is simply the web that allows users to lead, where their participation influences other users. Therefore, at the core of web 2.0 is user participation and involvement, providing individuals with the ability to interact online with service providers and other customers (Lim et al, 2013).

Similarly to web 2.0, social media does not appear to have a standard definition, however, Mayfield (2008) suggests social media is online media that uses web 2.0 features of 'participation, openness, conversation, community and connectedness'. Strauss and Frost (2009, pp.326) suggest social media are 'online tools and platforms that allow Internet users to collaborate on content, share insights and experiences, and connect for business or pleasure'. Thus, social media are Internet applications using web 2.0 technological foundations, allowing users to create, co-create and exchange content, while offering customers a rich social experience (Kaplan and Haenlein, 2010).

Greenberg (2010) suggests that social media through the use of web 2.0 functionality has created what we see as the 'social customer'. Greenberg (2010) stresses that the social customer expects information to be available to them at their fingertips and while having the ability to communicate with service providers or other customers. Social media offers web users an environment to interact and communicate through the Internet, which can be seen as an important part of 'customer socialisation' (Wang et al, 2012). Based on socialisation theory, Wang et al (2012) suggest social media provide three components that encourage consumer socialisation among peers online. Firstly, instant messaging and social network sites provide the tools that are needed to communicate and socialise easily. Secondly, Wang et al (2012) point out that customers

can use social media to communicate with service providers or other customers to help aid them in their information search process and decision making process. Thirdly, social media helps to facilitate education and information as it can provide vast amounts of information from experts and peers (Dennison, 2009). Online communities, social networks and online live chat will now be discussed as vehicles for online social interaction.

4.18 Online communities and Social Networks

One of the earlier technological functions providing the ability to communicate online came in the form of online communities deriving from online forums and chat rooms (Massey and Levy, 1999). With the increased connectivity provided by the Internet and the increased power of customers, online communities and social networks have emerged to become a virtual environment leading to additional communication (Casalo et al, 2010). These online communities allow customers to participate in conversations with service providers and other customers (Fernando, 2010). In other words the Internet has allowed for the growth of collaborative groups where organisations and customers can interact to create and co-create value and experiences, while developing effective services (Vargo and Lush, 2008; Gronroos, 2013).

Early research from Kim (2000) found that individuals choose to participate in online communities in order to fulfill various needs. Barnes and Pressey (2011) comment that there is no particular consensus when it comes to classifying motivation and needs, however, within the marketing field Maslow's Hierarchy of Needs is often most popularly employed. Kim (2000) suggests that Maslow's original hierarchy of needs (1943) can be applied to the online environment and identify why individuals participate in online communities and possibly wider in why individuals participate in online communication in general. Table 4.1 below highlights Maslow's hierarchy of needs offline and online as adapted by Kim (2000). Kim's (2000) research highlights how Maslow's five needs can be applied in both the offline and online context.

Table 4.1 Maslow's Hierarchy of Needs Offline and Online

Needs	Offline	Online	Author
Psychological	Food, clothing, shelter, health	System access, the ability to maintain one's identity, and participate in a web community	Kim (2000)
Security and Safety	Protection from crimes and war; the sense of living in a fair and just society	Protection from hacking and personal attacks; the sense of having a level playing field	Kim (2000)
Social	The ability to give and receive love; the feeling of belonging to a group	Belonging to the community as a whole; and to subgroups within the community	Kim (2000)
Self - Esteem	Self-respect; the ability to earn the respect of others, and contribute to society	The ability to contribute to the community and be recognised for those contributions	Kim (2000)
Self - Actualisation	The ability to develop skills and fulfill one's potential	The ability to take on a community role that develops skills and opens up new opportunities	Kim (2000)
Cognitive Need	*N/A: Not discussed in the offline domain*	The individuals need to strive for knowledge and understanding from information online	Gleitman et al (2011)
Aesthetic Need	*N/A: Not discussed in the offline domain*	The need to have attractive design, look and feel to the website	Gleitman et al (2011)

Kim (2000) and Glietman et al (2011) Adapted Maslow's Hierarchy of needs

Gleitman et al (2011) however offer an extended version of Maslow's hierarchy of

needs by adding two more needs as shown in table 4.1, the cognitive need and the aesthetic need. In an online context, the cognitive need refers to the individuals need to strive for knowledge and understanding from information online, with the aesthetic need referring to the design, look and feel of a site. While Kim's (2000) research provides insight into some of the reasons for participating in online communities and communication online, this research is predominantly focused on Gleitman et al's (2011) findings where customers may require to seek customer support through the need for knowledge and understanding from information.

4.19 Online Live Chat (Virtual Agent Technology)

Online live chat also known as virtual agent technology or instant messaging is a more recent technological function that allows users to instantly chat with an online operator to help overcome problems, answer questions and obtain assistance in search and navigation of a website (Aberg and Shahmehri, 2003). These services allow a website user to seek 'service related information' from a real human representative who provide answers through the synchronous media (Truel and Connelly, 2013). Chattaraman et al (2012) highlight three key purposes of live chat technology, firstly to serve as a search support function, secondly to serve as a basic decision support function and thirdly to serve as a navigational/procedural support function. Many blue chip organisations such as O2, Apple, Schuh, Adidas, Carphone Warehouse, Nokia and ASOS amongst numerous others offer their customers an online live chat facility to enhance their online customer service (Steele, 2012). Remote Internet users are no longer only able to access information; they are now able to initiate a live discussion with an operator (virtual agent) to help them find what they are looking for (Hvass and Myer, 2008; Etemad-Sajadi, 2014). Such services are important to service providers as they are often considered as inexpensive to facilitate, easy to access and have the potential to enhance customer satisfaction (Negash et al 2003; Turel and Connelly, 2013). Katz (2003, pp.50) deems live chat as, 'a live online reference where the user asks a question online and carries out a conversation with an operator'. It is believed that this live human-to-human contact allows individuals to interact and engage with an organisation in a new way and can help to establish a relationship between the customer and the website provider, thus decreasing the level of uncertainty and anxiety one may have while searching for information (Sultan et al, 2002). Zang (2011) in line with Sundar (2008)

suggests that instant live chat can have an effect on an individual's credibility evaluation and in turn their level of trust towards the website.

Online virtual agents through the use of live chat functions are not only suggested to increase the perception of social presence online (Dash and Saji, 2008; Gefen and Straub, 2003) but also increase the perception of online customer support and enhanced service provision (Chattaraman et al, 2012). According to Shumaker and Brownell (1984) customer support refers to an individual providing resources or material to another individual to benefit the receiver. Thus, customer support is suggested to reduce the impact of negative emotions such as stress and anxiety and changes the receiver's emotional response to a positive experience (Thoits, 1986). In line with role theory (Solomon et al, 1985), which suggests that users learn the role of service providers and service receivers through the numerous service encounters they have had and thus expect a certain level of service from providers whether that service is delivered online or offline. If the service provided does not match expectations it is likely to elect negative emotions and have an effect on the customer's overall experience (Truel and Connelly, 2013). Previous chapters have highlighted the prevalence of emotions when searching online (Flavian-Blanco et al, 2011) where negative emotions can result in individuals abandoning their Internet participation (Adams et al, 2005; Campbell and Wabby, 2003). As a result, Chattaraman et al (2012) suggest that live chat facilities are important for Internet users in order to help them complete Internet tasks.

Further research has shown that the presence of virtual agents on a website can provide the perception of an increased level of control, thus reducing levels of anxiety and frustration (Wang et al, 2007). Jin (2010) also highlights that virtual agents can help to reduce levels of stress for the user, as well as increasing user motivation (Mumm and Mutlu, 2010). Importantly, virtual agents are believed to be one of the best forms of delivering users a personalised experience and providing appropriate support when necessary (Li, 2007). Chattaraman et al (2012) highlights that virtual agents are able to provide real time support and information that can assist users in completing their tasks online, while also creating an interpersonal experience for the customer.

As we have discovered from Chapter 2 uncertainty and frustration in information seeking can cause individuals to abandon their search. Chapter 3 further highlighted the

impact credibility and quality evaluations can have on customer's behaviour. Online customer support through live chat technology may offer customers a tool to overcome issues when searching for information, thus virtual agent technology may help to provide customers with a means of achieving the optimal experience.

4.20 Outcomes of Online Customer Experience (OCE)

While the principle aim of this research is responding to calls for research (Verhoef et al, 2009; Klaus, 2013) to further understand the variables that can influence the customer's experience during their journey to finding online information and services, it is also noteworthy to outline the outcomes of a positive online customer experience. From a review of the literature, three distinct outcomes appear to exist namely, satisfaction, trust and re-visit intention. It is therefore appropriate to discuss each of the aforementioned outcomes.

4.20.1 Satisfaction

To outline the link between customer experience and satisfaction we can look to Oliver's (1999) original definition of satisfaction. Oliver (1999) defines satisfaction as the consumer's fulfilment response, based on the judgement that a service or product is providing a pleasurable level of consumption fulfilment. Ranaweera et al (2008) base their definition of web satisfaction on Oliver's (1999) original definition. 'Website satisfaction is the perception of pleasurable fulfilment of a website experience' (Ranaweera, 2008, pp.331). It can be seen here that Ranaweera et al (2008) suggest that satisfaction is the effective fulfilment of the customer's experience online. Like OCE as identified by Holloway et al (2005), Ha and Perks (2005) suggest that satisfaction is cumulative. Cumulative satisfaction recognises that customers rely on their whole experience when establishing intentions and making decisions. Olsen and Johnson (2003) therefore suggest that cumulative evaluations should enhance predictions on customer behaviour and intentions. Numerous researchers have also discovered that like customer experience, both cognitive and affective components exist in satisfaction (Yu and Dean, 2001; Liljander and Strandvik, 1997; Oliver, 1999). The cognitive component refers to the overall evaluation of the sites performance when compared to the individual's expectations. The affective component refers to the emotions

experienced during the customers encounter with the site such as, happiness, excitement, pleasure and joy. Rose et al (2011; 2012) find that customer satisfaction is the result of positive emotional and cognitive states of the online customer experience, this finding further confirms that of Janda and Ybarra (2005) who identified a relationship between superior online customer experience and customer satisfaction. As a result, we can see from Rose et al (2012) as well as Ranaweera et al (2008) research that online customer satisfaction would appear to be an outcome of an effective customer experience.

4.20.2 Trust

Furthermore, Rose et al (2012) research highlights that trust is an outcome of a positive online customer experience. Chapter 3 outlined the relation between trust and credibility; therefore, this section will merely discuss some of the key outcomes from the online customer experience. Fogg and Tseng (1999) suggest that customers base their level of trust on credibility, as trust can be seen as the property of the user and credibility the property of the information or object (i.e. website). Thus, trust can be difficult to establish in the online environment (Rieh, 2008). Some researchers suggest that trust is an antecedent of satisfaction (Grewal et al, 1999). However, Ha and Park (2005) subsequently point out that trust is often dependent on a customer's previous experience or prior satisfaction, therefore it can also be seen as an outcome of satisfaction. Rose et al (2012) research suggests that trust is not influenced directly by the cognitive and affective experiential states; rather it is mediated by the customer's level of satisfaction with their online experience. Yap et al (2012) also found that within the financial sector that customer satisfaction has a mediating role on customer's disposition to trust. These studies highlight that while numerous factors affect trust and credibility online, if an individual is not satisfied with their experience they are unlikely to have high levels of trust towards that particular site (Rose et al, 2012).

4.20.3 Revisit Intention

Moreover, Research has shown that revisit (or repurchase) intention is an outcome of online customer experience (Ha et al, 2010). Khalifa and Liu (2007) found a positive relationship between online satisfaction while shopping and the intention to revisit and

repurchase. More recent research conducted by Rose et al (2012) confirmed Khalifa and Liu (2007) research and found that satisfaction has a direct and indirect relationship with an individual's revisit intention. Rose et al (2012) argue that the indirect relationship link to revisit intention comes via trust. In other words, if an individual is satisfied with their experience and in turn trust the website this will have an influence over their revisit and repurchase intention. Ha et al (2010) in line with Yi and La (2004) suggest that repurchase/revisit and trust can be considered as post-satisfaction variables. It is further suggested that not only trust can be a moderator of revisit intention, but also customer expectations and attitudes. In other words, in order to encourage repurchase and revisit intention, websites should be designed to ensure customers are affected in a positive manner, feel like the website is credible and trustworthy as well as, aiding customers to develop a positive attitude toward the site (Ha et al, 2010). Overall, it can be seen that the online customer experience is important in order to achieve satisfaction online and subsequently trust and repeat visits.

4.21 Conclusion

This chapter introduced the literature surrounding the online customer experience with an initial discussion on service delivery. Providing customers with an effective online experience could potentially help overcome the complex process of information seeking as identified in chapter 2. Chapter 2 helped us understand the cognitive and affective process customers go through while searching for information and services online as well as the role for assistance in terms of interaction or intervention that is required during search. This chapter develops upon such discussions in relation to theory regarding interactivity, communication and social interaction. While chapter 2 and 3 highlighted online emotions, credibility and information quality as variables that can influence the customer online, this chapter moved forward and covered literature on the customer experience to help the study understand the online customer experience and the variables capable of influencing an individual online. The chapter identified 14 variables that can be identified as having the potential to influence the customer online. These variables included, flow, telepresence, enjoyment, concentration, engagement, web skills, challenge, interactivity, interactive speed, control, ease of use, customisation, connectedness and website aesthetics. In total 17 variables have identified as having the potential to influence the customer online and subsequently

their experience. Website credibility, information quality and online social interaction have not been previously explored in relation to the online customer experience, therefore it is important these variables are examined in subsequent stages of this research. The variables of satisfaction, trust and revisit intention were identified as the outcome of an effective customer experience.

It is the aim of this study to understand and examine the variables that can influence the online customer experience during a utilitarian search for business advisory information and services, while understanding the role of customer support through social interaction. The subsequent chapter explores the gaps in research that have emerged from the literature review and discusses the initial theoretical considerations for the development of the study's theoretical framework.

CHAPTER 5

INITIAL CONCEPTUAL DEVELOPMENT

5.0 Introduction

The review of the literature covered in Chapters 2-4 on information search, online credibility and information quality evaluation and the online customer experience provides a significant theoretical basis from which this study can be developed. The review of literature has introduced theories and concepts from a number of different disciplines including, services marketing, information science, human computer information and psychology. Baker (1976) suggests that marketing researchers ought to look to other disciplines in order to expand the knowledge of marketing theory. Thus, the comprehensive review has outlined interlinking conceptual issues from each discipline. A lack of integration with the founding concepts of traditional information search theory, inconsistent results and numerous knowledge gaps around the purpose of information search, the variables capable of influencing a customer's experience online during search and the role of social interaction during search offers this study numerous knowledge gaps to address.

Chapter 2 highlighted the cognitive and affective process that exists in information search and outlined a satisfactory search's dependency on communication with others (mediation), quality information, credibility of the source as well as a positive online experience. The literature suggests that many individuals result in abandoning their search online or cannot find the information or services they require due to both the individual's cognitive and affective psychological states (Flavian-Blanco et al, 2011).

Based on the literature reviewed, this chapter aims to develop the basis for a conceptual framework outlining the variables that influence the customer's emotional state and overall satisfaction with their experience stemming from the literature. The literature to date has not provided a coherent framework on the variables that influence a customer's

experience during a customer's journey to find information in a utilitarian context, which this study intends to do.

Some frameworks have been developed in retail and tourism literature and have helped to provide a basis for the variables that will be tested in this study. However, a limited number of studies have focussed on information search within a utilitarian context and have not explored the role of social interaction in aiding the customer in their search. The online customer experience discussed in Chapter 4 is an important element that remains unexplored in online services when searching for information in a utilitarian context. Many information search models have been produced over the years as seen in Chapter two, however each of these studies have focussed on the process of finding information and the behaviour of individuals during search and not on the experience and variables that influence this process and behaviour. This study can contribute to knowledge in two folds. Firstly, identifying the variables that influence a customer's online experience while searching in a utilitarian context. Secondly, the study can outline the role of online customer support through social interaction in relation to the customer experience during an online utilitarian search.

In order to structure the research, this chapter seeks to outline the emergent knowledge gaps within the online customer experience during a utilitarian search and add value to existing knowledge within the services marketing and information science domain. This chapter will then go on to outline the variables to be examined in order to create the study's conceptual framework in chapter 7.

5.1 Research Objectives

As a result, the principal aim of this research is to understand the variables capable of influencing the online customer experience while searching for online business advisory information and services and exploring the role of online customer support via synchronised social interaction in relation to the customer's online experience. In particular, the research objectives of this study are:

(1) Establish which variables influence the online customer experience during a utilitarian search for online business advisory information and services.

(2) Investigate the role of customer emotions while searching for online business advisory information and services.

(3) Establish the role of online customer support through social interaction in relation to a customer's experience.

(4) Examine the effect of a customer's search success on the online customer experience.

(5) Develop a comprehensive online customer experience model incorporating variables influencing the customer experience during the initial customer journey to find business information and services.

The principal aim and the objectives of this research aim to fill the knowledge gaps that have emerged through the review of the literature. The variables influencing the customers experience within the context of the study remain unexplored along with the potential role for online customer support when searching for business advisory information and services.

5.2 Theoretical Development

Kerlinger's (1979) definition of a theory is one that is still widely used today. Kerlinger (1979, p.11) defines a theory as, 'a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena'. In accordance to this definition, a theory can be seen as a set of variables that are effectively propositions and linked by hypothesis, which specifies any relationships between each of these variables. Creswell (2003) suggests that the 'systematic view' can be a particular argument, discussion or rationale, which will help in explaining the phenomena. Labovitz and Hagedorn (1971) define theoretical rationale as 'specifying how and why the variables and rationale statements are interrelated'.

Moreover, Lavovitz and Hagedorn (1971) suggest that a theory will explain 'why' an independent variable influences or has an effect on a dependent variable. Creswell (2003) further explains that independent variables are those variables that have cause, influence or effect on the outcomes. Whereas dependent variables are seen as the outcomes of the influence or affect that the independent variable has had. However, Creswell (2003) also highlights that between the independent variable and the dependent variable can be the intervening or mediating variable, which somewhat mediates the effects of the independent variable on the dependent variable.

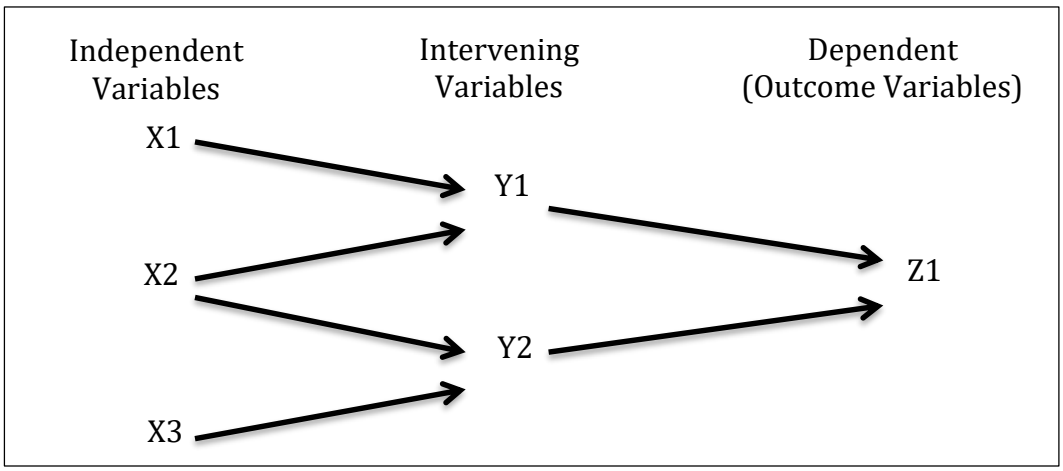
According to theory development expert Dubin (1978) and in line with Kerlinger (1979), Labovitz and Hagedorn (1971) and Whetten (1989), a theory should contain a number of critical elements including answers to 'what', 'how', 'why', 'who', 'where' and 'when'. The 'what' element refers to what elements, variables and constructs should be included as part of the explanation of a particular phenomenon. Whetten (1989) argues that two criteria exist in identifying 'what' factors should be included. Firstly, comprehensiveness and secondly parsimony, comprehensiveness is the concept that all relevant factors are included, while parsimony is the idea that some factors are deleted as they add little additional value.

Subsequently 'how' refers to, how each of the factors or constructs are related to each other (Whetten, 1989). The question of 'why' is argued as the theoretical rationale, and the underlying logic behind the theory (Labovitz and Hagedorn, 1971). According to Whetten (1989, p.491) why refers to 'the underlying psychological, economic, or social dynamics that justify the selection of factors and the proposed causal relationships' and also includes the theoretical assumptions that holds the theory together. As a result, the theory will explain why independent variables have an affect or influence on the dependent variables. Finally, the 'who, where and when' discussed by Whetten (1989) refers to the boundaries of generalizability of the theory and therefore places the limitations on the outcomes of the theory.

Moreover, Creswell (2003) points out that researchers can state or 'display' their theories in multiple ways including, a set of hypothesis, 'if…then' statements or through visual models. A theory expressed in the form of interrelated hypothesis, is one of the most popular forms of displaying a theory. According to Creswell (2003), the

second form of theory statement or display is through 'if…then' statements, which outlines what the researcher would expect if 'Y' happens then it will result in 'Z'. For example, 'if' the customer was male and aged 25-35, and a business director 'then' their experience on a website will be influenced by 'customisation'. Lastly, Creswell (2003) outlines that a theory may be displayed in a visual manner through the illustration of a model. Blalock (1991) suggests that the visual display of hypothesis in the form of a model can help the reader to more easily understand the relationships of the variables outlined. Creswell (2003) in Table 5.1 outlines independent variables influencing a dependent variable along with intervening variables.

Figure 5.1 Visual Model of Displaying Hypothesis



Source Adapted From: Creswell (2003)

This study will state its research hypothesis in the form of written hypothesis and also in the form of a model as described by Creswell (2003). However, in order to develop a new theoretical model, it is firstly important to clarify the variables that influence and have an effect. While clarifying each of the variables, the researcher will consider the temporal order, that one variable precedes another in time, (Creswell, 2003) which will allow the theoretical model to be developed in a systematic and measurable form. After clarifying the variables to be tested in this study, subsequent chapters will present hypotheses and a proposed theoretical model.

5.3 Clarification of variables

A clarification of the variables identified through the literature influencing the customer's online experience will now be provided. According to Creswell (2003) the development of a quantitative theoretical model differs significantly from the development of qualitative models, in relation to the language and focus on relating or comparing variables. This study takes a quantitative approach (which will be further discussed in chapter 8), as a result according to Creswell (2003) the temporal order and their measurement needs to be distinguished.

As previously highlighted the temporal order is where one variable proceeds another in time (Creswell, 2003), due to this it is therefore argued that one variable has an influence over another, which refers to the aforementioned independent variable (potentially) influencing the dependent variable with the mediating variable standing between them. The dependent variable can be seen as a variable that 'depends' on the independent variable, and are seen as the outcome or the result of the independent variables.

This research study currently consists of 11 independent variables, two mediating (intervening) variables and two dependent (outcome) variables. Following on from the theoretical development discussion, the temporal order of the variables influencing the online customer experience can be seen in table 5.1.

Table 5.1 Proposed Temporal order of Variables Influencing the Customers' Online Experience

Temporal Order	Variables	Reference
Independent	Web Aesthetics	(Reinecke et al, 2012; Wang et al, 2011; Hopkins, 2010; Rose et al, 2012; Lee and Jeong, 2010; Li and Yeh, 2010; Harris and Goode, 2010)
	Control	(Song and Zinkhin, 2008; Rose et al, 2012; Liu, 2003; Koufairs et al, 2001; Daley, 2004)
	Enjoyment	(Lee et al, 2011; Faiola et al, 2013; Rose et al, 2012; Hoffman and Novak, 2009)
	Web Skills	(Hoffman and Novak, 2009; Lee and Chen, 2011; Lee et al, 2011; Nah et al, 2010; Rose et al, 2012)
	Challenge	(Hoffman and Novak, 2009; Lee and Chen, 2011; Lee et al, 2011; Nah et al, 2010; Rose et al, 2012)
	Concentration/Focused Attention	(Faiola et al, 2013; Lee et al, 2011; Rose et al, 2012; Kim and Zhang, 2010; Lee and Chen, 2010)
	Telepresence	(Hoffman and Novak, 2009; Lee et al, 2011; Faiola et al, 2013; Song et al, 2006; Rose et al, 2012)
	Flow	(Csikszentmihalyi, 1997; Hoffman and Novak, 1996; Hoffman and Novak, 2009; Chen et al, 2000; Kim et al, 2012; Van Noort et al, 2012; Mollen and Wilson, 2010; Rose et al, 2012)
	Engagement	(Mollen and Wilson, 2010; Jones, 1998; Guthrie et al, 2004; Brodie et al, 2011)
	Website Credibility	(Fogg, 2003; Rieh, 2002, 2010; Sundar, 2008; Hilligos and Rieh, 2008; Westerwick, 2013; Lucessen et al, 2013)
	Quality of Information	(Lucessen et al, 2013; Rieh, 2002; Flanagin and Metzeger, 2000; Guo et al, 2012)
Mediating	Online Customer Support	Khulthau, 2004; Lui, 2003; Mcmillian and Hwang, 2002; Song and Zinkhan, 2008; Truel et al, 2013;

	(Social Interaction)	Truel and Connelly, 2013; Chattaraman, 2012)
	Success of the search	(Kuhlthau, 2004, Ellis, 1993, Wilson, 1999)
Dependent	Customer Emotions	(Kuhlthau, 2004; Edvardsson, 2006)
	Level of Satisfaction	(Song and Zinkhan, 2008; Edvardsson, 2006)

From the gaps identified in the literature, social interaction could play a role in a customer's experience online based on interaction theory, social response theory, social presence theory and intervention theory (Rafaeli, 1988; Neevs and Nass, 1994; Nass and Moon, 2000; Tombs and McColl-Kennedy's, 2003; Kuhlthau, 1996) as well as information search theories (Kuhlthau, 1999; Grover 1993; Engeldinger 1988; George et al, 2006; Wang et al, 2012; Robson and Robinson, 2015). Despite great attention on the rise of online communication through social media, the notion of social interaction in the form of customer support influencing the customer's online experience is a variable that remains unexplored.

In keeping with previous research, the literature identifies numerous variables such as web aesthetics, enjoyment, control, telepresence, focused attention, skills, challenge, flow, engagement, website credibility, and information quality as having an influence on the customer within the online environment. This study suggests that these variables may have an effect on the dependent variables of a customer's emotions and level of satisfaction while being mediated by the success of a customer's search and the need to seek online customer support.

5.3.1 Clarification of Online Information Seeking

The following section will clarify online information seeking covered in the first literature chapter. Chapter 2 outlined the cognitive and affective process associated with information seeking. A review of the literature revealed the complex nature of searching for information both online and offline. It can be seen in an online context that the issue of access to information is replaced with an overload of information. It was found that

information seeking is therefore often surrounded by uncertainty and prevalent emotions (Kuhlthau, 2004; Chowdhury, et al, 2011). It can be seen from the literature that communication with others could potentially help customers when searching for information (Wang et al, 2012), particularly for medium to complex search tasks or where the individual has little or no expertise.

This communication could be with a peer or an expert within the field and conducted either online or offline and could help to overcome issues of uncertainty and help individuals to move through the cognitive and affective stages of searching (George et al, 2006). Previous studies highlighted that customer's emotions prior, during and post search all have an influence on the customer (Flavian-Blanco et al, 2011). If these emotions are positive come the end of a search task, then the customer may well be satisfied with their search and regard their search as successful. Other cognitive stopping rules are often applied when searching for information. For example, where the individual is learning nothing new or when all questions have been answered (Brown et al, 2005). However, in spite of this we can see from the literature that individuals often abandon their search due to overwhelming emotions of uncertainty, frustration and anxiety (Kuhlthau, 2004). This study aims to further previous research and understand the external variables of the website that can influence a customer search experience.

5.3.2 Clarification of Online Customer Experience

It is also appropriate to clarify the online customer experience. Meyer and Schwager (2007) suggest that customer experience is the direct and indirect contact a customer may have with an organisation and their subjective response to this contact. Verhoef et al (2009) argue that the customer experience can be seen as a holistic process as it is the construction of experiences based on the customers contact with an organisation. These experiences are believed to have an effect on an individual's cognitive and affective states (Frow and Payne, 2007; Verhoef et al, 2009; Hoffman and Novak, 2009; Rose et al, 2012) and thus have an influence on the individual's 'take-away' impression from their experience. The 'take-away' impression customers obtain from the touch points of interaction with an organisation's website is believed to be the key purpose of online customer experience (Edvardsson, 2005). Like the customer experience,

Kuhlthau (2004) outlined that both a cognitive and affective process exists when searching for information, thus the holistic process of searching for information is intertwined with experiences (potentially positive, negative and neutral) during the journey of searching for information. Therefore, it is of little surprise that during such a holistic process, customers are influenced by various variables in the online environment. The literature identified numerous variables that have an influence on the online customer experience, including website aesthetics, control (ease of use, customisation, and connectedness), enjoyment, focused attention, telepresence, engagement, time distortion, website credibility, quality of the information provided and flow.

5.4 Independent Variables

As can be seen in table 5.1 this study has identified 11 independent variables some of which have antecedent variables of their own which were discussed and covered in the literature review chapters. Each of these variables have been regarded as key variables from a multitude of research papers as having the potential to influence the online customer experience, it is therefore appropriate that this study further explores the relevance of these variables in the context of searching for information and services online.

5.4.1 Clarification of Website Aesthetics

The literature outlined that website aesthetics is often discussed under the term the aesthetics of the e-servicescape. Bitner's (1992) research points out that the servicescape refers to the environment in which the service the organisation offers is carried out. The same way in which research has highlighted that the servicescape plays a significant role in the offline environment, in retail stores, offices and dining establishments including numerous others (Bitner, 2000), the literature review outlined the layout, design and ambience of the website as key elements that influence a customer's perception of the online e-servicescape (Lee and Joeng, 2010; Harris and Goode, 2010; Hopkins et al, 2010). Much attention has been paid to the design, ambience and layout of the e-servicescape over recent years in relation to its influence on a customer's purchase intention. Further studies including Wang et al (2010) and Al

Shamileh and Sutcliffe (2013) looked at the influence of website aesthetics on levels of satisfaction, credibility and the customer's experience. It is important that this study explores website aesthetics as a variable that could potentially influence the customers experience during a utilitarian search for business advisory information.

5.4.2 Clarification of Control

The literature review outlines control as another variable capable of influencing the online customer experience (Hoffman and Novak, 2009). According to Averill (1973) Cognitive Control Theory suggests that people feel more in control when they are able to interact and easily move from one point to another. As a result, cognitive control theory suggests that those individuals who interact more with the website, filter content, receive personalised content and are able to freely move around the site with ease, feel as they have more control over the website and their actions (Song and Zinkhin, 2008). According to the psychological reactance theory, once an individual experiences a website that provides high levels of navigational control and in turn a site that is easy to use, customers will begin to expect high levels of control from all websites they use. As a result, prior experience creates a new expectation (Brehm's, 1966).

Further, the literature revealed that numerous researchers suggest that customisation is an antecedent variable of control. Customisation can be seen as having the ability to alter the website to content relevant to the customer, as well as having the ability to decide where they want to navigate to on the website (Rose et al, 2012: Koufaris, 2002). Rose et al (2012) and Chang et al (2010) highlight that customisation provides customers with more control by allowing the user to have a personalised experience. Pentina et al (2008) also acknowledge that being able to share knowledge and experiences with others also provides users with a level of control through being able to connect with others.

Rose et al (2012) suggest that control has an influence on a customer's affective emotional state as well as the cognitive state previously mentioned. Koufaris et al (2001) and Rose et al (2012) outline that online control is an attitudinal variable that helps to explain online behaviour, thus this study considers control to be an important

variable that has the potential to influence the online customer experience while searching for business advisory services.

Additionally, Agarwal and Karahanna (2000) found that having a sense of control online reduces the perceptions of difficulty and therefore can eliminate emotions of frustration and uncertainty. As a result, adopted from the Technology Acceptance Model (Davis, 1989) it is clear to see why 'ease of use' can be deemed as another antecedent variable of control. Ease of use has continually been a prevalent variable throughout literature in influencing a customer's experience. Davis (1989) based much of his Technology Acceptance Model research around the variable of perceived ease of use. Websites with poor navigational aids can lead to individuals having negative emotions, which can further lead to negative attitudes towards the site (Dailey, 2004). Thus in line with Davis (1989), ease of use is an important element of the online experience. The overarching variable of control should therefore be explored further in this study.

5.4.3 Clarification of Enjoyment

Previous studies exploring the online customer experience during hedonic online shopping activities illustrate enjoyment as a variable that can influence a customer's experience online. Lee et al (2011) and Faiola et al (2013) suggest that those individuals who do not experience enjoyment in an online task may seek alternative methods to complete the task, whether it is on a different website or through traditional offline methods. Csikszentmihalyi's (1997) highly cited research outlined the need for enjoyment in order to provide the optimal customer experience. Hoffman and Novak (2009) suggest that enjoyment is critical within the online environment. Researchers outline that in the circumstance where individuals do not enjoy what they are doing they will leave (Lee et al, 2011). Much of the research surrounding enjoyment online is focused on the retail-shopping environment during a hedonic activity. In spite of this, Meyer and Schwager suggest that in a B2B context a good experience may not be an enjoyable one rather an experience which is trouble free. Thus, further research is needed to identify if enjoyment is a variable that influences the customer experience during a search for online business advisory information and services.

5.4.4 Clarification of Concentration

Faiola et al (2013) suggest that concentration (also referred to as focussed attention) within an Internet environment is where the individual loses focus on real world issues and thoughts. The user becomes so engaged and engrossed in the task they are completing that they become irritated about any type of interruptions from the 'real world'. Further research from Rose et al (2012) and Chen et al (2000) found that achieving a level of concentration can result in the loss of self-consciousness, which in turn can allow users to relax while browsing and incur the notion of flow. Online retail studies have shown a link between concentration and satisfaction (Rose et al, 2012; Lee et al, 2011; Kim and Zhang, 2010). As a result this study will further explore the role of concentration during a customer's journey to find online business advisory information.

5.4.5 Clarification of Telepresence

With regard to online customer experience research, much attention has been given to Telepresence. Lee et al (2011) suggest that telepresence is a feeling of being present in a virtual environment that is more dominant than the actual real life physical world that the individual lives in. Hoffman and Novak (2009) suggest that those who experience telepresence while online forget about their immediate surroundings. Faiola et al (2013) argue that telepresence may be a critical aspect of users feeling the sense of 'being there' in other words being completely immersed and engaged in the activity they are completing, in turn experiencing a distorted sense of time and multiple positive emotions. Similar to concentration, telepresence is a variable that can be seen as being closely in line with the concept of flow.

5.4.6 Clarification of Engagement

A number of researchers (Hoffman and Novak, 2009, Lee et al, 2010 and Rose et al, 2012) have suggested that engagement can be seen as part of Telepresence. However, engagement can be seen where individuals become fully immersed and lose themselves in the task at hand, hence engaged. Mollen and Wilson (2010) conducted much work on online engagement and suggest that an 'engaged' customer is active and motivated

as they are participating. Guthrie et al (2004) argue that engagement outlines a psychological state that extends beyond merely the fulfilment of a task and is rather seen as the involvement, being energised, being active and extracting effort as well as the full use of the individual's cognitive capabilities and emotions. Providing an engaging online environment for a customer is believed to help provide an effective online customer experience. This study will further explore the role of engagement during a utilitarian search for online business advisory information and services.

5.4.7 Clarification of Flow

The literature highlighted the work of Csikszentmihalyi (1997) and Hoffman and Novak (2009) on the concept of Flow. Hoffman and Novak (2009) took the concept of flow and applied it in the online environment in relation to the optimal customer experience. Rose et al (2012, pp. 309) highlighted that online customer experience is, 'a psychological state manifested as a subjective response to the service providers website'. The literature outlined the construct of flow as an important antecedent of online customer experience (OCE) and in turn has an influence on the customer's cognitive state. The literature pointed out that Csikszentmihalyi (1997) originally described flow as a situation in which an individual has completely focused motivation and where the individual is fully immersed, absorbed and engaged in the task at hand, with a loss of self-consciousness and experiencing enjoyment in the process. Numerous researchers including Hoffman and Novak (2009), Mollen and Wilson (2011), Ding et al (2009), Lee et al (2011) and Rose et al (2012) have highlighted numerous antecedent variables that influence the construct of flow, including telepresence, enjoyment, concentration, web skills, challenges, interactivity and engagement. Each of these antecedent variables are believed to positively increase the feeling of flow while browsing online and have been tested in the online shopping environment and in in the virtual life environment. Scope is left to understand the role of flow and the antecedents making up flow during search for online business advisory information.

5.4.8 Clarification of Quality of Information

Chapter two and three highlighted that the quality of information is an important variable in information search in order to reduce the level of uncertainty and anxiety that surrounds information seeking (Kuhlthau, 1999). Since the introduction of the Internet, research has shown that the restriction on the availability of information has been replaced by information overload (Rieh, 2008; Flavain-Blanco et al, 2011). This overload of information has lead customers to questioning the overall quality and credibility of the information. However, prior research outlines the difficulty in distinguishing the quality of the information. Jenkens et al (2003) suggest that only those who are experts within the subject area are able to evaluate the quality of the information provided. The literature defines 'Information Quality' as, 'a user criterion, which has to do with excellence or in some cases truthfulness in labelling' (Taylor, 1986). The literature further identifies a close relationship between information quality and credibility. Previous studies exploring the online customer experience have failed to consider the effect of the quality of the information in relation to the customer experience. This study will investigate both information quality and credibility on the customer's online experience.

5.4.9 Clarification of Website Credibility

Chapter 3 outlined the role of credibility online. It can be seen that credibility evaluations play a critical role when searching for online services and information (Hilligoss and Rieh, 2008; Robson and Robinson, 2015). Fogg and Tseng (1999) suggest that customers base their level of trust on credibility, as trust can be seen as the property of the user and credibility the property of the information or object (i.e. website). The literature outlined that individuals conduct credibility evaluations on a website and its content. Where a customer perceives a website as not being credible they are likely to abandon their search and in turn unlikely to revisit that particular website (Lucessen, 2013). Lucessen et al (2013) research found that only those who are experts within their field are able to conduct semantic factual accuracy evaluations, where the expert has the motivation to do so, thus credibility evaluations are most often based on heuristics stemming from the surface characteristics of the site. The credibility of the website is another variable that has been overlooked in terms of its influence on

the online customer experience. Previous studies have outlined that a positive customer experience may lead to trust (Klaus, 2013), however as the aim of this study is to understand the variables that influence the customer experience during the search to find information and services, this study will provide further theoretical understanding on the role of website credibility in relation to the customer's experience.

5.5 Mediating Variables

As highlighted in the temporal order in table 5.1, this study conceptualises two variables capable of having a mediating effect on the online customer experience. The need to seek customer support and the success of the customer's search can be seen as two variables capable of mediating the effects of the independent variables on the dependent variables in this study.

5.5.1 Clarification on role of Customer Support

Chapter two introduced the notion of 'intervention' during searching for information. Kuhlthau's (2004) influential research with the ISP model and the zone of intervention model outlined the need for help or assistance during searching for information. We can see that in the offline environment, individuals interact with service staff during their service encounter as well as possibly interacting with other individuals (Tombs and McColl-Kennedy, 2003). The ISCM developed by Robson and Robinson (2015) highlights that individuals often communicate with and seek the advice of others during search. Interactivity theory highlights a role for communication online (Rafaeli, 1988). Song and Zinkhan (2008) suggest that the perception of communication can result in users having an enhanced overall experience. The element of communication from Interactivity theory is in line with Kuhlthau (1994) and Robson and Robinson (2015) in potentially aiding individuals during search. During an online experience, some researchers have suggested that through the use of online social elements, customers are able to see and in some instances interact with others online. Based on social response theory (Neevs and Nass, 2000), we can see that individuals often address and refer to a computer as if they are addressing an actual human being, as they see a computer as a social actor rather than a medium (Nass and Moon, 2000).

Kim's (2000) research also highlighted through the adaption of Maslow's hierarchy of needs that individuals require a social need to be fulfilled while browsing online. As a result, Wang et al (2007) suggest that individuals may react well to social interaction as a form of support deployed on a website.

Social response theory and social presence theory (Neevs and Nass, 2000) suggest that individuals often see a computer or a website as a person rather than a piece of technology. As a result, seeking help or guidance during a search may be a natural course of action and an expectation of customers (Chattaraman et al, 2012).

Truel and Connelly (2013) as well as Chattaraman et al (2012) highlight that advancements in technology has seen the introduction of functions that allow website providers the ability to offer customers social interaction online with company representatives through virtual online communities, chat facilities, social networking and instant live chat. Each of these tools has their own set of features that allow social interaction and online communication to occur. While more traditional methods of telephone conversations can exist to help customers online. The role that social interaction plays online in relation to the customer's experience has received little attention to date, therefore this study aims to examine its potential influencing role during a utilitarian search.

5.5.2 Search Success

Previous sections have outlined the cognitive and affective process of information search (Kuhlthau, 2004). In addition, the holistic process of the online customer experience has been detailed (Verhoef et al, 2009; Klaus, 2013). Chapter 2 illustrated that a customer's emotions during search can affect the success of the search. Previous studies have outlined that the success of the search will result in customers either abandoning or successfully completing their search for information. However, previous research has not explored the influence of external variables on the success of a customer's search and in turn the influence the success of the search has on the customer's experience. Thus, this research aims to provide further theoretical understanding with regard to the success of a customer's search, outlining variables that

are capable of causing customers to abandon their search or result in having a successful search.

5.6 Dependent Variables

As illustrated in table 5.1, this study conceptualises two dependent variables, namely the level of customer satisfaction and customer emotions. This study conceptualises that each of these variables provide a measure of the online customer experience. Edvardsson (2005) outlined the initial importance of emotions within the customer experience and highlighted a role for emotions in measuring the customer experience, adopting psychology theories of the PAD model (Mehrabian and Russell 1974), the PANAS theory (Watson et al 1988) and the differential emotion theory (Izard 1977). However, in addition to this, this study suggests that customer emotions and the level of satisfaction with the experience provide a measure and underpinning of the customer experience.

5.7 Theoretical Model

Following the temporal order outlined in table 5.1 and the inclusion of all relevant variables from the literature make up the basis for the proposed theoretical model in this study (Whetten, 1989). The revisions of the literature show that web aesthetics, enjoyment, control, web skills, challenge, telepresence, focused attention, flow, engagement, credibility, information quality and website credibility may have an influence on the online customer experience.

Firstly, based on the review of information seeking we see that information seeking influences both the cognitive and affective state and requires the user to have an overall positive experience in order to have a satisfactory result.

Secondly, the study finds from investigating the role of trust and credibility and information quality online, that individuals carry out quality and credibility evaluations when assessing the quality of the information and how credible a website is. The investigation found that customers often base their credibility and quality evaluations

on surface characteristics of the site. Both website credibility and information quality are variables which have been unexplored in relation to their influence on the online customer experience.

Thirdly, numerous variables were outlined as having the potential to influence the online customer experience. Each of the variables outlined and constructed in the aforementioned temporal order allow the researcher to further explore the online customer experience through initial exploratory field research before proposing the study's theoretical framework.

5.8 Conclusion

This chapter has clarified the variables that have the potential to influence the online customer experience from the current body of literature as web aesthetics, enjoyment, control, web skills, challenge, telepresence, focused attention, flow, engagement, website credibility and information quality. The need to seek online customer support and the success of a customer's search are believed to be mediating variables influencing the aforementioned variables affecting the customer experience. Customer emotions and the level of satisfaction are believed to be two variables that make up the customer experience. The temporal ordering of the variables in this chapter has helped the study to establish hypothetical relationships, which will be discussed in chapter 7. As a result, based on the literature covered in chapter 2 regarding online information seeking, chapter 3 on website credibility and information quality and chapter 4 on the online customer experience; a theoretical framework can be developed. The relationships that have been identified from the aforementioned literature chapters will be hypothesised and investigated after initial exploratory research outlined in chapter 7. Each of the variables highlighted in this chapter need to be further investigated in order to identify the appropriateness for the study's theoretical framework. The subsequent chapter will discuss the initial methodological approach for this research before discussing the findings of the initial exploratory research and presenting the proposed theoretical framework in chapter 7.

CHAPTER 6

PART I: METHODOLOGY AND RESEARCH PHILOSOPHY

6.0 Introduction

The previous chapter began to outline the conceptual thinking for this study based on the literature review. The following chapter will discuss part one of the methodological approach for the research. This chapter will commence by exploring the various research philosophies in order to gain a philosophical grounding for this study. The chapter will provide an extensive discussion and rational for the methodological selection, the sample used as well as the data collection methods.

6.1 Understanding Research

According to Collis and Hussey (2003) research can be viewed as the systematic and methodological process of investigation that has the aim to add knowledge and understanding to a particular problem through providing a coherent and logical path to a reliable outcome. Ghauri and Gronhaug (2002) define research as the process that allows individuals to develop knowledge through discovering and finding out new things. As a result, it is quite clear that the purpose of any piece of research is to develop knowledge through a systematic process.

Research within a business discipline is no different and resembles the same characteristics as research in any other discipline, in terms of adding to knowledge in a systematic and purposeful manner. In spite of this, Easterby-Smith (1991) suggests that there are some particular features that distinguish research within the management discipline.

- Management research is often Trans-disciplinary: in other words, the research can relate to and use knowledge from other disciplines, which can often enrich

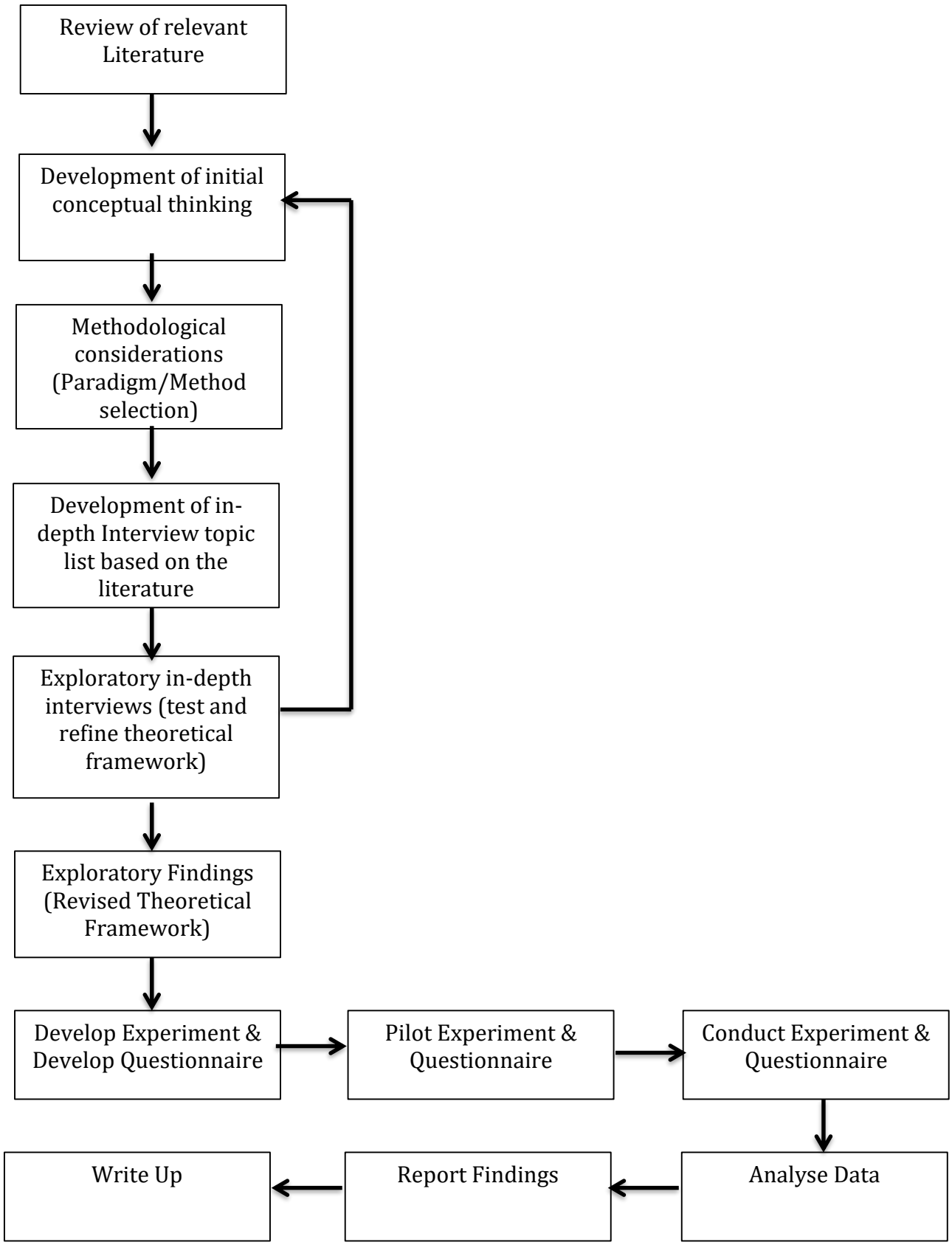
the management research with more insights that cannot be gained separately within each discipline alone (Baker, 1976).

- Management research is often Commercially-orientated: Access to business professionals or business directors is often limited and difficult to obtain unless a personal or commercial advantage is seen by the business.
- Management research is often Practical-Focused: Within the research's findings practical implications are often provided.

6.2 Methodology and Structure

It is important that a clear and concise research process is followed in order to provide the required systematic and logical research producing the aforementioned knowledge to the discipline. In order to clearly outline the structure of the research methodology and the study in general, a graphical representation is provided in the form of a flow chart in figure 6.1.

Figure 6.1 Research Process



6.3 Research Philosophy

Within any research study it is important to consider the implications of philosophical thinking. According to Easterby-Smith et al (2008) the importance of understanding research philosophy is critical in order to carry out effective management research. The formation of objective knowledge has been argued as the focal aim of science (Smith, 1998), nonetheless, the assumption on what constitutes objective knowledge and how to create it, influences the way research is collected (methodology) and how the research is interpreted (analysis).

Creswell (2003) and Easterby-Smith et al (2008) comment that philosophical ideals influence the result of research and therefore must be identified. In essence, research philosophies relate to the researcher's perception of the nature of knowledge and how it is created, as Easterby-Smith et al (2004) outline, this perception is critical to understand and important to outline as it affects how we go about our research and how we design it. What is in the world and how we know what is in the world are two key questions to elaborate on in research philosophy debates.

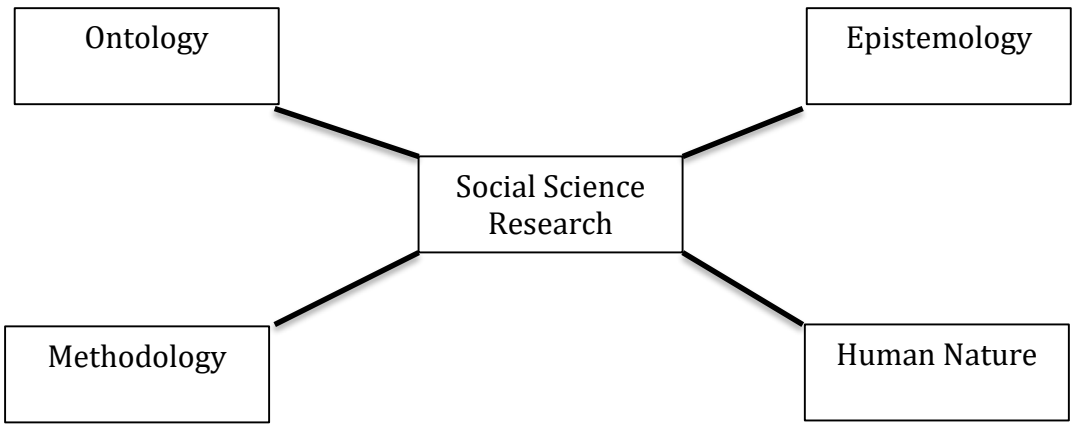
Easterby-Smith et al (2004, p. 24) provide a clear justification regarding the importance of philosophical assumptions in management research:

'It can help to clarify research design, this not only involves considering what kind of evidence is required and how it is to be gathered and interpreted, but also how this will provide good answers to the basic questions being investigated in the research to recognize which designs will work and which will not. It should enable the researcher to avoid going up too many blind alleys and should indicate the limitations of particular approaches. Third, knowledge of philosophy can help the research identify, and even create designs that may be outside his or her past experience. And it may also suggest how to adapt research designs according to the constraints of different subjective or knowledge structures'.

According to Burrel and Morgan (1979) all theories of organisations are based on an underlying philosophy. Organisation theorists make implicit ontological assumptions on the nature of reality they are researching and implicit epistemological assumptions

about how we can know with a level of certainty regarding that reality. Burrel and Morgan (1979) suggest that when examining the nature of science, researchers need to choose a subjective or objective approach to the research. Both a subjective and objective approach are defined by core assumptions relating to ontology (reality), epistemology (knowledge), human nature (pre-determined or not) and methodology (Burrel and Morgan, 1979; Creswell, 2003; Easterby-Smith et al, 2008). Figure 6.2 Provides a graphical representation of each of the assumptions influencing social science research.

Figure 6.2 Core Assumptions



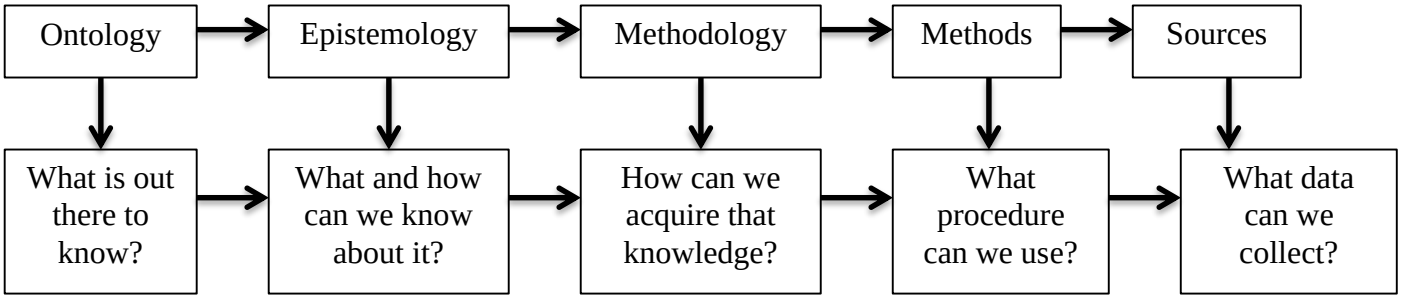
(Adapted from: Burrel and Morgan, 1979; Creswell, 2003; Easterby-Smith et al, 2008).

The process of research design within social science is positioned within the overarching discussion on the philosophy of science (Easterby-Smith et al, 2004). Whilst this may not be key to carrying out management research, developing an understanding of the overarching debate surrounding philosophy aids the researcher in obtaining an understanding of knowledge and how knowledge is reported as well as developed in the context of the researcher's subject area.

As previously mentioned Burrel and Morgan (1979) introduced the process of ontology leading on to epistemology that help to set the bases of the methodology, method and sources. Figure 6.3 adapted from Easterby-Smith et al (2004) and in line with Burrel and Morgan (1979) outlines the aforementioned philosophical research process.

Easterby-Smith et al (2004) further point out that research philosophy can often seem overwhelming with the number of 'isms' and 'ologies' within the subject area, as well as many philosophical terms being used interchangeably resulting in some confusion.

Figure 6.3 Research (Philosophical) Process



(Adapted from: Easterby-Smith et al, 2004)

6.3.1 Ontology

Ontology as shown in figure 6.3 is the starting point of research and can be seen as the foundation of any future philosophical assumptions including epistemology, methodology and methods. Ontology refers to how the individual views the nature of reality or the world we live in and what can be known about reality or that world (Lincoln and Guba, 1985). In line with this, Easterby-Smith et al (2004, p. 31) outline that an individual's ontology can be viewed as the 'assumptions that we make about the nature of reality'. As a result, it is therefore understandable that ontology affects what one believes can be learned or known about the world (epistemology), along with how one may explore it (methodology and methods).

Unlike science, social science does not follow a traditional approach and thus, deeper in philosophical debates. Burrell and Morgan (1979, p.1) outline that ontology discussions ask a fundamental question in research, 'what exists?' Does an external reality of an 'objective' nature and independent from (the researcher) individual consciousness exist, or is reality socially constructed and 'subjective' and dependent on individual's perceptions. Each of these perspectives can be seen as having epistemological and methodological implications.

According to Burrell and Morgan (1979) Objectivism and Subjectivism can be seen at

either ends of a continuum. Ontological positions therefore range from being fully objective, where a solid physical world exists irrespective of how the researcher (individuals) perceives it. To being entirely subjective, where 'reality' only exists as the construction of the individual and how they perceive the world. As a result, we can see that:

- Objective ontology refers to more physical science approaches (Facts, Laws, Measurement, Objective reality, the truth is the same irrespective of who the observer is, the overall aim is to discover what is there).

- Subjective ontology is socially constructed through the interpretations of the individual (What is there is not solid rather it is shifting, socially constructed, the truth depends on who established it, all facts are human creations, the aim is to understand individuals' interpretations and perceptions).

6.3.2 Epistemology

Secondly, epistemology is related to the way we see the nature of reality in the world and refers to the assumptions about the nature and grounds of knowledge. As each individual is different, we look at social world issues from different perspectives, through knowledge we have gained from our background, education, personal and professional experience (Easterby-Smith et al, 2004).

According to Burrell and Morgan (1979, p.1) epistemology regards an individual's assumptions on, 'the grounds of knowledge about how one might begin to understand the world and communicate this as knowledge to fellow human beings'. In a research context, epistemological considerations are vitally important as different perspectives on the nature of knowledge, as well as how that knowledge is accumulated has a significant impact on the research design and the methods used.

It is therefore understandable that the ontological and epistemological viewpoint of a researcher can result in different views on the same phenomenon. Research philosophical assumptions are closely related and help guide what is known as research paradigms (Lincoln and Guba, 2000; Meterns, 1998). Kuhn (1962) defines a paradigm

as “a set of linked assumptions about the world which is shared by a community of scientists investigating that world”. Likewise, Teddlie and Tashakkori (2009, p.84) define a paradigm as, ‘a worldview, together with the various philosophical assumptions associated with that point of view.’ Kuhn (1962) suggests that this set of assumptions provides a conceptual and philosophical framework to view the world.

6.4 Research Paradigms (Research Philosophies)

Creswell (2009) suggest that ontological and epistemological assumptions are often outlined through two contrasting philosophical paradigms, positivism and interpretivism. In line with this, Malhotra and Birks (2003) suggest the two dominant research paradigms used within marketing research are positivism and interpretivism. While the choice of research paradigm does not simply lie with either positivism or interpretivism, each appears to be the two traditional philosophical stances (Easterby-Smith et al, 2008). While the terms of positivism and interpretivism are widely used in the literature each of these paradigms can be referred to under different names, which can make defining each paradigm somewhat tricky (Creswell, 2009).

Figure 6.4 provides a continuum with the aforementioned polar opposite research paradigms at either end. Positivism, which is associated with objectivism and Interpretivism, which is associated with subjectivism.

Figure 6.4 The Subjective-Objective Continuum

(Adapted from: Burrell and Morgan, 1979; Guba and Lincoln, 2005)

Positivism can be seen at the far left of the continuum, where an objective reality is ‘out there’ and exists beyond the human mind (epistemology) as well as being separate from the researcher (ontology), and can be studied through scientific methods using statistics and content analysis (Webb, 2004). Interpretivism on the other hand is on the subjective end of the continuum, where multiple realties exist, and the researcher and reality is

inseparable (ontology), and where an individual's knowledge of the world is constructed through their experience (epistemology). The multiple realities are not considered more or less true, rather they are somewhat more or less informed (Denzin and Lincoln, 2000). The methods used in an interpretivist approach are more of a qualitative nature.

According to Bryman (2004) a paradigm war is evident in all literature regarding research philosophy. Creswell (2009) and Hussey and Hussey (1997) suggest that it is important that a researcher understands the philosophical paradigm that underpins their research study. From a review of the literature, it is clear to see that multiple philosophical paradigms exist, from Positivism, to the polar opposite Interpretivism, to post positivism and somewhat of a middle ground, pragmatism.

Somewhat controversially, Lewis and Grimes (1999) have proposed the argument for a mixed paradigm perspective called 'multiparadigm'. The multiple paradigm philosophical stance suggests that researchers can rely on more than one paradigm for their research study (Hall, 2012; Teddlie and Tashakkori, 2003). In spite of this, Hall (2012) points out that there are problems with multiparadigm approaches as it can be unclear as to which paradigms are mixed and how they are mixed. Additionally, historically there are claims of 'incompatibility' between some paradigms such as positivism and interpretivism. However, this is separate from the methodological level, where mixing methods are possible in order to collect data (Creswell, 2009). Nevertheless, in spite of the suggestion of a multiparadigm approach, it can be seen that the bulk of paradigm research is focused on what can be determined as the 'purist' stances of positivism and interpretivism. The aforementioned post-positivism is another philosophical stance in which those who follow a post-positivism stance are less accepting of choosing between the contrasting positivism and interpretivism.

Finally, pragmatism offers another alternative philosophical stance. With this stance, researchers are able to adopt one paradigm that involves both qualitative and quantitative research methods. According to Morgan (2007) pragmatists suggest that differing paradigms can work together to create a complimentary piece of research. For many research studies, it may in fact be the case that each differing paradigm from, positivism, to interpretivism and pragmatism may all be appropriate in order to guide

the study. Each of these paradigms will be further explored before outlining the philosophical stance of this study.

6.4.1 Positivist Paradigm

Positivism is based on what is known as naturalism and is presented as the classical view of science (Blaikie, 2007). Comte (1974) was the first to coin and introduce the term positivism to the research philosophy debate. It was through the work of Comte (1974) and Durkheim (1964) that the concept of positivism was brought into sociology. According to Creswell (2003) positivists take a realist position and view reality as single and objective, which exists independently of what individuals perceive and is external to them (the researcher). As a result, positivists believe their research is non-biased as they see it as separate from themselves.

Researchers taking the positivist stance, view the world objectively and see themselves as objective analysts, who are detached from the data they analyse to avoid any influence over it (Creswell, 2003). Bagozzi (1980) and Burrel and Morgan (1979) point out that as part of the positivist ontological assumptions, reality is structured and made up of relationships. This reality can be seen as 'devisable' and 'fragmentable', as a result precise and accurate measurements of this reality are possible (Hudson and Ozanne, 1988).

Within social science research, the positivist stance can be seen as the closest related stance to empirical science (Crotty, 1998). Crotty (1998, p. 28) further highlighted that, 'science imposes a very tight grid on the world it observes. The world is perceived through the world of regularities, constancies uniformities, iron-clad laws, absolute principles'. The problem with this scientific viewpoint of the world is that it does not reflect the world that we live in and experience. Positivists therefore suggest that research in social sciences should be similar to what is conducted in physical and natural sciences where results can be emerged into law-like regularities, allowing the results to be generalisable (Creswell 2003; Remenyi et al, 1998).

Positivist researchers embrace a deductive research methodology where theory is developed from literature (Easterby-Smith et al, 2004). Furthermore, hypothesises are

developed and tested through a research design that relies on specific measurable observations and quantitative results in order to analyse the research problem. During this process, positivists look for relationships between constructs or causalities between the variables outlined in the literature and based on quantitative evidence. As a result, in line with Crotty (1998), Bryman (2004) outlines that the positivist paradigm is one, which allows researchers to test theories and establish material for the creation of 'laws'.

According to Reichardt and Cook (1979), positivistic philosophical underpinnings and 'associated' methods have distinct limitations that can make them only applicable for particular research problems in validating, testing and confirming theories and hypotheses rather than to discover new ideas or hypotheses. Leone and Schultz (1980) point out that a key reason for lack of 'accumulation of thought' particularly within the field of marketing at this time is due to the nature of the positivist paradigm in use rather than the use of research methods. It can therefore be seen that due to the positivistic philosophical underpinnings, marketing researchers were unable to explore the complex world of lived experience from the point of view of those who live it (Schwandt, 1994). Sheth (1981) argues that a research field in its infancy or an area that is somewhat unexplored requires a significant amount of empirical inductive research, this would therefore allow the researcher to gather empirical data to generate general conclusions or theories (Williams & May, 1996).

This research study requires the researcher to explore the lived experiences from the viewpoint of those who have lived it in order to understand customer attitudes in an area that is somewhat unexplored. With a lack of definitive theories within this study's area, the philosophical assumptions associated with positivism will constrain the proposed research. As previously discussed Interpretivism is at the polar opposite end of the continuum and may offer an appropriate philosophical stance for this study. The next section will discuss Interpretivism.

6.4.2 Interpretivism

Interpretivism is believed to have its routes in Hermeneutics and phenomenology (Blaikie, 2007). Interpretivism is often used interchangeably with various other names

in the literature including, constructivism, constructivist, phenomenology, anti-naturalist and anti-positivist (Giddens, 1979; Easterby-Smith et al, 2004). The principal belief of Interpretivism is that there is a fundamental difference between the subject matters of natural science and social science. According to Blaikie (2007, p.129) the study of natural phenomena involves 'scientist developing concepts and theories for description and explanation; a scientist has to study nature from the outside. Through the use of theories a natural scientist makes choices about what is relevant to the problem under investigation.' On the other hand, Interpretivism suggests that the exploration of social phenomena requires an understanding of the social world that people have created and currently act in. As a result, the researcher is involved and part of the research. Blaikie (2007) comments that people continually interpret and reinterpret the world they live in, through social situation, actions of others, the actions they create themselves and through natural as well as humanly created objects. People attach meanings to activities and actions of themselves and others, the social world is already there before social scientists come along and cannot be ignored.

Winch (1958, p.72) suggested that basing social science on natural science (a positivist approach) is a mistake, as understanding society is conceptually as well as logically different from understanding natural science. Mill (1947) claims that the difference between society and natural science is that society is more difficult to understand than natural science. Blaikie (2007, p.131) comments that 'social reality is the product of its own inhabitants' and therefore why it is more difficult to understand.

As a result, according to interpretivists, reality is subjective and researchers are not separable from the research affecting the knowledge and facts that are produced out of it (Creswell, 2003). Naturally, researchers are part of the process in interpreting the findings of the research (Creswell, 2003). The interpretivist's stance acknowledges that reality is part of us as humans; as a result, the subjective state of the researcher has an influence over the research. This approach to research is much more focused on observation rather than measurement. The Interpretivist therefore sees reality as a holistic process that is created over time and social constructed. Saunders et al (2003) highlights that the social aspect of business and management research is far too complicated to associate itself to confined laws in the way in which natural science does.

It can therefore be seen that interpretivists take an inductive approach to research, where theory is developed upon analysing the data gathered. As a result, this philosophical approach allows for new theory development and somewhat allows researchers to expand what is known within a specific field of research (Saunders et al, 2003). A low sample of objects are usually examined or interviewed for a short period of time in order to gain an understanding and interpret the phenomena. From this the researcher is able to establish patterns that are repeated in similar circumstances and can develop theory from it (Creswell, 2003).

Table 6.1 provides a summary of the key differences between the Positivist philosophical stance and the Interpretivist stance.

Table 6.1 Summary of differences between Positivism v Interpretivism

	Positivism	**Interpretivism**
The Observer	Independent from the research.	Part of what is being observed.
Human Interests	Irrelevant to the research	Main drivers of science
Explanations	Must demonstrate causality and relationships	Aim is to increase general understanding of the situation
Research progresses through	Test hypothesis and deductions	Gather rich data from which rich ideas are induced.
Concepts	Need to be operationalized so they can be measured	Should incorporate stakeholder perspectives
Units of analysis	Should be reduced to simplest terms	May include the complexity of whole situations
Generalisation through	Statistical probability	Theoretical abstraction
Sampling requires	Large numbers selected randomly	Small number of cases chosen for specific reasons

It is clear to see the contrasting differences between Positivism and Interpretivism. Table 6.1 provides an effective summary of these differences. While Interpretivism provides an interesting approach to research which allows for theory development and observation of real life instances, this study aims to generate and test hypothesis as a result the philosophical assumptions underpinning Interpretivism may constrain the research studies aims. The third philosophical paradigm previously outlined, 'pragmatism' will now be discussed.

6.4.3 Pragmatism

According to Easterby-Smith et al (2004) the so-called paradigm war between positivism and interpretivism has led to the arrival of the pragmatism paradigm. Peirce (1878), Mead (1938), Dewey (1931) and James (1989) are thought to be some of the leading researchers in pushing forward the concept of pragmatism.

Goles and Hirshheim (1999) point out that pragmatism adopts a 'pluralist' stance, which means it uses whatever methods are deemed suitable to answer the study's research objectives. As a result, Goldkuhl (2012) suggests that it is then possible to combine a pragmatist study with interpretive (observerable) methods. In other words, the pragmatic paradigm believes that philosophical assumptions are independent and can be used interchangeably, along with different choices in methods in order to answer the research's objectives. The essence of pragmatism ontology is 'actions' and 'change' (Goldkuhl, 2012), we operate in a world where there is constant development. Blumer (1969) comments that, society is made up of ongoing processes and therefore change and development. As a result, to understand society, social science research needs to understand and acknowledge the role of society and the action that goes on within it.

In spite of this, a pragmatic philosophical stance has had some criticisms as many believe that due to the philosophy having a lack of clear definition and being somewhat contentious, it should not be thought of as a research paradigm (Hall, 2012).

Nonetheless, many researchers adopt a pragmatist stance (Goldkhul, 2012), which helps to produce research that might not be feasible through other philosophical thinking. Guba and Lincoln (1989) amongst numerous other qualitative researchers

have argued that pragmatism should be seen as the new dominant philosophy, overtaking positivism. However, it is not surprising to see that some quantitative researchers are against this view (e.g. Sechrest, 1992). In spite of this, many researchers support the use of mixed (qualitative and quantitative) methods in social sciences research (Tashakkori and Teddlie, 1998; Creswell, 2003). Creswell and Clark (2007) further support this notion, suggesting that pragmatism should be the key methodology moving forward.

Table 6.2 provides a summary of some of the benefits of the pragmatic approach as discussed by Creswell (2003), Tashakkori and Teddlie (1988) and Teddlie & Tashakkori (2009).

Table 6.2 Benefits of Pragmatism

Pragmatic approach	**Benefits**
1	The approach taken in the research can be linked directly to the research questions the study wants to answer.
2	Pragmatism provides a natural application where methods that are appropriate can be used.
3	'What works' tactic is deployed where the researcher can answer research questions from both a qualitative and quantitative approach. Adoption of mixed methods.
4	Findings can be used in a positive manner, as they are practical.

The pragmatism philosophical stance fits the approach and context, as well as the philosophical assumptions of this research study. The adoption of the pragmatism paradigm will now be discussed in the following section.

6.5 Paradigm Adopted for this study

After the review of the various philosophical stances, the researcher believes that pragmatism should be the adopted research philosophy in order to appropriately answer the research objectives. Creswell (2003) suggests that where there is a lack of previous research, in which in this study's case there is, the researcher needs to adopt a flexible approach. The methods that are often selected within this research area would not be able to fully answer the research objectives; therefore, adopting a philosophical stance that adopts methods that are appropriate is critical for this study.

In order to obtain a clear understanding of customer's attitudes towards online customer support via social interaction and the key elements that contribute to an effective online experience required the study to undertake exploratory research. As outlined by Teddlie & Tashakkori (2009) the pragmatic philosophy allows the research to use methods that work, as seen as one of the benefits in table 5.2, the 'what works' approach. This study requires a mixed methodological approach; as a result, pragmatism offers sound philosophical underpinnings. Moreover, the findings from this research can then be used in practice, as Goldkhul (2012, p. 7) outlines that, 'one of the foundational ideas within pragmatism is that the meaning of an idea or a concept is the practical consequence of the idea or concept.

As the research area around the online customer experience is somewhat in its infancy, with no real established theoretical underpinnings, it is important that the study is conducted within a philosophy that does not restrict the research with confined and set philosophical assumptions.

6.6 Methodology Considerations

The research methodology can be seen as the techniques that are used to collect data in a research study (McDaniel and Gates, 2010). According to Huberman and Miles (2002) research ought to be controlled by a properly defined methodology. In spite of this, due to the aforementioned philosophical paradigms and the different types of research conducted, there is no set research methodology. Different research studies require different and in some cases multiple methods in order to answer the research

questions (Creswell, 2003). It is important that the researcher adopts the methods that can investigate the phenomena.

Furthermore, Malhotra (2004) suggest that most research studies consist of either a deductive or inductive approach. A deductive approach is associated with exploratory research using quantitative methods. Within the deductive approach the researcher focuses on previous theories already developed, from this hypothesis are developed to examine relationships proposed, based on the findings, theory can be further developed (Easterby-Smith et al, 2007).

Conversely, inductive research is associated with more qualitative methods. It involves defining the research problem, but with little or no theoretical framework. An inductive approach focuses on observed or in-depth questioning of a respondent, where broad themes are often outlined and where the researcher probes to elaborate on the topic area. Malhorta (2004) explains that in an inductive approach, respondents help to explain the nature of particular issues, while an inductive approach allows the researcher to develop their own theories (Easterby-Smith et al, 2007).

6.7 Research Design

The research design can be seen as a fundamental component of a research study, Dillon et al (1994) suggest that the research design can be seen as the 'blue print' of conducting research. Figure 6.1 outlined the research process, which comes from the research design. Following the researcher's Pragmatic philosophical stance, the methodological approach has been designed around pragmatic considerations for data collection. McDaniel and Gates (2010) and Wilson (2012) point out that there are two methods of research design: exploratory research and descriptive research.

Exploratory research is considered a flexible and unstructured form of research that is often constructed in the early part of the research process (Wilson, 2012). Descriptive research is conclusive and requires prior knowledge of the research area and involves structured techniques. Descriptive research can determine the frequency of occurrence and also make a prediction of occurrence regarding specific marketing phenomena (Kinnear and Taylor, 1996).

Both Exploratory and Descriptive methods are adopted in this study. The Exploratory research comes in the form of the literature review in Chapters two, three and four, which helped to form the study's research objectives as well as 16 in-depth exploratory interviews. The descriptive method used allows research to be gathered to meet the research objectives.

Numerous researchers outline ways in which research should be designed (McDaniel and Gates, 2011; Aaker et al, 2011; Tull and Hawkins, 1993; Creswell, 2009; Easterby-Smith et al, 2004; Danermark et al, 2002). Table 5.3 outlines the research design of this study.

Table 6.3 The Research Design

1)	Literature Review	The literature review provides the researcher with an understanding and grounding of the subject area.
2)	Conceptual Thinking	Theoretical Development, with initial thoughts on the conceptual framework for the study.
3)	Choice of Research Instrument	Outlining the most appropriate method for the research.
4)	Define Objectives and Research Questions	Based on the literature review.
5)	Primary data collection	The selected method is applied on the sample to gather data.
6)	Refine Research Objectives	Refine the research objectives based on the literature and initial exploratory research
7)	Data Analysis	An iterative process takes place between the literature review, data collection and analysis.
8)	Reporting	Report the findings of the study in a clear and concise manner.

(Adapted from: Tull and Hawkins, 1993; Aaker et al, 2011; Danermark et al, 2002)

It is important that during the entire research study that the researcher remains objective and critical at each stage of the process. In turn this helps to reduce errors, biasness and misinformation (Creswell, 2009). The research design is by no means a linear process (Blundel, 2007) and can require the researcher going back and forth between stages. The goal of research in general is to explore and explain potential relationships behind the phenomenon, rather than simply trying to predict, with the researcher continuing to explore and collect data until an explanation of some kind is found (Easterby-Smith et al, 2004).

6.8 Qualitative, Quantitative and Mixed Methods approach

Many researchers have dedicated a significant level of focus on the explanation and the differences between quantitative and qualitative research. McDaniel and Gates (2010) and Wilson (2012) highlight the variances between quantitative and qualitative research outlining the numerical differences. Wilson (2012, p.130) defines quantitative research as, 'research which is undertaken using a structured research approach with a sample of the population to produce quantifiable insights into behaviour, motivations and attitudes'. On the other hand, qualitative research can be defined as 'research which is undertaken using an unstructured research approach with a small number of carefully selected individuals to produce non-quantifiable insights into behaviour, motivations and attitudes (Wilson, 2012, p.103).

Quantitative research most often comes in the form of questionnaires and experiments, which can show numerical information and provides a structured insight into consumer attitudes, behaviour and motivations (Shao, 1999). Statistical analysis can be achieved through the use of quantitative research due to the large sample size it offers, which provides researchers more reliable information on the target audience.

Survey questionnaires are the most popular method of quantitative research. Questionnaires offer much versatility in terms of places to conduct the research and availability to the target audience (Aaker, Kumar and Day, 2001). Survey questionnaires can be administered in a number of ways including, verbally, in writing or via computer based technology (Wilson, 2012).

Qualitative research on the other hand often comes in the form of In-depth Interviews, Observation and Focus Group Discussions. As previously mentioned, qualitative research is unstructured gaining an in-depth but non-quantifiable insight into consumer behaviour from small samples (Dillon, Madden and Firtle, 1993; Wilson, 2010). While the data may not be quantifiable, qualitative research provides a 'deeper and more penetrating insight' (Wilson, 2012, p. 103) into subject areas that is not possible through quantitative approaches. However, Wilson (2012), McDaniel and Gates (2010) suggest that a study that combines both qualitative and quantitative methods (known as mixed methods) can help to provide a deeper understanding as well as information on the representativeness of that particular understanding through numerical means.

Creswell and Clark (2007) highlighted that mixed methods is an increasing trend in marketing research and research in general in or to appropriately answer the research objectives. As a result, this has seen many studies adopting both a qualitative and quantitative approach. Denzin (1978, p.28) suggests that 'no single method adequately solves the problem'. Advocates of the mixed method approach suggest that restricting research to either a qualitative or quantitative approach would likely increase the error rate associated to that specific approach (Patton, 2002).

In line with the pragmatic philosophical stance, Creswell and Clark (2007) point out that the mixed methods approach is practical as it allows the researcher to use any method possible in order to answer the research questions. Further Creswell and Clark (2007) suggest that a mixed methods approach is in line with how individuals solve every day problems through a mix of numbers and words, adopting what can be seen as both an inductive and deductive approach.

It can therefore be seen that in a mixed methods approach, the research takes on a qualitative phase followed by a quantitative phase or vice versa. Going forward with a qualitative/quantitative sequence of research would allow the study to gather exploratory qualitative data on a new subject area and using the results to refine the conceptual framework and build the quantitative phase. As there is a lack of research regarding the variables influencing business advisory information search and the role for social interaction during search, this study will adopt a sequential mixed methods qualitative/quantitative approach.

6.9 Methodology Selection

The literature shows that numerous research studies relating to information search and the online customer experience have used a mix of both qualitative and quantitative research approaches including depth-interviews, questionnaires and experiments. We can however see that a quantitative approach appears to be the dominant methodological approach in researching the online customer experience with a mix between survey questionnaires and experiments (see Kawaf and Tagg, 2012).

Falling in line with much research on information search and the online customer experience, this study adopts a quantitative approach. However, the research design follows the aforementioned mix methods approach, where exploratory research in the form of qualitative in-depth interviews will take place to help establish a basis for the larger quantitative phase of the research.

Applying a mixed methods approach helps the researcher to reduce the number of variables in the conceptual framework coming from the review of the literature and provides a richer insight into the studied phenomena. Selecting the appropriate methods is important for all research studies, given the complexity of this study, it is extremely important that a comprehensive methodology is in place.

Wilson (2012) and Aaker et al (2011) point out that a mixed methods approach can help the researcher to understand attitudes and behaviour, along with understanding how widespread these attitudes and behaviours are. It can be seen that in a mixed methods approach, generally studies follow interviews, with questionnaires and or experiments. Given the lack of research in this study's context, it is proposed that the exploratory qualitative element of the study involves depth interviews with businesses in order to understand what variables influence them while searching for information online and also gain an insight into the potential role for online customer support through social interaction. Due to the nature of exploratory research and depth interviews themselves, the interviews allow the researcher to understand the respondent's attitudes and general behaviours, which help to create the main quantitative element. This study's main quantitative element is carried out via an online experiment with participants followed by a researcher-administered questionnaire. The rationale for adopting this research

approach along with the sample, sample size and data collection considerations will now be offered. Other methodological approaches were considered including the use of an online questionnaire, however, due to the context of the research it was important that participants have experience of using a business advisory website, therefore an online experiment associated with a questionnaire ensured participants gave responses based on their actual experience with a business advisory website. Additionally, the researcher considered using eye tracking software to analyse particpants' behaviour on business advisory websites, however due to time and cost restraints and the nature of the research objectives such a methodological approach was not suitable. The proposed approach is believed to be able to answer the study's objectives effectively. Other approaches were seen as either not fit for purpose, time consuming or potentially involving ethical issues observing businesses activity.

6.10 Exploratory Interviews

As previously outlined, due to the lack of research in this study's context of a utilitarian search for online business advisory information and services, exploratory interviews were seen as being required in order to add validity and robustness to the conceptual framework and limit the number of variables to those that are relevant. Aaker et al (2011) outline that qualitative research should be carried out in order to gain an understanding of individuals' motivations and behaviours. The sample is usually small, with the collection of data being unstructured with a non-statistical outcome (Wilson, 2012). Malhotra (2010) comments that exploratory research provides the researcher with an initial understanding that can be developed upon.

It can be seen that the most popular methods of qualitative research include depth interviews, focus group research and observation (Aaker et al, 2011). It is suggested that in order to gain a clear understanding a semi structured or unstructured interview ought to take place, as a structured interview may be restricting at the exploratory stage and resembles survey methods (Malhotra, 2010; Rapley, 2004). Semi-structured interviews can be seen as the most popular form of interview as it allows the researcher to adapt the order of questioning or question topics depending on the flow of the interview, while topics are clear for the researcher to cover.

Wilson (2012) points our attention towards the use of a 'Topic List' to aid the researcher in carrying out semi structured or structured interviews. This list provides the researcher with guidance during the interview with specific topic areas outlined. However, these are not to restrict the researcher, while the topics are outlined the researcher is able to ask questions that are seen as appropriate at whatever point during the interview. Within the 'Topic List' prompts are often outlined for the researcher to use in order to gain more depth detail on the subject area. These prompts are often useful where additional explanation or clarification is needed from the respondent (Wilson, 2012).

Due to the nature of semi-structured and unstructured interviews McDaniel and Gates (2010) suggest that probing to gain further insight into areas that were not actually considered by the researcher is a benefit of semi-structured and unstructured interviews, as this can open up a new area for the researcher to explore which may not have been apparent otherwise. Due to little research within this study's context it is important to carry out interviews that allows the researcher to gain a deep understanding of the participant's attitudes and behaviours. As a result, it was deemed appropriate that semi-structured interviews are used.

In order to gain a solid grounding on delivering the in-depth interviews it is beneficial to follow an appropriate framework. Gillham's (2005) framework was used to guide the interviews, however this framework does not restrict the interviewer as the nature of semi-structured interviews allows for probing and exploring new areas.

Gillham (2005) suggests that themes ought to be created using the key components from the literature and the study's research objectives. Following this, these themes should then be put in a logical order for questioning. The aim of the exploratory research is to help confirm and refine the conceptual model in order to reduce the variables to those that are most relevant. This allows the study to take a systematic and logical approach as previously mentioned; identifying individuals search process, the variables that influence their experience during search for information and services and identifying the points in which help through online customer support may be appropriate.

6.10.1 Exploratory Interview Data Collection

As well as Gillham (2005), Wilson (2012) and McDaniel and Gates point out that a Topic Guide should have headings that outline the broad agenda, with accompanying follow up topics and probes for further exploration. As previously mentioned the Topic Guide is based on the Literature Review and the initial research objectives. The Topic Guide, which can be seen in Appendix 1 included three phases as suggested by Wilson (2012, p.111), 'The Introduction phase', 'The Discussive phase' and 'The Summarising phase', more detail is provide in Table 6.4.

Table 6.4 Creation of Topic List for Semi-Structured Interviews

1)	The Introduction Phase	• The objectives of the session • Explanation of the nature of a group discussion • The general agenda of topics to be followed • Prompts for participants to introduce themselves
2)	The Discussive Phase	• General topic areas to be discussed • Potential prompts and stimulus material
3)	The Summarising Phase	• Prompts for summarising what has been discussed • Thanks to participants

(Adapted from: Wilson, 2012)

The stimulus material outlined by Wilson (2012) in the 'Discussive phase' of the research was incorporated into the exploratory in-depth interviews. Stimulus material can help the respondent with a visual impression and can help to overcome problems of 'self-recall' as it is important to understand attitudes towards real life situations.

Stimulus material can also aid the researcher in helping to clarify what the researcher is asking the participant (McDaniel and Gates, 2010).

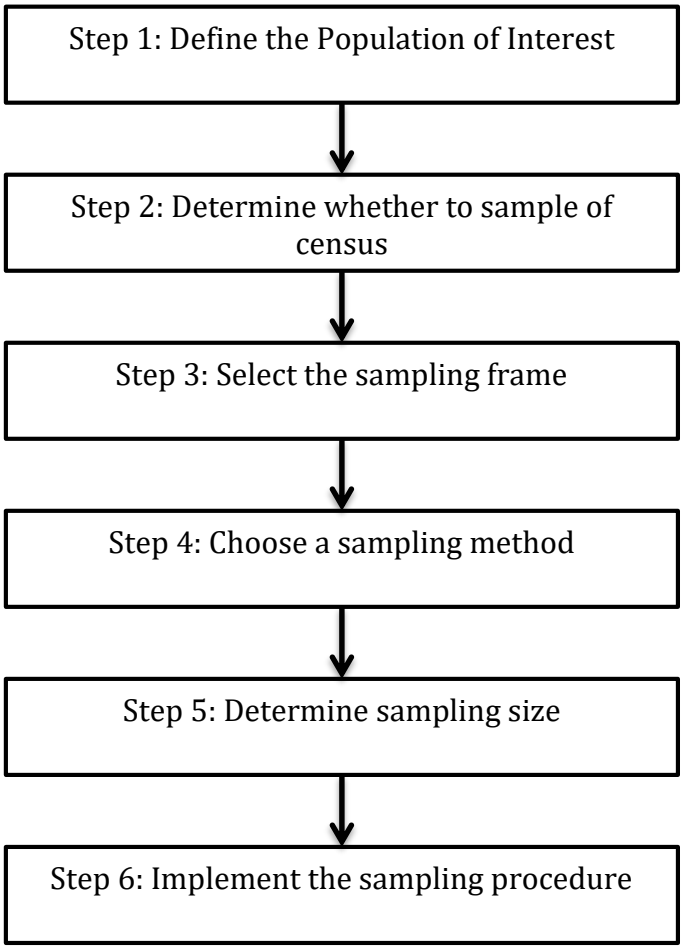
The stimulus section of the depth interviews, during the discussive phase, included mock up screen shots of various business advisory websites carrying out A/B testing. The participants were to evaluate the site in terms of design, layout, and the ability for social interaction on that particular site. On some screen shots, mock-up live chat and forum opportunities were inserted along with visible telephone numbers against those without. This stimulus section provided participants with a visual representation and helped to answer the researcher's questions as it overcomes the need for participant self-recall as well as clearly outlining what the researcher is asking.

Each interview was recorded using a digital recorder. Each of the interviews where then downloaded onto software to listen to the audio files. Following this the audio files were then fully transcribed using Microsoft Word. The researcher used a research diary in order to keep track of emerging themes and important variables from each of the interviews.

6.10.2 Exploratory Interview Sampling Considerations

In order to develop the sample for the exploratory in-depth interviews Wilson's (2012) sampling process was deployed as can be seen in figure 6.5. Many research studies focus on undergraduate students as the main sampling approach. This approach can be highly beneficial due to the availability and cost benefits of undergraduate students. However, it is not always applicable to employ such an approach.

Figure 6.5 The Sampling Process



(Adapted From: Wilson, 2012)

As the context of this research is very specific, it is important that the appropriate sample is selected. The population of interest in this study was Businesses who have had previous experience in using a business advisory website. As a result, businesses in Glasgow and Edinburgh who have had contact with an economic development agency operating in Glasgow providing online business advisory information and services were selected and seen as an appropriate sample for the study. As with most research studies a sample of the population of interest was used. No incentive was offered to the individuals for participating in the research, which helps to overcome issues with the individual's motivation for participating in the research.

As mentioned the sampling frame involved businesses that had pervious contact with an economic development agency based in Glasgow. This provided the researcher with individuals who had past experience of searching for business advisory information

online. In order to overcome issues with self-recall only those individuals who had been searching for advisory information within the past 30 days were invited to take part in the research (Aaker et al, 2011).

With most research studies exploratory research has time and cost restraints associated with it (McDaniel and Gates, 2010). Time must be considered in terms of the researcher's time scale of activities as well as the respondent's time as the research was conducted between the University and the business premises of the participating business within regular working hours. In total 16 interviews took place, this is in line with many other consumer behaviour studies and information search studies using a qualitative interview approach. 96 businesses were approached in total with a written letter sent through postal mail inviting them to take part in the research. This was followed up by a telephone call to all 96 invited businesses. Participants were sourced from an economic development agency's customer database and followed the contact guidelines of the organisation. Of the 16 participants who accepted to take part in the research, a variation of age, gender and position was obtained. Table 6.5 outlines the sampling details of each of the respondents.

Table 6.5 Sample of Exploratory Interview Respondents

Respondent	**Gender**	**Age**	**Position Held**	**Business**	**Interview Duration**
Respondent 1 (R1)	Male	25	Company Director	SME	1hr 9mins
Respondent 2 (R2)	Female	28	Company Director	SME	40mins
Respondent 3 (R3)	Female	41	Senior Manager	SME	41mins
Respondent 4 (R4)	Male	32	Company Director	SME	1hr 13mins
Respondent 5 (R5)	Female	38	Company Director	SME	40mins

Respondent 6 (R6)	Female	42	Company Director	SME	1hr 9mins
Respondent 7 (R7)	Male	27	Senior Manager	SME	42mins
Respondent 8 (R8)	Male	57	Company Director	SME	1hr 12mins
Respondent 9 (R9)	Male	26	Company Director	SME	39mins
Respondent 10 (R10)	Female	35	Company Director	SME	56mins
Respondent 11 (R11)	Female	33	Company Director	SME	53mins
Respondent 12 (R12)	Male	56	Company Director	SME	1hr 8mins
Respondent 13 (R13)	Male	43	Company Director	SME	50mins
Respondent 14 (R14)	Female	47	Company Director	SME	56mins
Respondent 15 (R15)	Female	48	Company Director	SME	1hr 3mins
Respondent 16 (R16)	Male	33	Company Director	SME	51mins

The nature of qualitative research and in particular exploratory qualitative research the sample size is relatively low (Malhotra, 2010). With exploratory research the researcher may stop learning anything new and at this point, saturation has been reached. Theoretical saturation was particularly apparent when coding the interview transcripts and through the research diary as no new themes or topics were emerging from the research, therefore this resulted in the researcher stopping the interviews at 16 and not approaching additional organisations to take part in the research. The sample shown in table 6.5 outlines the variation of gender, age, position held and organisation size. A 50% split was achieved between male and female participants, with a good variation in

age group. 14 out of 16 participants were the company director (owner) and two participants were senior managers within their organisations. All participants had experience of searching for business advisory information online within the last 30 days of when the interview took place.

Each interviewee signed and agreed to their interview being recorded for transcribing purposes and the potential of quotations in the study's thesis. However, each respondent was ensured that their business name or personal name would not be associated with the transcripts or quotations and thus remain anonymous. As a result, a code name was given to each respondent as can be seen in table 5.5 starting from (R1) through to (R16).

6.10.3 The Role of the interviewer

When conducting qualitative interviews, the role of the interviewer is to acquire detailed and precise information on the subject area. In the case of semi-structured exploratory in-depth interviews, the aim is most often for the interviewee to actively participate in the interview and thus leading its direction rather than simply responding to questions in a question and answer form (McDaniel and Gates, 2010). As a result, the interviewer can actually be seen as more of a facilitator, keeping the discussion on topic and probing for further insight when required (King, 2004).

An effort was made by the interviewer to avoid leading the interview and using any leading questions or examples. While the interviews were semi-structured, in line with King (2004), the researcher acted as a facilitator of the interviews while encouraging the interviewee to lead the discussion, as they are able to give the researcher the knowledge needed for the study.

It is also important that the researcher builds a level of trust with participants and ensures that confidentiality is adhered to. Ethical issues are discussed further later in this chapter.

6.10.4 Exploratory Interview Analysis

After the completion of each interview a digital audio file was transcribed using Microsoft Word. The transcripts provide a detailed 'word-for-word' representation of the interview. The transcripts become the basis in which the analysis is based on (Wilson, 2012). Any notes that were taken by the researcher in the researcher's logbook were written up after each interview.

The interviews were coded following best practice using Microsoft Word to do so. The data from the transcripts were colour coded and categorised into relevant themes so that the data can be easily analysed. This coding was completed by the researcher assigning colour codes (using highlighters) to quotations that were related to each other from each of the 16 transcripts. Once colour coding was completed quotations were exported into a table and categorised into relavent themes. Following this, a keyword (variable name) was extracted from the quotations in the transcripts as can be seen in the analysis in chapter 7. According to Wilson (2012) data categorisation can be completed in many different ways and it is down to the researcher's preference as to how data categorisation is completed. Coding can be seen as a time consuming process, however such an exercise allows the study to find the key themes and variables.

Nvivo (qualitative research software) was considered for coding the interview transcripts, however with a small number of interviews, it was seen that the learning curve of operating such software may take time and better suited for larger qualitative research studies. The analysis provided a clear structure and outlined the important topics for the study.

In order to ensure reliability and validity of the key topic areas identified through the in-depth interviews it is important that data validation checks take place. Aaker et al (2011) and Carson et al (2009) outline two ways in which data validation checks can take place to ensure the validity of the explanations and interpretations drawn from the analysis, these being triangulation and participant validation.

Triangulation is where the researcher is able to find 'corroboration' for the findings coming from the qualitative research (Wilson, 2012). This corroboration may come

from published data from previous studies or through a series of quantitative data or through observations to validate the qualitative research findings.

Participant validation on the other hand, which is growing in popularity, is another form of data validation that researchers can use (Aaker et al, 2011). This is where 'independent judges' or participants involved in the study go through transcripts to give feedback on their interpretations and analysis of the data. Where the feedback verifies the conclusions drawn from the data, the researcher can be confident of the validity of the findings (Maxwell, 1992). This study used six 'independent judges' to review transcripts to ensure the validity of the analysis. The reviewed transcripts confirmed the researcher's initial categorisations and findings.

As a result of the exploratory interviews, the number of variables outlined in the previous chapter was reduced to the most appropriate for the study, which completed the overall objective of the exploratory research. The reduced number of variables can then be taken forward and tested in the next methodological stage. Further discussion on the results of the exploratory in-depth interviews will be provided in the subsequent chapter.

6.11 Conclusion

This chapter discussed phase one of the methodological approach for the research. The chapter commenced by exploring the various research philosophies in order to gain a philosophical grounding for the study. After a discussion on various philosophical approaches, a pragmatic philosophical stance was argued for this study.

Further, the chapter provided an extensive discussion and rational for the methodological selection of initial exploratory in-depth interviews. From a review of the literature and the initial theoretical thinking in chapter 5, this chapter proposed that exploratory in-depth interviews were needed before testing the theoretical framework in the quantitative phase of the study. A lack of understanding in the area and within this study's context confirmed the need for such exploratory research.

CHAPTER 7

EXPLORATORY RESEARCH FINDINGS AND CONCEPTUAL DEVELOPMENT

7.0 Introduction

The previous chapters have outlined the literature relevant to this study. Chapter 5 proposed some initial conceptual thinking, before outlining the initial methodological approach in chapter 6. This chapter provides the findings of the exploratory research and aims to determine the most relevant variables influencing the customer during a utilitarian search for business advisory information online, as well as gaining an understanding of customer's perception of online social interaction and its role in searching for business advisory information online. The findings of the exploratory interviews provide the basis of the theoretical framework to be tested in this study by highlighting the variables that appeared to be most significant to the respondents in the in-depth interviews.

In consideration of the exploratory findings this chapter comes to a concluding point by providing a proposed theoretical model for this study and clarification of the hypothesis to be tested in the main experimental stage of the research methodology.

7.1 Exploratory Findings

The exploratory research was conducted in order to provide comprehensiveness and parsimony (Whetten, 1989), meaning that only those variables that are relevant to the study are tested and those that are seen as irrelevant are deleted. In order to reduce the large number of variables coming from the literature, exploratory in-depth interviews were seen as the most appropriate way to do so. In addition, the exploratory interviews gave the researcher an opportunity to explore the role of online social interaction while searching for business advisory information. These interviews helped to provide insight into the potential need for social interaction and in which form, the variables that influence the customer experience and which point in time these variables influenced

the customer during their search. Stimulus material used in the exploratory interviews helped to clarify variables and the potential role of social interaction. As previously discussed this helped to overcome issues of self-recall.

The findings of the interviews highlighted that the initial theoretical thinking required modification with a reduction in the number of variables. The results of the exploratory interviews will now be discussed.

7.2 Internet Usage

It can be seen that each business uses the Internet as part of their daily routine for a number of different activities including email, searching, researching, social networking, sourcing and buying products amongst numerous other activities. The Internet can be seen as a fundamental part of a business's day. One respondent commented:

'Without the Internet I couldn't survive, it is how I do everything, my communication, my research, and my business in general. It is vitally important to me and is the basis of my entire day' (Respondent R2).

Additionally, respondent R3 also commented:

'I use the Internet for everything in my business. All of what would be expected, email, social networks, searching information, finding out about suppliers, news within my industry. Finding out about events that are coming up in the future - one of the things I am looking at just now is trade shows and stuff, so it is quite useful just seeing what kind of trade shows are out there and looking at them all, looking at the costs and seeing which ones I think would be worthwhile. The Internet is critical to me really' (Respondent R3).

However, we can see that when it comes to searching for business advisory information, search becomes a very much 'goal directed' utilitarian activity, where a purpose for search is apparent.

'In a business context I never really use the Internet to browse I'd go on with a specific task - something that I need to do' (Respondent R3).

'For work related activity I search online with a goal, I don't search just to browse this would be a waste of my time' (Respondent R1).

Time can be seen as a factor that resonated every discussion and surrounds businesses searching for information. Businesses appear to be time constrained and appreciate any means to reduce the amount of time spent on searching for information. Numerous respondents commented that they do not appreciate their time being wasted by poor website design and not having the ability to easily navigate from one point of the site to another.

Respondent R1 also commented:

'When I am searching for business information online, it comes down to how long it takes. I don't have the time to spend even 10 minutes searching around looking for something that might or might not be there. If something was to take me 20 minutes just searching, no way! I am gone… That's 20 minutes of time that I could have billed for. So factors that cut down on the time spent on a site is definitely appreciated. I believe this would be the case for all businesses.' (Respondent R1)

Additionally, respondent R11 commented:

'I see searching for business advisory information as important; otherwise I wouldn't be doing it, that's obvious I guess… However, the amount of time I can spend on something that I might not get anything from is hard to justify. If I can't find what I want within just a couple of minutes or can't see how anything can help my business I will be away. Time is precious and I certainly do not want to waste my time' (Respondent R11)

From this we can see that businesses are time constrained and that time will not be wasted if information does not appear to be relevant to them or if they simply cannot find the information. Thus, respondents appeared to be very time conscious during

search. Respondent R6 also discussed how she found business advisory sites as being particularly difficult to use resulting in taking more time to navigate and find information.

'Business information sites tend to draw you in with maybe some pretty colours, as soon as you click on something you are bombarded with an information overload with so many links and you have no idea where to go, it is very frustrating, and who has the time to spend going through all of that? During business hours you are attending to your business. After that you can be attending to family or have other things that you need to do. They (Business Advisory Sites) *have to realise that businesses don't have all day to browse their website, and if I thought it was going to take me too long to find the information then I'd leave the website. They would actually be giving support indirectly by improving this and reducing the time it takes' (Respondent R6)*

Respondent R8 further supported these arguments and commented:

'It's all down to time; at the end of the day the old cliché, time is money really is true. If I can't go on to a website and find what I need within the first couple of minutes, I simply leave the site. I am not going to look around like a headless chicken searching for advice or funding, when I might not even know what exactly it is I am looking for. It almost has to be catered for you as the business. When I did go onto search for funding advice, I couldn't find a thing related to what I do so I left' (Respondent R8).

These findings suggest that while it is quite clear to see that the Internet may be an important part of businesses operations. It can be seen that when searching for advisory information 'the perceived length of time spent' on the website is an important factor in influencing whether the user continues or abandons their search on the site. This is a variable that has not been discussed in previous studies and may be context specific as no previous studies have explored the experiential aspect of a utilitarian search. While in an online B2C environment, users may have more time to spend browsing while shopping. However, in an information seeking context and more specifically a business context we can see from these findings that search is goal-directed with time constraints. Respondents R4 and R10 comment that in a social context online searching is different.

'In comparison to searching for information for the business, in a social environment I am quite happy to browse and take my time. It can be a form of relaxing like reading the paper… I use the iPad and browse. I wouldn't do that searching for business information' (*Respondent R4).*

'If I am shopping online in a personal context, then yeah I will browse various sites. I love shoes for example, so I will browse various sites that sell shoes. I might not buy any but I like to go for a look and I take my time' (Respondent R10).

This comparison suggests that a difference between searching online in a business context to searching online in a personal context exists and further supports the rational for identifying the influencing variables in searching in a utilitarian context for business advisory information. The variable of time outlined in this section is one that the study did not initially consider. The exploratory research has made this variable apparent, and therefore requires attention in the study's theoretical framework.

7.3 Website Aesthetics

Website aesthetics were outlined as an important variable influencing the customers experience on business advisory sites. Respondents commented on the importance of the website design and layout. The findings show that customers searching for business advisory information expect a website to look good. Respondent R12 commented:

'I think how a site looks is very important, if the site doesn't look good you are unlikely to stay or even go back. I need the site to be inviting to start looking at it. If there is simply just too much information displayed on the page it puts you off' (Respondent R12).

Supporting this Respondent R3 commented:

'It is definitely the layout and colour scheme and the overall look that can determine whether or not you stay on the site. So, the actual graphic ... The graphic design of the actual website. That's probably the most important. If I come across a website and it

looks really boring, then I quickly click off it, no matter what, even if it could help my business and I know that sounds a bit ridiculous. If I find one that's quite pleasing on the eye, quite bright and spacious, then I'm like, Okay, I'll stay on it…. The amount of information and the organisation of the information are important, it needs to be shown clearly and that's all part of the design. I would rather have a website that has 20 pages of information all spread out rather than a website that has five pages of information and it's all crammed on' (Respondent R3)

These findings show that the 'look of the website' as well as the 'layout of the website' are important factors to customers. The amount of information displayed on the website has an influence on the customer's perception of the website's design. It can be seen that the design of the site is the first impression that customers get and this can influence their thoughts going forward. Respondent R7 commented:

'*If the site doesn't look good and is not well organised this put me off straight away. This gives me the perception that they are not an up to date organisation and I wouldn't want to get business advice from an organisation that I perceive that way. The site must be attractive to lure you into it. It needs to be organised well so it provides a clear path. If I'm on the site and the colours and look is just off, then I will leave. The same would go if I was to step into someone's office for advice and it was messy and cluttered I would be away' (Respondent R7)*

Respondent R7 provides us with an interesting insight by comparing the website to an offline office environment. It can be seen that the same principles are being applied to both online and offline environments, which has been suggested in the B2C shopping environment. Customers come to the website with the same frame of mind as they come to an office, expecting it to be organised and look good.

Moreover, Respondents R8 and R6 further support the notion of an aesthetically pleasing website.

The look of the site is very important, a bad looking site in my opinion harms the credibility of the organisation and if it doesn't look good you are not going to hang

around on it or take the time to look through the information. It is likely to take longer and in business you're time constrained. (Respondent R8)

Additionally, respondent R6 explained:

'I like a site that is just clean and simple. I don't like websites with stuff everywhere and the layout is awful, it needs to look attractive in order to keep you on the site. I really don't like when the menus of the website are not self-explanatory, you are having to guess what would be on that section of the website. There are so many business resources on the web, so you can leave a site and go to another.' (Respondent R6)

Respondent R8 again highlighted the need for an aesthetically pleasing website. In addition, this respondent and in line with respondent R7's comment above suggests that the credibility of the organisation can be effected if the website design is not perceived as being good. Respondents suggest that a poor website design leads you to leaving the website as it gives off the perception that it will take longer to complete a task if the site does not look good. This finding again highlights the notion of 'time constraints' with searching for business advisory information.

Respondent R6 further points to a clean and simple website design as an import factor. The layout and look of the site was further highlighted as being key to keeping users on the site. However, Respondent R13 suggests that there is more to web aesthetics than simply just the arguments that come with cost and time.

'Website design, is an emotional thing, it is much, much deeper and more powerful than the economic argument of just cost and time. Having a site that is well designed and looks good is important. If you don't like the look of the site, you leave, simple as that. If you're on a site that is attractive, you as a person even feel good, you are more willing to spend more time, because you don't leave, you might have feelings of confidence because of a nice looking website, confident in the expectation that you will find what you came for' (Respondent 013).

These findings on website aesthetics highlight the influencing role that such a variable plays when customers are searching for business advisory information. Each of the

respondents outlined above find website aesthetics as a variable that could cause them to abandon or continue their search on a business advisory site. While comments are only outlined by R12, R3, R7, R8, R6, R13 respectively, each respondent in the exploratory interviews acknowledge the importance of website aesthetics as an influential factor in online business advice search.

7.4 Enjoyment

Enjoyment in the online experience has been outlined as an important factor in numerous research studies as discussed in the literature chapters and in the conceptual chapter. As a result, enjoyment was a variable that ought to be explored in the exploratory interviews. In relation to enjoyment when searching for business advisory information Respondent R1 commented:

'Enjoyment isn't something that I believe is overly necessary nor something that I would expect when searching for business information. How enjoyable can searching for funding advice or tax advice be to someone, so it isn't something I would expect. There are more important factors.' (Respondent R1)

Additionally, Respondent R3 further suggested that enjoyment is not a necessity when searching in a business context.

'I think you want a site that provides you what you are looking for, you might not get enjoyment out of it but you get what you are looking for. I would say that is an element of satisfaction really' (Respondent R3)

These comments show us that enjoyment may not be an important element in business information search, which again highlights differences between business information seeking and information seeking in a social context.

'I certainly don't want to get bored when I am online but I don't need to say I enjoyed that' (Respondent R9).

Respondent R8 added:

'How much fun or enjoyment can you get out of looking for business advisory information on funding or something...? No not something I need' (Respondent R8).

These findings show that enjoyment is possibly surplus in a business context. The need to enjoy an experience online may be more appropriate in a social browsing setting where the activity itself is carried out for the purpose of enjoyment. Respondent R11 comments that:

'We have all been on a website that has effectively fried our brain, causing no end of problems and clearly not an enjoyable experience. I believe a lot of these issues come down to other factors such as the design of the site, how much you can do with the site, how easy it is to use. These things for me are more important than the enjoyment. It can come into it but it is driven by these other factors. Getting enjoyment out of online shopping or reading blogs in a personal situation is different' (Respondent R11).

Respondent R5 and R10 added:

'I come to a business advisory site for a specific reason, whether it is enjoyable or not is irrelevant for me' (Respondent R5).

'My priority is to get what I came for, not to have fun!' (Respondent R10)

These comments quite clearly highlight that enjoyment is not a key requirement in a business context and thus helps the study to reduce the number of variables examined. The purpose of the exploratory research as previously outlined is to provide comprehensiveness and parsimony (Whetten, 1989). Deleting irrelevant variables does exactly that. In spite of this Respondent R12 comments:

'Getting enjoyment out of what you are doing is always important, no matter what it is. Yes having a level of enjoyment while searching for the information I am looking for would be nice. Although, if I am being realistic and in reality it isn't something that is always needed. If I am to find what I want and didn't get enjoyment out of it, I won't be bothered. If I was to search and not find what I want and didn't get enjoyment out of it,

I would be more frustrated and annoyed at the fact of not obtaining the information than enjoying my time. What I am saying is it is nice to enjoy but it is certainly down the pecking order' (Respondent R2).

We can see from Respondent R2 that while 'enjoyment' may be deemed as something that can add value to an online experience, it is still in line with other respondents' comments that 'enjoyment' can be seen as somewhat supplementary and not a critical factor for businesses searching for information. The overall comments from respondents again highlight the utilitarian 'goal directed' nature of business advisory information search. Enjoyment has been outlined in the literature as a key variable in online shopping contexts (Rose et al, 2012; Hoffman and Novak, 2009). These findings show a contrasting view on enjoyment. Along with the goal directed nature of search, we can also see how these findings fall in line with the variable of 'time' echoing the search process for business advisory information. Those searching for business advisory information seem to want to obtain the information as quickly as possible and leave, with enjoyment being something that is bypassed.

7.5 Control (Ease of Use and Customisation)

The level of control on a website as highlighted from the literature refers to how easy the site is to use and how much the user can customise the site to their own needs (Rose et al, 2012; Hoffman and Novak, 2009; Davis et al, 1993). Respondents highlighted an easy to use site as being an important element in searching for business advisory information. Being able to identify yourself as a company (customisation) was also seen as an important element in online searching. Respondent R15 and R14 commented:

'So being able to narrow down your search, so then you're becoming much more focused in terms of what you're looking for, being able to do what you want to do rather than what the site is forcing you to do' (Respondent R15).

'Time is a big factor because you can lose hours online. So, it's getting in and out quickly, so the use of something that allows you to narrow down the options, you know, if it's funding, you know, what kind of business, what is it that you're looking for? So, if

you have that facility to put in the advanced search functionality, you feel you are getting what you want quickly' (Respondent R14)

These comments from Respondent R15 and R14 show that users seek a level of control over their own experience on the site. The use of advanced functions such as filtering and selecting the links you want to choose seems to be important to users. Respondent R9 and R7 supported this notion:

'I want to be able to see what is relevant to me, what is worth reading. So I need to be able to filter that content. So for instance in a business context, it might be me selecting the industry of my company, then the size, then the location and so on. This allows me to have that control and find only what it is I need. That is important, as it also saves you time' (Respondent R09).

'I need a level of control over what I am doing; I like to be able to select the categories I want to see and show results that way. It should feel I am deciding where to go and what I want to see and not the website doing it for me. That approach often makes it more time consuming and in the end you get annoyed and leave, as I said I am inpatient like most people' (Respondent R7).

These comments show that users want to be able to customise their own experience by selecting content in which they believe is relevant to them. The findings highlight the notion of time yet again with comments on *'it also saves you time'* and '*I am impatient like most people'*. These findings show that being able to have an element of control through being able to decide which information you see is an important variable for businesses searching for information. Further comments from the interviews show that an easy to use site is very important to businesses and again can be seen as being tied to time constraints.

When discussing website navigation respondents R8, R4 and R6 commented:

'I think regardless of what the website is about, the flow around the website shouldn't be challenging, ever, because even if you have brilliant information, the flow is most

important this can make up for a lack of skills. The flow, how the website is structured is crucial, it needs to be easy for me to use or I would look elsewhere' (Respondent R8).

'If the website is quite easy to go around and you can find the information fairly quickly, you simply feel like you're in control of everything and that's important, I need a site that I feel comfortable using and I can do things quickly without much trouble' (*Respondent R4).*

'*Being able to get back easily is important, having control over where to go. 'Cos it's terrible, when people haven't got an easy way to move back and forward. A clear path is important on the site, making it as simple as possible. Some site just don't allow you to do that…' (Respondent R6).*

The findings therefore suggest that a site that is easy to use and offers users the ability to move from point A to point B freely without strain then this adds to the online experience. Users appear to have an expectation that the site should allow them to do what they want to do, rather than what the site itself wants its users to do. The 'customisation' and 'ease of use' highlighted in this section are key parts of control and outlines the purpose and need of such a variable. It can be seen from the following comments from R14, R3 and R1 that control is not only an important feature online, but also an expectation of users.

'Having that level of control is definitely important, it allows me to do what I want to do and how I want to do it' (Respondent R14).

'It's important that I am able to do what I want on the site and have some control over my own actions' (Respondent R9).

'I like control in all aspects, it is no different online. If I don't feel as though I have any control over what I am doing on the site I would go off to another site or call someone' (Respondent R1).

Overall, these findings suggest that respondents regard control as having the ability to customise the site to their own needs by selecting appropriate categories, filtering

content and selecting what they want to see. In addition, and in line with the literature the findings further define control as the site being easy to use, being able to be in control of your own actions, deciding which link to click, which item to choose and not being forced down a path decided by the website, allowing the user to freely navigate from one point of the site to another with relative ease. Thus, these findings outline control as an important element that needs to be explored in the quantitative phase of the study.

7.6 Engagement

Engagement can be seen as another variable that has received much attention within the current body of literature with regard to the online customer experience. However, the results from this study suggest that engagement, like enjoyment, can be seen as a supplementary factor in the study's business information seeking context. Users made comments that while being engaged with the content that you have found is beneficial, it would be difficult for such a site to provide a highly engaging environment. Respondents R1, R13 and R6 commented:

'I think this is similar to the argument with enjoyment on the site. I want to simply come to the site and get what I need. I don't need the site to do anything special that is trying to be engaging' (Respondent R1).

'I see aspects such as how easy the site is to use, how relevant the content is to me and how the site looks as being more important. Maybe that leads to engagement' (Respondent R13).

'Engagement for me is where I am involved more with the site. That isn't really needed because that would tend to be more of an investment of my time, which as I have mentioned before, I would rather that was less' (Respondent R13).

These findings illustrate that respondents believe that there are more important factors that should be of a greater concern for marketers. While an engaging site may be beneficial in a social context, in a business context where users want to find information

quickly and efficiently, developing a site based on providing an engaging experience may be the wrong approach. Upon further probing on the topic, respondents suggested.

'I prefer where I can actually talk to someone. I see that as being beneficial, rather than tools that I've to use, such as a funding calculator, which some sites have, which is supposed to be the engaging tool. That to me is just time consuming and you often can't outline results that match your company's needs' (Respondent R4)

Respondent R10 explained:

'I like to have control over what I want to see. That is more important to me and if that is engagement then fine' (Respondent R10)

Respondent R2 added:

'Yeah engagement seems to be what everyone speaks of at social media talks I go to. I think it becomes obvious in that environment when having a discussion. You are actively involved in talking to someone. I think that is maybe more important the ability to talk' (Respondent R2).

When probing took place we could see a pattern emerge where respondents felt being able to communicate with someone as being part of engagement or a more important element of engagement within a business context. Respondents commented that engagement was something that is important in social network channels and in sites such as ecommerce website where browsing and searching is done as a social activity. However, the overall general feeling from respondents is that engagement is not a priority for an effective experience. In line with the objective of the exploratory research this is a variable that will be deleted from the theoretical framework.

7.7 Flow- Concentration/Focussed Attention

In addition to the above variables, the variable of 'Concentration' often referred to as 'Focussed Attention' was discussed with respondents. This variable appears to be important to respondents, possibly due to the more serious nature of the search. The

term flow has been coined in the literature by Hoffman and Novak (2009) and can be seen as the absorbed and focused attention of an individual while online. It can be seen that such a definition of flow as outlined in chapter 4 is effectively what we can see from the findings of the exploratory interviews as focused attention. Respondents suggest that being able to concentrate on the task is very important. Respondents R10, R3, R13 and R4 commented:

'I need to be able to focus on the task at hand. If I become distracted I lose this focus and I am likely to leave' (Respondent R10).

'A website shouldn't have any distractions and should help you in as many ways as possible to complete what you came to do' (Respondent R3).

'I like to become focused on what I am doing on a site and I guess that comes down to the site allowing me to focus properly, no pop-up ads and the content being good enough. Sometimes you can get so engrossed in what you are doing that you can lose track of time, especially when it is something important to your business' (Respondent R13).

'I hate getting distracted on a site, it should allow me to focus on what I came to do without making me click or navigate certain places' (Respondent R4).

The findings from the respondents show the importance of being able to concentrate and focus on the task at hand. Respondents like to be able to focus on what they are doing as important decisions may be made from the information provided. Respondent R6 outlined:

'Any decision made for my business is important, so I need to be able to pay attention to what I am doing with no distractions on the site or off the site for that matter' (Respondent R6).

While marketers cannot control the physical environment in which the user is in while completing their task, the findings show that steps ought to be taken to ensure the online environment allows the user to focus on their task, without any distractions.

Respondents R11 and R3 point to the following variables as vehicles that enable users to focus:

'It's the design and layout of the site, the navigation, how easy it is to go through the site and not being taken down the wrong path that allows you to focus on your task. If the website can do that, then you have a chance of being able to concentrate on what you've come to do' (Respondent R11)

'If you're got lots of pages, then it makes it look more professional I think, and more like topic-orientated rather than just squeezing it all on to a short number of pages. It means as well that you can click between the information and keep your attention going, it keeps you focussed on your task if you don't have to fight with the site, too much information on a page makes you lose concentration, it puts you off and you end up leaving' (Respondent R3).

In addition, Respondent R7 supports this notion by commenting:

'The look of the site and how easy it is to use and how much it caters towards your needs allows you to focus on the task that you came to complete. If all of this is good, then you can become deep in thought with what you are doing' (Respondent R7).

The findings from R11, R3 and R7 illustrates that variables such as the design of the site, layout, navigation and how easy the site is to use are important variables in allowing respondents to focus on their task. Respondents outlined that the information that is often sought in a business context is important for the business, as a result being able to properly focus on the task is an important factor on the user's experience. Thus, we can see that the variable of focused attention (concentration) is important to explore further in this study and shall be tested in the quantitative phase of the research.

7.8 Website Credibility

The literature outlined website credibility as an important variable that influences customers within the online environment Lucassen et al, 2013; Sundar, 2008; Rieh, 2002). As a result, the exploratory interviews explored the notion of website credibility.

Two different forms credibility were outlined in the literature of surface characteristics credibility and content credibility, the findings illustrate that website credibility should focus on the surface characteristics of the site and content credibility is more appropriately labelled 'quality of information'. Respondents outlined the importance of credibility on a website and highlighted a number of different variables that can influence the credibility of a site. Respondents R13, R4, R8 and R3 commented:

'The thing that screams at me, is where the domain is - I mean, if it's 'e.ru' or '.cz' or '.cm', I get very worried about that, if I am able to see information is from a .gov or something similar then I am more at ease with the information' (Respondent R13).

Respondent R4 further points out the problems of the Internet and website credibility:

'The Internet is a great thing, however, it is open to abuse really. Anyone can put a website together and put anything on that site that they want. You need to be able to check where the information has come from' (Respondent R4)

Respondent R8 added:

'The first thing I would look at when I go on a website, if I don't find this piece of information straight away, what already puts me off a bit is where a company is registered, the registration number. I also judge the credibility of the site by the way it looks, if it looks cheap and has links that don't work or doesn't look up to date, it won't seem credible to me. I also look for any accreditations or associations the company has' (Respondent R8)

The above findings illustrate the importance of being able to confirm who or where the information has come from; respondent R3 outlines the importance of the brand.

'If it's a well-known brand that's publishing the information, then I'd be really OK, it's from a trusted source. If it's got a URL that's got '.org' or '.ac.uk' '.gov' and it seems to come from an educational background or institute, that would make me think, yeah, it's OK. I guess, as well, if it's an article and it actually has the name and position of the person that's actually wrote the article, then that can help as well, because if I scroll

down and say, for example, like my project because it's about knee damage, so if I'm reading an article and it's by Dr whatever, a physiotherapist, there is credibility to it, I can verify the credentials of that person or the site' (Respondent R3).

These findings show that users want to be able to confirm the credentials of an organisation or person that has written the article or responsible for the information provided. Recognition of the brand name can be seen as a credential used to evaluate how credible the information is likely to be. Additionally, Respondent R13 further emphasised the importance of credibility:

'You see, people use the Internet as a source of information on which to build business strategies and, if that information is flawed, then it's garbage in, garbage out. There are monsters out there on the Internet and you've got to have your wits about you as you are trawling through, otherwise you can get suckered in to some absolutely stupid decisions' (Respondent R13).

Respondents R13 is further supported by Respondent R1:

'In the business environment, there is always some sort of proclaimed 'guru', which really frustrates me, 20 years social media guru, when social media has only been around for 10 years… These kinds of things put me off and are why I need to know where the information has come from, can it be confirmed, can I find out easily who the organisation is? If I am taking business advice from them these aspects are critical' (Respondent R1).

We can see that due to the important nature of the search, businesses want to be able to check and confirm that the website is credible. The findings from R13, R4, R8, R1 and R3 show that business and strategic decisions are being made from the information provided on such business advisory sites, thus the credibility of the site is an important variable influencing users search.

In addition to the sites credentials or associations, brand, URL of the site, sources the site uses, respondents R7, R5 and R10 further suggest that the look and style of the site (the website aesthetics) has an influence on how credible the site appears to users.

'I am highly unlikely to want to engage with the organisation unless there's some confirmation that I can get that the site will be OK, if the website isn't a positive experience, I'm likely to just find the information somewhere else. The website needs to look good. It is about first impressions, if they can't deliver a nice website, what is their service going to be like' (Respondent R7).

R5 added:

'I suppose; we'd look at things from a superficial surface. We do, let's face it. Nine times out of ten, you are looking at the look of something, the way that it comes across to you. This is how you judge the credibility of the site I think' (*Respondent R5).*

Further supporting R5 and R7's comments, R10 suggests:

'If the site looks good, works well and you can actually do what you are trying to achieve, then for me the credibility of the site is high' (Respondent R10).

This section has outlined the importance of website credibility. We can see from the findings that businesses use particular methods to evaluate the credibility of a website, looking at key surface characteristics of the site. A summary of the methods used find an evaluation of the sources, checking accreditation or company credentials, the brand of the website, the URL and the websites aesthetics.

Closely aligned with website credibility, the interviews explored information quality. The next section will provide findings regarding respondents' views on the quality of the information provided on a business advisory website.

7.9 Information Quality

The quality of the information provided by a website has been outlined as an important factor in influencing the customer's experience. Respondents from the exploratory interviews highlighted the significance of information quality as a key indicator as to

whether they abandon their search or not. Some respondents referred to factual accuracy as being important in the information provided. Respondent R13 and R9 commented:

'If it's a subject area that I know something about, I will have a look around to see what they've written about that particular subject area and, if the content is inconsistent with what I know to be the facts, then I just simply condemn that website utterly because you cannot separate the good from the bad there, especially if you don't know…'(Respondent R13).

'The actual accuracy and quality of the information provided on the site is extremely important. I want to see supported facts and try and back that up, either by talking to the organisation or from other sources' (Respondent R9).

The comments from respondent R13 and R9 are further supported by respondent R7 who alludes:

'If there is information there that's not accurate or that's hideously out-of-date, it's like losing credit, in my view, of the whole site. It has got to be factually correct to show that the information being provided is quality information' (Respondent R7).

These findings from R13, R9 and R7 illustrate that the information provided by business advisory sites needs to be up to date and accurate. Failing such accuracy results in users abandoning their search and going elsewhere. Respondent R2 confirms:

'There are so many sites out there that you can seek advisory services from… if the information is not good then you move to another site' (Respondent R2).

Respondent R4 further added to respondent R2's argument by stating:

'It needs to be good quality information with some detail attached to it without overwhelming you. Another website that offers similar advice and content is only a click away!' (Respondent R4).

It is quite clear to see that respondents are happy to move to an alternative website if they feel that the site does not have quality content. Further to this respondent R12 suggested that *'you don't need to be an expert in the subject area to assess the quality of the content'.* Respondent R12 went on to explain that:

'I've been on websites where there are sections of the website with incorrect spelling or grammar mistakes. If this is the case, I see the content as being of poor quality and would seek information elsewhere. I wouldn't be taking advice from someone with poor information and spelling mistakes (Respondent R12).

The results suggest that the information quality is an important variable to explore further in this study. Other respondents highlighted that the Internet has created an environment of information overload and results in customers not knowing what is good quality information. Respondent R2 commented:

'The Internet has taken the amount of information we can find into over-drive! This overload of information makes it very difficult to figure out what is the good quality and credible information. It is now at the point I think that we need to consult with someone and seek clarification' (Respondent R2).

Respondent R2's comments reflect that of the literature and earlier comments from respondents regarding time constraints. Respondent R11 further emphasised the issue of information overload and time constraints.

'Poor information is everywhere… It is difficult amongst the abundance of information we have access to, to actually decipher the good information in a timely manner. As I have previously mentioned time is precious and do I have time to wade through everything… no is the answer' (Respondent R11).

Each of these comments outlines the importance of high quality information. It is therefore important that the study includes the variable of 'information quality' as part of the theoretical framework to be tested later in the study.

7.10 Online Emotions

Customer emotions are a well-studied topic and have received much attention over recent years in relation to the online environment. From the exploratory findings it can be seen that emotions are prevalent during a utilitarian search for business advisory information. As previously mentioned, many respondents outlined the importance of business information search and thus emotions are at the surface of such a search. It can be seen from the findings of the research that users often get frustrated when they cannot find what they are looking for quickly. Respondent R14 added:

'I can often get really annoyed if I am trying to do something quickly and the site just won't allow me to do it, or I just can't find what I should be finding' (Respondent R14).

R13 added:

'In business you want to get things done quickly, you are more impatient because you are usually operating within a specific time-frame, if you can't get what you need then you start to become frustrated and annoyed' (Respondent R13).

These findings outline that due to the aforementioned time constraints surrounding business search, customers are likely to become annoyed or frustrated when they are unable to complete their task in a timely manner.

Furthermore, the analysis form the exploratory interviews highlight that users can also become frustrated and annoyed when the website does not operate as they would expect. Restrictive navigation and websites that are difficult to use appear to elect such emotions. Respondent R12 points out:

'If I click a link and it doesn't work or takes me to something totally different that frustrates and annoys me greatly and I am likely just to leave the site, the site needs to be simple to use' (Respondent R12).

Respondent R14 further commented that:

'The frustration index is often very high with websites, and I want to come away from a website feeling I have achieved something. I run my own business. It's just me. So, in any one year, we've only got maybe 250 working days, eight hours in each of these working days, giving away half an hour on a spurious search for a website that's been badly designed, that is time I can't afford and I don't wish to afford' (Respondent R14).

Respondent R11 again discussed the issue of information overload online along with the uncertainty and frustration that such overload can bring.

'On many advisory sites there's so much information, it's almost too much, information overload and that can actually be a problem, you become bombarded, you are unsure what to do, you often can't tell how good the information is and then you get frustrated and annoyed that you can't get what you're looking for' (Respondent R11).

The uncertainty identified here from respondent R11 shows us that websites could be doing themselves damage by providing users too much information and making the choice for customers overwhelming.

Respondent R6 discussed:

'You want to be able to quickly find the information rather than being bombarded with lots of other things that are moving around, or too much other noise it just creates frustration at the end of the day. The site needs to look good and feel good when you're using it, letting you move around without restrictions' (Respondent R6).

The findings outline many factors that respondents believe lead to frustration when searching for business advisory information. Respondents subsequently commented that a well-designed website, a website that is easy to use and one that seems credible help to overcome emotions of frustration, anxiety and uncertainty. Respondent R11 commented:

'So it's important that the site is easy to use, well laid out and looks good, this helps to reassure you' (Respondent R11).

Further adding to this respondent R3 commented:

'When your searching for something you know little about it is always difficult, so you can become frustrated quickly when you cannot find it. To help businesses, advisory sites ought to provide a good site that is simple to help overcome these pains' (Respondent R3).

These findings show that frustration can occur when searching for business advisory information and this may be due to the lack of knowledge in the area and the website not being supportive enough to overcome this lack of knowledge. In essence it is the websites role to provide such knowledge. Respondent R8 outlines an occasion when searching for seminar dates for business advice:

'I wanted to get to a point where I knew exactly the dates and locations of specific seminars that they did. I took it to the nth degree and then, truthfully, I was quite frustrated because the last point in that was, you know, fill in a contact form and we'll get back to you. I just don't like that it should be immediate, so I didn't get the level of information I wanted' (Respondent R8).

Further to the findings regarding 'frustration' when searching for information respondent R7 also added:

'It can be quite frustrating if the information is not up to date and it can make you a bit wary and uncertain whether or not you should use the information' (Respondent R7).

Respondent R6 commented that many websites while searching for business information has lead the respondent down paths that result in dead ends. This has resulted in time wasted and high levels of frustration. The respondent outlined:

'I have been to some business guidance websites where it is an absolute nightmare and you do go down dark alleyways and you really don't quite know where you're going to end up, and I have got incredibly frustrated and, out of frustration, I have got to a point where I've just thought, uh, where's the telephone line, where's the contact information, I need to speak with someone and I've either hurried off a form to somebody in the full

expectation that it's going into another dark alleyway and they'll never see it' (Respondent R6).

The findings that can be drawn from respondent R6 outlines communication as an aid that can help users while searching for business advisory information. Respondent R6 outlined the difficulty of navigating a site as an issue causing frustration. Additionally, the respondent commented on further frustration in the expectation that such a query through a contact form would not be dealt with. Thus, such expectation can result in the aforementioned uncertainty.

The results from this section illustrate that frustration, anxiety and uncertainty can surround a search for business advisory information. Respondents outlined numerous reasons for such emotions including, the web site design, layout, navigation, poor quality and credibility, as well as the website being difficult to use. It can be seen from the above findings that emotions play a role in searching for business advisory information. The emotions outlined, frustration, anxiety and uncertainty appear to lead users to abandoning their search. It is therefore important that the study continues to explore customer emotions in the quantitative stage of the research.

7.11 Social Interaction

It is an objective of this study to understand the potential role of customer support through social interaction during a utilitarian search for business advisory information. Some of the findings outlined in the previous sections have hinted towards the usefulness of being able to communicate with service staff in order to complete a search for business advisory information. Respondent R7 commented:

'Searching for business information on funding or guidance or even a business event isn't something you do every day. Maybe once, twice a year, so it isn't a natural thing. It's not like going to buy clothing online or searching for a holiday. It is more complicated and often additional support is needed in understanding what you're looking for and even just finding it' (Respondent R7).

Respondent R7 informs us that searching for business advisory information can be a complex task that is not often completed. As a result, aiding customers in what can be seen as somewhat of an unfamiliar environment may help them to complete their task.

Before going on to discussing social interaction it was important to explore and gain an understanding on what respondents recognise as social interaction. Respondent R2 suggested:

'Where you can communicate with people to a certain degree and that communication is two way, maybe instantly or with a lag for response, but it has to be two way' (Respondent R1).

Respondent R2 further added:

'I think social interaction is communicating with someone in one of the many channels, online social interaction is communicating with people, through a computer through a 1:1 discussion' (Respondent R2).

In addition, respondent R15 and R10 also suggested that social interaction involved 1:1 communication:

'I suppose online social interaction is having the opportunity for spontaneous two-way dialogue, with informed parties on topics of relevance to you personally' (Respondent R15).

'Being able to communicate with someone online is social interaction, being able to give a response and talk back instantly' (Respondent R10).

These findings show that in the context of this study social interaction can be defined as two-way communication on a topic of relevance to the customer occurring in real-time or with a slight delay.

Respondent R3 further commented:

'Social interactivity to me just makes me think interacting with other people, and then it gets to Facebook and Twitter, you can interact with basically anyone, but the interaction has obviously got to be two-way. When searching for business information online, I don't think it matters whether that interaction remains online or offline. You often need to discuss information found with someone to move forward with your decision, especially in business when an important decision is possibly being made from it' (Respondent R3).

This comment from respondent R3 outlines the need for communication when searching for business advisory information. This communication allows business to make more informed decisions with confidence. Respondent R6 comments:

'For me a level of communication is important. If I am able to discuss what I am looking for with someone on the site this would give me more confidence that the information I am getting is right' (Respondent R6).

Further to this, respondent R4 suggests that communication in whatever form is necessary in the business environment, due to the aforementioned complex nature of the information and the unfamiliar environment. Respondent R4 comments:

'If I had a question, and if it's available I'd probably use an online live chat or something similar to see if I could have my question answered quickly. I think if I knew my enquiry was a bit more complicated or I knew it was going to have a long-winded explanation to it, I would probably pick up the telephone and get to speak to the person. The website would get me to a point I think and then I need someone in some kind of way to assist me, either by phone or online, as long as you can easily get in touch with someone to help you to the next point' (Respondent R4).

Respondent R4 again outlines the need for communication. The notion of help or aid has been outlined by a number of respondents. However, customers illustrated that social interaction needs to be with service staff rather than other businesses. Respondents outlined that they would be unwilling to share knowledge and experience with other competitor businesses, as this will have an effect on their competitive advantage.

Respondent R9 and R16 commented:

'I'd seek support online from an advisor of a business advisory website. However, I wouldn't seek the support of another business online operating within the same area. I wouldn't know if I could trust the advice and I wouldn't want to look like I need help from a competitor and why would they even offer the help…? I would be unwilling to help a competitor!' (Respondent R9).

'I wouldn't share information or give advice to a competitor… so I wouldn't expect to receive it… However, being able to communicate with business advisors would be very advantageous' (Respondent R16).

As a result, the researcher took the opportunity to probe further and explore the notion of online help with service staff.

7.12 Customer Support

The definition of social interaction illustrating the need for communicating with someone (service staff) when searching for business advisory information propelled the need to further explore 'support' or 'assistance' when searching for such information online. At this point stimulus material was revealed to respondents, with different options for obtaining help online with the options of social network channels, forums, telephone call options and live chat. The following findings show that respondents are favourable towards real time help and assistance through private live chat and online help desk channels.

'Being given that helping hand on a site certainly makes a difference, I have experienced it with O2 through a chat function and it helped me complete my task. If I'm searching funding, I don't know what I can apply for so a function like O2 to help you would be very beneficial I think' (Respondent R8).

Respondent R14 also commented:

'I would be more likely to stay on a site if I was able to communicate with the company on there and find out an answer to my question. It might be just telling me where to get the information on that site, but that help makes all the difference and caters the service of the site to my business needs' (Respondent R14).

The findings from respondent R8 and R14 highlight that additional guidance during search may be beneficial to customers. Respondent R14 points to a site seeming as though it is centred around the customer when live help or assistance is available. In relation to live assistance on a website, respondent R12 commented:

'I think having live help online, through one of these live chat functions then it helps the user of the site. It is so easy to get frustrated and turned off by a website and you come away annoyed that you couldn't find what you were looking for. I do get frustrated at times and then I can't concentrate and I leave the site that I am on and sometimes I don't even try other websites, because I am frustrated. So being able to have that live help on the site would help to ease that frustration and get an answer to your problem one way or another' (Respondent R12).

Respondent R12's comments are in line with respondent R3 who highlights:

*'An assistance feature on an advisory site such as (*name removed*), would help a lot. I previously mentioned searching for information on exporting can be difficult and time consuming, which most often ends in a frustrating manner. Possibly emailing off to someone in hope you'll get a reply (Respondent R3).*

These comments from R14 and R3 suggest that instant assistance may help customers to overcome emotions of frustration and uncertainty when searching for information. Respondent R9 suggests:

'If there is a help function then you can seek reassurance from them and this helps you to make decisions and take the next step' (Respondent R9).

Respondent R9 therefore suggests that being able to seek assistance live on a site helps to overcome issues of uncertainty, as the customer is able to seek reassurance.

Respondents R5 and R4 commented that assistance online has become somewhat of an expectation and part of the service that advisory sites ought to offer.

'I think it's very useful, being able to talk, find out information, being able to get advice and help you on to the next stage of your search. That for me is all part of the service that I should be getting and expect. Website owners and in particular in this advisory context, people need to be pointed in the right direction a lot because they are not experts otherwise they wouldn't be there' (Respondent R5).

Respondent R4 added:

'When search is for something as important as advisory information for your business, you will want to talk to someone and make sure what you are getting is right. Or it might be where to get the information, this help is very important. Communicating is a big part of researching and you should be allowed to communicate easily' (Respondent R4).

However, while customers outlined the need for help and assistance online. While discussing the use of social networking sites in their ability to provide online customer support as identified through the literature review, businesses opposed to such a use for social networking sites in providing business advisory services

Respondent R15 added:

'I definitely wouldn't have a conversation with someone from (name removed) on their Facebook or Twitter channels. Not only on Twitter are you restricted to what you can say within the character limit but it is not a private environment to discuss what may be quite confidential information' (Respondent R15).

Respondent R6, R3 and R9 also commented:

'No social networks wouldn't work for giving businesses advisory services… I wouldn't want any of my competitors finding out my business and seeing that I am seeking support as well' (Respondent R6).

'I use these channels such as Twitter if I want the attention of the company with regard to a complaint. I find I get the quickest responses that way. I wouldn't however engage in a conversation on these sites about my businesses, giving private information out for everyone else to see! Not only that, I think for a business advisory function then it would seem a little unprofessional to try and deliver their services on a social network…' (Respondent R3).

'I wouldn't discuss on Twitter or LinkedIn for support. Privacy is important in the conversation; you would be letting other businesses know your personal details. Live chat functions as I mentioned before would be far more appropriate in offering a level of service to communicate with the organisation' (Respondent R9).

These comments illustrate that businesses would not want to seek customer support on social networking sites such as Facebook, Twitter and LinkedIn due to the inability to have a private conversation with the advisory site. Respondents illustrated the need for conversations with regard to obtaining business advisory services on business advisory websites being private and confidential between the organisation and the business. In spite of this respondents illustrated a purpose for social network websites in relation to business advisory providers. Respondents R6 and R16 commented:

'I don't believe social networks to be the place to deliver business advisory services. However, receiving communication about events, how the company can support businesses, new initiatives, and testimonials of success are very useful and it keeps the organisation on your mind that they are there if advisory services are required' (Respondent R6).

I wouldn't expect to have to communicate private information on an open social network. I think they have their place as a way for business advisory service providers to deliver messages to their audience, which is useful and keeps you up to date on things' (Respondent R16).

These findings outline a role for help and assistance on business advisory websites. Respondents again outlined that due to the importance of the search, clarification and

assurance is often required. Due to the nature of a 'business advisory websites', respondent's expectations are high in relation to the guidance and support they should receive within the online environment. Respondents outlined social networking sites as being useful to receive communications messages from business advisory websites keeping them up to date, however they highlighted the inappropriateness of social networking sites as a medium to have social interaction and receive business advisory services due to the non-private nature of the discussions. Further to this discussion with respondents, the researcher probed further to discuss in more detail the concept of 'live chat' functions as a vehicle for help or assistance online this will now be discussed in the following section.

7.13 Live Chat

The previous section on help and assistance online found some respondents discussing live chat functions. A deeper discussion on such a function found admiration for a live chat facility to help customers overcome difficulties in search and address pain posts of frustration, uncertainty, credibility and difficult to use sites. Some respondents discussed their past experiences with live chat functions on other types of websites such as technical websites, sales websites and mobile phone sites such as O2 and Vodaphone. This past experience allowed some respondents to elaborate on live chat and discuss how useful such a function may be in the context of business advisory services. Respondent R1 points out:

*'A business advisory site such as (*Name Removed*) is all about providing professional advice. Providing a live chat function offers an online means of discussing with a service advisor! So, as 'advice' is what the service is all about, I see something like a live chat as a function that is vitally important as you are taking that support digitally and moving it into the 21st Century, this for me beats waiting in a telephone line for someone to answer, you can work away while 'chatting'. If you then feel that the task is taking too long you can then initiate a chat (Respondent R1).*

Respondent R3 supports respondent R1 in terms of the importance of a live chat function and the reduced time spent waiting on the telephone:

'I think it is a lot easier and you can see the chat history as well, whereas if you phone somebody, you might have a conversation and then finish the conversation and you would be, like, actually, hang on a minute. What was that they said, you don't always remember… what was half of that conversation about? And then the other thing as well with phone conversations, I know whenever you phone a company, usually it goes to like a switchboard or whatever and you have to wait, whereas with live chat, it's just like there's somebody there waiting for you.' (Respondent R3)

Furthermore, respondents R11, R15 and R9 all discussed the usefulness of a live chat function in relation to time saving and inadvertently the influence on respondent's emotions.

'I think a live chat option would be brilliant if you are searching for business information. It would help to save a lot of time and no doubt point you in the right direction or give you the information that you were looking for. For me that would be a fantastic service and would leave me feeling impressed and happy if I was pointed in the right direction' (Respondent R11).

Respondent R15 added:

'I think you feel more valued as a customer as the company has cared enough to think about their customers' needs. In the context of business advisory services, it is definitely a good thing to have, it shows you have someone there by your side to answer your questions in a timely manner and gives you a bit of confidence and reassurance that's needed. If I am spending more time than I should have to then I really would like to be able to seek support' (Respondent R15).

Further to these findings respondent R9 stated:

*'I think there are times where I'm on (*Name Removed*) website and I am not quite sure if it's for us, and if I could chat and I could just say, I am thinking of this, what do you think, can I get help with this? And if they said, well, this thing is not really for you or, yes, it is for you, then that would be great and I would be happy with that. It saves me*

time and prevents me from becoming frustrated with the site. I'm not bothered if I'm told no we can't help you, but don't waste my time' (Respondent R9).

In addition to the findings from R11, R15 and R9, R6 commented that being able to obtain assistance instantly through a live chat function is beneficial as the concept you are looking at exploring is important to you at that time. If the communication isn't instant its importance may fade away:

'When you're actually working on it, then, a chat option is fantastic you can get what you need or pointed in the right direction there and then. Progress is made. If I don't have the instant chat option the moment has probably passed and because I am impatient I would maybe give it another go to see if I could find something but if I can't I just walk away (Respondent R6).

These findings highlight that respondents can see a value in having a live chat function on a business advisory website. It would appear that respondents see that such a function not only makes the website seem more up to date, but respondents believe that it can save them time, get them an answer that they need and help overcome negative emotions.

Further to this respondent R8 and R7 commented:

'I have used a live chat function with BT and I think it is very very good and it saves a lot of time. I think live chat really adds to the experience on a website, they gave me all the information I needed straight away and I was very impressed. It saved any waiting around. This feature in a business environment would be fantastic it would keep you active on the site' (Respondent R8).

Respondent R7 commented:

'If I got to a point and it was a dead end and a chat box popped up or I was able to go to a chat box, I would definitely use it because it stops it from being a dead end any more. If this option weren't there then I would just pop off the site and be unlikely ever

to return. It really helps when you feel that you're spending too long on the website searching' (Respondent R7).

Each of these findings again illustrate the importance of communication to respondents and the perception that such communication on the site can save time and prevent the user from abandoning their search. Respondent R7 highlighted that not being able to speak to an advisor on the site would result in the respondent abandoning their search if they were unable to find what they were looking for. This comment has been further supported by respondent R8, R9, R15, R3 and R1.

While respondent R6 suggested that communication is important in order to help a customer obtain the information or advice that they need, a live chat option appears to be more beneficial that traditional support via the telephone:

'I think if you're picking up the phone, you feel like you're going to spend more time on it, whereas, at this stage, you are just looking and fact-finding. Instant chat would be much easier than a phone call, I think. You would be saving yourself a lot of time as well as the advisors' (Respondent R6).

Respondent R7 further added:

'Being able to communicate with an organisation, especially in a business context is so important! Being able to do that online and instantly is good service. If I had to spend longer than I thought was necessary on the website then I would look to seek online support. If I didn't have that option I would leave the website. Offering that kind of service would bring me back to a site. If I had to call them up, I might not bother because I think, do I have time for it at the moment, do I want to be hassled and I am likely going to have to wait on hold for a while' (*Respondent R7).*

Overall these findings suggest that social interaction with a service representative is important when searching for business advisory information. It can be seen that online communication can help users to find the information or answer they seek. Live chat functions and online help desks appear to provide the synchronised communication and support that businesses appear to need when searching for business advisory

information. The findings show that businesses simply want to be able to move through the site freely, identifying if information is relevant to them and seeking advice as and when it is required. Respondents commented that searching for business advisory information is not a daily, weekly or even a monthly task. It may only be completed once or twice a year. As a result, the level of familiarity with such a site and its terminology is somewhat limited and thus guidance is often required.

7.14 Theoretical Framework

This study conducted exploratory research in order to provide the aforementioned comprehensiveness and parsimony (Whetten, 1989). The study undertook exploratory research to include only those variables that add value to the study while exploring an area that is considered under-researched. The number of variables outlined in the literature was exhaustive and thus too large to provide insightful results. The exploratory research has outlined the most appropriate variables to be tested. It can be seen that the context of a utilitarian search for business advisory information differs to the context of the studies that many variables were derived from such as online shopping environments and general Internet browsing. As a result, different variables may appear more or less important depending on the context of the search.

The previously outlined results revealed the complex nature of searching for business advisory information and the numerous variables capable of influencing a customer's experience. The findings outlined Website Aesthetics, Control, Flow, Website Credibility, Information Quality, the perceived length of time spent on the website as variables with the potential to influence the customer experience while searching online for business advisory information. Respondents outlined each of these variables as the most important contributors to a satisfactory or unsatisfactory experience.

Further to this social interaction was defined by respondents R1, R2, R3, R6, R8, and R10 as instant communication between two individuals or communication with a slight time lag. Respondents suggested that communication would be useful when searching for business advisory information. Respondents commented that searching for such information is not a usual activity, therefore help and guidance in the form of online customer support with a service advisor is often required. The findings outline a role

for help and assistance on business advisory websites. Respondents again outlined that due to the importance of the search, as well as the characteristics of the website clarification and assurance is often required.

In order to develop the theoretical framework for this study, clarification of each of the relevant variables will be discussed.

7.14.1 Website Aesthetics

Comments on website aesthetics were quite apparent during the exploratory interviews. Respondents commented on the need for a well-designed website that looked good and offered a logical layout in turn making navigation simple for the user. The findings from the interviews highlighted the need for an aesthetically appealing website. Respondents commented on the frustration that can arise out of a poorly designed website in terms of layout, look and feel. Respondents highlighted that content hidden within unknown menus makes the layout of the website difficult to understand and thus sign posts to the information would prove fruitful. As a result, it is important that such a variable is tested within the experimental stage of the research.

7.14.2 Control

The concept of control was explored with respondents and found to be an important variable with the potential to influence the customer's experience. In line with the literature (Hoffman and Novak, 2009; Song and Zinkhin, 2008; Dailey, 2004) respondents commented on the need for a site to be easy to use, thus providing the user with a level of control over what they are able to do. In addition, respondents outlined the need to be able to identify their own business when searching for advisory information, as a result being able to receive content that is customised or customisable for businesses may provide the experience required. Respondents pointed out that they want to be able to narrow down their search and find content that is relevant to them. Some respondents explicitly commented that being in control of what they are doing is important to them. Respondents wanted to be able to go to parts of the site that they wanted to see and not have the website dictate their actions. Thus, respondents commented on the need for customisation and control over the navigation of the

website. Therefore, it is important that control is further explored in the experimental stage of the research and included in the theoretical framework.

7.14.3 Flow

Literature regarding the online customer experience often refers to the concept of flow. Flow can be seen as the absorption and focussed attention on a task. Csikszentmihalyi (1997) originally described flow as a situation in which an individual has completely focused motivation and where the individual is fully immersed and absorbed in the task, experiencing enjoyment and time distortion. However, from the findings of the in-depth interviews, customers commented that enjoyment was not something that they expected during a search for business advisory information and in contrast to time distortion, respondents outlined that they are highly time conscious during search. In spite of enjoyment and time distortion being excluded from flow in this study, we can see from the uni-dimentional measure of flow as illustrated by Hoffman and Novak (2001) that flow appears to emphasise concentration or focussed attention, i.e. being engrossed in what the user is actually doing. Further to this other studies have used the variable of focussed attention as a measure of flow. The findings from the exploratory interviews show that being able to focus on the task without distraction and being able to become absorbed in what the user is doing is an important element in searching for business advisory information. As a result, from the findings of the exploratory interviews and the literature discussing flow, this study will measure flow based on focused attention and becoming engrossed in the task. Thus, the variable of flow should be included in the theoretical framework for the study and tested in the experimental stage.

7.14.4 Website Credibility

The literature outlined website credibility as an important factor that can influence a customer while online (Hilligoss and Rieh, 2008; Fogg and Tseng, 1999; Lucessen et al, 2013). However, website credibility has not been examined in relation to the customer experience in previous studies. Many respondents commented that the credibility of the website is important to them. Two forms of credibility evaluation exist, surface evaluation and factual accuracy evaluation. It can be seen from the findings of the exploratory research that factual accuracy evaluation of a website is

more in line with assessing the information quality. The literature highlights that surface evaluation of a website on the other hand examines the characteristics of the site such as the look of the site, the brand name, URL, navigation and the ability to contact the organisation. These characteristics were further outlined by respondents R13, R4, R3, R1, R5, 510 as a method of evaluating the credibility of the website. Respondents also commented on the need to confirm the information with information from another source or person within the field. This can be seen as an element of factual accuracy confirmation. Respondents outlined that anyone can simply create a website or a blog offering business advisory services, however, respondents commented that the credibility of that website needs to be brought into consideration. Respondents highlighted the importance of decisions made from the information sought; as a result, credibility as well as the information quality appear to be a priority for businesses.

7.14.5 Information Quality

The quality of the information provided by a business advisory site is quite clearly essential to businesses. Respondents R4, R12, R2, and R10 commented that key business decisions may be made from the information that is provided to them, as a result it can be expected that the quality of the information needs to be high. While the quality of the information was seen as being important to businesses, respondents further commented on the problem of information overload. Many respondents suggested that the quality of information could be affected by the mass of information that is often provided. Respondents further discussed the time-constraints of searching through such information. Some respondents outlined the need to try and confirm facts through their own knowledge or from other websites. Respondents also discussed the need for information to be accurate in terms of spelling and grammar; such mistakes can leave businesses questioning the professionalism and quality of the information provided by the organisation, as well as the information being current and easily understandable. Respondent R2 aptly highlighted and echoed by numerous other respondents R6, R11, R13, R1, R4 that if the quality of information provided is not good, you simply move on to the next website which is only a click away. Thus, it can be determined that Information Quality is another important variable to explore further in this study and shall be included in the theoretical framework.

7.14.6 Time

The variable of the perceived time spent on the website became very apparent through each individual in-depth interview. Each respondent discussed the issue of time-constraints when searching for business advisory information. Respondents R1, R11, R3, R6, R8, R4, and R10 all discussed the importance of being able to find information quickly without wasting any time. Respondents highlighted that they do not have the time to spend 20mins - 1 hour searching for information, the running of the business needs to be taken care of and thus, time cannot be wasted. During discussions around other variables that have the potential to influence a customer's experience, the variable of time spent on the website resonated each conversation. It is clear to see from the findings of the in-depth interviews that businesses are unwilling to spend longer than perceived necessary searching for business advisory information. Respondents further commented that any means that can be provided to help them find information in a timely manner is beneficial. Respondents discussed the goal directed nature of their search and therefore highlighted the need to find the information they are looking for and then leave. This for respondents can be seen as the optimum experience.

7.14.7 Customer Support (Social Interaction)

Khulthau's (1999) influential research outlined the need for intervention when searching for information. Further research from Kim's (2000) adaption of Maslow's hierarchy of needs showed that individuals require a social need to be fulfilled while browsing online. In addition, Social Response Theory and Social Presence Theory (Neevs and Nass, 2000) point out that individuals see computers as social actors. As a result, the expectation of social interaction online may be somewhat expected and natural. An objective of the exploratory interviews was to establish if a role existed for online social interaction in relation to the customer's experience during a utilitarian online search. First of all, it was important to gain a common view on how social interaction can be defined. Respondents suggested that social interaction is two-way communication on a topic of relevance to the customer occurring in real-time or with a slight delay. Respondents R4, R5, R9, commented that as searching for business advisory information is not a day-to-day task and therefore may only be carried out once or even twice per year. As a result, respondents R4, R5, R9, R3, R8, and R14

suggest that customer support is often needed with online service staff. Respondents highlighted that knowing what to search for can be difficult amidst other aspects such as the layout and design of the site. How much you can trust the site and the quality of the information provided. Respondents suggested that being able to communicate with someone to point you in the right direction or being given advice provides the experience required. Respondents also commented that any means to reduce the amount of time spent searching for information is appreciated, thus being able to obtain guidance during the search helps to provide the experience and result that businesses expect and look for.

In addition, respondents highlighted a role for social interaction to help overcome negative emotions deriving from a search. As previously discussed emotions can be seen as being prevalent while searching for business advisory information. Respondents suggested that customer support through online social interaction, having the ability to talk to a company representative about their needs and the information they are looking for can help to reduce the level of frustration, anxiety and uncertainty over their information seeking experience.

7.14.8 Online Emotions

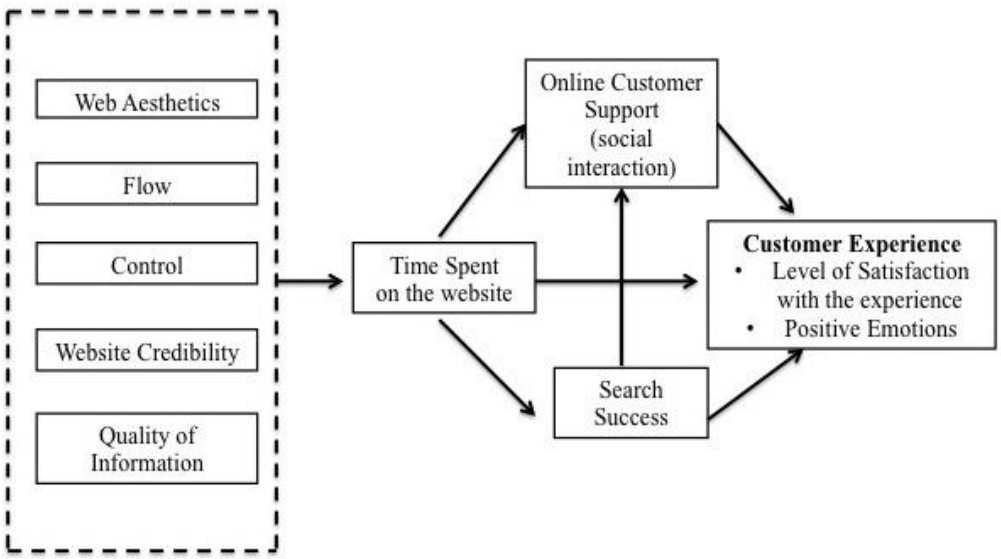
Emotions in the online environment have been discussed in relation to information search and in the online shopping experience. Khulthau (1989) outlined the role of the affective emotions in influencing an individual searching for information. Further studies continued to confirm the role of emotions and their influence on abandoning a search. Respondents R13, R14, R12, R11, R6, R8, and R7 outlined frustration as an emotion that can lead users to leaving a website and abandoning their search. Frustration appears to be one of the most prevalent emotions while searching for information. Respondents highlighted numerous reasons such as the design of the website, navigation, being able to find content relevant to their business as well as not knowing what to look for. Respondents also outlined emotions of anxiety and uncertainty when searching for advisory information, this can often come down to the aforementioned reasons of the information quality being poor, the credibility of the site, the design and layout, the level of control over the user's experience and a lack of knowledge within the domain. From the results of the exploratory interviews and

previous research highlighted in the literature review chapters it can be seen that emotions appear to be a part of the customer experience, thus this study proposes to measure the impact of the aforementioned variables on the customer's emotions.

7.15 Revisiting the Temporal Order

The temporal order was outlined in the conceptual chapter. The temporal order is where one variable precedes another in time (Creswell, 2003). As a result, it is argued that one variable has an influence over another, which refers to the independent variable (potentially) influencing the dependent variable with potential mediating variables standing between them. Originally this study outlined 14 independent variables identified through the literature as having the ability to influence the customer's experience. As previously outlined, in line with Whetten (1989), this study carried out the discussed exploratory research to provide comprehensiveness and parsimony and thus to delete irrelevant variables from examination. The findings show that 5 independent variables ought to be tested in the experimental stage of the research. One new mediating variable of 'the perceived length of time spent on the website' was identified through the exploratory research. The researcher believes it is imperative that 'the perceived time spent on the website' is included in the study's theoretical framework due to the overwhelming response from participants regarding such a variable. In the most part the foundations of the temporal order outlined in chapter 5 (table 5.2) was supported. The exploratory study highlighted the most relevant variables and outlined a new mediating variable to be included. Figure 7.1 provides a graphical representation of this study's conceptual framework. Following the conceptual framework, the research hypotheses will be discussed, which were developed in relation to the literature review and the findings of the exploratory research.

Figure 7.1 Theoretical Framework: Variables influencing the OCE during a utilitarian Information Search



The theoretical framework provides a model illustraiting the varibales influencing the customer experience during information search as outlined through the information seeking models in chapter 2. The theoretical framework shown in figure 7.1 outlines a graphical representation of the relationships that the next phase of the research will explore. The findings from the exploratory research and the previous literature review chapters provided the study with a basis to test the framework in figure 7.1. The framework suggests that the 5 variables of website aesthetics, flow, control, website credibility and quality of information have an influence on the customer's experience during a utilitarian search for business advisory information through the mediating variable of the time spent on the website. Moreover, the model suggests that the success of the search has an effect on the emotions and level of satisfaction making up the customer experience. The success of the search will also influence the requirement for online customer support. The model also illustrates that the need to seek online customer support via social interaction will have an effect on the customer experience. The introduction of seeking customer support through one to one social interaction is a new concept in relation to the customer experience. Without the ability to seek customer support online, customers may simply abandon their search or move to an alternative provider as outlined in the exploratory findings.

7.16 Hypotheses

The conceptual model illustrated in figure 7.1 outlines the relationships that will be tested in this study. The model suggests that 5 variables of website aesthetics, flow, control, website credibility and information quality have an influence on the perceived length of time spent on the website and subsequently the customer's emotions (affect) and level of satisfaction (cognition). The length of time spent on the website will have an influence on the requirement of online customer support and the success of the search. Further to this, the model outlines that the need to seek customer support will have an influence on the customer's experience. The model also proposes that the success of the search will have an impact on the need to seek online customer support and on the customer experience, influencing the customer's emotions and level of satisfaction. As a result, based on the evidence from the literature review and the exploratory research findings several hypotheses have been developed.

7.16.1 Independent Variables

From the review of the literature and the analysis of the exploratory in-depth interviews five independent variables have been established. Website aesthetics, control, information quality, website credibility and flow have been highlighted as the most pertinent variables to be tested within this study. Kuhlthau's (1989) Information Search Process model highlighted the complexity of searching for information however previous research did not account for external variables influencing the customers experience during searching. This study hypothesises that the variables of website aesthetics, control, information quality, website credibility and flow combine together to create an underlying latent variable which together has an effect on the customer experience. The literature highlighted overlapping features of each of the variables outlined as well as the results of the in-depth interviews finding that respondents discussed each variable in relation to each other further highlighting the overlapping features of each variable. Thus, we have come to the following hypothesis:

H1 (a-e) There is a relationship between website aesthetics, control, information quality, credibility and flow combining together to create a new higher order variable of website characteristics.

7.16.2 Mediating Variable of The perceived time spent on the Website

The perceived time spent on the website was a variable that emerged through the exploratory research findings. Respondents commented that when they felt time was being wasted or the search was simply taking longer than perceived necessary they were likely to leave the website. Respondents outlined that time wasted would elect emotions of frustration, anxiety and disappointment in their search. The literature has somewhat neglected the variable of an individual's perceived time spent on the website in relation to the customer's experience. In the context of a utilitarian search for business advisory information, where time is constrained, the variable became very apparent. Thus hypothesis H2 suggests:

(H2) Website Characteristics will have an influence on the length of time that a customer perceives to spend searching for online business advisory information and services.

In addition, in relation to the perceived time spent on the website this study further purposes 3 hypothesises:

(H3) The perceived length of time a customer spends searching for online business advisory information and services will have an impact on the customer's experience.

(H4) The longer customers perceive to spend searching for online business advisory information and services will result in customers seeking online customer support via synchronised social interaction.

(H5) The less time customers perceive to spend searching for online business advisory information and services will result in customers having a successful search.

7.16.3 Seeking Customer Support and Search Success

The findings from the exploratory interviews outline a need for customer support through synchronised social interaction particularly when individuals become frustrated, unsure, uncertain and have any level of anxiety (negative emotions) during search. The literature identified that a social need often needs filled when searching online (Kim, 2000). According to the social response and social presence theory (Neevs and Nass, 2001) individuals view computers as social actors rather than machines and as a result can expect help when required. Robson and Robinson (2015) highlighted the role of communication with a provider during search. Kuhlthau (2004) introduced the notion of intervention when searching for information. This intervention can help individuals find the information that is required. Thus, hypothesis H6 suggests:

(H6) There is a relationship between the need to seek online customer support while searching for business advisory information and services and the customer experience.

In addition, the literature (Kuhlthau, 1989; Hyldegard, 2009; Chowdhury et al, 2011; Flavian-Blanco et al, 2011) suggests that customers may abandon their search for information if there are negative emotions. Respondents from the exploratory interviews outlined that they often leave a website as they become frustrated or unsure about the information provided. Contrary to this however, the literature suggests (Rose et al, 2012; Hoffman and Novak, 2009) that positive emotions are likely to result in a satisfactory experience. As a result, hypothesis H7 and H8 suggests:

H7 There is a relationship between a successful search and the customer experience while searching for online business advisory information and services.

H8 There is a relationship between a customer's success in their search and the need to seek online customer support.

7.16.4 Customer Emotions and Level of Satisfaction with the Experience

The literature and the exploratory in-depth interviews have outlined the role of emotions during online information search (Kuhlthau, 2004) as well as on the online customer experience (Rose et al, 2012). The literature and in-depth interviews suggest that emotions and the level of satisfaction with the experience are integral to the customer experience (Edvarsson, 2005). Thus, this study hypothesises that the level of satisfaction with the experience as well as customer emotions combines together to create a measure of the customer experience. Therefore, hypothesis H9 (a-b) suggest:

H9 (a-b) A customer's experience is made up of the customer's emotions and the customer's level of satisfaction while searching for business advisory information and services.

Each of the hypotheses outlined in this Chapter have theoretical underpinnings from the existing body of literature. The exploratory research helped to narrow down the most relevant variables to be studied and tested in the experimental stage of the research. The relationships outlined from H1 to H9 will provide insight into the variables that influence the online customer experience during a utilitarian search for business advisory information and outline the role of online customer support through synchronised social interaction.

7.17 Conclusion

The purpose of this chapter was to explore the most relevant variables to be included in the study's conceptual framework to be tested during the quantitative phase of the research methodology. The exploratory research was conducted in order to provide comprehensiveness and parsimony (Whetten, 1989), meaning that only those variables that are relevant to the study are tested and those that are seen as irrelevant are deleted as well as providing an insight into the area of the online customer experience during information search.

The exploratory research reduced the number of variables from the conceptual thinking chapter from 14 to 5 independent variables. However, one additional variable was

identified throughout the findings of the exploratory interviews and therefore provided a mediating variable (perceived time spent on the website) on the customer's experience. Furthermore, customer emotions and level of satisfaction with the experience were included in the conceptual model as part of the customer experience. The model suggests a relationship between the need to seek online customer support and the customer experience as well as a relationship between the success of the search and the customer experience.

The findings of the exploratory research confirmed some of the initial theoretical thinking. The conceptual framework was subsequently displayed to illustrate the relationships the study wishes to test. Finally, a further description of the relationships identified in the theoretical framework was provided in the form of written hypotheses. The following chapter outlines part II of the methodological approach, the aforementioned online experiment and accompanied online questionnaire.

CHAPTER 8

PART II METHODOLOGY

8.0 Introduction

The previous chapter outlined the findings of the exploratory qualitative research and introduced further conceptual thinking. The following chapter will discuss part II of the methodological approach for the research introducing the quantitative phase. This chapter will commence by discussing an online experiment approach, followed by the experiment design stage, data collection and the creation of the online questionnaire accompanying the online experiment. Rational for the sample selected for the study is provided followed by the limitations of the approach.

8.1 Online Experiment

Following the decision to undertake exploratory in-depth interviews, an online experiment immediately followed by a questionnaire was seen as the most appropriate method for the study in order to adequately meet the research's objectives. According to Grant and Will (2009, p.653), 'the experiment method is an invaluable resource for building, refining, accumulating and applying knowledge'. Experiments provide management researchers the ability to discover cause and effect, identifying influential variables and the ability to rule out alternative explanations (Cook and Campbell, 1979).

In general, an experiment can be defined as, 'studies in which conditions are controlled so that one or more independent variable(s) can be manipulated to test a hypothesis about a dependent variable' (Aaker et al, 2011, p. 303). As a result, experiments can be seen as investigations of a particular phenomenon under constrained parameters. In its simplest form an experiment can show a participant stimulus along with a task and then ask questions relating to that task (Aaker et al, 2011). In traditional science, experiments involve variables being extracted from natural situations and examined under lab conditions where the experiment takes place with the variable being manipulated to

determine the effect of variables on each other (Orne, 1962). In the social science domain, the key difference is that the main subject of the experiment is not an inanimate organism rather a cognitive thinking and conscious individual, thus assuming that the individual is passive is more difficult to justify (Orne, 1962).

Experimental research is very much based on cause and effect relationships (Shadish, et al, 2002). The effect is measured on the dependent variable(s) after the systematic manipulation of an independent variable(s). If it can be seen that such manipulation of the independent variable on the dependent variable have caused changes, thus the researcher can conclude that the independent variable was responsible for such change (Perdue and Summers, 1986).

The aim of this study is to understand which variables influence a customer's experience online when searching for business advisory information. The role of customer support via synchronised social interaction as a 'help' or 'aid' is an area of research that remains unknown. It is important for the study to establish any relationships between which variables prompt the need for social interaction during the customer's search. As a result, an online experiment involving multiple business advisory websites was seen as the most appropriate means of establishing such relationships. It can be seen from a review of the literature that many online experiments have been conducted in the area of consumer behaviour and information search (Kim and Lennon, 2008; Kim and Lennon, 2010; Kim et al, 2019; Lee et al, 2010; Manganari et al, 2011; Park et al, 2005; Park et al, 2008; Wang et al, 2010; Wang et al, 2012; Al-Maskari and Sanderson, 2010; Choo and Martin, 2003; Flavian-Blanco et al, 2011).

The aforementioned studies found that using an experimental approach allowed the researcher to gain insights that could not have been attained through any other means. The decision to use an experiment followed by a questionnaire was an important one for this study as it overcomes a number of issues that arise through other methods. Wang et al (2010) as well as Kim and Lennon (2010) deployed online experiments in the online shopping environment and found the method to provide fruitful insights. An online experiment in this study gives users experience of searching for business advisory information as each participant is given a set of tasks to complete across multiple business advisory sites. Like Wang et al (2010) and Kim and Lennon (2010)

albeit in a different context, it is suggested that an online experiment followed by a questionnaire is a good fit for answering the study's research objectives.

However, in order to understand 'cause' and 'effect' it is argued that the researcher requires a level of control over the experiment. Easterby-Smith et al (2008) along with Creswell (2009) highlight that classical experimental design involves the appointment of individuals to either an experimental or control group. The experimental group go under the aforementioned manipulation of variables; the control group on the other hand receive no 'unusual condition' or restrictions (Creswell, 2009). From this the researcher can conduct a comparison between the experiment group and the control group.

In contrast to scientific (medical) studies where a control group receive medicine and the experimental group perhaps receive a test drug, the differences between participants can then be outlined through measurements. However, in social science experiments no such distinction exists, where researchers are confronted with somewhat unobservable and higher order variables such as individual's perceptions and attitudes. In turn these variables cannot be manipulated in the direct manner like those variables in medical and scientific research, thus variables need to be manipulated indirectly through either the participant's surroundings or context (Aaker et al, 2011). However, according to Cook and Campbell (1979) and further supported by Grant and Wall (2009) management experiments do not necessarily have to manipulate variables, in addition changes can occur naturally rather than through manipulation.

Previous studies have found that when aiming to understand which variables influence an online customer's experience and understanding information search both experiments and questionnaires were deemed as the two best methods to study the phenomena (Rose et al, 2012; Hoffman and Novak, 2001; Wang et al, 2010; Sambhanthan and Good, 2013; Faiola et al, 2013; Csikszentmihalyi, 1997). Due to the complexity of the subject area and the number of variables involved, this study combines both of the aforementioned methods.

We can see from Lee et al (2010) that without an online experiment, the study would not have been able to identify the differences in enjoyment and aesthetics between two

different sites without the use of an online experiment and followed by a questionnaire. As the online environment has grown in popularity in both practice and research, experiments have become a popular methodological approach.

Understanding the variables that influence the customers experience online and result in either satisfaction in the experience with positive emotions or an abandoned search is important for marketing practitioners and information scientists. Previous studies in the context of online shopping have identified some variables that are believed to influence the customer's experience (Rose et al, 2012; Hoffman and Novak, 2009; Wang et al, 2011). It can be seen that social interaction as a form of 'help' or 'aid' online has somewhat been overlooked and therefore requires attention. Kuhlthau (2004) points to intervention as an important element often required during information seeking. The experiment will allow the study to identify which variables prompt the need for customer support through social interaction online and which variables have an influence on the customer's emotions as well as what causes search abandonment or satisfaction across three different websites. As like the in-depth interviews, an experiment helps to overcome issues of 'self-recall' as the participants are questioned on the experience they have just had (Jacoby et al, 1978).

Previous research has shown conflicting results with regard to the factors that influence the customer online. However, this may be due to the fact that there is no universally applied research approach (Hoffman and Novak, 2009). The variables under test are those identified through the literature and then confirmed and filtered in the exploratory in-depth interviews. Considerations on the experiment design, data collection, sampling and the pilot phase will be discussed in the following section.

8.1.1 Experiment Design

From a review of management literature and in particular marketing literature it can be seen that either 'true' or 'quasi' experiments are most often conducted (Aaker et al, 2011).

While Shadish et al (2002) reject the term 'true experiments' and argue that such experiments should be referred to as 'randomised experiments' much of the literature

covering experimental research use the term ‘true experiments’. Shadish et al (2002) argue that the term is somewhat ambiguous and the word ‘true’ suggests that it is the single correct experimental method. However, while the researcher concurs with Shadish et al (2002) comments, the study shall discuss such an experimental approach with the commonly used ‘true experiment’ term.

True experiments adopt a random assignment procedure, where all subjects have an equal probability of being chosen for the experiment (Aaker et al, 2011). True experiments offer researchers two key features that enable them to obtain tight control over any irrelevant influences. Firstly, a control group who do not undertake the manipulated experiment and secondly having random assignment of participants to various experimental and control groups (Aaker et al, 2011). True experiments are often conducted in the previously discussed medical environments, where the experimental group are exposed to a placebo and a control group who take regular medication. These experiments are conducted under strict lab conditions and therefore reduce the risk of extraneous variables, i.e. factors other than those being studied influencing the experiment (Easterby-Smith et al, 2008).

Given the nature of many management experiments it is not always possible to control all aspects of a ‘social science’ experiment where the researcher is dealing with live, conscious, cognitively aware individuals who will come with their past experiences and own set of attitudes and assumptions (Orne, 1962; McGrath, 1981).

Quasi experiments on the other hand have the same purpose as all other types of experiments, to test causal hypotheses regarding possible manipulation of causes (variables) and provide details on what would have happened with or without the treatment (Shadish et al, 2002). However, the key difference in quasi experiments is that they do not use ‘random assignment’ methods (Aaker et al, 2011). As a result, the assignment of participants is self-administered. Campbell and Stanley (1966) introduced the notion of quasi experiments as a way of addressing the aforementioned issues with management experiments in not being able to control all variables. The quasi experiment provides many of the same benefits that ‘true field experiments’ offer with high external validity, while at the same time relaxing the need for researcher

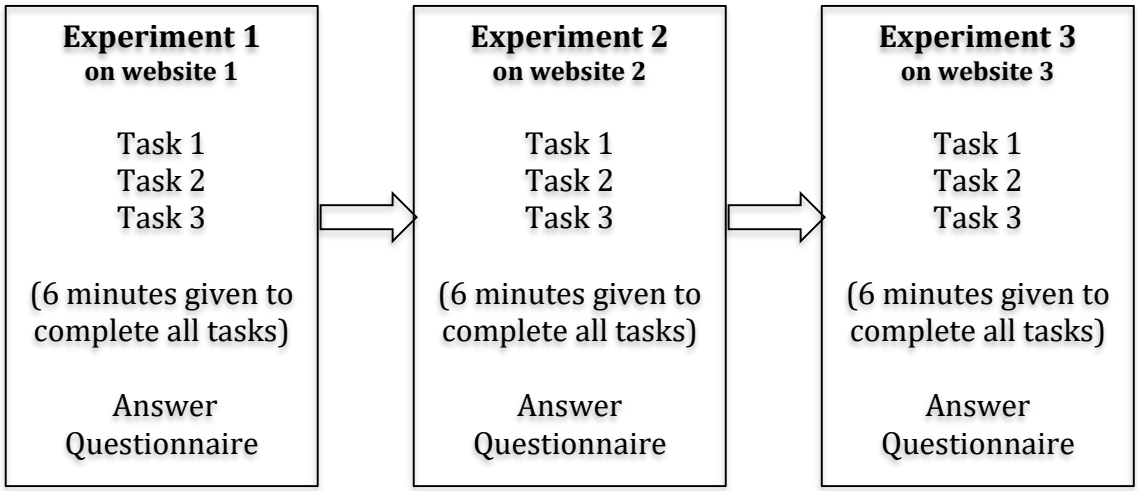
control over the random assignment of participants and the need to manipulate independent variables (Grant and Will, 2009).

Campbell and Stanley (1966) as well as Cook and Campbell (1979) outline that the purpose of quasi experiments is to strengthen the casual inference while also sustaining internal and external validity without interrupting 'real life' through intrusive intervention. Overall a quasi-experiment can be seen as the most appropriate form of experiment for this study as the experiment takes place in a field setting, involving a change in independent variables while being relaxed on random assignment to treatments and controlled manipulation of the independent variable. Quasi experiments also include changes to independent variables that are naturally occurring (Grant and Will, 2009) which again is appropriate for this study.

8.1.2 Data Collection

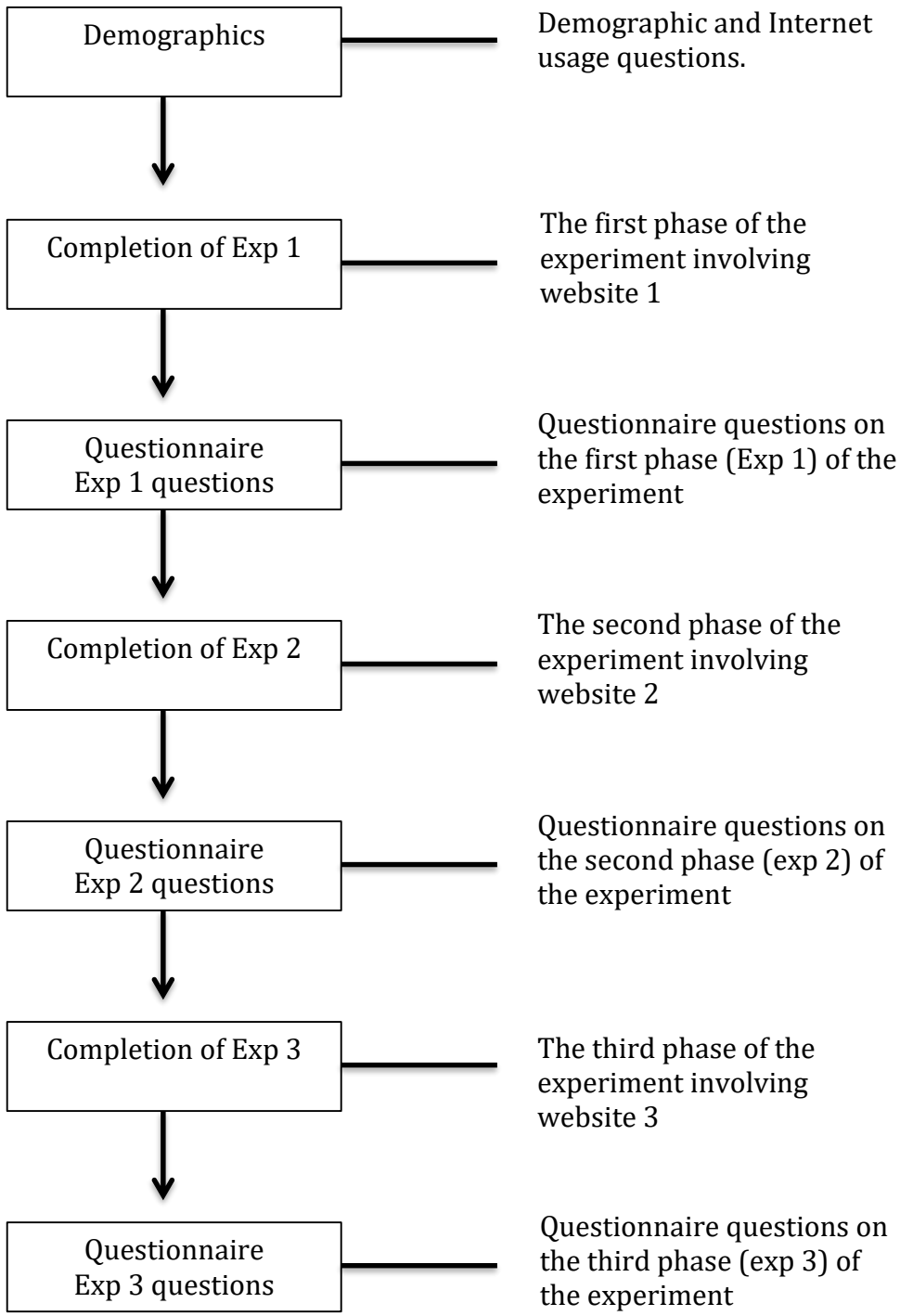
As previously discussed during the exploratory research, the research design is extremely important. An experiment and questionnaire requires a well-established design with numerous considerations taken into account (Malhotra, 2010). Within the experimental stage participants are asked to complete three experiments on three different business advisory websites (3x3). Each of these experiments are conducted on specific 'live' business advisory websites. Within the three experiments 3 tasks exist. Each participant is given 6 minutes to complete each experiment, therefore 18 minutes in total. Figure 8.1 provides a graphical representation of the experiment procedure.

Figure 8.1 Experiment Procedure



In addition, 'Help Cards' were given to the participant for each of the tasks; these 'Help Cards' were symbolic in nature and simply identifies the point where help would have been beneficial for the participant. This is then followed up on during the questionnaire stage. Vryona (2014) suggests that in the study on interaction between people and computers much research has focussed on the use of interviews and questionnaires, which leaves 'grey areas' where actual behaviour remains unknown. Figure 8.2 outlines the procedure of the experiment and the integrated questionnaire. The questionnaire is used for the data collection during the experiment. The experiment provides the researcher with a means understanding actual behaviour and the ability to identify the variables influencing the customer's experience.

Figure 8.2 Experiment and Questionnaire Stages



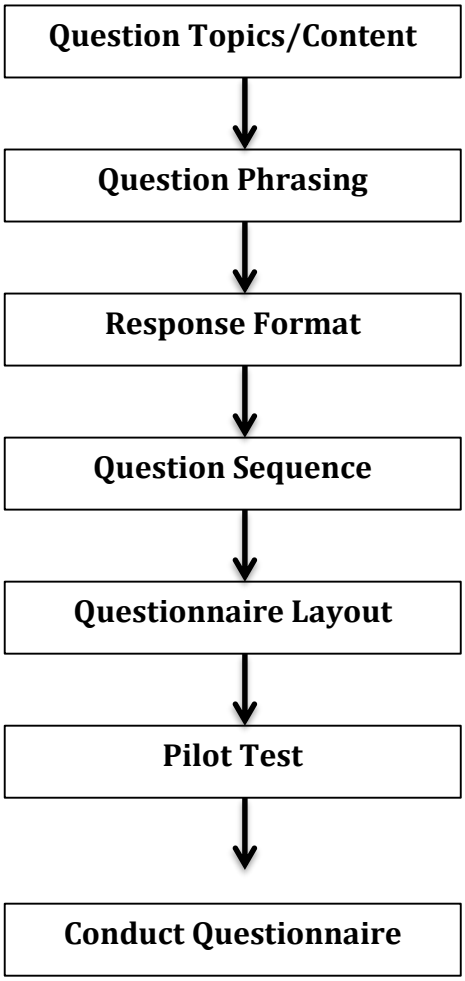
As previously discussed the aim of this research is to understand which variables influence the online customer experience while searching for online business advisory information and services and in turn where online customer support may have an intervening role. Due to the time constraints associated with the study, three business advisory websites were selected for this research from a pool of business advisory sites.

The researcher developed three experiments with three tasks within each experiment as detailed in figure 8.1.

8.2 Questionnaire Design Process

According to Webb (1996) a questionnaire can be seen as a structured mechanism, which involves a series of written or spoken questions for participants to answer either self-administered or administered by the researcher. Aaker et al (2011) further suggest that a questionnaire should provide the information required from a set of questions that participants are able and willing to answer. Wilson (2012) points out that the questionnaire design process is extremely important as poor questioning can lead to misunderstandings which are often seen in common conversations. However, the luxury within these common conversations is that facial expressions, hand gestures and interruptions for clarification can take place. Conversely with questionnaires this is not always available. Wilson (2012, p.155) elaborates that 'noise' can occur from poor questioning and can result in confusion and misinterpretation of the question. The questionnaire design process as shown in figure 8.3 is not simply a discrete liner process. Each step is somewhat interrelated, as the questionnaire design is an interactive process, involving numerous drafts, before the questionnaire is taken to field (Wilson, 2012). From a review of marketing methodology literature (Aaker et al, 2011; Wilson, 2012; Malhotra, 2010; McDaniel and Gates, 2010), researchers ought to take the following factors displayed in figure 8.3 into account when designing a questionnaire.

Figure 8.3 Questionnaire Design Process



(Adapted from: Aaker et al, 2011; Wilson, 2012; Malhotra, 2010; McDaniel and Gates, 2010)

8.2.1 Question Topics/Content

When developing the research topics and content, the researcher needs to take the research aim and objectives into careful consideration as well as the result of any exploratory research undertaken as done in this study (Wilson, 2012). Only those questions that provide the capability of answering the research objectives should be used (Malhotra, 2010). Dillon et al (1994) also comments that the question should only be formed once the research question had been carefully considered.

Wilson (2012) points out that if exploratory research has been carried out previous to the quantitative stage, the exploratory findings can be used to help clarify what should be further explored and asked during the quantitative phase of research.

In addition, it is important that the researcher considers the characteristics of the respondent, in that they are willing and able to answer the research questions and are in turn able to provide the required information (Wilson, 2012). It is a worthwhile exercise for the researcher to put themselves in the shoes of the respondent and determine the likelihood of the respondents being able to answer what they are being asked (Aaker et al, 2011; Wilson, 2012). Webb (1992) points out that the researcher ought to design the question content with the ability of the respondent in mind and therefore should cater the questions asked to the respondent's level.

8.2.2 Question Phrasing

Following very closely to the question topics/content discussed above. The question phrasing in a questionnaire is quite simple. This is transferring the question content into a simple and useable form. Dillen et al (1994) point out that clear and simple 'phrases' ought to be used in each question so it is simple for the respondent to understand and does not lead to any ambiguity over what the question is actually asking. Wilson (2012) highlights that testing should take place in order to identify if the question has any other meaning and from this simpler wording can be adopted. In addition, Webb (1992) points out that two questions should not be asked within the wording of one question as the researcher is not able to identify what exactly the respondent is answering.

8.2.3 Response Formats

From a review of research methodology work it can be seen that three key response formats exist (Wilson, 2012; Aaker et al, 2011; McDaniel and Gates, 2010; Creswell, 2009). These response formats are open-ended questions, closed questions and scaling questions.

Open-ended questions are questions that allow the respondent to answer in their own words. There are no options for the respondent to choose from, and it is down to the

respondent in how detailed their answer may be. It may range from a one-word answer to a very detailed response (Wilson, 2012). The benefit of an open-ended question is that it allows the researcher to find out 'why' an individual may have a particular attitude or perception towards a subject. As a result, open-ended questions can often provide more detailed answers and can help to explain the answers of other questions in the questionnaire (McDaniel and Gates, 2010). However, Wilson (2012) points out the main drawback of open-ended questions, this being the analysis and interpretation of the responses. The researcher needs to edit the number of responses into categories and then code each of the responses to one of these categories. If too many categories exist it may be difficult to identify any patterns or relationships with answers to other questions. However, some problems can be overcome in open-ended questions by conducting interviewer-administered questionnaires, where questions can be pre-coded rather than post coded (Wilson, 2012).

Closed questions on the other hand require the respondents to choose a response from a predefined list of responses. Wilson (2012) points out that two types of closed questions exist: Dichotomous questions with only two options to choose from most often, 'yes' or 'no' and multiple choice questions that include more than two response options. In contrast to open-ended questions, the same level of depth is provided by all respondents, as a result analysis becomes far easier for this type of question (Aaker et al, 2011).

Scaling questions in marketing and wider in management research often refer to numerical measures of attitudes, opinions, feelings and customer perceptions. The application of numbers allows the researcher to more easily compare and summarise (Wilson, 2012). The use of rating scale questions are particularly important for a study as this allows the researcher to use statistical techniques to analyse the data collected. From the statistical analysis, the researcher can then identify any relationships between variables in the study. From a review of the current body of literature within marketing it can be seen that two of the most popular scaling formats is the Likert Scale and the Semantic Differential Scale. This Likert scale, which is adopted in this study's questionnaire, involves respondents being asked to outline their level of agreement with a number of statements. The scale tends to use the descriptors of strongly agree, agree, neither agree or disagree, disagree and strongly disagree. From this the researcher can

understand either a favourable or unfavourable attitude towards the studied phenomena (Wilson, 2012). The Semantic Differential Scale on the other hand has a set of bipolar adjectives or phrases. Each phrase or adjective is separated with a seven-category scale with no numerical or verbal labels for illustration. These phrases may be something like 'friendly' to 'unfriendly' with the respondent rating within the seven-point scale.

8.2.4 Question Sequence

When developing the sequence of the questionnaire, methodological literature (Malhotra, 2010) suggest that researchers ought to approach sequencing from the respondent's point of view, i.e. what the respondent will find interesting and logical. A questionnaire that jumps from subject to subject with no clear logic can somewhat frustrate the respondent and make the questionnaire feel like an interrogation rather than a relaxed piece of research (Wilson, 2012). As a result, questions on the same or similar topics should be grouped together, allowing the respondent to focus on their train of thought before moving on to the next topic area.

The positioning of classification questions continually remains a controversial issue in questionnaire sequence. Some researchers argue that classification questions should appear at the beginning of a questionnaire yet others argue they should appear at the end (Wilson, 2012). However, Webb (1992) suggests that general classification questions should be stated initially, followed by more specific questions and groups of questions within the same subject area.

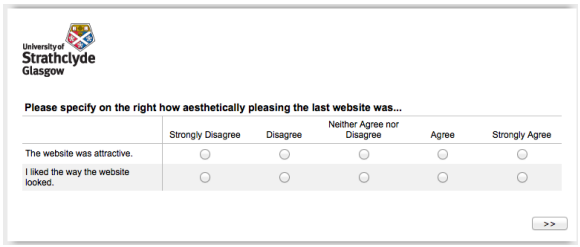
8.2.5 Questionnaire Layout

The layout as well as the appearance of a questionnaire is very important. Wilson (2012, p.175) suggests that a questionnaire should look attractive, uncluttered and easy to understand. Webb (1992) also comments that the appropriate spacing should be used. In addition, Malhotra (2010) comments that an outline of the research as well as instructions should be clearly provided at the start of the questionnaire. The questionnaire associated with the experiment in this study used Qualtrics online software to create and administer the questionnaire. Questions were grouped on separate pages as can be seen in figure 8.4. This helped to keep the questionnaire in a

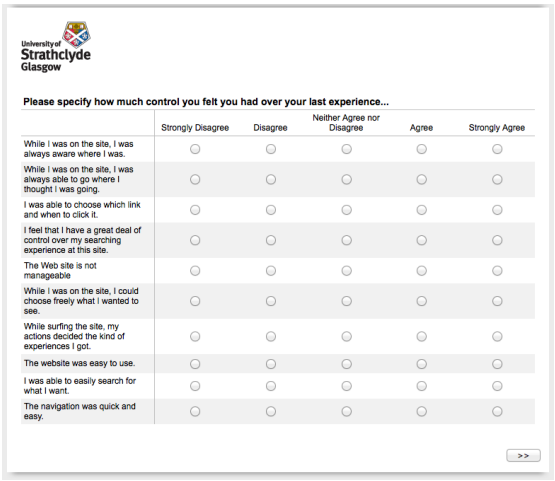
logical form. Albeit, the questionnaire was researcher-administered it is still important to have effective questionnaire layout.

Figure 8.4 Questionnaire Layout Examples

Screen 1



Screen 2



The layout of the questions is an important part of questionnaire design. The introduction of online survey platforms such as Qualtrics (as used in this study), SNAP and Survey Monkey all provide researchers with the ability to create clear and logical questionnaires.

8.3 Research Experiment Measurement (Questionnaire Scales)

The fine details of the design and data collection could not be fully established until the results of the exploratory research were analysed as the structure and variables included in the theoretical framework were yet to be confirmed. This section will outline and provide rational for the measurements and scales adopted for the survey section of the experiment.

In order to examine the variables in the study, 5-point Likert scales were used in the form of Strongly Agree, Agree, Neither Agree or Disagree, Disagree and Strongly Disagree towards statements on each variable. The scale items used in the questionnaire were derived from influential research studies in marketing, human computer science and information science. As Easterby-Smith et al (2009) and Baker (1976) commented;

we need to look to other disciplines in order to advance knowledge within Management and Marketing research. Each scale was carefully considered with the purpose of delivering meaningful data.

Adopting the correct scales is an important part of research (Creswell, 2003). As outlined in this chapter, participants taking part in the experiment were asked to complete tasks related to searching for business advisory information, the data are collected via a survey after each task. Thus, the appropriate scales must be deployed within the survey to analyse and understand the relationships between the variables shown in the conceptual model in the previous chapter (figure 7.1). This section will now discuss the scales used for each variable.

8.3.1 Website Aesthetics

For the purpose of this study website aesthetics can be defined as, *'how appealing the look, feel and layout of the website is to a user'*. This definition comes from the literature (Mathwick et al, 2001; Harris and Goode, 2010) and the findings from the respondents of the exploratory research. As previously mentioned, website aesthetics has received much attention by marketing researchers with regard to its influence in the online shopping environment. A scale measuring the look and feel of the website was deemed important. Mathwick et al (2001) provide an effective measurement using a Likert Scale to measure website aesthetics. Two items were seen as appropriate to adopt in order to measure website aesthetics (1) The website was attractive (2) I liked the way the website looked. As a result of the pilot test one item was removed from the original scale as it was seen as being redundant (3) The website was aesthetically appealing.

8.3.2 Flow

Flow has been identified as an important concept in the online customer experience. Flow can be defined in this study as, *'The complete focus and concentration on a task, while being absorbed and engrossed in the activity'.* As previously mentioned Hoffman and Novak (2001) were the first to introduce the term flow to the online environment. Csikszentmihalyi (1997) originally described flow as a situation in which an individual has completely focused motivation and where the individual is fully immersed and

absorbed in the task. Hoffman and Novak (2001) developed a uni-demensional measure of flow using the following paragraph:

The word "flow" is used to describe a state of mind sometimes experienced by people who are deeply involved in some activity. One example of flow is the case where a professional athlete is playing exceptionally well and achieves a state of mind where nothing else matters but the game; they are completely and totally immersed in it. The experience is not exclusive to athletics - many people report this state of mind when playing games, engaging in hobbies, or working.

Activities that lead to flow completely captivate a person for some period of time. When in flow, time may seem to stand still and nothing else seems to matter. Flow may not last for a long time on any particular occasion, but it may come and go over time. Flow has been described as an intrinsically enjoyable experience.

Users are then asked to answer (1) Have they ever experienced flow (2) How frequently would you say you have experienced "flow" when you use the Web? (3) Most of the time I use the web I feel I am in Flow.

However, discussions around flow including the definition provided by Csikszentmihalyi (1997) and the measurement description of flow provided by Hoffman and Novak (2001) outline being absorbed and deeply engrossed and focused on what the user is doing. Many studies have used multiple variables to measure flow such as focused attention/concentration, enjoyment, telepresence and numerous others. Table 8.1 provides an outline of the variation of measurements for flow.

Table 8.1 Flow Measurements

Article	**Variables influencing Flow**	**Measurement of Flow**
Csikezentmihalyi (1978, 1997, 1998, 2002)	Clear goals with a response, immediate feedback, congruence of skills and challenge, Concentration, Focus,	Unidimensional

	Control, Loss of Self consciousness, altered sense of time, autotelic experience i.e. doing an activity for its own intrinsic reward.	
Ghani and Deshpande (1994)	Control, Challenges.	**Concentration** and Enjoyment
Hoffman, Novak and Young (2000)	Skills, Perceived Control, Challenge, Arousal, Focused Attention, Interactivity, and Telepresence.	Unidimensional
Shin (2006)	Skill, Challenge, Concentration, Goal and Gender	Enjoyment, Telepresence, **Focused Attention**, Engagement, Time Distortion
Rodriguez-Sanchez and Schaufeli (2008)	Absorption, Enjoyment, and Intrinsic Interest.	Absorption, Enjoyment, and Intrinsic Interest, **Attention**.
Pearce et al (2004)	Challenge, Skills, Control, Enjoyment, Attention, Ease of use, Curiosity,	Challenge, Skills, Control, Enjoyment, **Attention**, Ease of use, Curiosity,

	Telepresence	Telepresence
Hoffman and Novak (1996)	Enjoyment, Telepresence, Focused Attention, Engagement, and Time Distortion.	Unidimensional
Faiola et al (2013)	Skill, Challenge, Control, Arousal, Focused Attention.	Skill, Challenge, Control, Arousal, **Focused Attention**.
Fan et al (2013)	Convenience, Contents, Aesthetics, Interactivity, Customisation.	Time Distortion, Enjoyment
Hsu and Lu 2003	Ease of Use and Perceived Usefulness	Unidimensional
Dailey (2004)	Navigational Control	Unidimensional
Huang (2003)	Curiosity, Enjoyment, Control, Interest, Focus, Attention, Personal-Relevance.	Control, Curiosity, **Attention Focus**, Interest.
Koufaris (2002)	Skill, involvement, search mechanism, challenge.	Control, Enjoyment, **Concentration**, Ease of Use and Perceived Usefulness.
Lazoc and Lut (2013)	Skills and Challenge	Skills and Challenges
Renard (2013)	Skills and Challenge	**Concentration** and Enjoyment
Richard and Chandra (2005)	Challenge, Skills and Interactivity	Challenge, Skills, Involvement and Interactivity
Skadberg and Kimmel (2004)	Ease of use, Speed, Attractiveness, Interactivity, Skill,	Time Distortion and Enjoyment

	Challenge	
Bridges and Florsheim (2008)	Telepresence, Time Distortion, Arousal, Challenge, Skill	Telepresence, Skill, Interactive Speed, Importance and Time Distortion, **Attention**
Ding et al (2009)	Perceived Control, Skill, Focused Attention, Interactivity and Challenge.	Perceived Control, Skill, **Focused Attention**, Interactivity and Challenge.
Lee and Chen (2010)	Concentration, Enjoyment, Time Distortion, Telepresence	**Concentration**, Enjoyment, Time Distortion, Telepresence
O'Cass and Carlson (2010)	Involvement, Time Distortion, Control and Telepresence	Involvement, Time Distortion, Control and Telepresence
Rose et al (2012)	Interactive Speed, Telepresence, Challenge, Skill	Interactive Speed, Telepresence, Challenge, Skill
Ding et al (2010)	Focussed Attention and Interactivity	**Focussed Attention** and Interactivity
Nel et al (1999)	Control, Attention Focus, Curiosity and Intrinsic Interest	Control, **Attention Focus**, Curiosity and Intrinsic Interest
Van Noort et al (2012)	Interactivity, Immersion, Enjoyment	Control, **Attention Focus**, Curiosity and Intrinsic Interest and narrative description of flow
Wang et al (2007)	Interest, Curiosity, Attention, Control	Interest, Curiosity, **Attention**, Control

Flow appears to emphasise concentration or focussed attention, i.e. being engrossed in what the user is actually doing. From the analysis of measurements of flow it can be seen that focussed attention appears to be one of the most consistent variables. Thus it is for this reason, along with the definition of flow provided by Csikszentmihalyi (1997) and Hoffman and Novak's (2001) description of flow that this study measures flow using scales regarding focused attention. The scale adopted from Lee and Chen (2010) established from Ghani et al (1991), Koufaris (2002) and Ding et al (2009) was used to measure flow. Four items within a five point Likert Scale were used (1) I was absorbed intensely in the activity (2) My attention was focused on the activity (3) I concentrated fully on the activity (4) I was deeply engrossed in the activity. It can be seen that each item within the scale relates to the description and definition of flow outlined within the literature.

8.3.3 Control

From the results of the exploratory research findings and the literature reviewed, for the purpose of this study control can be defined as *'the level of customisation for users to see content relevant to their needs and the ability for the user to move around the site with relative ease, while choosing the areas of the site they want to go to'*. While control is a well-studied topic, many researchers prefer to opt for 'ease of use' and 'customisation' as separate variables and exclude the overarching control. The literature outlined control as involving both of these variables. In addition, the findings from the exploratory research highlight control as how easy it is for the user to move from one point of the site to another based on the user's own decisions, as well as the ability to filter content to make it more relevant to the user. Respondents highlighted specifically the need for control online. Respondent R1 commented '*I like control in all aspects, it is no different online. If I don't feel as though I have any control over what I am doing on the site I would go off to another site'.* This respondent's comment was very much in line with most others outlining the need to have control. Some respondents suggested it might be down to the nature of business and needing to feel in control of what you are doing. This study adopts Song and Zinkhan's (2008) scale. 7 items out of the 9 items offered on the original scale were adopted. From the pilot test 7 items were seen as sufficient in providing participants with a reliable scale. The following items of Song

and Zinkhan's (2008) scale were used (1) While I was on the site, I was always aware where I was (2) While I was on the site, I was always able to go where I thought I was going (3) I was able to choose which link and when to click it (4) I feel that I have a great deal of control over my searching experience at this site (5) The Web site is not manageable (6) While I was on the site, I could choose freely what I wanted to see (7) While surfing the site, my actions decided the kind of experiences I got.

In addition, in order to adequately test this study's definition of control three further items were added to the Song and Zinkhan's scale on 'ease of use'. These items included (1) The website was easy to use (2) I was able to easily search for what I want (3) The navigation was quick and easy. Both these combined scales provide the study with an accurate measure of control as defined within this section.

8.3.4 Perceived Time Spent on the Website

For the purpose of this study, time spent on the website refers to, *'The perceived length of time users are prepared to spend searching for information on a website before halting their search'.* The variable of time was outlined as being important to businesses searching for support information. Respondents do not want to waste their time and thus when a search cannot be completed respondents often abandon their search on the site. After an exploration of the literature no adequate scale could be found to measure the perceived length of time spent on the website, thus in order to measure this variable a new scale was developed. A pool of items was generated from the respondents of the in-depth interviews in order to measure the willingness of customers to spend time searching for information or services. The pool of items was reduced in the pilot test of the questionnaire to a 4-item scale that was tested with the results and the items presented in the subsequent chapter. Chapter 9 outlines the steps taken to validate the new scale.

8.3.5 Website Credibility

Website credibility is another variable that has received much attention in recent years with regard to the online environment. Trust, faith, believability and credibility have all been discussed and highlighted as important aspects online. It can be seen that website

credibility is often evaluated from either a surface characteristic point of view or factual accuracy point of view. Respondents from the exploratory research outlined the difficulty in analysing the information for factual accuracy, as they are not experts within the area. As a result, respondents opt to evaluate the credibility of business advisory websites by looking at the surface characteristics of the site such as being able to check the websites credentials including the brand, the URL, accreditation, associations, contact details and the look of the website. Respondents outlined that each of these factors makes up how credible the site appears to be and in turn results in the respondent either trusting or not trusting the site. In order to measure the credibility this study adopts a scale from Flanagin and Metzeger's (2000) study. Three items on a five point Likert Scale were adopted (1) I was able to look for an official "stamp of approval" or a recommendation from someone I know on the site (2) I was able to check to see whether the contact information for the organisation is provided on the site (3) I was able to verify the website's accreditation or credentials. One additional item was included from Fogg et al (2002) scale regarding the look of the website as this was a means by which respondents evaluated the surface credibility of a business advisory site. The fourth item added from Fogg et al (2002) is (4) The site looks professionally designed. Each of these items provide a comprehensive measure of website credibility based on the findings from the literature and the exploratory research.

8.3.6 Quality of Information

For the purpose of this study, information quality can be defined as, *'Information that is accurate, current, complete and comprehensive and easily understandable allowing business to make assured decisions'.* Many respondents highlighted that the information provided by business advisory websites may be used to aid important business decisions, as a result the quality of such information is important. The literature outlined information quality as 'a user criterion, which has to do with excellence or in some cases truthfulness in labelling' (Taylor, 1986). In line with the literature many respondents commented on the difficulty in assessing the quality of the information on a business advisory website, as the topics under question may be outwith the customer's area of expertise. Thus, in order to evaluate the quality of the information users often refer to aspects such as how current the information appears, how complete the information seems to the user, being able to identify facts and being

able to confirm the information with references or other sources. In order to identify participants' perceptions on information quality Flanagin and Metzeger's (2000) scale was adopted using 2 items on a 5 point Likert scale (1) I was able to see if the information was current (2) I was able to see that the information was complete and comprehensive. The last 2 items came from Jeong et al (2003) (3) I was able to see that the website provides accurate information (4) The information on the website is easy to understand. This scale covers the basis of assessing information quality and will allow the study to assess its influence on the online customer experience.

8.3.7 Synchronised Social Interaction (Customer Support)

The previous chapter provided a definition of social interaction resulting from the exploratory interviews. Respondents defined social interaction as *'two-way communication with a service representative on a topic of relevance to the customer occurring in real-time or with a slight delay'*. It was identified through the in-depth interviews that assistance in the form of social interaction might help customers to find the information and receive the experience that customers need and expect. Kuhlthau (2004) introduced the concept of intervention when searching for information to help and guide individuals. Kim (2000) and Wang (2007) further highlighted a social need to be filled when searching online. Robson and Robinson (2015) outlined the need for communication during information seeking. Respondents outlined that due to the complex nature of business advisory information, interaction is often required. Kuhlthau's (2004) intervention scale was adopted for this study. Four items were used on a five point Likert scale including: (1) It would have been useful to be able to ask for direction in locating the information (2) It would have been useful to be able to talk to people who know about the topic (3) It would have been useful to ask for advice while searching for the information (4) It would have been useful to have assistance in identifying the correct material. In addition to Kuhlthau's (2004) scale, a further four items were added from Song and Zinkhan's (2008) scale adapted from Liu (2003), MacMillan and Hwang (2002) and Wu (1999) specifically on online social interaction, these items included: (1) It would have been useful if the website facilitated two-way communication (2) It would have been useful if the website gave me the opportunity to talk back (3) It would have been useful if the website facilitates instant (live) communication (4) It would have been useful if the web site enabled conversation.

In addition to the battery of scale items on a five point Likert Scale. The study also used an open-ended question to allow for more detail to be obtained with regards to online customer support. In line with Wilson (2012) this open-ended question allowed the researcher to gain insight into why respondents used any of their help cards and to find out why social interaction would have been useful.

8.3.8 Search Success

A customer's search success was calculated by the recorded time it took participants to complete tasks. Thus, in order to measure the success of the search, the average time for a successful search was worked out for each task (x3) in each experiment (x3). Using the recorded time for completing a successful search allowed the researcher to measure how successful a customer was in searching for their tasks rather than the customer's perception of success. A further explanation on the calculation is provided in chapter 9.

8.3.9 Online Emotions

Individuals' emotions have been shown to be prevalent when searching for information. Previous research highlighted the impact emotions can have in the online shopping environment. This study has found from the exploratory in-depth interviews that customer emotions appear to play a role when searching for business advisory information and an integral part of the customer experience. Respondents commented that the aforementioned variables of website aesthetics, concentration (flow), control, time spent, website credibility and information quality can all have an influence on their emotional response and in turn their experience. Numerous scales have been developed and applied in the online environment over recent years in order to understand customer emotions. Watson et al (1988) developed the PANAS scale: Positive Affective Negative Affect Scale as well as the differential emotion theory introduced by Lzard (1977). In addition, Russell and Mehrabian (1977) introduced the PAD scale: Pleasure, Arousal, Dominance model of emotions. Within the PAD scale emotions can be measured on the basis of Pleasure/Displeasure, Arousal/Non-Arousal and Dominance/Submissiveness thus resulting in positive or negative emotions. Numerous

other scales have been developed in addition to the widely known PANAS and PAD scales. However, only certain attributes of these scales were deemed appropriate to measure the emotions that had been outlined in the exploratory research findings or in the literature review. Thus, Khulthau's (2004) emotions scale was deployed which was seen as being in line with the emotions respondents discussed in the exploratory research. In line with the PANAS scale, a five point Likert Scale was applied to Khulthau's items. 10 items were used in total within the scale (1) Frustrated (2) Confident (3) Sure (4) Confused (5) Optimistic (6) Uncertain (7) Disappointed (8) Relieved (9) Doubtful (10) Satisfied.

8.3.10 Satisfaction

Additionally, it is important to understand the level of satisfaction participants have with their experience to offer a cognitive perspective on the customer experience as well as an emotional perspective. As a result, the study adopts Song and Zinkhan's (2008) experiential satisfaction scale. Three items were adopted on a five point Likert scale including: (1) I am satisfied with the experience (2) This online search experience has not worked out as well as I thought it would. (3) This online experience is exactly what I needed. This scale provides the study with an adequate measure of the level of satisfaction of the customer experience.

8.3.11 Personal Characteristics Measurement

A number of personal characteristic measurements were developed to help analyse the data from different perspectives. As well as traditional demographic questions on age and gender, based on the literature review a number of scale items were adopted and developed to measure the following personal characteristics: (1) Level of confidence in using the Internet (2) Average usage of the Internet (3) Average usage of Social Networking Sites (4) Gender and (5) Age. Five point Likert scales were applied to measure each of these variables with exception to the dichotomous questions, age and gender.

Table 8.2 provides a summary of the derived scale items employed, associated authors and phenomenon measured.

Table 8.2 Scale Items used in the study's Questionnaire

Derived Scale Items	Author(s)	Phenomenon Measured
• The website was attractive • The website was aesthetically appealing	Mathwick, Malhotra and Rigdon, 2001.	Website Aesthetics
• While I was on the site, I was always aware where I was. • While I was on the site, I was always able to go where I thought I was going. • I was able to choose which link and when to click it. • I feel that I have a great deal of control over my searching experience at this site. • The Web site is not manageable • While I was on the site, I could choose freely what I wanted to see. • While surfing the site, my actions decided the kind of experiences I got. • The website was easy to use. • I was able to easily search for what I want. • The navigation was quick and easy.	Lui, 2003; McMillan and Hwang, 2002; Song and Zinkhan, 2008; Gefen, 2003.	Control
• I was able to check to see if the information was current. • I was able to check to see that the information was complete and comprehensive. • I was able to see that the website provides accurate information. • The information on the web site is easily understandable.	Flanagin and Metzger, 2000; Guo et al, 2012.	Quality of Information
• I was able to look for an official "stamp of approval"	Flanagin and Metzger, 2000. Fogg et al, 2001	Website Credibility

• I was able to check to see whether the contact information for that person or organisation is provided on the site. • I was able to verify the website's accreditation or credentials. • The site looks professionally designed		
• I was absorbed intensely in the activity • My attention was focused on the activity • I concentrated fully on the activity • I was deeply engrossed in the activity	Ghani et al, 1991; Koufaris, 2002; Lee and Chen, 2010; Ding et al, 2009.	Flow
• Frustrated • Confident • Sure • Confused • Optimistic • Uncertain • Disappointed • Relieved • Doubtful • Satisfied	Adapted from Kuhlthau, 2004 and applied a Likert Scale: Following the PANAS scale	Emotions
• I am satisfied with the experience. • This online experience is exactly what I needed. • This online search experience has not worked out as well as I thought it would.	Song and Zinkhan, 2008.	Satisfaction
• It would have been useful to be able to ask for direction in locating the information. • It would have been useful to be able to talk to people who know about the topic. • It would have been useful to ask for advice while searching for the information. • It would have been useful to have assistance in identifying the correct material.	Khulthau, 2004; Lui, 2003; McMillan and Hwang, 2002; Song and Zinkhan, 2008.	Social Interaction/Customer Support

• It would have been useful if the website facilitated two-way communication... • It would have been useful if the website gives me the opportunity to talk back... • It would have been useful if the website facilitates instant (live) communication... • It would have been useful if the web site enabled conversation.		

8.4 Pilot Test

Pilot testing (also known as pre-testing) is an important stage of any research approach. Pilot testing involves carrying out a limited number of the experiments, questionnaires or interviews with respondents to identify any design flaws and correct such flaws (Webb, 1992). The respondents of the pilot test come from the same population sample for consistency. It is also important that the test is administered in the same way as the planned full experiment (Wilson, 2012). In some cases, the researcher may seek some verbal feedback on the pilot test from the respondent. Normally the sample of the pilot test is relatively small. Aaker et al (2011) and Wilson (2012) suggest that it is better to test a questionnaire with detailed probing of a small sample rather than doing 'superficial testing' with a large sample.

This study conducted a pilot test of the experiment with 15 participants from the sample population. A breakdown of the test participants saw 4 undergraduate business students and 6 postgraduate business students and 5 business people undertake the pilot test. Feedback was given orally be each participant and logged in a logbook by the researcher. This test helped the study to correct some design flaws in the sequence of questions. The pilot study also gave the researcher an idea of how long each experiment would take as well as allowing the researcher to design the questionnaire in a researcher-administered manner as a convenient method of conducting the research. In order to reduce the length of some of the questions in the questionnaire section, and not

to frustrate the participants with repetition, some items were removed from the scales used. The removal of these items did not affect the validity or reliability of the scales and in line with other research studies adopting similar scales.

8.5 Sampling

In order to determine the sample for the study's experiment, in line with the sampling procedure used in the study's exploratory depth interviews, Wilson's (2012) sampling process as seen in figure 8.5 was deployed. The first stage of this process is defining the population of interest. As this research study is focussed on businesses searching for business advisory information and services, ideally businesses would be an appropriate population of interest.

However, due to the nature of the study's methodology, an experiment followed by a questionnaire provides the study with scope to use business students as the population of interest as participants are provided with the experience of conducting business advisory information seeking tasks before completing the questionnaire. Further, the students used in the study are either undergraduate business students or postgraduate business students, who as a result have a grounding of business terminology and practices as well as being future searchers of business advisory information. Numerous researchers (Kim and Park, 2005; Hogg et al, 1998; Lee and Johnson, 2002) outline that students are a good sample for online studies, because they are most often involved with the Internet every day. In order to ensure the sample of undergraduate and postgraduate business students is appropriate for the study, a repeated measures ANOVA (which compares responses between groups) was conducted between 20 business people and 20 business students to identify if any differences exist between the responses of undergraduate/postgraduate business students and business people, the results outlined that no differences existed, thus business students are an appropriate sample to use in the study (the results of the ANOVA are further discussed in chapter 9: section 9.3).

The second stage of the sampling process is determining whether to sample or census. A census occurs when every member of the population of interest have an equal opportunity of participating in the research. Due to the time and cost restraints of such

a measure the aforementioned sample are used in this study rather than a census approach.

As previously mentioned due to the convenience and availability, the sampling frame for this study is undergraduate and postgraduate business students. The availability of such respondents provides the researcher with the ability of obtaining a larger sample. Considerations of cost and time need to be made with regard to the sample population and the sample frame (McDaniel and Gates, 2010). As a result, the information gathered from the participants of the experiment will serve as the sampling frame for the study.

8.5.1 Probability and Non Probability Sampling

Wilson (2012) and Malhotra (2010) outline that two key sampling processes exist: probability sampling and non-probability sampling. Probability sampling is where everyone within the population of interest has a known probability of being selected to take part in the research. Numerous advantages of probability sampling exist including, the results being applicable to the total population and as a result the research can be sure of gaining information from a representative group of the population of interest. However, the major drawback of such an approach is the significant increase in the researcher's costs, time and effort (Wilson, 2012).

Non-probability sampling on the other hand is where the probability of being selected to take part in the research is unknown (Malhotra, 2010). Non-probability sampling has a number of advantages including lower costs, less time constraints and a lower sample. However, using a non-probability sampling technique results in indicative results rather than definitive results, which can be applied quite comfortable to the whole population of interest. Thus, the researcher does not know fully to what degree the sample is representative of the population of interest. Despite non-probability samplings faults, it is widely used for most research studies due to the aforementioned cost and time constraints. This study adopts a non-probability sampling technique using convenience sampling, where the researcher approaches the most accessible members of the population of interest.

8.5.2 Types of sampling methods

Numerous sampling methods exist within both probability and non-probability sampling. Table 8.3 outlines the different sampling methods that are used in probability and non-probability sampling.

Table 8.3 Non-probability and Probability Sampling

Non-Probability Sampling	**Probability Sampling**
Convenience Sampling	Simple Random Sampling
Judgement Sampling	Systematic Sampling
Quota Sampling	Stratified Random Sampling
Snowball Sampling	Cluster Sampling

Adapted from: Wilson (2012) and Malhotra (2010)

As previously mentioned the sampling methods adopted in this research study are both 'convenience sampling' and 'snowball sampling'. With regards to convenience sampling the researcher's convenience forms the basis of selecting potential participants within the population of interest (Wilson, 2012). Convenience sampling can be seen as one of the lowest cost methods of obtaining a sample for research (Webb, 1992). Having access to a wide selection of Business School students at Universities in Glasgow studying on both undergraduate and postgraduate business programs provides a convenient sample for the researcher to use. In addition, 'snowball sampling' is where participants that have taken part in the research refer the researcher to other potential participants leading to waves of referrals, as a result leading to a snowballing effect (McDaniel and Gates, 2010).

8.5.3 Sample Size

The sample size is an important consideration in any research study. When determining the sample size to be used 'financial, managerial and statistical issues' are taken into consideration (Wilson, 2012, p.194). While a large sample size may help to reduce sampling error, a balance needs to be achieved with the increased costs and time involved in the data collection phase (Aaker et al, 2011). This study carried out 160

experiments (3 x repeated measures) with the aforementioned population of interest (140 business students and 20 business people). As each experiment took on average 36 minutes to complete, the time and cost restraints of conducting more experiments was deemed unrealistic within the restricted timescales.

8.6 Sources of Error

The random sampling error can be seen as the variation between the true mean value of the population and the true value of the sample population. This sample error occurs in non-probability sampling as the sample can be considered as an imperfect representation of the population of interest (Churchill and Brown, 2007).

However, non-sampling error can occur in many different forms (Aaker et al, 2011). Wilson (2012) points out that non-sampling error can result from issues with the problem definition, the scales used in the study, the interviewing methods and the data analysis. Malhotra (2010) outlines that non-sampling errors can also consist of non-response errors and response errors, this occurs when a participant fails to complete part of a question. In addition, response error occurs when a participant gives an inaccurate answer or the answer is misunderstood and misanalysed (Dillon et al, 1994; Wilson, 2012).

Malhotra (2010) and Wilson (2012) point out that response errors made by participants may be due to the participant not have the ability or the willingness to actually answer the question posed. As a result, the inability error comes from the participant's inability to answer the question. Wilson (2012) suggests that respondents may provide inaccurate answers for a number of reasons including unfamiliarity with the subject, tiredness, boredom, inability to recall, the format of the question and the question wording as previously discussed. In addition, participants may intentionally misrepresent their opinions in order to provide socially acceptable answers, to avoid any embarrassment and to give the researcher what they think the researcher wants (Malhotra, 2010).

Churhill and Brown (2007) argue that non-sampling error is most often more problematic than sampling error, as such sampling errors can be somewhat calculated, whereas the non-sampling errors discussed are difficult to overcome.

8.7 Ethical Issues

According to Punch (1986) ethical issues occur when there is a clash between professional and personal interests. In order to obtain data for a research study, a researcher can act unethically by overstepping confidentiality boundaries. With all aspects of this research, the researcher ensured that ethical research took place.

In line with the University of Strathclyde's ethics regulations all field (primary) research had to be passed by an ethics committee. During the exploratory interview phase of the research participants were invited by letter, which informed them of the purpose of the research. A follow up telephone conversation outlined the purpose of the research and further clarification was given face to face before the interview began. All respondents were made aware that a digital recorder was being used to record the interviews for transcription purposes. Each participant was advised that their responses would remain confidential and that their name or business name would be presented anonymously in the research findings. During such interviews the researcher remained unbiased and did not force the discussion of any topics and allowed the participant to speak freely.

During the development of the experiment, the researcher ensured that questions asked after each task were not leading questions. This was tested through a pilot test of the experiment with 15 participants. Moreover, instructions were outlined in a document that contained the experiment tasks. Participants were invited to take part in the research via email and face-to-face forms. Upon invitation potential participants were informed of the purpose of the research. The purpose of the research was again outlined to all participants within the experiment task document and reiterated again verbally at the experiment. The experiments along with their instructions can be seen in Appendix 2. In addition, participants signed a consent form to take part in the research.

8.8 Limitations

As in any research study methodological limitations exist and this study is no different. The time constraints associated with the experiments meant that a lower sample had to be obtained. An alternative method may have allowed for a higher response rate, however alternative methods would have come with their own time and cost restraints and would have imposed restrictions on the research objectives.

Due to time constraints on the part of businesses (i.e. their availability) and the researcher, businesses were not used as the population of interest in the experiment, which could be viewed as a limitation of the research. However, this was somewhat overcome by using 'business' students and giving each participant the experience of searching for business advisory information before answering questions posed in the questionnaire.

8.9 Conclusion

This chapter discussed part II of the methodological approach for the research. The use of an online experiment was proposed as the main methodological approach for gathering data. This was seen as the most appropriate means of data collection in order to identify relationships between variables and the potential need for online customer support. The online experiment ensured that participants had searched for business advisory information and had used business advisory websites as each task was to be completed on specified business advisory sites followed by a questionnaire. The questionnaire design was outlined as well as a discussion on the question topics, wording and response formats, the question sequence, the appearance of the questionnaire and the scale items used in the questionnaire.

A pilot test was conducted to check for reliability and validity of the process of the experiment and questionnaire. The sample adopted for the research was outlined along with clarification of the sampling process as well as a discussion on sampling error and non-sampling error. The subsequent chapter discuses the results of the online experiment before going on to discuss the findings of the research.

CHAPTER 9

RESEARCH FINDINGS AND ANALYSIS

9.0 Introduction

Chapter 7 outlined the qualitative exploratory research findings and presented the conceptual theoretical framework to be tested through the previously outlined methodological approach (in Chapter 8). In addition to the graphical representation of the research hypothesis in the form of the conceptual theoretical framework, the research hypotheses were also detailed in written descriptions. This Chapter will now introduce the research findings.

Numerous statistical techniques are used to investigate the relationships between the variables outlined in the previous Chapter using version 22 of statistical software package SPSS. Firstly, descriptive statistics are presented to provide an analysis of the sample and basic descriptions of the data gathered. Following this, in order to determine the appropriateness of the sample to be used in the study a repeated measures ANOVA is conducted.

A second repeated measures ANOVA is calculated in order to identify the representativeness of the sample of websites used in the study. Further to this, reliability tests are presented to outline the reliability of the scales deployed in the study's questionnaire to ensure the data is reliable for statistical analysis. Following this, reliability tests, an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) are performed in order to validate a new scale developed in this study to measure the perceived time spent on the website.

Further to this, a series of MANOVAs are calculated to identify if differences between various groups existed on the variables within the study. Following these tests, a confirmatory factor analysis (CFA) is calculated to examine the validity of the variables in the study for Structural Equation Modelling. The Structural Equation Model using

AMOS Graphics 22 is then specified and estimated to test the relationships hypothesised in the previous chapter.

9.1 Sample Descriptive Analysis

An online experiment was conducted and fully completed with 160 participants where over 700 potential participants were approached. Thus, this study has 160 repeated measures 3 times over due to each respondent completing 3 online experiments. Two sample groups were included in the study. Initially the experiment was carried out with 20 business people (see Table A9.1 in Appendix 3) and then followed up with a sample of 20 business students. The subsequent section (9.3) outlines the comparison of results in the form of a repeated measures ANOVA.

Furthermore, the sample of 160 participants comprised of 47% male and 53% female. The age group of the sample ranged from 18 and 50+ years old in keeping with the demographic profile of a business advisory provider. The results show that 65% of the participants fall within the age ranges of 18-25 years and 26-34 years (see Table 9.1), an age group the UK Government are seeking to start new businesses (Gov.uk, 2015).

Table 9.1: Gender and Age of Sample Population

Variables	Frequency (n)	Percentage (%)
GENDER		
Male	75	47
Female	85	53
AGE		
18-25	59	37
26-34	44	28
35-42	29	18
43-50	22	14
50+	6	4
Total	160	100

As this research focuses on the online environment it is appropriate to gain an understanding of how confident participants are at using the Internet as well as understanding how often participants use the Internet. The results (see Table 9.2) show 60% of respondents are either extremely confident or confident at using the Internet; in addition, 87% of respondents use the Internet very often or often. A mean average of 2.44 was calculated for level of confidence in using the Internet on a 4-point Likert scale ranging from Extremely Confident to Not Confident. In addition, a mean average of 1.72 was calculated for how often participants use the Internet on a 4-point Likert scale ranging from Very Often to Not Often. These results (Table 9.2) show that the sample in the study can be deemed as mostly confident and regular Internet users.

Table 9.2: Internet Confidence and Usage

Variables	Frequency (n)	Percentage (%)
How confident are you at using the Internet?		
Extremely Confident	32	20
Confident	68	43
Somewhat Confident	49	31
Not Confident	11	6
On average how often do you use the Internet?		
Very Often	67	42
Often	73	45
Somewhat Often	17	11
Not Often	3	2
Total	160	100

It was also seen as appropriate to establish how often participants used social networking sites such as Facebook, Twitter, Linkedin and Google+. This allowed the researcher to gain an insight into how active participants are in acting within the social environment online. The results in table 9.3 outline that 63% of participants either use social networking sites very often or often. An average mean result was calculated with a result of 2.5 on a 5-point Likert scale ranging from Very Often to Very Rarely.

Table 9.3: Social Network Usage

Variable	Frequency (n)	Percentage (%)
How often do you use any of the following social network sites: Facebook, Twitter, Google +, LinkedIn		
Very Often	48	30
Often	52	33
Somewhat Often	25	16
Not Often	24	15
Very Rarely	11	6

The descriptive statistics provide the study with an overview of the sample frame. The statistics provided in table 9.1, 9.2 and 9.3 would suggest that the sample is appropriate for the study. However, as this study proposes to use undergraduate and postgraduate business students as the sample population as discussed in chapter 8, it is important that an analysis is conducted between business students and business people to ensure the responses are the same and thus an appropriate sample for the study, section 9.3 outlines the procedure used.

9.2 Computing Composite Variables

One of the first steps taken before conducting any further analysis is to prepare the data file. Within SPSS the researcher computed overall composite variables for each variable represented by multiple scale items. This allowed the researcher to use composite variables for comparison within the sample (Business People vs. Business Students) as well as a comparison between each website. Overall 30 variables were computed from the 3 website experiments.

9.3 Comparison of Business Persons and Business Students Sample

In order to further analyse the appropriateness of the sample, a repeated measures ANOVA was conducted to identify if differences existed between business people and business students on each of the variables within the study. A repeated measures ANOVA can be used to compare participants' responses to two or more different questions (Pallant, 2013). The repeated measures ANOVA allows the researcher to

compare responses across all three website experiments while identifying the differences between business people and business students.

Alternatively, some researchers would opt to use a MANOVA for comparisons between the two samples. However, this would be the most beneficial technique to apply should only one set of data be under examination, three sets of data apply in this study from the three website experiments. Thus, conducting 3 x MANOVA tests could result in Type I error.

The output from the repeated measures ANOVA provides the researcher with tests for the assumption of sphericity, as well as both univariate and multivariate ANOVA results. However, the results of the multivariate ANOVA will be interpreted as the univariate ANOVA statistics makes the assumption of sphericity (Tabachnick and Fidell, 2007). The sphericity assumption requires the variance of the population scores for any two conditions are the same as variance of the population scores for any other two conditions (Pallent, 2013). Sphericity was violated in this tests as $p = <.05$. In spite of this, the multivariate tests do not require sphericity, thus the researcher will analyse the multivariate outputs.

It is important however when conducting multivariate analysis to check for any outliers within the data that could potentially affect the results (Tabachnick & Fidell, 2001). Before proceeding with the analysis a multivariate normality test was conducted by calculating the Mahalanobis distance. This is the distance of a case from the center point created by the means of all the variables included. This analysis will pick up on any particular cases that have an unusual pattern of scores across the 10 dependent variables tested. The Mahalanobis maximum distance value was recorded as 25.12 (Exp1) 25.91 (Exp2) 27.32 (Exp3). This number is then compared with a critical value, which is determined by using the critical values of chi-square table, with the number of dependent variables as the degrees of freedom (df) value. Tabachnick & Fidell (1996) highlight that a test with 10 dependent variables, the critical value is set at 29.59. Thus, our Mahal.distance values are smaller than the critical value; therefore, it can be safely assumed that there were no substantial multivariate outliers.

Table 9.4 outlines the results from the multivariate test between each experiment and between business people and business students.

Table 9.4 Multivariate Results Between Experiments / Business people and Business Students

Within Subjects Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Experiment * SB	Pillai's Trace	.602	1.514	20.000	20.000	.181	.602
	Wilks' Lambda	.398	1.514	20.000	20.000	.181	.602
	Hotelling's Trace	1.514	1.514	20.000	20.000	.181	.602
	Roy's Largest Root	1.514	1.514	20.000	20.000	.181	.602

It can be seen from table 9.4 that there is no statistical significant difference between the two groups (business people and business students). Table 9.4 shows Wilks' Lambda = .40, F(20, 20) = 1.514, p = .181. Thus, as a non-significant result was achieved p = > .05 (.181) it can be concluded that there is no difference in responses to the questions within the questionnaire between business people and business students across all 3 experiments.

Table 9.5 further establishes the differences between both business people and students for each individual variable within the study.

Table 9.5 Tests of Between-Subjects Effects

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SB	WebsiteAesthetics	4.990	1	4.990	2.982	.097	.072
	Control	1.462	1	1.462	1.255	.269	.031
	InfoQuality	.199	1	.199	.440	.511	.011
	Credibility	.916	1	.916	1.827	.184	.045
	Flow	4.888	1	4.888	2.844	.100	.068
	Emotions	4.691	1	4.691	2.409	.129	.058
	Satisfaction	4.258	1	4.258	2.420	.128	.058
	CustSupport	.500	1	.500	.404	.529	.010
	TimeSpent	.046	1	.046	.119	.732	.003
	Successful Search	2.795	1	2.795	3.157	.083	.075

Transformed Variable: Average

SPSS automatically transforms each of the variables and calculates averages to produce table 9.5. As can be seen from the sig column, there are no significant differences, with all p values > .05.

Further analyses of a comparison of means between each website on each individual variable within the study can be seen in table 9.6. This further shows that no significant difference exists between business people and business students.

Table 9.6 Student or Business (S -1 B = 2) * Experiment

Measure	Student or Business (S -1 B = 2)	Experiment	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Website Aesthetics	Student	1	3.213	.220	2.889	3.778
		2	3.501	.216	3.170	4.045
		3	2.322	.169	2.040	2.722
	Business	1	2.963	.225	2.507	3.418
		2	2.925	.222	2.477	3.373
		3	2.238	.173	1.888	2.587
Control	Student	1	3.195	.167	2.858	3.532
		2	3.376	.166	3.040	3.713
		3	2.743	.135	2.471	3.015
	Business	1	3.085	.171	2.740	3.430
		2	3.060	.170	2.715	3.405
		3	2.515	.138	2.236	2.794
Info Quality	Student	1	2.631	.130	2.369	2.893
		2	3.095	.100	2.894	3.297
		3	2.440	.106	2.227	2.654
	Business	1	2.588	.133	2.319	2.856
		2	3.125	.102	2.919	3.331
		3	2.213	.108	1.993	2.432
Credibility	Student	1	3.786	.107	3.568	4.003
		2	3.857	.113	3.629	4.085
		3	3.500	.122	3.253	3.747
	Business	1	3.588	.110	3.365	3.810

		2	3.388	.115	3.154	3.621
		3	3.650	.125	3.397	3.903
Flow	Student	1	3.333	.220	2.889	3.778
		2	3.607	.216	3.170	4.045
		3	2.381	.169	2.040	2.722
	Business	1	2.963	.225	2.507	3.418
		2	2.925	.222	2.477	3.373
		3	2.238	.173	1.888	2.587
Emotions	Student	1	3.076	.224	2.623	3.530
		2	3.233	.228	2.773	3.694
		3	2.248	.159	1.926	2.569
	Business	1	2.735	.230	2.270	3.200
		2	2.635	.233	2.163	3.107
		3	2.015	.163	1.686	2.344
Satisfaction	Student	1	3.016	.222	2.566	3.466
		2	3.365	.210	2.940	3.790
		3	2.286	.176	1.931	2.641
	Business	1	2.750	.228	2.289	3.211
		2	2.750	.215	2.314	3.186
		3	2.050	.180	1.686	2.414
Customer Support	Student	1	3.673	.209	3.250	4.095
		2	3.351	.203	2.941	3.762
		3	4.196	.107	3.980	4.413
	Business	1	3.500	.214	3.067	3.933
		2	3.413	.208	2.992	3.833
		3	3.925	.110	3.703	4.147
Time Spent	Student	1	2.381	.110	2.159	2.603
		2	2.429	.110	2.206	2.651
		3	2.524	.111	2.300	2.748
	Business	1	2.450	.113	2.222	2.678
		2	2.400	.113	2.172	2.628
		3	2.600	.113	2.371	2.829
Successful Search	Student	1	.810	.140	.526	1.093
		2	1.206	.129	.946	1.466
		3	.889	.125	.636	1.142
	Business	1	.583	.144	.293	.874
		2	.867	.132	.600	1.133
		3	.550	.128	.291	.809

9.4 Comparison across Experiments

The previous section confirmed that the sample is appropriate for the study. However, before moving on to compute overall mean composite variables from across the three experiments in the study, a second repeated measures ANOVA was conducted to explore if any differences exist between variables across each experiment for the full sample of 160 participants. This allows the researcher to identify if the study has a broad and representative sample of websites that can produce generalisable results for all types of business advisory websites. A broad sample of websites provides the study with scope to compute overall mean variables from the three website experiements.

The descriptive statistics output from SPSS shows that we have a full sample of 160 participants; the mean responses for each item, followed by the standard deviation are provided. However, the multivariate test table (table 9.7) provides us with more interesting statistics.

Table 9.7 Multivariate Tests between Experiments

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Observed Power
Experiment	Pillai's Trace	.810	29.920[b]	20.000	140.00	.000	.810	1.00
	Wilks' Lambda	.190	29.920[b]	20.000	140.00	.000	.810	1.00
	Hotelling's Trace	4.274	29.920[b]	20.000	140.00	.000	.810	1.00
	Roy's Largest Root	4.274	29.920[b]	20.000	140.00	.000	.810	1.00

Table 9.7 illustrates that there is a significant difference between each of the websites used in the three experiments $F(20.00, 140.00) = 29.920$, $p = .000$. Table 9.7 shows a Wilks' Lambda value of .19, with a probability value of .000, which can therefore be concluded as a statistical significant difference as the p value is < .05. This therefore suggests that there are differences between each website.

While table 9.7 shows that there is a significant difference between websites, it is also important to assess the effect size of the result (Pallant, 2013). The effect size can be seen from the Partial Eta Squared statistic from table 9.7. The value from this set of

results is .810, which according to Cohen (1988) is a large effect size.

Despite this, we cannot identify where the differences lie between each of the websites from the above analysis. Thus, in order to identify such differences further post hoc tests can be conducted (Field, 2012). Table 9.8 outlines the differences and compares each website on each individual variable within the study.

Table 9.8 Between Experiment Comparisons

Measure	(I) Experiments	(J) Experiments	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
Aesthetics	1	2	.475*	.112	.000	.195	.755
		3	1.163*	.128	.000	.841	1.484
	2	1	-.475*	.112	.000	-.755	-.195
		3	.688*	.124	.000	.378	.997
	3	1	-1.163*	.128	.000	-1.484	-.841
		2	-.688*	.124	.000	-.997	-.378
Control	1	2	-.028	.067	1.000	-.195	.140
		3	.738*	.109	.000	.466	1.009
	2	1	.028	.067	1.000	-.140	.195
		3	.765*	.114	.000	.481	1.049
	3	1	-.738*	.109	.000	-1.009	-.466
		2	-.765*	.114	.000	-1.049	-.481
Information Quality	1	2	-.406*	.081	.000	-.609	-.204
		3	-.044	.099	1.000	-.292	.204
	2	1	.406*	.081	.000	.204	.609
		3	.363*	.091	.001	.134	.591
	3	1	.044	.099	1.000	-.204	.292
		2	-.363*	.091	.001	-.591	-.134
Credibility	1	2	-.106	.067	.361	-.274	.061
		3	.013	.098	1.000	-.233	.258
	2	1	.106	.067	.361	-.061	.274
		3	.119	.082	.460	-.085	.323
	3	1	-.013	.098	1.000	-.258	.233

		2	-.119	.082	.460	-.323	.085
Flow	1	2	.081	.055	.437	-.056	.218
		3	.525*	.115	.000	.238	.812
	2	1	-.081	.055	.437	-.218	.056
		3	.444*	.110	.001	.168	.719
	3	1	-.525*	.115	.000	-.812	-.238
		2	-.444*	.110	.001	-.719	-.168
Positive Emotions	1	2	-.208*	.081	.042	-.409	-.006
		3	.543*	.124	.000	.231	.854
	2	1	.208*	.081	.042	.006	.409
		3	.750*	.127	.000	.431	1.069
	3	1	-.543*	.124	.000	-.854	-.231
		2	-.750*	.127	.000	-1.069	-.431
Satisfaction	1	2	-.058	.058	.970	-.204	.088
		3	.350*	.106	.006	.085	.615
	2	1	.058	.058	.970	-.088	.204
		3	.408*	.094	.000	.172	.644
	3	1	-.350*	.106	.006	-.615	-.085
		2	-.408*	.094	.000	-.644	-.172
Customer Support	1	2	.125	.088	.487	-.095	.344
		3	-.334*	.105	.009	-.598	-.071
	2	1	-.125	.088	.487	-.344	.095
		3	-.459*	.121	.002	-.762	-.156
	3	1	.334*	.105	.009	.071	.598
		2	.459*	.121	.002	.156	.762
Percieved Time Spent	1	2	-.042	.042	.964	-.134	.093
		3	.656*	.071	.000	.485	.827
	2	1	.042	.042	.964	.134	.093
		3	.451*	.061	.000	.302	.599
	3	1	-.656*	.071	.000	-.827	-.485
		2	-.451*	.061	.000	-.599	-.302
Successful Search	1	2	-.342*	.044	.000	-.449	-.234
		3	.069	.038	.214	-.023	.160
	2	1	.342*	.044	.000	.234	.449
		3	.410*	.032	.000	.334	.487
	3	1	-.069	.038	.214	-.160	.023
		2	-.410*	.032	.000	-.487	-.334

Table 9.8 illustrates that there is a statistically significant difference between each website with regard to websites aesthetics with a p value of .000 for all combinations. In terms of control on the website, Website 1 and Website 2 do not differ with a non-significant difference p = 1.000, however other combinations between the websites result in a significant difference p = .000. All combinations displayed in table 9.8 show that Information Quality is significantly different on each website with p =.000. Websites 1 and 3 are not significantly different with regard to website credibility with a p = 1.000, all other combinations are significant at p=.000 and p =.007. Furthermore, the results show that website 1 and 2 do not differ in with regards to flow with p =.246, however other combinations are significant with p = .000. Both positive and negative emotions do not differ between website 1 and website 2 with a p value of 1.000, other combinations are statistical significant with p = .000. Similarly, the customer experience does not have a statistically significant difference between website 1 and website 2, however other combinations shown in table 10.8 show a significant difference with p = .000. With regard to Social Interaction, website 1 and website 2 do not have a significant difference with p = 1.000 for social interaction, however other combinations show that there is a statistical significant difference with a p value of .000. Moreover, we can also see that with regard to the variable of time spent on the website, there is a significant difference between website 1 and website 3 (p = .000), as well as website 2 and 3 (p = .000), however there is no significant difference between website 1 and website 2 (p = .964). Finally, table 8.10 shows that there is a significant different between website 1 and website 2 (p = .000) with regard to a successful search and a significant difference between website 2 and 3 (p = .000), however there is no significant difference between website 1 and website 3 (p = .214). These results in table 9.8 further highlight the level of significant difference between websites for each of the study's variables. While some websites are not significantly different with regard to some individual variables, this can be somewhat expected with 10 variables across 3 websites. Overall it can be claimed that the study has a broad and representative sample of websites and thus allows the study to compute composite variables using the mean response for participants calculated across the three sites.

9.5 Further Comparison between websites using Cronbach's Alpha Coefficient

Within table 9.9, it is interesting to look at the column 'Cronbach's Alpha if Item Deleted', this shows us an element of variation between the three websites as previously highlighted in the repeated measures ANOVA in table 9.8. It can be seen from Table 9.9 that there are differences between each of the websites on each variable, particularly with website 3 as deleting this item within the scales with exception to website aesthetics would increase Cronbach's Alpha variable. This further analysis shown in table 9.9 highlights that a broad and representative sample of websites has been achieved and provides the study with the justification for further computing mean averaged variables across the three websites used in the experiment.

Table 9.9 Variation between websites

Factor	**Items**	**Cronbach's Alpha**	**N of Items**	**Scale Variance If Item Deleted**	**Corrected Item Total Correlation**	**Cronbach's Alpha if Item Deleted**
Website Aesthetics		**.708**	3			
	Exp1WebAesth			1.784	.491	.658
	Exp2WebAesth			1.574	.627	.489
	Exp3WebAesth			1.706	.467	.693
Control		**.831**	3			
	Exp1Control			1.333	.735	.722
	Exp2Control			1.158	.781	.674
	Exp3Control			1.743	.589	.863

Information Quality		**.707**	3			
	Exp1InfoQual			.835	.563	.570
	Exp2InfoQual			.957	.591	.541
	Exp3InfoQual			1.074	.434	.722
Website Credibility		**.748**	3			
	Exp1WebCred			1.151	.655	.570
	Exp2WebCred			1.101	.593	.648
	Exp3WebCred			1.410	.491	.755
Flow		**.821**	3			
	Exp1Flow			2.393	.687	.743
	Exp2Flow			2.211	.767	.655
	Exp3Flow			2.981	.590	.835
Positive Emotions		**.818**	3			
	Exp1PosEmo			1.961	.704	.714
	Exp2PosEmo			1.714	.760	.655
	Exp3PosEmo			2.636	.585	.837
Time Spent on the site		**.707**	3			
	Exp1NegEmo			.825	.558	.570
	Exp2NegEm			.973	.597	.541

	o					
	Exp3NegEmo			1.043	.441	.722
Customer Experience		**.821**	3			
	Exp1CustExp			2.437	.722	.705
	Exp2CustExp			2.267	.774	.646
	Exp3CustExp			3.130	.549	.869
Customer Support		**.759**	3			
	Exp1CustSupport			1.396	.683	.567
	Exp2CustSupport			1.494	.668	.582
	Exp3CustSupport			2.431	.486	.799

9.6 Reliability Analysis

However, before moving on to compute mean averaged variables to be used in the study, it is important when conducting quantitative research that the scales used are reliable. Reliability can be seen as the extent to which a scale produces consistent results when repeated measurements are conducted (Tabachnick and Fidell, 2007). One of the main concerns of the reliability of a scale is its internal consistency (Pallant, 2013). This is the extent to which all items in the scale are measuring the same underlying construct. The reliability of a scale can be understood through examining the association between scores from items within the scale, if this association is high, then it can be concluded that the scale provides consistent results and thus reliable (Briggs and Cheek, 1986).

One of the most popular reliability tests is Cronbach's Alpha. According to Pallant (2013) the Cronbach Alpha coefficient of a scale should be above .7 to ensure

reliability. Malhotra (2004) suggests that an Alpha value of .6 or less is concerning. Thus, Cronbach's Alpha was calculated for each scale in the study. Three scale items, one item within the scale measuring control, one item within the scale measuring perceived time spent and the other within the scale measuring customer experience were 'reversed' as each scale contained one item that was negatively worded.

As previously mentioned in Chapter 8 scales have been adopted from previously published studies with the exception of the 'newly' discovered variable of time spent on the website. As no adequate scales exist for such a variable the researcher opted to create and validate a new scale consistent with established scale development procedures (Gilbert and Churchill, 1979). Table 9.10 outlines Cronbach's Alpha coefficients to determine the reliability of the scales across each website experiment.

Table 9.10 Reliability Analysis of Measurement Scales

Factor	**Items**	**Cronbach's Alpha**			**N of Items**	**Scale Variance If Item Deleted**			**Corrected Item Total Correlation**			**Cronbach's Alpha if Item Deleted**		
		web 1	**web 2**	**web 3**		**web 1**	**web 2**	**web 3**	**web 1**	**web 2**	**web 3**	**web 1**	**web 2**	**web 3**
Website Aesthetics		**.989**	**.964**	**.973**	2									
	WebAesth1					.575	.616	.665	.978	.933	.947	.	.	.
	WebAesth2					.543	.547	.641	.978	.933	.947	.	.	.
Control		**.934**	**.952**	**.908**	10									
	Control1					38.895	45.894	26.629	.592	.687	.509	.934	.951	.909
	Control2					37.228	44.928	26.728	.718	.721	.629	.928	.949	.902
	Control3					40.306	47.864	26.222	.497	.537	.471	.937	.956	.914

	Control4					36.883	44.138	27.602	.787	.788	.594	.924	.947	.904
	Control5					36.362	45.187	25.050	.739	.804	.670	.927	.946	.899
	Control6					36.786	42.803	25.936	.686	.828	.681	.930	.945	.898
	Control7					34.467	42.975	25.453	.912	.804	.715	.917	.946	.896
	Control8					34.558	41.525	24.667	.875	.916	.818	.919	.941	.890
	Control9					39.680	41.413	24.552	.674	.894	.841	.931	.942	.888
	Control10					34.679	40.935	24.564	.885	.930	.863	.919	.940	.887
Information Quality		**.771**	**.720**	**.754**	4									
	InfoQual1					3.912	3.227	2.698	.545	.460	.584	.731	.687	.679
	InfoQual2					3.178	2.375	2.321	.664	.670	.716	.601	.548	.592
	InfoQual3					3.528	2.468	3.778	.485	.643	.367	.701	.569	.781
	InfoQual4					4.656	3.435	3.059	.179	.293	.567	.795	.773	.689
Website Credibility		**.754**	**.788**	**.703**	4									
	WebCred1					3.204	4.161	3.322	.643	.651	.414	.643	.707	.610
	WebCred2					4.628	5.007	3.877	.452	.490	.366	.746	.787	.650
	WebCred3					3.321	3.891	2.814	.633	.746	.343	.648	.651	.587
	WebC					4.42	5.37	3.61	.513	.522	.303	.720	.773	.695

	red4					1	1	9						
Flow		**.941**	**.947**	**.940**	4									
	Flow1					7.523	7.903	5.846	.879	.881	.853	.917	.927	.922
	Flow2					8.330	8.263	5.783	.856	.881	.868	.925	.928	.918
	Flow3					8.330	8.467	5.748	.856	.884	.865	.925	.933	.919
	Flow4					7.369	7.669	5.658	.864	.852	.841	.924	.938	.927
Time Spent on website		**.807**	**.723**	**.746**	4									
	TimeSpent1					2.237	2.074	1.443	.650	.610	.642	.747	.609	.637
	TimeSpent2					2.707	2.623	1.340	.532	.455	.560	.799	.706	.676
	TimeSpent3					2.222	1.733	1.590	.699	.517	.479	.720	.674	.719
	TimeSpent4					2.522	1.915	1.391	.623	.538	.500	.760	.647	.714
Positive Emotions		**.962**	**.966**	**.933**	10									
	PosEmo1					61.380	67.610	36.841	.913	.923	.843	.954	.959	.921
	PosEmo2					63.722	67.808	37.311	.845	.879	.851	.957	.961	.921
	PosEmo3					65.097	69.503	38.422	.828	.853	.812	.958	.962	.924
	PosEmo4					64.028	70.079	37.557	.849	.828	.663	.957	.962	.930
	PosEmo5					63.377	69.436	38.057	.865	.869	.781	.956	.961	.924

	PosEmo6					61.821	68.289	36.929	.907	.884	.759	.954	.960	.925
	PosEmo7					59.663	65.342	34.758	.852	.877	.721	.958	.961	.930
	PosEmo8					68.175	75.165	39.887	.639	.634	.654	.964	.969	.930
	PosEmo9					66.791	72.100	39.740	.694	.782	.542	.962	.964	.935
	PosEmo10					61.353	66.506	35.789	.907	.908	.884	.954	.959	.920
Level of Satisfaction		**.899**	**.894**	**.798**	3									
	LevelofSat1					3.458	3.484	2.887	.838	.855	.828	.824	.791	.604
	LevelofSat2					3.481	3.701	2.981	.886	.873	.834	.783	.779	.577
	LevelofSat3					3.937	4.277	3.038	.688	.660	.634	.949	.956	.952
Customer Support		**.985**	**.978**	**.976**	8									
	CustSupport1					37.673	35.037	15.016	.930	.904	.875	.984	.975	.974
	CustSupport2					37.100	33.929	14.463	.938	.921	.921	.983	.974	.972
	CustSupport3					37.132	33.805	14.400	.946	.917	.926	.983	.975	.972
	CustSupport4					37.011	34.162	14.622	.946	.915	.911	.983	.975	.973
	CustSupport					37.516	35.155	14.792	.947	.916	.900	.983	.975	.974

	5													
	CustSupport6					38.224	35.946	14.964	.929	.899	.885	.984	.976	.972
	CustSupport7					37.403	35.044	14.704	.940	.918	.908	.983	.975	.972
	CustSupport8					38.128	35.797	14.902	.927	.904	.892	.984	.975	.973

The Cronbach Alpha was used to examine the internal consistency and reliability of 49 scale items. As suggested by Pallant (2013), Tabachnick and Fidell (2007) and Briggs and Cheek (1986) Cronbach's Alpha should be above .7. The Cronbach Alpha values shown in table 9.10 for each scale in this study are above this critical value, which therefore suggests the scales have internal consistency and can be seen as reliable for further analysis to take place. Additionally, due to the methodology deployed in this research, repeated measure of each of the scales were carried out across each website that participants answered questions on, thus following the recommended repeated measure of Tabachnick and Fidell (2007).

9.6.1 Reliability and Validity of Time Spent Scale

When developing a new scale, it is important that further analysis takes place in order to ensure the scale is reliable and valid (Churchill, 1979). As previously mentioned one new scale was created in this study. While scales may be developed using a single item measure (Jacoby, 1978), Churchill (1979) suggest that marketing researchers are far better served to develop a multi-item scale as has been done in this study.

The first step in the procedure for developing a scale is to understand the definition of the variable. The definition of the variable was outlined in Chapter 7, where time spent can be seen as:

'The perceived length of time users are prepared to spend searching for information on

a website before halting their search'.

As little literature exists on the notion of time spent on a website within the marketing management and information science domain, the researcher predominantly relied on the exploratory in-depth interviews in producing a concise definition of the variable 'percieved time spent on the website'.

The second step in scale development is to generate items that best fit and align with the domain as previously specified (Churchill, 1979). The exploratory in-depth interviews conducted with business owners (see sample in Chapter 8), provided the researcher with a set of items. These items were established from the transcripts of the depth interviews and through further elaboration with each participant on the concept of time spent on a website. In order to develop a robust scale, the researcher in line with Churchill (1979) developed items with slightly different shades of meaning in order to create a better foundation for the final item set. Once the final item set was edited and collated, tests were conducted with actual data.

According to Churchill (1979) Cronbach's Alpha as outlined in table 9.10 should be the researcher's first measure of internal consistency, calculating the coefficient alpha and the inter-item correlation. We can see from the shortened version of table 9.10, table 9.11 illustrates the coefficient alpha along with inter-item correlation for 'time spent' on each individual website.

Table 9.11 Time Spent on Website Reliability Analysis

Factor	**Items**	**Cronbach's Alpha**			**N of Items**	**Scale Variance If Item Deleted**			**Corrected Item Total Correlation**			**Cronbach's Alpha if Item Deleted**		
		web 1	**web 2**	**web 3**		**web1**	**web2**	**web3**	**web 1**	**web 2**	**web 3**	**web 1**	**web 2**	**web 3**
Time Spent on website		**.807**	**.723**	**.746**	4									
	Time Spent 1					2.237	2.074	1.443	.650	.610	.642	.747	.609	.637

	Time Spent 2					2.707	2.623	1.340	.532	.455	.560	.799	.706	.676
	Time Spent 3					2.222	1.733	1.590	.699	.517	.479	.720	.674	.719
	Time Spent 4					2.522	1.915	1.391	.623	.538	.500	.760	.647	.714

It can be seen that Cronbach's Alpha value is above the .7 critical value (Pallant, 2013) with an alpha value of .80, .72 and .74 for the scale on each individual website. Additionally, item correlation is at an acceptable level (Churchill, 1979).

9.6.2 Exploratory Factor Analysis for Scale Development

Researchers can either continue to examine the column 'Cronbach's Alpha if item deleted' in table 9.11 or go on to conduct an Exploratory Factor Analysis (EFA). Churchill (1979) comments that in order to carry out stringent scale development the researcher ought to conduct an EFA. An EFA within SPSS helps the researcher to further understand the relations among the set of items in terms of an underlying latent factor, additionally the EFA provides a means of explaining variation among the variables (items) (Floyd and Widaman, 1995).

The correlations matrix produced in the EFA shows that all items correlate above the value of .3 thus indicating that an exploratory factor analysis can be carried out (Pallant, 2013). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) is .789, which is above the critical value of .6 as well as Barlett's Test of Sphericity being significant with a p value of .000, this further supports the factorability of the correlation matrix.

First of all, it is important to look at the communalities output from SPSS to understand the variance the variables share with the latent variable underlying the set of observed measures. Table 9.12 outlines the communalities output from SPSS.

Table 9.12 Communalities

	Initial	Extraction
I spent more time than I would have liked searching for the information	1.000	.667
It took longer than I expected to find the information on the website	1.000	.519
It took too long to find the information on the website.	1.000	.721
The length of time spent searching for information on the website was acceptable	1.000	.633

According to Velicer and Fava (1998) communalities are considered high if they are .8 or above, however this is unlikely to occur with real data. In spite of this, table 9.12 shows moderate to high communalities between .4 and .7 (Costello and Osborne, 2005). Communalities that fall below .4 may be 1) not related to the other items 2) suggest that an additional factor should be explored. However, Tabachnick and Fidell (2001) suggest that .32 can be considered as the minimum loading of an item.

Table 9.13 shows the results of the component matrix as part of the exploratory factor analysis, we can see from the one factor extracted that each variable loads highly on the factor at above the critical value of .5 (Tabachnick and Fidell, 2001).

Table 9.13 Component Matrix

	Component
	1
I spent more time than I would have liked searching for the information	.817
It took longer than I expected to find the information on the website	.720
It took too long to find the information on the website.	.849
The length of time spent searching for information on the website was acceptable	.795

The results recorded from the exploratory factor analysis in table 9.12 and table 9.13 as well as Cronbach's Alpha coefficient in table 9.11 all provide results that would suggest

a scale that can be deployed. However, the next appropriate step in the scale development process is to conduct a confirmatory factor analysis. The confirmatory factor analysis will help to determine if the factor and the variables (items) loading on it confirm to what is expected based on the EFA (Tabacknick and Fidell, 2007).

9.6.3 Confirmatory Factor Analysis for Scale Development

The Confirmatory Factor Analysis (CFA) is used to test the validity of the indicator variables on the underlying factor (Byrne, 2013). The CFA outlines the goodness of fit of the variables. Table 9.15 highlights the critical values that will be used to determine the goodness-of-fit, using the Chi Square, CFI, NFI, GFI, SRMR, RMSEA and the RMR.

As shown graphically in Figure 9.1 the CFA allows the researcher to test the hypothesis that a relationship between the observed variables and the underlying latent construct exists (Byrne, 2013).

Figure 9.1 Confirmatory Factor Analyses for Scale Development

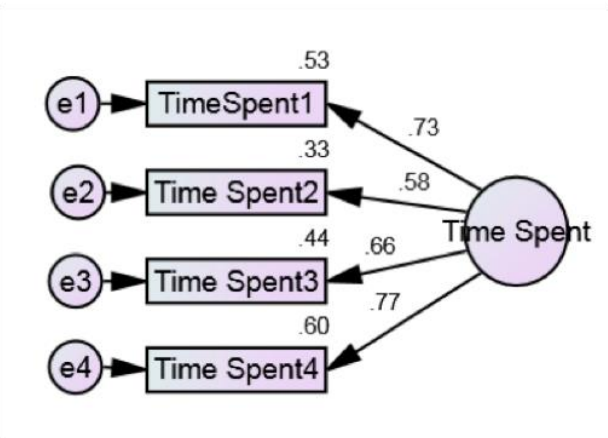


Figure 9.1 outlines the CFA conducted in AMOS Graphics. Figure 9.1 graphically outlines the standardised regression weights. Table 9.14 outlines the regression weights and level of significance, of which we can see strong relations and statistical significance.

Table 9.14 CFA Regression Weights

	Estimate	**P(.Sig)**
Time Spent4 ← Time Spent on Website	.775	.000
Time Spent3 ← Time Spent on Website	.664	.000
Time Spent2 ← Time Spent on Website	.576	.000
Time Spent1 ← Time Spent on Website	.730	.000

From table 9.14 there are two items 'Time Spent2' and 'Time Spent3'which may raise some concern, however each of these values are significant and above .3, in spite of this we can conduct further inspection with goodness-of-fit tests to determine if this item should be removed for better fit within the modification indices (Byrne, 2013). Table 9.15 outlines the goodness-of-fit indices. As explained earlier, 7 goodness-of-fit indices will be used. The number of goodness-of-fit indices to report is debated amongst researchers (Schumacker and Lomax, 2010), however reporting more than one is universally agreed.

Table 9.15 Goodness of Fit Indices

Fit Index	**Goodness of Fit Value**	**Recommended Value of Good Fit**	**Reference**
Chi Square	.300	P > .05	Byrne (2013)
CFI	.998	≥.90 ≥.95	Bentler (1990) Hu and Bentler (1999)
NFI	.986	>.95 Good Fit >.90 Acceptable Fit	Bentler and Bonett (1980)
GFI	.992	>.90 >.95	Joreskog and Sorbom (1996) Schumacker and Lomax, (2010)

SRMR	.022	<.08	Hu and Bentler (1999)
RMSEA	.036	≤.05 Good Fit .05<RMSEA≤.08 Adequate Fit .08<RMSEA≤.10 Mediocre Fit ≤.06 Good Fit	Schumacker and Lomax (2010) Hu and Bentler (1999)
RMR	.008	<.05 ≤.08	Joreskog and Sorbom (1996) Hu and Bentler (1999)

9.6.4 Chi Square Fit Indices

The result of the chi-square test is one of the first results shown from the output in AMOS. Byrne (2013) suggests that a non-significant chi-square test indicates 'good fit'. In this case, it can be seen in table 9.15 that a non-significant result has been produced CMIN = 2.405, d.f. 2, p = .300. However, a number of researchers suggest that the chi-square index is the least reliable and thus other indices should be used.

9.6.5 Comparative Fit Index (CFI)

Cadogan et al (2002) suggests that the CFI is one which is most favoured by marketing researchers, as it is robust under severe multivariate non-normality (Ping, 1995). As shown in table 9.15 the CFI has a value range from 0 – 1 with a value > .90 representing good fit (Bentler, 1990), however Bentler and Ho (1999) further suggest a more stringent value of .95 should be sought after. The CFI value for 'time spent' was .998 above the stringent Bentler and Ho (1999) recommended value.

9.6.6 Normed Fit Index (NFI)

The NFI does not require chi-square assumptions and reflects the proportion that the model fit compared to the null hypothesis. According to Schumacker and Lomax (2010) as well as Bentler and Bonett (1980), the NFI should be above .95 for good fit. The NFI as shown in table 9.17 is .986 showing further good fit.

9.6.7 Goodness of Fit Index (GFI)

The GFI is an estimation of how close the model comes to reproducing perfectly by the observed covariance matrix (Schumacker and Lomax, 2010). The GFI is the percentage of the observed covariance that is explained by the covariance implied in the model. The values of the GFI range from 0 – 1, as seen in table 9.15 Joreskog and Sorbom (1996) suggest that a good fitting GFI is above .90, however Schumacker and Lomax (2010) suggest a more stringent value of .95. The GFI value for time spent is .992, which is above the more stringent value suggested by Schumacker and Lomax (2010).

9.6.8 Standardised Root Mean Square Residual (SRMR)

The SRMR is an absolute measure of fit and can be defined as the standardised difference between the observed correlation and the predicted correlation. As the SRMR is an absolute measure of fit, a value of 0 indicates perfect fit. Hu and Bentler (1999) suggest that a value less than .08 indicates good fit. The SRMR value for time spent is .022 thus below the critical value outlined by Hu and Bentler (1999).

9.6.9 Root Mean Square Error of Approximation (RMSEA)

According to Byrne (2013) the RMSEA is often regarded as one of the most informative fit indices. The RMSEA informs how well the model, with unknown optimally chosen parameter values, fit the population covariance matrix if it was available (Brown and Cudeck, 1993). The RMSEA however, does favour more complex models than simpler models, which are subject to higher values. Despite this, the RMSEA is below the critical value of .05 (Brown and Cudeck, 1993; Schumacker and Lomax, 2010) with a RMSEA value of .036.

9.6.10 Root Mean Square Residual (RMR)

The RMR is the mean absolute value of the covariance residuals. Byrne (2013) suggests that the smaller the RMR value the better fit. Hu and Bentler (1999) suggest that the RMR should be ≤.08, however, Joreskog and Sorbom (1996) suggest that the RMR value should be <.05 for good fit. The RMR in table 9.15 for the construct time spent is .008.

It can be seen in table 9.15 that all 7 goodness-of-fit indices that have been calculated are above the critical values outlined and thus we can conclude that goodness of fit exists for the scale developed and no modifications of the scale required. Therefore, the study can use the newly developed scale to measure 'time spent on the website' in the study.

9.7 Calculating Successful Search Variable

As can be seen in previous sections within this chapter and within chapter 8, numerous developed scales were used in order to measure the majority of the variables in the study, with exception to the newly developed scale 'time spent on the website'. However, in order to measure a successful search, as outlined in chapter 8, the researcher utilised the deployed methodology. Within the experiment participants were given instructions that allowed them to use a help card and move on to the next task, abandon search and move on to the next task or successfully complete the search and move on to the next task. The researcher recorded the time it took participants to complete tasks. Thus, in order to measure successful searchers, the average time for successful search was worked out for each task (x3) in each experiment (x3) outlined in table 9.16.

Table 9.16 Average Time for Successful Search

	Experiment 1	**Experiment 2**	**Experiment 3**
Task1	2 mins 49 secs	2 mins 30 secs	2 mins 53 secs
Task2	2 mins 24 secs	2 mins 16 secs	2 mins 13 secs
Task3	1 min 02 secs	1 min 25 secs	1 min 29 secs

Further to this, a points system was then introduced. Those searchers who were faster than the average time to successfully complete the task were allocated 2 points. Those searchers who were slower than the average successful searcher were allocated 1 point and those who did not complete the task (i.e. used a help card or abandoned search) were allocated 0 points. In total the maximum number of points a participant could receive was 18 points (3 tasks x 3 experiments). In order to work within a 5 point scale,

like all other scales within the study, the total points for each participant was divided by 3.6. Using the recorded time for completing a successful search allowed the researcher to measure how successful a customer was in searching for their tasks.

9.8 Reliability Analysis of Composite Variables

Moreover, within SPSS the researcher further prepared the data file by computing new composite mean variables from across the three experiments. Computing new mean composite variables allowed the researcher to work with more manageable variables and display the research results in a more logical manner. However, it is important to carry out further reliability analysis to ensure the items continue to be reliable. According to Briggs and Cheek (1986) and Pallant (2013) Cronbach's Alpha values are somewhat sensitive to the number of items within the scale, with short scales (below 10 items) lower Cronbach's Alpha values can often be found around .5. Pallant (2013) suggests that if the Cronbach Alpha value is low, it is appropriate to report the mean inter item correlation with an optimal range from .2 to .4. In spite of this, the Cronbach Alpha values for each scale remains above the critical value of .7, thus it can be concluded that the scales are reliable.

Table 9.17 Reliability Analysis of Composite Variables (Cronbach's Alpha)

Factor	**Items**	**Cronbach's Alpha**	**N of Items**	**Scale Varience If Item Deleted**	**Corrected Item Total Correlation**	**Cronbach's Alpha if Item Deleted**
Website Aesthetics		**.982**	2			
	WebAesth1			.384	.965	.
	WebAesth2			.366	.965	.
Control		**.960**	10			

	Control1			27.919	.654	.959
	Control2			26.932	.802	.956
	Control3			27.928	.665	.960
	Control4			26.747	.848	.954
	Control5			27.192	.823	.955
	Control6			26.473	.826	.955
	Control7			26.410	.807	.956
	Control8			25.066	.936	.950
	Control9			25.027	.903	.952
	Control10			25.073	.935	.950
Information Quality		**.830**	4			
	InfoQual1			2.119	.609	.806
	InfoQual2			1.621	.782	.725
	InfoQual3			1.983	.695	.769
	InfoQual4			2.203	.564	.825
Website Credibility		**.841**	4			
	WebCred1			2.331	.741	.769
	WebCred2			2.974	.598	.832
	WebCred3			2.192	.757	.763
	WebCred4			2.776	.633	.817
Flow		**.961**	4			
	Flow1			5.178	.911	.947
	Flow2			5.500	.904	.949

	Flow3			5.484	.905	.949
	Flow4			4.995	.906	.950
Time Spent on website		**.871**	4			
	TimeSpent1			.861	.649	.868
	TimeSpent2			.887	.795	.810
	TimeSpent3			.872	.745	.803
	TimeSpent4			.845	.689	.851
Positive Emotions		**.968**	5			
	PosEmo1			41.079	.896	.961
	PosEmo2			41.882	.903	.962
	PosEmo3			42.946	.900	.963
	PosEmo4			42.516	.835	.965
	PosEmo5			42.431	.841	.963
	PosEmo6			41.649	.893	.962
	PosEmo7			39.472	.849	.966
	PosEmo8			45.682	.656	.970
	PosEmo9			44.659	.691	.969
	PosEmo10			40.563	.881	.961
Level of Satisfaction		**.902**	3			
	LevelofSat1			2.382	.882	.805
	LevelofSat2			2.500	.885	.798
	LevelofSat3			2.660	.465	.905
Customer		**.986**	8			

Support	CustSuppor1			19.838	.932	.985
	CustSuppor2			19.318	.950	.984
	CustSuppor3			19.323	.954	.983
	CustSuppor4			19.439	.951	.983
	CustSuppor5			19.950	.949	.983
	CustSuppor6			20.247	.930	.984
	CustSuppor7			19.901	.945	.983
	CustSuppor8			20.202	.928	.984

It can be seen from table 9.17 that the computed variables have strong internal consistency and reliability and thus can be used for further analysis in the study.

9.9 Normality Analysis

In all research studies using a quantitative approach it is important that an assessment of normality is conducted. Each statistical test makes what is known as statistical assumptions (Pallant, 2013). Thus, it is important that an analysis is conducted on the normality of the data set. The normality of data can be assessed both graphically and numerically, with either visual inspection of graphs or by statistical tests (Malhotra, 2011). Statistical tests can arguably have the advantage due to the ability of making an objective judgment of normality. However, statistical tests can often be sensitive with low or high sample sizes. Thus, graphical interpretations provide an adequate judgment of normality when tests are overly sensitive, however graphical interpretations do lack objectivity. According to Gravetter and Wallnau (2000), normality can be seen as the symmetrical, bell-shaped curve that has the largest frequencies of scores in the middle with smaller frequencies towards either end within a graph. Pallant (2013) points out that using the skewness and kurtosis values can also assess normality as well as analysing the Kolmogorov-Smirnov test and Shapiro-Wilk test. However, the Kolmogorov-Smirnov test and the Shapiro-Wilk test can be sensitive to sample size

particularly those samples that are large (N = 150+) and very large (N = 200+) and therefore it is often recommended that researchers calculate normality by assessing the skewness and kurtosis values (Field, 2009).

In order to determine if the data is normally distributed or not, a z-score for skewness and kurtosis needs to be calculated, this is done by dividing the skewness and kurtosis values by their standard error outlined in figure 9.2.

Figure 9.2 Z score for Skewness and Kurtosis Formula

$$Z_{skew} = \frac{Skew - 0}{Standard\ Error_{skew}} = \frac{Skew}{SE_{Skew}}$$

$$Z_{kurtosis} = \frac{Kurtosis - 0}{Standard\ Error_{kurtosis}} = \frac{Kurtosis}{SE_{kurtosis}}$$

Table 9.18 outlines the distribution of the data. According to Field (2009) the researcher can set a conservative statistical significance level of .01, which equates to a z-score of between -2.58 and +2.58. Therefore, if the z-score is between these values we can state that the data is normally distributed. Table 9.18 displays the results of the z-scores.

Table 9.18 Normality analysis of the distribution of data

Variable	**Statistic**	**Value**	**Standard Error**	**Z-Score**
Website Aesthetics	Skewness	-.242	.192	-1.26
	Kurtosis	-.687	.381	-1.80
Website Control	Skewness	.167	.192	.87
	Kurtosis	-.967	.381	-2.54
Information Quality	Skewness	-.399	.192	-2.08
	Kurtosis	-.553	.381	-1.45
Flow	Skewness	.184	.192	.96
	Kurtosis	-.954	.381	-2.50

Positive Emotions	Skewness	.388	.192	2.02
	Kurtosis	-.961	.381	-2.40
Credibility	Skewness	-.249	.192	-1.27
	Kurtosis	-.961	.381	-2.52
Level of Satisfaction	Skewness	.170	.192	.89
	Kurtosis	-.936	.381	-2.46
Customer Support	Skewness	-.249	.192	-1.27
	Kurtosis	.455	.381	1.19
Percieved Time Spent	Skewness	.362	.192	1.89
	Kurtosis	.539	.381	1.41
Successful Search	Skewness	.387	.192	2.02
	Kurtosis	-.919	.381	-2.41

We can see from the calculated z-scores in table 9.18 that the data can be termed as normally distributed as we have values between -2.58 and +2.58 for each variable in the study. This allows the researcher to confidently conduct statistical analysis on the data knowing the data set is normally distributed for each variable in the study.

Now that we can see that the data is normally distributed the research can progress through conducting multivariate tests to explore differences between groups before going on to test the conceptual model proposed in chapter 7.

9.10 Moderating Variables

Table 9.1 through to table 9.3 provided us with information on gender, age, confidence using the Internet, how often the Internet is used as well as usage of social networking sites. These groupings allow the researcher to identify if any of these variables act as moderating variables on any of the DV or IV in the study. Each variable was measured on a 5-point Likert Scale ranging from Strongly Disagree to Strongly Agree. In order to identify if any differences exist between the groups a series of MANOVAs were conducted.

Before going on to conduct the series of MANOVAs, it is important to check that the

data are normally distributed and thus we can test for multivariate normality by calculating the Mahalanobis distance (Pallant, 2013). As previously mentioned the Mahalanobis distance is the distance of a particular case from the 'centroid' of cases (Tabachnick and Fidell, 2007). This analysis will pick up on any particular cases that have an unusual pattern of scores across the 10 dependent variables tested. The Mahalanobis maximum distance value was recorded as 28.21. This number is then compared with a critical value, which is determined by using the critical values of chi-square table, with the number of dependent variables as the degrees of freedom (df) value. Tabachnick & Fidell (1996) highlight that a test with 10 dependent variables, the critical value is set at 29.59. Thus, the Mahal.distance value is smaller than the critical value; therefore it can be safely assumed that there were no substantial multivariate outliers.

9.10.1 Gender MANOVA

The Multivariate Analysis of Variance (MANOVA) is an extension of the Analysis of Variance (ANOVA) and is used when comparing groups with more than one dependent variable (Pallant, 2013). The MANOVA creates a new summary dependent variable, which is effectively a linear combination of all of the dependent variables and conducts an analysis of variance using the newly combined variables (Pallant, 2013). From this the MANOVA tells us if there are any significant differences between the groups. This MANOVA tests to identify if any differences exist between males and females with regard to any of the dependent variables outlined in tables 9.19 and 9.20.

According to Tabachnick and Fidell (2001) within Levene's Test of Equality of Error Variances any $p < .05$ would indicate that the assumption of equality of variance for that variable has been violated. Table 9.19 shows that no variable has violated the assumption of equality of variance as all p values are $> .05$ and thus the MANOVA can proceed with the confidence interval of 95% ($p = .05$).

Table 9.19 Levene's Test of Equality of Error Variances (Gender)

	F	df1	df2	Sig.
Website Aesthetics	.123	1	158	.726
Control	.131	1	158	.718
Information Quality	.777	1	158	.379
Credibility	1.199	1	158	.275
Flow	.396	1	158	.530
Customer Support	.234	1	158	.629
Time on the Site	.886	1	158	.348
Satisfaction	.005	1	158	.945
Emotions	.117	1	158	.733
Successful Search	.751	1	158	.387

The multivariate test of significance produced by a MANOVA shows whether there are statistically significant differences between the groups on a linear combination of the group of dependent variables, which can be seen in greater detail in table 9.20. There are a number of statistics to choose from out of the multivariate test. Wilks' Lambda is often the most common statistic reported when there is no violation of the assumption of equality of variance.

Table 9.20 Multivariate Tests of Gender

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
GENDER	Pillai's Trace	.063	1.000[b]	10.000	149.000	.447	.063
	Wilks' Lambda	.937	1.000[b]	10.000	149.000	.447	.063
	Hotelling's Trace	.067	1.000[b]	10.000	149.000	.447	.063
	Roy's Largest Root	.067	1.000[b]	10.000	149.000	.447	.063

We can see from table 9.20 that there is no statistically significant difference ($p = < 0.5$) between gender on the combined dependent variables: $F(10, 149) = 1.000$, $p = .447$; Wilks' Lambda = .937; partial eta squared .063. Therefore, there is no significant difference between males and females with regard to the variables in the study.

9.10.2 Age MANOVA

Following the procedure deployed in section 9.7.1 for the MAONVA using Gender as the fixed factor, a second MANOVA test will be conducted to identify if any differences exist with regard to age group. First of all, Levene's Test of Equality of Error Variances was calculated to identify if the assumption of equality of variance for any of the variables in the study had been violated. It can be seen from table 9.21 that all p values (sig. column) are above .05, thus no variable has violated the assumption of equality of variance, allowing the MANOVA to proceed.

Table 9.21 Levene's Test of Equality of Error Variances (Age)

	F	df1	df2	Sig.
Website Aesthetics	1.963	4	155	.103
Control	1.103	4	155	.357
Information Quality	2.346	4	155	.057
Credibility	.336	4	155	.853
Flow	2.196	4	155	.072
Customer Support	1.125	4	155	.347
Time on the Site	2.150	4	155	.077
Satisfaction	.560	4	155	.692
Emotions	1.954	4	155	.104
Successful Search	1.268	4	155	.285

Table 9.22 outlines the results of the MANOVA test examining the differences between age groups on the variables in the study.

Table 9.22 Multivariate Tests of Age

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
AGE	Pillai's Trace	.368	1.686	40.000	596.000	.082	.092
	Wilks' Lambda	.671	1.723	40.000	555.470	.069	.095
	Hotelling's Trace	.435	1.757	40.000	578.000	.061	.098
	Roy's Largest Root	.265	4.415	10.000	149.000	.057	.209

Table 9.22 shows that there is no statistically significant difference between age groups on the combined dependent variables: F(40, 596.000) = 1.723, p = .069; Wilks' Lambda = .67; partial eta squared .095. Thus, it can be concluded that there is no significant difference between age groups on the variables within the study.

9.10.3 How Often Participants use the Internet MANOVA

It is also interesting to identify if there are any differences between how often participants use the Internet, therefore a third MANOVA test is conducted. Participants answered on a 5-point Likert Scale ranging from Vary Rarely to Very Often.

Again, following the previous MANOVAs, it is important to examine Levene's Test of Equality of Error Variances to assess if the assumption of equality of variance for the variables in the study. It can be seen in table 9.23 that the assumption has been violated.

Table 9.23 Levene's Test of Equality of Error Variances

	F	df1	df2	Sig.
Website Aesthetics	2.841	3	156	.040
Control	3.236	3	156	.028
Information Quality	3.244	3	156	.026
Credibility	.309	3	156	.819
Flow	2.881	3	156	.038
Customer Support	2.808	3	156	.031
Time on the Site	2.792	3	156	.027
Satisfaction	3.202	3	156	.026
Emotions	3.119	3	156	.029
Successful Search	2.943	3	156	.051

Table 9.23 shows that the assumption of equality of variance for the variables website aesthetics, control, information quality, flow, social interaction, time on the site, satisfaction and emotions all violate the assumption of equality of variance at the 95% confidence interval ($p < 0.5$). Thus, Pallant (2013) suggests that a more stringent alpha

value of .025 or .001 is set, rather than the conventional .05. At the .025 level all variables do not violate the assumption of equality of variance.

Table 9.24 outlines the results of the MANOVA test examining the differences between how often participants use the Internet on the variables in the study.

Table 9.24 Multivariate Tests on How often Participants use the Internet

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
How often Participants Use the Internet	Pillai's Trace	.389	1.446	30.000	447.000	.094	.146
	Wilks' Lambda	.755	1.498	30.000	432.150	.073	.151
	Hotelling's Trace	.469	1.547	30.000	437.000	.071	.157
	Roy's Largest Root	.309	4.157	10.000	149.000	.053	.276

Table 9.24 shows that there is no statistically significant difference between 'How often participants use the Internet' on the combined dependent variables: F(30, 432.150) = 1.498, p = .073; Wilks' Lambda = .76; partial eta squared .151. Thus, it can be concluded that there is no difference between 'How often participants use the Internet' on the variables within the study.

9.10.4 Level of Confidence using the Internet MANOVA

Participants were asked to rate their level of confidence in using the Internet on a 4-point Likert Scale (not confident, somewhat confident, confident, extremely confident). The MANOVA allows the researcher to understand if differences exist amongst participants with different levels of confidence.

In line with the previous sections, Levene's Test of Equality of Error Variances was calculated to identify if the assumption of equality of variance for any of the variables in the study had been violated. Table 9.25 outlines that the assumption of equality variance at the 95% confidence interval p = < .05 has been violated. Thus, in line with Pallant (2013) an alpha value of .025 should be applied.

Table 9.25 Levene's Test of Equality of Error Variances

	F	df1	df2	Sig.
Website Aesthetics	1.588	3	156	.194
Control	3.033	3	156	.025
Information Quality	3.117	3	156	.028
Credibility	1.053	3	156	.371
Flow	3.182	3	156	.030
Customer Support	2.114	3	156	.048
Time on the Site	2.803	3	156	.032
Satisfaction	3.024	3	156	.026
Emotions	2.698	3	156	.030
Successful Search	3.106	3	156	.030

Table 9.26 outlines the results of the MANOVA test examining the differences between participants 'level of confidence using the Internet' on the variables in the study.

Table 9.26 Multivariate Tests on 'Level of Confidence using the Internet'

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Level of confidence using the Internet.	Pillai's Trace	.517	3.102	30.000	447.000	.000	.172
	Wilks' Lambda	.549	3.262	30.000	432.150	.000	.181
	Hotelling's Trace	.705	3.423	30.000	437.000	.000	.190
	Roy's Largest Root	.504	7.505[c]	10.000	149.000	.000	.335

The results in table 9.26 show that there was a statistically significant difference between participants with varying levels of confidence in using the Internet on the combined dependent variables: $F(30, 432.150) = 3.404$, $p = .000$; Wilks' Lambda = .55; partial eta squared = .181. A breakdown of the individual variables in the study that have statistically significant differences with regard to the level of confidence in using the Internet can be seen in table 9.27.

Table 9.27 Tests of Between-Subjects Effects (Level of confidence using the Internet)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Level of confidence in using the Internet.	Website Aesthetics	3.529	3	1.176	3.336	.026	.060	10.007	.750
	Control	13.455	3	4.485	18.274	.000	.260	54.823	1.000
	Information Quality	4.634	3	1.545	8.457	.000	.140	25.371	.993
	Credibility	3.136	3	1.045	4.082	.008	.073	12.245	.838
	Flow	18.322	3	6.107	12.889	.000	.199	38.666	1.000
	Customer Support	8.991	3	2.997	8.681	.000	.143	26.044	.994
	Time on the Site	2.176	3	.725	8.665	.000	.143	25.994	.994
	Satisfaction	17.824	3	5.941	11.968	.000	.187	35.904	1.000
	Emotions	18.813	3	6.271	15.455	.000	.229	46.364	1.000
	Successful Search	67.198	3	22.339	19.404	.000	.272	58.212	1.000

All variables in the study are statistically significantly different (p = < .05) based on an individual's level of confidence in using the Internet. Thus, it would be beneficial to the study to further explore the mediating role of the 'level of confidence in using the Internet' on the variables within the study the following structural equation modelling section.

9.11 Structural Equation Modelling

Structural Equation Modelling (SEM) was adopted in this study with the use of AMOS 22. Structural equation modelling is one of the most commonly used statistical techniques that are adopted in order to conduct analysis on structural theory through a confirmatory approach (Tabachnick and Fidell, 2007). Structural Equation Modelling involves two important aspects (1) the casual process that is being studied is represented by a series of structural (regression) equations and (2) the structural relationships can be modelled pictorially to provide a clear representation of the theory being studied.

From this, the benefit of SEM is that the hypothesised model can then be tested statistically in a simultaneous analysis of the whole model of variables (Byrne, 2013).

Structural equation modelling provides the study with two different models; the measurement model and the structural model (Byrne, 2013). The CFA model also known as the measurement model within the framework of SEM (Byrne, 2013) outlines the causal relationships between the observed variables and the underlying latent variables. The structural model on the other hand outlines the casual relationships of the theoretical constructs between exogenous and endogenous variables or among endogenous variables.

Exogenous latent variables are synonymous with independent variables, i.e. they cause the changes in values of other latent variables in the model. The changes to these values within the model are not explained within the model and are considered to be influenced by external factors (such as age, gender etc.) Endogenous latent variables are synonymous with dependent variables and are therefore influenced by the exogenous variables within the model (directly or indirectly). Byrne (2013) states that changes in values of endogenous variables are explained by the model as all of the latent variables that have an influence over them are included in the model.

9.11.1 AMOS Graphics 22

AMOS Graphics 22 (Analysis of Moment Structures) is the most up to date statistical software that analyses the mean and covariance structures. AMOS graphics is used to analyse both the measurement model and the structural model produced in Structural Equation Modelling. Other analysis of moment structure software packages exist, such as LISREL and SAS CALIS, however a high level of programming knowledge in C++, Visual Basic and HTML is required to use such programmes. AMOS graphics provides the researcher with a user-friendly interface and the ability to draw and interpret results in a graphical form as well as in text and tables. Byrne (2013) as well as Tabahnick and Fidell (2007) suggest that it is easier to work within AMOS graphics. Due to the overall advantages of using AMOS graphics and having access to the latest version of the software, the researcher conducted confirmatory factor analysis and structural equation modelling within AMOS Graphics 22.

9.11.2 Confirmatory Factor Analysis (The Measurement Model)

A confirmatory factor analysis (CFA) within the framework of SEM is often referred to as the measurement model as previously discussed in section 9.7 (Byrne, 2013). A Confirmatory Factor Analysis is appropriate for this research as the researcher has knowledge of the underlying latent variable structure, based on the literature and conducted empirical research (Kline, 1998). The CFA model helps the researcher to determine the adequacy of model fit (goodness-of-fit) (Bollen, 1989). Thus, the confirmatory factor analysis in this study outlines how and the extent to which the observed variables are linked to their underlying latent factors (Byrne, 2013). Specifically, the CFA is concerned with how much the observed variables are generated by the underlying latent constructs and therefore the strength of the regression paths from the factors to the observed variables (i.e. the factor loadings). Thus, an important first step before the analysis of a latent variable model is to test the validity of the measurement model before going on to test and evaluate the structural model (Byrne, 2013).

The measurement model produced in structural equation modelling is evaluated like any other SEM model, using a goodness-of-fit measure (Schumacker and Lomax, 2010). If the measurement model is not valid then there would be little purpose in proceeding to the structural model, Schumacker (2002) states that it is essential to test the measurement model underlying the full structural model first before moving on to testing the structural model. Thus once the measurement model is deemed as being valid (having goodness-of-fit), the researcher can have confidence in the results from the structural model (Byrne, 2013).

9.11.3 Goodness of Fit Indexes

There are a number of goodness-of-fit indexes that this study will look at to determine how well the model fits and to test the study's hypotheses. The goodness-of-fit indexes examine the level of significance in terms of the difference between the estimated population covariance matrix (generated by the SEM) and the original sample matrix. The ideal situation would be for a very small non-significant difference, which would

represent goodness-of-fit in the numerous goodness-of-fit indexes (Schumacker and Lomax, 2010).

Each fit indexes measure the fit of the model in multiple different forms. According to Schumacker and Lomax (2010) there is no one fit index that serves as an exact criterion for testing either the measurement model or the structural model. Numerous researchers suggest reporting 3 – 6 indexes (Jaccard and Wan, 1994; Kline, 1998; Garsen, 2008; Cui and Adams, 2003; Diamantopoulos and Siguaw, 2000). In line with the aforementioned researchers, this study will assess the goodness-of-fit values of the Chi Square test (CMIN), CFI, NFI, GFI, SRMR, RMSEA and the RMR. Table 9.28 outlines the suggested values for each of the goodness-of-fit tests and their corresponding references.

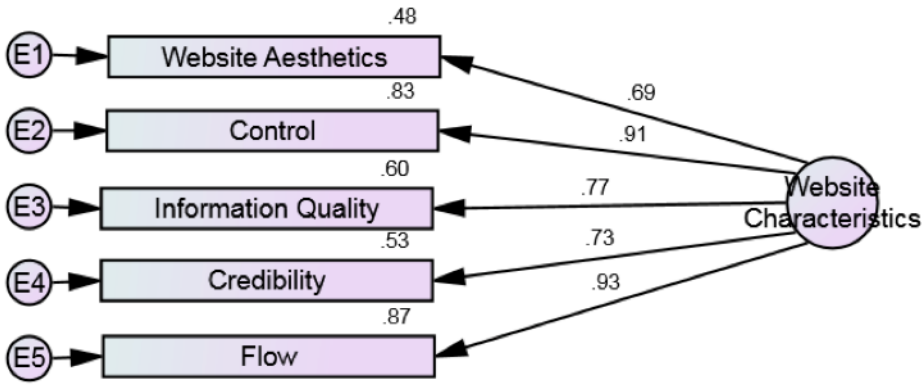
Table 9.28 Goodness-of-fit suggested values

Fit Index	**Value of Good Fit**	**Reference**
Chi Square	P > .05	Byrne (2013)
CFI	≥.90 ≥.95	Bentler (1990) Hu and Bentler (1999)
NFI	>.95 Good Fit >.90 Acceptable Fit	Bentler and Bonett (1980)
GFI	>.90 >.95	Joreskog and Sorbom (1996) Schumacker and Lomax, (2010)
SRMR	<.08	Hu and Bentler (1999)
RMSEA	≤.05 Good Fit .05<RMSEA≤.08 Adequate Fit .08<RMSEA≤.10 Mediocre Fit ≤.06 Good Fit	Schumacker and Lomax (2010) Hu and Bentler (1999)
RMR	<.05 ≤.08	Joreskog and Sorbom (1996) Hu and Bentler (1999)

9.12 Website Characteristics

The researcher aimed to establish if a 2nd order latent construct of website characteristics existed, comprised of website aesthetics, control, information quality, credibility and flow. Thus, a Confirmatory Factor Analysis was conducted in AMOS Graphics. Figure 9.3 below outlines the regression weights of the CFA.

Figure 9.3 Website Characteristics 2nd Order Variable



We can see that each variable loads on the underlying latent variable of website characteristics highly with all rounded values achieving .7 and above as well as being statistically significant (p = .000). However, it is important that we assess the model fit to identify if any item should be removed or if the model should be modified in any way in order to further improve fit. The indices outlined in table 9.28 (Chi Square test (CMIN), CFI, NFI, GFI, SRMR, RMSEA and the RMR) will be examined in order to identify if the model has goodness-of-fit. Table 9.29 elaborates on the model fit indices for website characteristics.

Table 9.29 Website Characteristics 2nd Order Model Fit

Fit Index	Goodness of Fit Value	Recommended Value of Good Fit	Reference
Chi Square	.020	P > .05	Byrne (2013)
CFI	.984	≥.90 ≥.95	Bentler (1990) Hu and Bentler (1999)
NFI	.975	>.95 Good Fit >.90 Acceptable Fit	Bentler and Bonett (1980)
GFI	.969	>.90 >.95	Joreskog and Sorbom (1996) Schumacker and Lomax, (2010)
SRMR	.030	<.08	Hu and Bentler (1999)
RMSEA	.054	≤.05 Good Fit .05<RMSEA≤.08 Adequate Fit .08<RMSEA≤.10 Mediocre Fit ≤.06 Good Fit	Schumacker and Lomax (2010) Hu and Bentler (1999)
RMR	.009	<.05 ≤.08	Joreskog and Sorbom (1996) Hu and Bentler (1999)

Table 9.29 shows that the model has goodness-of-fit with 'good' fit indices from the results of the CFI, NFI, GFI, SRMR, RMSEA and the RMR. However, a non-significant chi-square test indicates 'good fit'. In this case, it can be seen in table 9.29 that a significant result has been produced with CMIN = 13.393, D.F. 5, p = .020. In spite of this, chi-square values depend on sample size particularly in models with larger

sample size, where small differences cause the x^2 to be significant based on sample size (Bentler, 1995), thus the larger the sample size the more likely of model rejection and type II error, rejecting the true model. Bentler (1995), Byrne (2001) and Tabachnik and Fidell (2007) argue that a sample size of 150+ with good fit tests from those seen in table 9.29, can allow the researcher to discount the chi-square test. Tabachnik and Fidell (2007) suggest that a significant chi-square when there is support of good fit from other fit indices is not a reason on its own to modify the model. Further inspection of modification indices within the AMOS Graphics text output supports this theory, as no modification to the model was suggested.

From the results discussed and displayed in table 9.29 and figure 9.3 we can conclude that an underlying latent variable of website characteristics exists comprised of website aesthetics, control, information quality, website credibility and flow. This finding is supported both statistically and theoretically with the overlapping features of the variables outlined in the literature review and the in-depth interviews.

9.13 Conceptual Measurement Model

As previously shown in Chapter 7, the conceptual model was developed based on the variables emerging from the literature reviewed in chapters 2 – 4 as well as the exploratory in-depth interviews in chapter 7. The conceptual model in this study aims to test the relationships of website aesthetics, control, information quality, credibility and flow on an underlying latent variable of website characteristics. Secondly the conceptual model aims to explore the relationship between web characteristics and the time spent on the website. Thirdly the model aims to explore the relationship between the perceived length of time spent on the website and the customer's experience as well as the relationship between the perceived length of time spent on the website and the need to seek customer support. In addition, the relationship between the perceived length of time spent on the website and the success of the search as well as the success of the search on the need to seek customer support and on the customer experience and finally the relationship between the need to seek customer support and the customer experience. Table 9.30 outlines the scale items used for each variable on the left side, the middle column outlines the measured variable and the right column outlines the latent variables. Each of the variables outlined in Table 9.30 were derived from the

literature reviewed and the in-depth interviews, additionally reasons for inclusion for the variables was discussed in the Conceptual Development Chapter (Chapter 5).

Table 9.30 Conceptual Measurement Model Variables

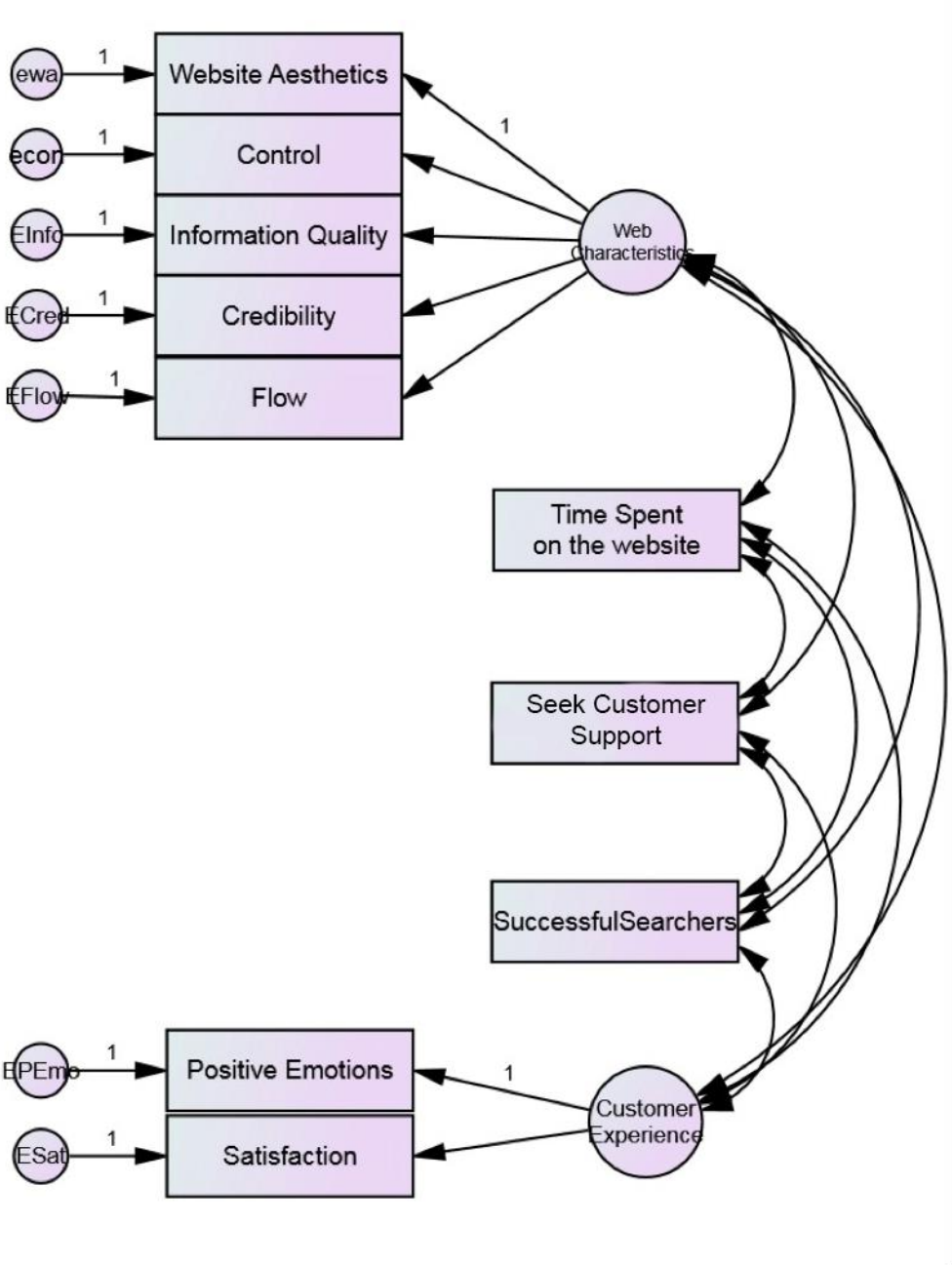
Item	Composite Variable	Latent Variable
The website was attractive.	Website Aesthetics	Website Characteristics
I liked the way the website looked.		
While I was on the site, I was always aware where I was.	Control	
While I was on the site, I was always able to go where I thought I was going.		
I was able to choose which link and when to click it.		
I feel that I have a great deal of control over my searching experience at this site.		
The Web site is not manageable (*)		
While I was on the site, I could choose freely what I wanted to see.		
While surfing the site, my actions decided the kind of experiences I got.		
The website was easy to use.		
I was able to easily search for what I want.		
The navigation was quick and easy.		
I was able to see if the information was current.	Information Quality	
I was able to see that the information was complete and comprehensive.		
The information on the web site is easily understandable		
I was able to see that the website provides accurate information.		
I was able to see an official "stamp of approval" or a recommendation from someone I know on the site.	Website Credibility	
I was able to see whether the contact information for the organisation is provided on the site.		
I was able to verify the website's accreditation or credentials.		
The site looks professionally designed.		

I was absorbed intensely in the activity.	Flow	
The website allowed me to focus my attention on the activity.		
The website allowed me to concentrate fully on the activity.		
I was deeply engrossed in the activity.		
I spent more time than I would have liked searching for the information	Perceived Time spent on the website	N/A
It took longer than I expected to find the information on the website		
It took too long searching for the information on the website.		
The length of time spent searching for information on the website was acceptable.		
Indicate to what extent you feel this way after completing your task? -Frustrated (*)	Positive Emotions	Customer Experience
“ ”-Confident		
“ ”-Sure		
“ ”-Confused (*)		
“ ”-Optimistic		
“ ”-Uncertain (*)		
“ ”-Disappointed (*)		
“ ”-Relieved		
“ ”-Doubtful (*)		
“ ”-Satisfied		
I am satisfied with the experience.	Level of satisfaction with the experience	
This online experience is exactly what I needed.		
This online search experience has not worked out as well as I thought it would. (*)		
It would have been useful to be able to ask for direction in locating the information.	Seek Customer Support	N/A
It would have been useful to be able to talk to people who know about the topic.		
It would have been useful to ask for advice while searching for the information.		
It would have been useful to have assistance in identifying the correct material.		

It would have been useful if the website facilitated two-way communication.		
It would have been useful if the website gave me the opportunity to talk back.		
It would have been useful if the website facilitates instant (live) communication.		
It would have been useful if the web site enabled conversation.		
See section 8.4	Successful Search	N/A
(*) Reversed Coded Item		

Table 9.30 above outlines the variables tested in this study and their associated scale items. Now that the observed and latent variables are known the next step is to assess the validity of the variables, thus the hypothesised measurement model is shown in figure 9.4.

Figure 9.4 Hypothesised Measurement Model



As shown in figure 9.4 five observed variables are hypothesised to load on an underlying latent variable named ‘web characteristics’. Figure 9.4 also outlines two observed variables loading on a latent variable named ‘customer experience’. Circular error terms were added to the left of each observed variable. The arrows from these circular error terms outline the impact of measurement error either random or unique on the observed variables (Byrne, 2013). Double-headed arrows between exogenous variables indicates relationships that are unanalysed, and represents covariance between

the exogenous variables with no particularly implied direction of effect (Tabachnick and Fidell, 2007).

9.14 Normality for Model Fit

Before proceeding to measure the model for goodness-of-fit, like in any multivariate analysis it is important to consider the normality of the data. Section 9.6 analysed the normality of the data using skewness and kurtosis tests. As previously shown in table 9.18, the multivariate normality is illustrated by z-scores of skewness and kurtosis. Baumgartner and Homberg (1996) highlight that for normally distributed data in both skewness and kurtosis tests, z-scores should be within -2 and +2 (p value > .05). A negative (-) kurtosis z-score indicates distribution may be flat with many cases in the 'tails'; conversely positive (+) kurtosis indicates too little cases in the tails. Additionally, negative (-) skewness z-scores indicates that there are a pile up of cases to the left; conversely positive (+) z-scores indicate a pile up of cases to the right. Section 9.6 and table 9.18 shows that the sample data are distributed with normality and allows the researcher to conduct tests of CFA for model fit before going on to test the structural model.

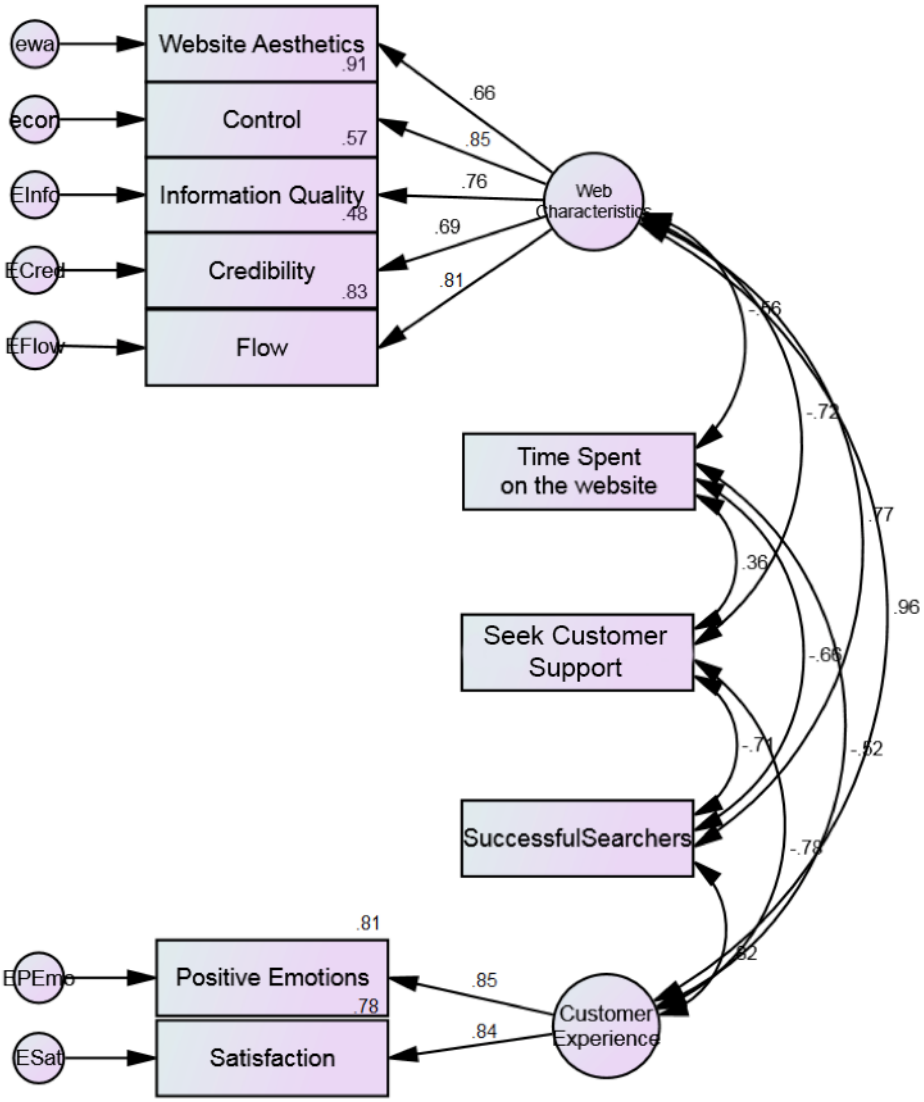
9.15 Model Identification

According to Tabachnik and Fidell (2007) identification of a model is to understand if the sample data is sufficient to achieve solutions for each of the parameters in the model to produce the estimated population covariance matrix. In order to gain solutions of the parameters in a SEM CFA measurement model the researcher requires the number of parameters to be estimated to be less than the number of variances and co-variances (Byrne, 2013; Baumgartner and Homberg, 1996) as is the case in this study. Thus as there are more data points than parameters, the structural equation model meets the minimum requirements for identification and can therefore be considered overidentified and sufficient to produce estimated population co-variance matrix in the CFA measurement model.

9.16 CFA Measurement Model

Section 9.11 outlined that the data is normally distributed, further to this, section 9.12 highlighted that the model is overidentified and therefore fit for purpose. Additionally, earlier MANOVA tests outlined no serious outliers using Mahalabobis distance tests. As a result, the measurement model could be tested in AMOS Graphics, the results are graphically illustrated in figure 9.5.

Figure 9.5 CFA Measurement Model



The measurement model shown in figure 9.5 outlines the regression weights of the observed variables on the underlying latent variables. Additionally, we can see the

covariance estimates between each of the variables on the right side of the model in figure 9.5. The following tables illustrate the results of the CFA Measurement Model.

The first set of statistics from the output in AMOS Graphics is the computation of degrees of freedom. Table 9.31 illustrates the degrees of freedom within the model. As previously mentioned, this shows that the model can be deemed as being overestimated making it fit for purpose.

Table 9.31 Computation of degrees of freedom (Default model)

Number of distinct sample moments:	55
Number of distinct parameters to be estimated:	27
Degrees of freedom (45 - 22):	28

The model shown in figure 9.5 outlines the standardised regression weights. Standardising the regression weights allows for comparison between each variable (Pallant, 2013). Table 9.32 outlines the standardised regression weights which all load highly and significant at p = .000

Table 9.32 Standardised Regression Weights: (Group number 1 - Default model)

			Estimate	P
Flow	<---	WebCharacteristics	.810	***
Credibility	<---	WebCharacteristics	.690	***
InfoQuality	<---	WebCharacteristics	.756	***
Control	<---	WebCharacteristics	.851	***
Aesthetics	<---	WebCharacteristics	.658	***
Satisfaction	<---	CustomerExperience	.836	***
Emotions	<---	CustomerExperience	.852	***

*** significant at .000

It is also useful to look at the R^2 value, which is referred to as the squared multiple correlations output within AMOS. According to Cohen (1988) values above .25 can be considered a large effect. The R^2 value informs the level of variance the variable

accounts for on the dependent variable (Tabachnick and Fidell, 2007). Table 9.33 illustrates the values of the squared multiple correlations output.

Table 9.33 Squared Multiple Correlations Output (Group number 1 - Default model)

	Estimate
Emotions	.807
Satisfaction	.777
Aesthetics	.433
Control	.905
Info Quality	.571
Credibility	.477
Flow	.829

Table 9.33 shows all high squared multiple correlation values above .25. This indicates that each variable explains a high percentage of its variance with the error variance explaining a lower percentage on most variables (Cohen, 1988).

Furthermore, according to Kline (2005) it is important to examine the standardised total effects. The standardised total effect looks at the direct and indirect effect of the variable in question on the dependent variable. Thus, table 9.34 explains that when the standard deviation for the dependent variables 'Customer Experience' and 'Website Characteristics' goes up by 1 then the independent variables increase by their displayed value in table 9.34.

Table 9.34 Standardised Total Effects (Group number 1 - Default model)

	Customer Experience	Web Characteristics
Emotions	.852	.000
Satisfaction	.836	.000
Aesthetics	.000	.658
Control	.000	.851
Info Quality	.000	.756
Credibility	.000	.690
Flow	.000	.810

9.16.1 Model Fit Indices

As previously outlined in section 9.7.3 and in Table 9.28 there are a variety of goodness-of-fit indices that can be used to assess the measurement model (Byrant, 2013). As previously highlighted, the purpose of the goodness-of-fit indices are to assess the level of significance in the difference between the estimated population covariance matrix, which is generated by the SEM, and the original sample matrix (Schumacker and Lomax, 2010).

Each fit indices measure the fit of the model in multiple different ways (Byrant, 2013). Schumacker and Lomax (2010) states that there is no one fit index that serves as an exact criterion for testing either the measurement model or the structural model. According to Kline (1998) and Cui and Adams (2003) researchers should report more than one fit index. The goodness-of-fit-indices that will be reported in assessing the fit of the CFA measurement mode and the structural equation model include; the Chi Square test (CMIN), CFI, NFI, GFI, SRMR, RMSEA and the RMR. Table 9.35 outlines the suggested values as previously seen in table 9.28, along with the produced values from the measurement model.

Table 9.35 Measurement Model Fit Indices

Fit Index	Goodness of Fit Value	Recommended Value of Good Fit	Reference
Chi Square	**.000**	P > .05	Byrne (2013)
CFI	**.960**	≥.90 ≥.95	Bentler (1990) Hu and Bentler (1999)
NFI	**.954**	>.95 Good Fit >.90 Acceptable Fit	Bentler and Bonett (1980)
GFI	**.949**	>.90	Joreskog and Sorbom (1996) Schumacker and Lomax, (2010)
SRMR	**.040**	<.08	Hu and Bentler (1999)
RMSEA	**.047**	≤.05 Good Fit .05<RMSEA≤.08 Adequate Fit .08<RMSEA≤.10 Mediocre Fit ≤.06 Good Fit	MacCallum et al (1996) Schumacker and Lomax (2010) Hu and Bentler (1999)
RMR	**.015**	<.05 ≤.08	Joreskog and Sorbom (1996) Hu and Bentler (1999)

The values from modification indices are presented in table 9.35. The purpose of carrying out model fit tests is to identify if the model fits the data. Within goodness-of-fit tests a non-significant chi-square value is desirable as this indicates that there is not a significant difference between the sample covariate matrix and the estimated (by AMOS) population covariance (Tabacknick and Fidell, 2007). Therefore, a 'good fit' is indicated by a non-significant chi-squire (p = > .05). However, as previously

mentioned the chi-square test is often considered one of the most unreliable fit statistics to work with (Byrne, 2013) and thus a significant chi-square can often be discounted if other fit statistics show goodness-of-fit. According to Bentler (1995) models with medium to larger sample sizes can cause the chi-square test to become significant. Tabacknick and Fidell (2007) comment that it is for this reason that numerous fit statistics have been developed to overcome flaws with particular fit tests.

9.16.1.1 Chi-Square Test

The results of the chi-square test are printed in two parts within the AMOS output. Within the 'notes for model section' a value of significance is printed. As outlined in the previous section, a non-significant value is desired, illustrating good-fit. A significant value is produced p = .000. The second statistic to look at with regard to the chi-square test is the CMIN value, concurrently this value is significant CMIN = 74.06. However, as previously discussed chi-square values can be quite sensitive and can produce significant results with type II error, rejecting the true model (Tabachnick and Fidell, 2007). Thus in line with Long (1993), other model fit statistics have been reported in table 9.35.

9.16.1.2 Comparative Fit Index (CFI)

The Comparative Fit Index is a fit statistic that compares the existing model fit with a 'null' model, which assumes the latent variables in the model are uncorrelated with each other (Tabachnik and Fidell, 2007). As previously discussed, the CFI is a fit statistic often reported within marketing literature (Cadogan et al, 2002) as it is seen as being robust under severe multivariate non-normality (Ping, 1995) as well as being a statistic least susceptible to sample size (Fan et al, 1999). As shown in table 9.35 the CFI has a value range from 0 – 1 with a value > .90 representing good fit (Bentler, 1990), in spite of this Bentler and Ho (1999) suggest that researchers should adopt a more stringent value of .95. The CFI value reported in table 9.35 for the measurement model is .96 above the higher end value recommended by Bentler and Ho (1999).

9.16.1.3 Normed Fit Index (NFI)

The Normed Fit Index is often seen as an alternative to the CFI (Byrne, 2013). The NFI

does not require chi-square assumptions and reflects the proportion that the model fit compared to the null hypothesis. Thus a NFI value of .60 would suggest that the proposed model improves fit by 60% compared to the null model. According to Schumacker and Lomax (2010) as well as Bentler and Bonett (1980), the NFI should be above .95 for good fit. The NFI as shown in table 9.35 is .954 showing further good fit. Thus the model in figure 9.5 improves fit by 95% compared to the null model.

9.16.1.4 Goodness of Fit Index (GFI)

The GFI is an estimation of how close the model comes to reproducing perfectly by the observed covariance matrix (Schumacker and Lomax, 2010). The GFI is the percentage of the observed covariance that is explained by the covariance implied in the model. The values of the GFI range from 0 – 1, as seen in table 9.35, while Joreskog and Sorbom (1996) suggest that a good fitting GFI is above .90, Schumacker and Lomax (2010) suggest that researchers set a more stringent value of .95. The GFI value is .949, which can be rounded to .95 and is within the more stringent value suggested by Schumacker and Lomax (2010). Thus, the GFI suggests good fit.

9.16.1.5 Root Mean Square Error of Approximation (RMSEA)

According to Byrne (2013) the RMSEA is often regarded as one of the most useful fit indices. The RMSEA informs how well the model; with unknown optimally chosen parameter values fit the population covariance matrix if it was available (Brown and Cudeck, 1993). The RMSEA however, does favour more complex models than simpler models, which are subject to higher values. According to MacCallum et al (1996) .01 indicates excellent fit, between .01 and .05 indicates good fit, and between .05 and .08 indicating mediocre fit. Despite the model in this study being subject to higher values due to the simplicity of the model, the RMSEA is below the critical value of .05 with a RMSEA value of .047.

9.16.1.6 Root Mean Square Residual (RMR)

The RMR is the mean absolute value of the covariance residuals. Byrne (2013) suggests that a small RMR value indicates better fit. Hu and Bentler (1999) suggest that the RMR

should be ≤.08, however, Joreskog and Sorbom (1996) suggest that the RMR value should be <.05 for good fit. This study adopts Joreskog and Sorbom (1996) more stringent value. The RMR in table 9.35 for the CFA measurement model is .015, suggesting goodness-of-fit.

9.16.1.7 Standardised Root Mean Square Residual (SRMR)

The SRMR is considered an absolute measure of fit and can be defined as the standardised difference between the observed correlation and the predicted correlation (Hu and Bentler, 1999). As the SRMR is an absolute measure of fit, a value of 0 indicates perfect fit. Hu and Bentler (1999) suggest that a value less than .08 indicates good fit. The SRMR value for the measurement model is .040, thus below the critical value outlined by Hu and Bentler (1999).

9.16.1.8 Summary of goodness-of-fit Statistics for Measurement Model

Overall, it can be seen in table 9.35 and from the previous sections that 6 out of the 7 goodness-of-fit indices that have been reported are above the critical values outlined CFI (.960), NFI (.954), GFI (.949), SRMR (.040), RMSEA (.047), RMR (.015). The chi-square value (CMIN) was the only fit statistic not to produce a fitting model statistic with a value of p = .000 and CMIN = 74.06, however as detailed in section 8.13.1 and in section 8.13.1.1, the chi-square test is sensitive to sample size and often considered one of the least reliable fit statistics (Byrne, 2013) and can be disregarded should multiple other fit statistics suggest goodness-of-fit (Tabachnick and Fidell, 2007; Schumacker and Lomax, 2010). Thus, we can conclude that the model entails goodness-of-fit, allowing the researcher to proceed to conducting the structural equation model (path model).

9.16.2 Measurement Model Modification Indices

Before proceeding to running the Structural Equation Model (path model), it is important to consult the modification indices output within AMOS to identify if any improvements can be made with regard to model fit. The purpose of the modification

indices within structural equation modelling is to improve fit and hypotheses testing (Byrne, 2013).

Within the modification indices, AMOS groups modifications of covariances, variances and regression weights. The M.I. (modification index) column provided in the output refers to the approximate chi-square value. Additionally, the approximate drop in parameter change is provided in the column 'Par Change' (Bryne, 2013).

As the researcher is only interested in the regression weights modification index as the CFA measurement model is analysing the causal paths, the covariance and variance tables are excluded. The modification indices do not provide any modifications to the measurement model over the threshold value of 10.0 as recommended by Byrne (2013) and thus no modifications will be made. The result of no modifications could be due to the earlier in-depth interviews shown in Chapter 7 providing parsimony.

9.17 Structural Model Testing and Hypothesis Testing

Now that we understand the validity of the observed variables loading on their associated latent variables as well as knowing that there is no significant difference between the estimated population covariance matrix and the sample matrix, with the measurement model producing good-fit, we can proceed to evaluate the structural equation model.

As has already been outlined in section 9.7, structural equation modelling is a collection of statistical techniques that allow the researcher to analyse a set of relationships between one or more independent variables simultaneously (Tabachnick and Fidell, 2007). Byrne (2013) suggests that the casual relationships set out in the measurement model are transformed into a series of structural equations with these structural relations being capable of providing a clear conceptualisation of theory under investigation. As with the CFA measurement model, the structural model was analysed using AMOS Graphics 22. The following section will outline the structural model and calculate the hypothesised relationships.

9.17.1 Model Hypotheses

The analysis from the measurement model indicated no changes to be made. Thus, the variables seen in table 9.30 apply for structural equation modelling. Additionally, as no variables have been deleted and the use of composite variables have been applied in the measurement model, no scale items have been deleted, therefore we do not need to revisit the Cronbach Alphas calculated in table 9.17.

The development of the path model shown in figure 9.6 was developed from previous literature reviewed in chapters 2 – 4, the conceptual development in chapter 5 and subsequently the exploratory research in chapter 7. As previously outlined in chapter 7 there are 10 research hypotheses that this study aims to explore:

H1 (a-e) There is a relationship between website aesthetics, control, information quality, credibility and flow combining together to create a new higher order variable of website characteristics.

H2 Website Characteristics will have an influence on the length of time that a customer perceives to spend searching for online business advisory information and services.

H3 The perceived length of time a customer spends searching for online business advisory information and services will have an impact on the customer's experience.

H4 The longer customers perceive to spend searching for online business advisory information and services will result in customers seeking online customer support via synchronised social interaction.

H5 The less time customers perceive to spend searching for online business advisory information and services will result in customers having a successful search.

H6 There is a relationship between the need to seek online customer support while searching for business advisory information and services and the customer experience.

H7 There is a relationship between a successful search and the customer experience while searching for online business advisory information and services.

H8 There is a relationship between a customer's success in their search and the need to seek online customer support.

H9 (a-b) A customer's experience is made up of the customer's emotions and the customer's level of satisfaction while searching for business advisory information and services.

H10 (a-c) A customer's level of confidence in using the Internet will moderate:

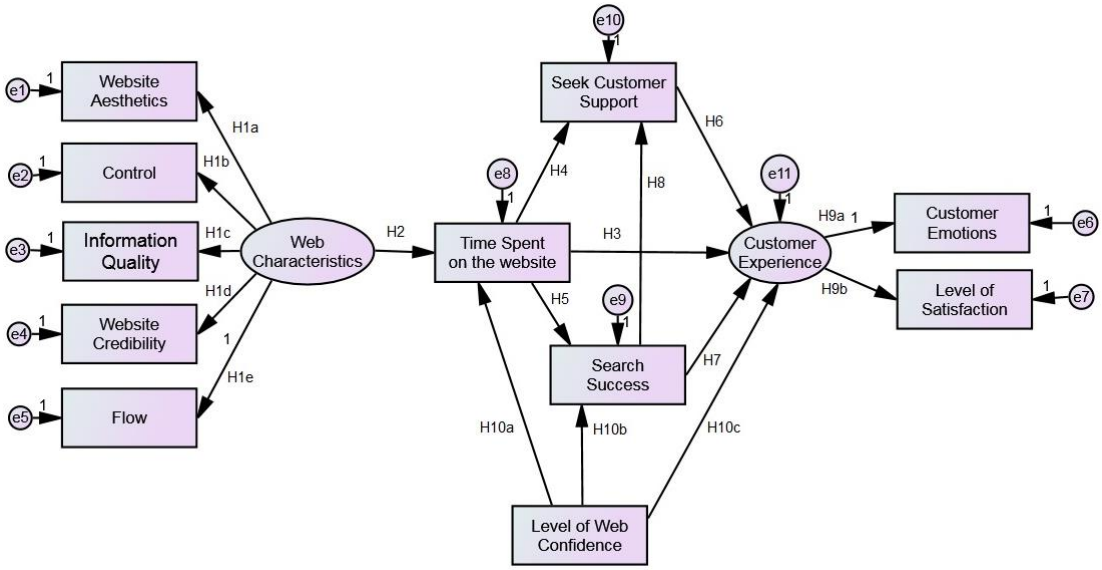
(a) The time a customer is willing to spend on a business advisory website.

(b) The customer experience.

(c) The success of the search.

Figure 9.6 provides a graphical representation of the structural equation model and the hypothesised relationships.

Figure 9.6 Structural Equation Model with Hypothesised Relationships



The relationships illustrated in figure 9.6 are transferred into equations and the model is then estimated and can be assessed for statistical fit (Tabachnick and Fidell, 2007).

9.17.2 Structural Model Identification

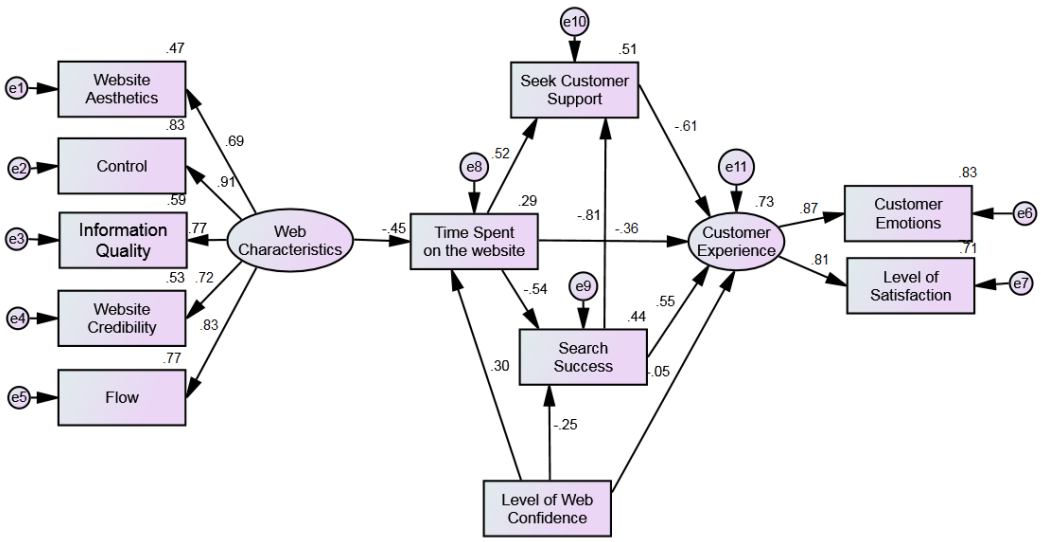
Like the CFA measurement model, it is also important that checks take place with regard to model identification for the structural model. The structural model displayed in figure 9.6 is over-identified, as there are more data points than parameters to be examined, which meets the minimum requirement (Tabachnik and Fidell, 2007).

According to Byrne (2013) the number of data points in the model can be calculated using the following equation; data points = p(p+1)/2, where p = the number of measured variables. In this case we have 11(11+1)/2 = 66 data points with 28 parameters to be estimated. The model in figure 8.5 is therefore over-identified with 38 degrees of freedom. Thus the model is suitable for structural equation modelling.

9.17.3 Structural Equation Model Results

Figure 9.7 outlines the results of structural equation modelling. Further depth discussion will take place within the subsequent sections.

Figure 9.7 Initial Structural Equation Model



The model shown in figure 9.7 analyses the hypothesised relationships shown in figure 9.7. The subsequent sections will discuss the strength and significance of each regression, first of all the model fit will be discussed.

9.17.4 Assessing Fit of the Structural Model

The fit indices that were used in assessing the fit of the CFA measurement model were applied in assessing the fit of the structural model. The goodness-of-fit statistics can be seen in table 9.36.

Table 9.36 Goodness of fit Structural Model

Fit Index	Goodness of Fit Value	Recommended Value of Good Fit	Reference
Chi Square	**.000**	P > .05	Byrne (2013)
Relative Chi-Square	**6.69**	< 5	Schumacker and Lomax (2010)
CFI	**.955**	≥.90 ≥.95	Bentler (1990) Hu and Bentler (1999)
NFI	**.901**	>.95 Good Fit >.90 Acceptable Fit	Bentler and Bonett (1980)
GFI	**.902**	>.90	Joreskog and Sorbom (1996) Schumacker and Lomax, (2010)
SRMR	**.051**	<.08	Hu and Bentler (1999)
RMSEA	**.112**	≤.05 Good Fit .05<RMSEA≤.08 Adequate Fit .08<RMSEA≤.10 Mediocre Fit ≤.06 Good Fit	MacCallum et al (1996) Schumacker and Lomax (2010) Hu and Bentler (1999)
RMR	**.016**	<.05 ≤.08	Joreskog and Sorbom (1996) Hu and Bentler (1999)

The analysis of the structural model on goodness-of-fit reported the chi-square, CFI, NFI, GFI, SRMR, RMSEA and the RMR as shown in table 9.36.

9.17.4.1 Chi-Square

The chi-square test shows a significant result. As previously discussed, in order for good fit a non-significant value is desired. Table 9.36 shows a chi square fit statistic of p = .000 and CMIN = 254.161. However, as outlined in previous sections researchers should not rely solely on the chi square test as the only model fit statistic, with numerous researchers doubting the accuracy of the test (Tabachnick and Fidell, 2007).

The relative Chi-Square value, also known as the x^2/d.f. Ratio, is the chi-square fit index divided by the number of degrees of freedom (Byrne, 2013). The relative chi-square value was introduced due to the sensitivity of the chi square value. According to Carmines and McIver (1981), the relative chi-square value should fall under 3 or even better fewer than 2 in order to indicate good fit. Kline (1998) also agrees that a value of under 3 indicates good fit. However, Schumacker and Lomax (2010) and Wheaton (1987) suggest that a value fewer than 5 indicates goodness of fit. The first structural model the relative chi-square value is 6.69 (254.161/38).Thus, indicating poor fit.

9.17.4.2 Comparative Fit Index (CFI)

The Comparative Fit Index as previously highlighted is a fit statistic that compares the existing model fit with a 'null' model, which assumes the latent variables in the model are uncorrelated with each other (Tabachnik and Fidell, 2007). As shown in table 8.28 the CFI has a value range from 0 – 1 with a value > .90 representing good fit (Bentler, 1990), in spite of this Bentler and Ho (1999) suggest that researchers should adopt a more stringent value of .95. The CFI value reported in table 9.36 for the structural model is .924 below the upper recommended value by Bentler and Ho (1999). Thus, it would suggest that the model has adequate fit.

9.17.4.3 Normed Fit Index (NFI)

The Normed Fit Index for the structural model is .901, thus the model improves fit by 90% compared to the null model. According to Schumacker and Lomax (2010) as well as Bentler and Bonett (1980), the NFI should be above .95 for good fit. Above .90 can be considered as adequate fit. However, improvements may be able to be made through

modifications.

9.17.4.4 Goodness of Fit Index (GFI)

The values of the GFI range from 0 – 1, as seen in table 9.36, while Joreskog and Sorbom (1996) suggest that a good fitting GFI is above .90, Schumacker and Lomax (2010) suggest that researchers set a more stringent value of .95. The GFI value for the structural model is .902, which can be regarded as acceptable fit but within the lower fit range and below the more stringent value suggested by Schumacker and Lomax (2010). Thus, the GFI has adequate fit.

9.17.4.5 Root Mean Square Error of Approximation (RMSEA)

The Root Mean Square Error of Approximation is often regarded as one of the most useful fit statistics (Byrne, 2013. According to MacCallum et al (1996) .01 indicates excellent fit, between .01 and .05 indicates good fit, and between .05 and .08 indicating mediocre fit. The RMSEA is above the critical value of .05 with a RMSEA value of .112, suggesting poor fit. However, this could be due to the relative simplicity of the model.

9.17.4.6 Root Mean Square Residual (RMR)

Hu and Bentler (1999) suggest that the RMR should be ≤.08, however, Joreskog and Sorbom (1996) suggest that the RMR value should be <.05 for good fit. The RMR in table 9.36 for the structural model is .016, suggesting good fit under Joreskog and Sorborn (1996) more stringent cut off value.

9.17.4.7 Standardised Root Mean Square Residual (SRMR)

As the SRMR is an absolute measure of fit, a value of 0 indicates perfect fit. Hu and Bentler (1999) suggest that a value less than .08 indicates good fit. The SRMR value for the measurement model is .051, thus below the critical value outlined by Hu and Bentler (1999) and suggest good fit.

9.17.5 Summary of Structural Model Goodness of Fit

The results shown in table 9.36 and the previous sections (9.17.4.1 – 9.17.4.7) suggest that modifications need to be made to the structural model in order to improve fit. A non-fitting Chi-square value was produced, a non-fitting RMSEA, an adequate NFI and GFI, a good fit index for the RMR, CFI and the SRMR. In order to improve fit, and to produce a more accurate model modifications need to be made by referring to the modification indices within the AMOS graphics output.

9.17.6 Standardised Parameter Estimations Structural Model

As has been shown in the previous sections (9.14.4.1 - 9.14.5) modifications need to be made to the structural model in order to improve fit. However, it is worthwhile assessing the standardised regression weights and their level of significance before going on to model modification. The regression weights from the initial structural model show strong loadings with many significant relationships as outlined in table 9.37.

Table 9.37 Standardised Regression Weights of Initial Structural Model

			Estimate	P
Time Spent on Site	<---	Web Characteristics	-.452	***
Time Spent on Site	<---	Level of Internet Confidence	.304	***
Customer Experience	<---	Time Spent on Site	-.361	***
Seek Customer Support	<---	Time Spent on Site	.523	***
Search Success	<---	Time Spent on Site	-.541	***
Customer Experience	<---	Level of Internet Confidence	-.054	.243
Positive Emotion	<---	Customer Experience	.867	***
Level of Satisfaction	<---	Customer Experience	.811	***
Flow	<---	Web Characteristics	.831	***
Credibility	<---	Web Characteristics	.724	***
Info Quality	<---	Web Characteristics	.770	***

			Estimate	P
Control	<---	Web Characteristics	.913	***
Aesthetics	<---	Web Characteristics	.688	***
Customer Experience	<---	Seek Customer Support	-.614	***
Customer Experience	<---	Successful Search	.552	***
Seek Customer Support	<---	Search Success	-.811	***
Search Success	<---	Level of Internet Confidence	-.251	.003

The Level of Internet Confidence's direct effect on the customer experience is not significant (> .05, p = .243) and thus does not support the hypothesised relationship. All other relationships show strong regression weights and statistically significant at p = .000 level and prove the research hypotheses. However, as model fit may be improved through checks of the modification indices it is important to assess these indices and report the modified structural model regression weights, squared multiple correlations and total effects. Thus, the next section will assess the modification indices from the initial structural model shown in figure 9.7 in an attempt to improve model fit.

9.18 Structural Model Modification

If goodness-of-fit indices indicate that the structural model does not fit the data, modifications can be made from the suggestions obtained from the SEM modification indices output in AMOS graphics (Joreskog and Sorbom, 1997). However, it should be noted, that the point of this modification is to find a model that provides meaningful insights as well as fitting the data statistically.

As has been previously outlined, the structural model can be determined as having marginal fit, with some statistics (RMR, SRMR and CFI) indicating good fit and some indicating adequate fit (NFI and GFI). However, this fit may be able to be improved, with the goal of improving the structural equation model fit, which would subsequently provide a more acceptable theoretical model (Byrne, 2013).

9.18.1 First Structural Model Modification

According to Byrne (2013) only one parameter should be added or deleted from the model at a time, as one modification to the model can have an impact on the other parameters in the model. The modification indices as well as the regression weights of the model shown in figure 9.7 are examined at this point, along with the literature reviewed in chapters 2 – 4. At this model development/modification stage the focus is particularly on the regression weights of each of the parameters (Hair et al, 2010). Table 9.38 below outlines the modification indices from the initial structural model. The output within AMOS Graphics was set to produce Modification Indices only above 4.0. This provides us detail on sufficient modifications, however Byrne (2013) suggests that modifications that are over 10.0 should be the priority to address, those falling under 10.0 should not require change in the structural model unless seen as completely necessary.

Table 9.38 Modification Indices from Initial Structural Model (Regression Weights)

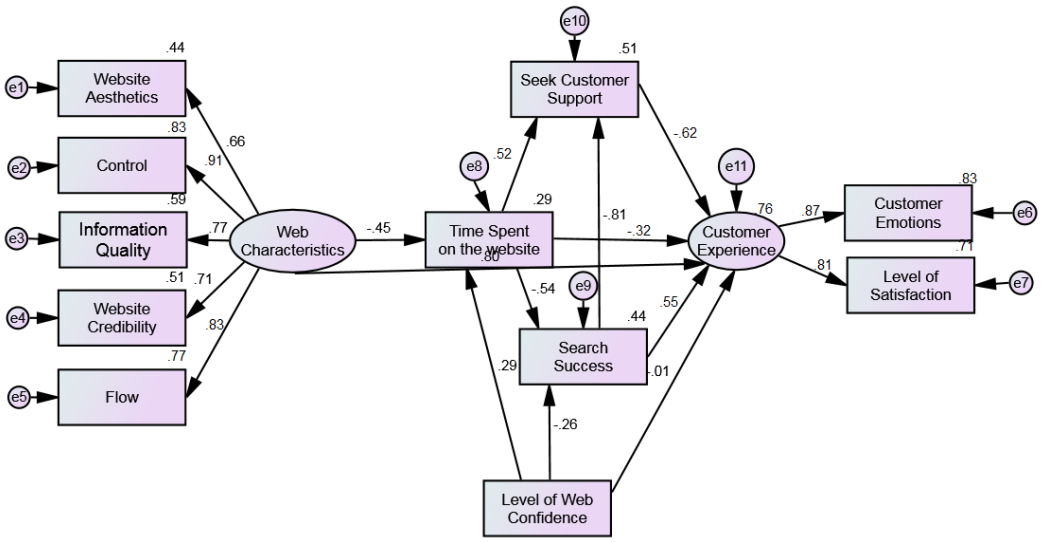
			M.I.	Par Change
Customer Experience	<---	Web Characteristics	81.988	.765
Seek Customer Support	<---	Web Characteristics	26.253	-.366
Search Success	<---	Web Characteristics	16.321	.245
Website Characteristics	<---	Customer Experience	9.124	.153
Website Characteristics	<---	Seek Customer Support	7.182	-.125
Website Characteristics	<---	Satisfaction	8.464	.107
Control	<---	Positive Emotion	5.598	.145
Flow	<---	Satisfaction	5.172	.086
Satisfaction	<---	Web Characteristics	8.901	.209
Satisfaction	<---	Control	5.875	.120
Satisfaction	<---	Info Quality	5.009	.139
Satisfaction	<---	Credibility	5.846	.162
Satisfaction	<---	Flow	6.607	.127
Positive Emotion	<---	Aesthetics	7.907	.109

			M.I.	Par Change
Positive Emotion	<---	Control	4.557	.088

Following Byrne's (2013) logic, that only one parameter should be modified at the one time; therefore, only one parameter from table 9.38 will be used at a time. The column M.I. (Modification Indices) in table 9.38 is where we can find the values that will make the largest effect to the structural model. The highest Modification Index value exists between 'Web Characteristics' and 'Customer Experience' with a M.I. value of 81.99 and a par .765. This means that by adding this parameter to the model, the chi-square will reduce by approximately 81.99, with the approximate parameter change of .765. This modification is in line with previous research that suggests that there is a relationship between website characteristics and the customer experience (Rose et al, 2012; Hoffman and Novak, 2009; Ding et al, 2009), thus it is theoretically applicable as well as statistically relevant to introduce this parameter to the structural model as the first modification.

The first modified structural model can be seen in figure 9.8. Within figure 9.8 one new parameter has been added to the model between website characteristics and customer experience.

Figure 9.8 First Modification of Structural Model



The goodness-of-fit statistics for the first modification to the model shows an improvement in model fit. The Chi Square reduced from 363.060 (d.f. 38) to 146.041 (d.f. 37), thus the model difference can be seen as significant as a change of 108.120 took place. Table 9.39 illustrates the rest of the model fit indices.

Table 9.39 Model Fit Indices for First Structural Model Modification

Fit Index	**Goodness of Fit Value**	**Recommended Value of Good Fit**	**Reference**
Chi Square	**.000**	P > .05	Byrne (2013)
Relative Chi-Square	**3.95**	< 5	Schumacker and Lomax (2010)
CFI	**.947**	≥.90 ≥.95	Bentler (1990) Hu and Bentler (1999)
NFI	**.950**	>.95 Good Fit >.90 Acceptable Fit	Bentler and Bonett (1980)

GFI	**.954**	>.90	Joreskog and Sorbom (1996) Schumacker and Lomax, (2010)
SRMR	**.039**	<.08	Hu and Bentler (1999)
RMSEA	**.098**	≤.05 Good Fit .05<RMSEA≤.08 Adequate Fit .08<RMSEA≤.10 Mediocre Fit ≤.06 Good Fit	MacCallum et al (1996) Schumacker and Lomax (2010) Hu and Bentler (1999)
RMR	**.015**	<.05 ≤.08	Joreskog and Sorbom (1996) Hu and Bentler (1999)

Table 9.39 shows improvement in fit statistics by adding a parameter (supported theoretically and statistically) between website characteristics and customer experience. With the exception of a significant chi-square value p = .000 and a CMIN = 146.041, other fit statistics showed vast improvements. The relative chi square (3.95) the CFI (.947), NFI (.950), GFI (.954), SRMR (.039) and the RMR (0.15) all have good fit indices. The RMSEA still shows a fit value above the critical value outlined by MacCallum et al (1996) of below .05. However, the RMSEA can now be determined as having mediocre fit at .098. Therefore, the first modified model shows better fit than the initial model. A high, standardised regression weight can be seen for the newly added parameter between website characteristics and customer experience of .77 p = .000. Table 9.40 illustrates the standardised regression weights.

Table 9.40 Standardised Regression Weights of First Modified Structural Model

			Estimate	P
Time Spent on Site	<---	Web Characteristics	-.452	***
Customer Experience	<---	Web Characteristics	.801	***
Time Spent on Site	<---	Level of Internet Confidence	.294	***
Customer Experience	<---	Time Spent on Site	-.323	***
Seek Customer Support	<---	Time Spent on Site	.523	***
Search Success	<---	Time Spent on Site	-.544	***
Customer Experience	<---	Level of Internet Confidence	-.011	.243
Positive Emotion	<---	Customer Experience	.867	***
Level of Satisfaction	<---	Customer Experience	.811	***
Flow	<---	Web Characteristics	.831	***
Credibility	<---	Web Characteristics	.714	***
Info Quality	<---	Web Characteristics	.770	***
Control	<---	Web Characteristics	.913	***
Aesthetics	<---	Web Characteristics	.664	***
Customer Experience	<---	Seek Customer Support	-.619	***
Customer Experience	<---	Search Success	.553	***
Seek Customer Support	<---	Search Success	-.811	***
Search Success	<---	Level of Internet Confidence	-.261	.003

*** significant at the .000 level.

9.18.2 Second Modification to the Structural Model

In line with the earlier modifications to the structural model, the researcher looked to the modification indices within AMOS Graphics to identify if further modifications needed to be made to the structural model in order to improve fit. Table 9.41 outlines the Modifications Indices output and shows a modification that should be made between Website Characteristics and the need to Seek Customer Support.

Table 9.41 Modification Indices from Second Structural Model (Regression Weights)

			M.I.	Par Change
Seek Customer Support	<---	Web Characteristics	26.253	-.366
Search Success	<---	Web Characteristics	16.321	.245
Website Characteristics	<---	Customer Experience	9.124	.153
Website Characteristics	<---	Seek Customer Support	7.182	-.125

We can now see that the number of total modifications suggested by AMOS has dropped to 4 over the M.I. value of 4.0, however in line with Byrne (2013) only those M.I. values over 10.0 will be addressed. Thus, a modification will be made to the structural model between Website Characteristics and the requirement to Seek Customer Support as this is the highest value shown in the M.I. column and will approximately drop the chi-square value by 26.253 and have a parameter change of approximately -.366. Again this modification has further supporting theoretical evidence as discussed within the literature chapters as well as the aforementioned statistical evidence.

Figure 9.9 Second Modification of Structural Model

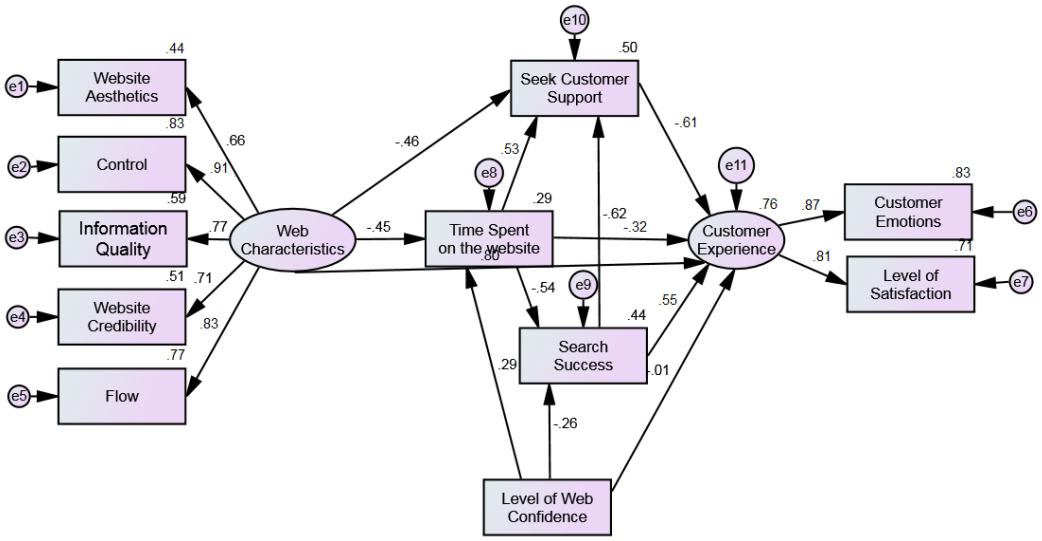


Figure 9.9 shows a strong regression weight of -.461 and a statistically significant p-value of .000 between the newly added parameter, Website Characteristics and the requirement to Seek Customer Support. The model remains to be over-identified with 11(11+1)/2 = 66 data points with 30 parameters to be estimated and 36 degrees of freedom, which provides meaningful fit statistics. It can also be seen from table 9.42 that model fit statistics have improved upon the additional parameter added to the structural model.

Table 9.42 Model Fit Indices for Second Model Modification

Fit Index	**Goodness of Fit Value**	**Recommended Value of Good Fit**	**Reference**
Chi Square	**.000**	P > .05	Byrne (2013)
Relative Chi-Square	**3.16**	< 5	Schumacker and Lomax (2010)
CFI	**.966**	≥.90 ≥.95	Bentler (1990) Hu and Bentler (1999)

NFI	**.958**	>.95 Good Fit >.90 Acceptable Fit	Bentler and Bonett (1980)
GFI	**.959**	>.90	Joreskog and Sorbom (1996) Schumacker and Lomax, (2010)
SRMR	**.026**	<.08	Hu and Bentler (1999)
RMSEA	**.054**	≤.05 Good Fit .05<RMSEA≤.08 Adequate Fit .08<RMSEA≤.10 Mediocre Fit ≤.06 Good Fit	MacCallum et al (1996) Schumacker and Lomax (2010) Hu and Bentler (1999)
RMR	**.012**	<.05 ≤.08	Joreskog and Sorbom (1996) Hu and Bentler (1999)

Each of the modification indices displayed in table 9.42 outline an improvement in model fit, compared to the previous model. The structural model can now be deemed as having good fit. With the exception of a significant chi-square value p = .000 and a CMIN = 113.852, other fit statistics continued to improve, the relative chi-square (3.16), CFI (.973), NFI (.964), GFI (.969), SRMR (.019) and the RMR (0.10) all have good fit indices. The modification brought a further slight improvement to the RMSEA with a fit value below the critical value outlined by MacCallum et al (1996) of below .05 (.047). Therefore, the second modified model shows better fit than the initial, first modified structural models.

Moreover, the standardised regression weights outlined in table 9.43 show strong regression values, which are statistically significant at p = .000 value, with exception

of ‘Level of Internet Confidence on ‘Customer Experience’ with a non-significant p value of p = .243.

Table 9.43 Standardised Regression Weights of Second Modified Structural Model

			Estimate	P
Time Spent on Site	<---	Web Characteristics	-.452	***
Customer Experience	<---	Web Characteristics	.801	***
Seek Customer Support	<---	Web Characteristics	-.462	***
Time Spent on Site	<---	Level of Internet Confidence	.294	***
Customer Experience	<---	Time Spent on Site	-.323	***
Seek Customer Support	<---	Time Spent on Site	.529	***
Search Success	<---	Time Spent on Site	-.544	***
Customer Experience	<---	Level of Internet Confidence	-.011	.243
Positive Emotion	<---	Customer Experience	.867	***
Level of Satisfaction	<---	Customer Experience	.811	***
Flow	<---	Web Characteristics	.831	***
Credibility	<---	Web Characteristics	.714	***
Info Quality	<---	Web Characteristics	.770	***
Control	<---	Web Characteristics	.913	***
Aesthetics	<---	Web Characteristics	.664	***
Customer Experience	<---	Seek Customer Support	-.614	***
Customer Experience	<---	Search Success	.553	***
Seek Customer Support	<---	Search Success	-.623	***
Search Success	<---	Level of Internet Confidence	-.261	.003

*** significant at the .000 level.

9.18.3 Third Modification to the Structural Model

In line with the earlier modifications to the structural model, the researcher looked to the modification indices within AMOS Graphics to identify if further modifications needed to be made to the structural model in order to improve fit. Table 9.44 outlines the Modifications Indices output and shows one final modification that should be made by introducing a parameter between Website Characteristics and Search Success.

Table 9.44 Modification Indices from Third Structural Model (Regression Weights)

			M.I.	Par Change
Search Success	<---	Web Characteristics	20.507	.445
Website Characteristics	<---	Customer Experience	9.124	.153
Website Characteristics	<---	Seek Customer Support	7.182	-.125
Satisfaction	<---	Aesthetics	5.144	.059

We can now see that the number of total modifications suggested by AMOS has dropped to 4 over the M.I. value of 4.0, however in line with Byrne (2013) only those M.I. values over 10.0 will be addressed. Thus, a modification will only be made to the structural model between Website Characteristics and Search Success as this is the highest value shown in the M.I. column and will approximately drop the chi-square value by 20.507 and have a parameter change of approximately .445. Again this modification has further supporting theoretical evidence as well as the aforementioned statistical evidence.

Figure 9.10 Third Modification of Structural Model

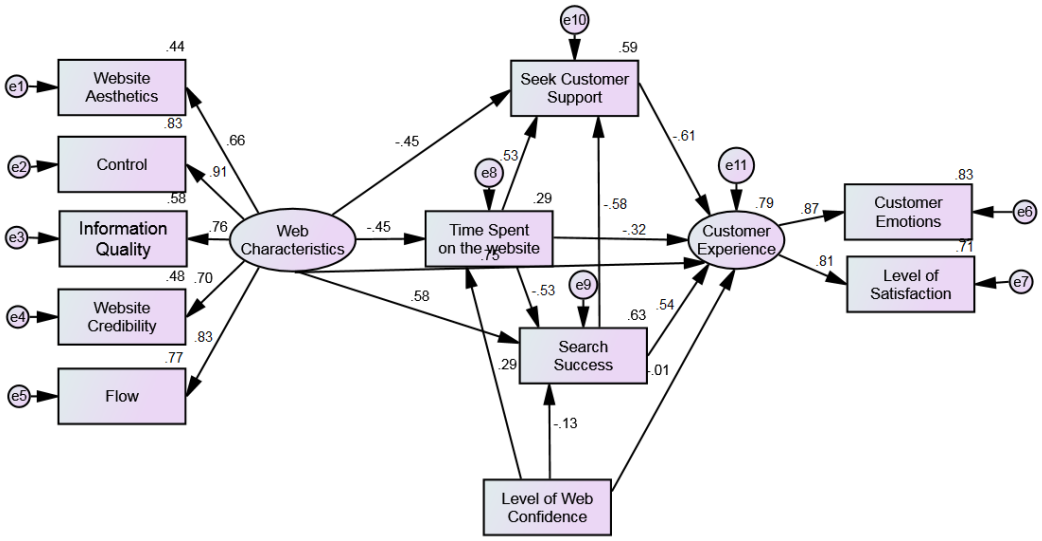


Figure 9.10 shows a strong regression weight of .581 and a statistically significant p-value of .000 between the newly added parameter, Web Characteristics and Search Success. The model remains to be over-identified with 11(11+1)/2 = 66 data points with 31 parameters to be estimated and 35 degrees of freedom, which provides meaningful fit statistics. It can also be seen from table 9.45 that model fit statistics have improved upon the additional parameter added to the structural model.

Table 9.45 Model Fit Indices for Third Model Modification

Fit Index	**Goodness of Fit Value**	**Recommended Value of Good Fit**	**Reference**
Chi Square	**.000**	P > .05	Byrne (2013)
Relative Chi-Square	**2.67**	< 5 <2 or 3	Schumacker and Lomax (2010) Carmines and McIver (1981)

		<3	Kline (1998)
CFI	**.973**	≥.90 ≥.95	Bentler (1990) Hu and Bentler (1999)
NFI	**.964**	>.95 Good Fit >.90 Acceptable Fit	Bentler and Bonett (1980)
GFI	**.969**	>.90	Joreskog and Sorbom (1996) Schumacker and Lomax, (2010)
SRMR	**.019**	<.08	Hu and Bentler (1999)
RMSEA	**.047**	≤.05 Good Fit .05<RMSEA≤.08 Adequate Fit .08<RMSEA≤.10 Mediocre Fit ≤.06 Good Fit	MacCallum et al (1996) Schumacker and Lomax (2010) Hu and Bentler (1999)
RMR	**.010**	<.05 ≤.08	Joreskog and Sorbom (1996) Hu and Bentler (1999)

Each of the modification indices displayed in table 9.45 outline an improvement in model fit, compared to the previous model. The structural model can now be deemed as having good fit. With the exception of a significant chi-square value p = .000 and a CMIN = 93.477, other fit statistics continued to improve, the relative chi-square (2.67), CFI (.973), NFI (.964), GFI (.969), SRMR (.019) and the RMR (0.10) all have good fit indices. The modification brought a further slight improvement to the RMSEA with a fit value below the critical value outlined by MacCallum et al (1996) of below .05 (.047). Therefore, the third modified model shows better fit than the initial, first and modified structural model.

Moreover, the standardised regression weights outlined in table 9.46 show strong regression values, which are statistically significant at p = .000 value, with exception of 'Level of Internet Confidence' directly on 'Customer Experience' with a non-significant p value of p = .834.

Table 9.46 Standardised Regression Weights of Third Modified Structural Model

			Estimate	P
Time Spent on Site	<---	Web Characteristics	-.452	***
Customer Experience	<---	Web Characteristics	.751	***
Seek Customer Support	<---	Web Characteristics	-.453	***
Search Success	<---	Web Characteristics	.582	***
Time Spent on Site	<---	Level of Internet Confidence	.294	***
Customer Experience	<---	Time Spent on Site	-.323	***
Seek Customer Support	<---	Time Spent on Site	.528	***
Search Success	<---	Time Spent on Site	-.531	***
Customer Experience	<---	Level of Internet Confidence	-.007	.834
Positive Emotion	<---	Customer Experience	.867	***
Level of Satisfaction	<---	Customer Experience	.811	***
Flow	<---	Web Characteristics	.831	***
Credibility	<---	Web Characteristics	.701	***
Info Quality	<---	Web Characteristics	.763	***
Control	<---	Web Characteristics	.913	***
Aesthetics	<---	Web Characteristics	.662	***
Customer Experience	<---	Seek Customer Support	-.614	***
Customer Experience	<---	Search Success	.544	***
Seek Customer Support	<---	Search Success	-.583	***
Search Success	<---	Level of Internet Confidence	-.125	.017

*** significant at the .000 level.

9.18.4 Final Modification to the Structural Model

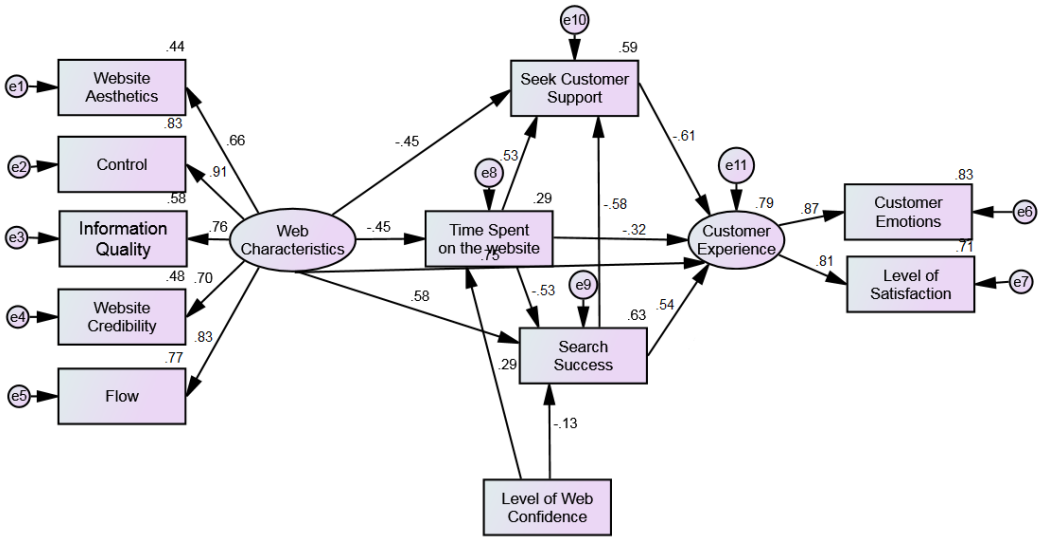
Following on from the third modification of the model, table 9.47 illustrates that no further fit improvements can be made to the structural model from the Modification Indices. Table 9.47 outlines the remaining modifications suggested by AMOS's output.

Table 9.47 Modification Indices from Final Structural Model (Regression Weights)

			M.I.	Par Change
Website Characteristics	<---	Customer Experience	5.124	.153
Website Characteristics	<---	Seek Customer Support	4.182	-.125
Satisfaction	<---	Aesthetics	4.144	.059

The Modification Indices shown in table 9.47 all fall under the M.I. critical value of 10.0 outlined by Byrne (2013), thus no further meaningful model improvements can be made from the M.I. However, it can be seen in Figure 9.10 and Table 9.47 that the regression weight between 'Level of Internet Confidence' and the 'Customer Experience' has dropped even further from the initial structural model .05 to .01 with a new non-significant p value of .834 >.05. Thus, in line with Byrne (2013) the researcher can delete a parameter that adds no value to the model, while also attempting to improve model fit. The parameter between Level of Internet Confidence and the Customer Experience, i.e. the relationship between how confident a customer is using the Internet influencing the experience that the customer has on a website is unsupported. Thus, the parameter can be deleted from the structural model. Figure 8.9 outlines the updated model with the parameter between Level of Internet Confidence and the Customer Experience deleted.

Figure 9.11 Final Modification to Structural Model



As can be seen in figure 9.11 in the final modification to the structural model, the non-significant parameter between Level of Web Confidence and the Customer Experience has been deleted from the model. This parameter did not make a contribution to the research and thus in the interests of parsimony and comprehensiveness, the item was deleted (Whetten, 1989).

A further examination of the model fit statistics show that a chi-square x^2 value of 93.936, p = .000 (d.f. = 36), thus the difference between the third modified model and the final modified model is not significant as the difference between the x^2 values is only .0459, which is less than the critical x^2 value of 10.828. Therefore, deleting the parameter between 'Level of Web Confidence' and the 'Customer Experience is supported.

An overview of other goodness-of-fit statistics show that the final model remains almost unchanged in comparison to the third modification to the structural model. In spite of this, the final model can be seen as the best fit amongst all proposed models. A relative chi-square value = 2.61, CFI = .973, NFI = .964, GFI = .969, SRMR = .019,

RMSEA = .047, RMR = .011. Thus, the statistics from the final structural model show goodness-of-fit.

9.19 Comparison between Structural Models

The evaluation of the online customer experience model can take place by comparing the models developed from the structural equation modelling by examining the EVCI and CAIC fit statistics as well as the nest chi-square value. The difference of a chi-square value divided by the difference of the degrees of freedom value (x^2/d.f) of more than 3.84 (Diamantopoulos and Siguaw, 2000) can be deemed as significant improvement in the model fit. Additionally, the greater the x^2/d.f. value, the better improvement in model fit.

Byrne (2013) also comments that a lower EVCI (Expected Cross-Validation Index) value will provide a model with better fit. Byrne (2013) further suggests that the EVCI value of the hypothesised model should be lower than the value of the saturated and independent model. The CAIC, the constant version of the Akaike Information Criterion (Bozdogan, 1987), is a goodness of fit measure that adjusts the model chi-square to assign a greater penalty to model complexity. Similarly to the EVCI, a low CAIC value will provide the model with better fit. The hypothesised CAIC value should be lower than the saturated and independent model (Diamantopoulos and Siguaw, 2000).

Furthermore, the x^2 / d.f. value from the initial structural model to the first modified model was 108.120, the x^2 / d.f. value from the first modified model to the second modified model was 32.189, additionally, the x^2 / d.f. value from the second modified model to the third modified model was 20.375. Finally, the x^2 / d.f. value from the third modified model to the final modified model was 0.459 (which is a significant value, as the modification was to reduce the structural model by one non-significant parameter, and thus, there is very little change in the chi-square value). Finally, the x^2 / d.f. value from the initial structural model to the final model was 160.225. As a result all modifications that took place had a significant result and improved model fit.

Table 9.48 outlines the EVCI and CAIC values for each of the structural models proposed in this chapter. In addition to the x^2/d.f. values, the results in Table 9.48 shows a significant increase in model fit from the initial structural model to the final structural model. The EVCI and CAIC values are less than their corresponding saturated and independent models.

Table 9.48 Model Comparison via EVCI and CAIC Tests

	EVCI	**CAIC**
Initial Structural Model	1.112	473.890
First Modified Structural Model	.891	275.462
Second Modified Structural Model	.721	231.707
Third Modified Structural Model	.674	231.707
Final Structural Model	.670	228.891
Saturated Model	.986	334.135
Independent Model	8.707	1425.235

Table 9.48 further outlines that the final model is the best fitting model, with an EVCI value of .670 less than the saturated model and the independent model, additionally a CAIC value of 228.891 was obtained from the final model again lower than the saturated and independent model values.

An examination of the further goodness-of-fit statistics in table 9.49 confirmed that the final structural model was the model with best fit. The final structural model had the lowest relative chi-square value, best fitting CFI value, best fitting NFI value, best fitting GFI value, lowest SRMR value, lowest RMSEA and lowest RMR. These statistics as well as table 9.49 show that the final structural model has best fit and there were significant improvement in model fit from the initial model to the final model.

Table 9.49 Comparison of Goodness of Fit Indices from the Initial Model to the Final Model

Fit Index	**Fit Value (Initial)**	**Fit Value (1st)**	**Fit Value (2nd)**	**Fit Value (3rd)**	**Fit Value (Final)**	**Recommended Value of Good Fit**	**Reference**
Chi Square	x^2 =254.161 d.f. = 38 p =.000	x^2 = 146.041 d.f. = 37 p = .000	x^2 = 113.852 d.f. = 36 p = .000	x^2 = 93.477 d.f. = 35 p = .000	x^2 = 93.936 d.f. = 36 p = .000	P > .05	Byrne (2013)
Relative Chi-Square	**6.69**	**3.95**	**3.16**	**2.67**	**2.61**	< 5	Schumacker and Lomax (2010)
CFI	**.924**	**.947**	**.966**	**.973**	**.973**	≥.90 ≥.95	Bentler (1990) Hu and Bentler (1999)
NFI	**.901**	**.950**	**.958**	**.964**	**.964**	>.95 Good Fit >.90 Acceptable Fit	Bentler and Bonett (1980)
GFI	**.902**	**.954**	**.959**	**.969**	**.969**	>.90	Joreskog and Sorbom (1996) Schumacker and Lomax, (2010)
SRMR	**.051**	**.039**	**.026**	**.019**	**.019**	<.08	Hu and Bentler (1999)

RMSEA	**.112**	**.098**	**.054**	**.047**	**.047**	≤.05 Good Fit .05<RMSEA≤.08 Adequate Fit .08<RMSEA≤.10 Mediocre Fit ≤.06 Good Fit	MacCallum et al (1996) Schumacker and Lomax (2010) Hu and Bentler (1999)
RMR	**.016**	**.015**	**.012**	**.010**	**.010**	<.05 ≤.08	Joreskog and Sorbom (1996) Hu and Bentler (1999)

9.20 Parameter Estimates of the Final Structural Model

It is important to analyse the regression weights (parameter estimations) of the final structural model. These regression weights between each parameter can be seen in table 9.50.

Table 9.50 Standardised Regression Weight Estimates of Final Structural Model

			Estimate	P
Time Spent on Site	<---	Web Characteristics	-.452	***
Customer Experience	<---	Web Characteristics	.751	***
Seek Customer Support	<---	Web Characteristics	-.453	***
Search Success	<---	Web Characteristics	.582	***
Time Spent on Site	<---	Level of Internet Confidence	.294	***

			Estimate	P
Customer Experience	<---	Time Spent on Site	-.323	***
Seek Customer Support	<---	Time Spent on Site	.528	***
Search Success	<---	Time Spent on Site	-.531	***
Positive Emotion	<---	Customer Experience	.867	***
Level of Satisfaction	<---	Customer Experience	.811	***
Flow	<---	Web Characteristics	.831	***
Credibility	<---	Web Characteristics	.701	***
Info Quality	<---	Web Characteristics	.763	***
Control	<---	Web Characteristics	.913	***
Aesthetics	<---	Web Characteristics	.662	***
Customer Experience	<---	Seek Customer Support	-.614	***
Customer Experience	<---	Search Success	.544	***
Seek Customer Support	<---	Search Success	-.583	***
Search Success	<---	Level of Internet Confidence	-.125	.017

*** significant at p < .001

** significant at p < .01

* significant at p < .05

The results from table 9.50 on the standardised regression weight estimates illustrate the following relationships.

1) A variable 'Website Characteristics' is made up of Flow, regression weight = .831, p = .000. Additionally, 'Website Characteristics' is made up of Website Credibility, regression weight = .724, p = .000. 'Website Characteristics' is also made up of Information Quality, regression weight .759, p = .000. Moreover, 'Website Characteristics' is made up of the level of Control a user can have on a site, regression weight .899, p = .000. Lastly, 'Website Characteristics' is also made up of Website Aesthetics. Thus, good website characteristics are the combination of, a website that allows the user to focus and concentrate on their tasks (flow), appears credible to the user, contains quality information, provides the user with a level of control, while having an aesthetically pleasing design. H1(a-e) has been proved.

2) The customer experience is made up of two variables, positive emotions, regression weight = .86, p = .000, and level of satisfaction, regression weight .81, p = .000. Thus, if a variable influences a customer's level of satisfaction with their experience, along with influencing emotions, it will have an effect on the customer's experience. H9 (a-b) has been proved.

3) Website Characteristics effect the perceived length of time a customer requires to spend on the website, regression weight = -.45, p = .000. Thus, if website characteristics are rated positively, customers will perceive to spend an appropriate length of time on the website. However, should website characteristics be perceived poorly, customers will perceive to spend longer than necessary on the website. H2 has been proved.

4) The perceived length of time spent on a website has an effect on the customers experience, regression weight = -.32, p = .000. This indicates that if customers have to spend longer searching on the website than is perceived necessary, it has a negative effect on the customer's experience. H3 has been proved.

5) The length of time spent on a website has an effect on the customer's requirement to seek customer support, regression weight = -.52, p = .000. Thus, if customers have to spend longer searching on the website than is perceived necessary they will require customer support via synchronised social interaction with a service advisor. H4 has been proved.

6) The length of time spent on a website has an effect on the customer's success in their search, regression weight = -.53, p = .000. This indicates that if customers perceive to spend an adequate length of time searching on the website they will have a successful search, conversely should customers believe they are required to spend longer than necessary they will have an unsuccessful search and abandon their activity on the website. H5 has been proved.

7) Website characteristics have a direct effect on the customer's need to seek customer support, regression weight = -.45, p = .000. This suggests that if customers think the website characteristics (made up of website aesthetics, level of control,

information quality, website credibility, and a website that allows the user to focus and concentrate) are good then they will not require online customer support through synchronised social.

8) Website characteristics have a direct effect on the customer's search success, regression weight = .58, p = .000. This indicates that if customers think the website characteristics (made up of website aesthetics, level of control, information quality, website credibility, and a website that allows the user to focus and concentrate) are good then they will have a successful search.

9) Search Success has a direct relationship with the requirement to seek customer support, regression weight = -.58, p = .000. This indicates that if customers do not have a successful search they will require online customer support. H8 has been proved.

10) Website characteristics have a direct effect on the customer's experience, regression weight = .77, p = .000. This indicates that if customers perceive the website characteristics positively then it will have a positive effect on the customer's experience.

11) Customers who require customer support are enduring a negative experience, regression weight = -.61, p = .000. This highlights that if a customer requires to seek customer support online this indicates that the customer is having a negative experience, caused by the website characteristics and the length of time spent on the website and the success of their search. H6 has been proved.

12) The level of confidence a customer has in using the Internet has an effect on the length of time the customer is willing to spend on the website, regression weight = .29, p = .000. Thus, the more confidence a customer has in using the Internet the less time they are willing to spend searching for the information and services required. H10a has been proved.

13) The Level of confidence a customer has in using the Internet has an effect on how successful a customer's search is, regression weight = .13, p = .017. This suggests

that customers with higher levels of confidence in using the Internet are more likely to abandon their search than less confident searchers. H10b has been proved.

9.21 Squared Multiple Correlations from the Final Structural Model

The squared multiple correlations (also known as the R^2 value) are the estimated proportion of variance that is explained by the predictors. The remaining variance is explained by the error variance (Tabachnick and Fidell, 2007). According to Cohen (1988) values above .25 can be considered a large effect. The results of the squared multiple correlations can be seen in table 9.51.

Table 9.51 Squared Multiple Correlations (Final Structural Model)

	Estimate
Website Characteristics	.260
Time Spent on Site	.291
Customer Experience	.791
Seek Customer Support	.592
Search Success	.629
Aesthetics	.438
Control	.831
Info Quality	.581
Credibility	.479
Flow	.768
Satisfaction	.710
Positive Emotions	.828

Based on Cohen's (1998) critical value of large effect correlations being above .25, each of the variables in table 9.51 can be considered as having a large effect. From the R^2 values obtained the following relationships can be outlined:

1) The predictors of website characteristics, website aesthetics, level of control the website provides, the quality of the information, the credibility of the website and the websites provision to allow users to focus and concentrate (flow), accounts for 26% of the variance associated with website characteristics.

2) Positive Emotions and a customer's level of satisfaction serve as predictors of customer experience and as shown in table 8.38, both account for 79% of the variance explained of customer experience

3) The predictors of the percieved time spent on the website account for 29% of its variance and thus the error variance of time spent on the website accounts for 71%.

4) The predictors of customer support account for 60% of its variance, meaning that the error variance of customer support accounts for 40% of the variance.

5) The predictors of website aesthetics account for 44% of its variance and thus the error variance of website aesthetics accounts for 56% of the variance.

6) The predictors of control account for 83% of its variance, meaning that the error variance of control accounts for 17% of the variance.

7) The predictors of Information Quality account for 58% of its variance, meaning that the error variance of Information Quality accounts for 42% of the variance.

8) The predictors of Credibility account for 48% of its variance, meaning that the error variance of Information Quality accounts for 52% of the variance.

9) The predictors of Flow account for 77% of its variance, meaning that the error variance of Flow accounts for 23% of the variance.

10) The predictors of Satisfaction account for 71% of its variance, meaning that the error variance of Satisfaction accounts for 29% of the variance.

11) The predictors of positive emotions account for 83% of its variance and thus the error variance of website aesthetics accounts for 17% of the variance.

12) The predictors of search success account for 63% of its variance and thus the error variance of successful search accounts for 30% of the variance.

9.22 Standardised Total, Direct and Indirect Effects of the Final Structural Model

In order to carry out further examination of the final structural model the researcher can interpret the total, direct and indirect standardised effects of the variables on the online customer experience model. The total, direct and indirect effects provide the researcher with insight into the variables affecting the online customer experience and the subsequent need for online customer support. A direct effect refers to the effect between two variables when a single arrow connects them (see table 9.53). An indirect effect on the other hand refers to when there is an indirect effect between two variables, thus the second variable is connected to the first variable through another (third or more) variable(s) (see table 9.54). The total effect is the effects between two variables adding the sum of any direct effects with indirect effects (see table 9.52).

Table 9.52 Standardised Total Effects Final Structural Model

	Level of Web Confidence	Web Characteristics	Time Spent	Customer Experience	Search Success	Customer Support
Time Spent on Site	.294	-.452	.000	.000	.000	.000
Customer Experience	-.020	.942	-.370	.000	.581	.000
Search Success	-.269	.817	-.323	.000	.000	.000
Customer Support	.000	-.684	.654	.000	-.583	-.614
Aesthetics	.000	.662	.000	.000	.000	.000
Control	.000	.913	.000	.000	.000	.000
Info Quality	.000	.763	.000	.000	.000	.000
Credibility	.000	.701	.000	.000	.000	.000
Flow	.000	.831	.000	.000	.000	.000
Level of Satisfaction	-.028	.961	.044	.811	.171	-.153

Positive Emotion	-.026	.896	.041	.867	.159	-.142

Table 9.53 Standardised Direct Effects Final Structural Model

	Level of Web Confidence	Web Characteristics	Time Spent	Customer Experience	Search Success	Customer Support
Time Spent on Site	.294	-.452	.000	.000	.000	.000
Customer Experience	.000	.751	-.319	.000	.544	.000
Search Success	-.125	.581	-.323	.000	.000	.000
Customer Support	.000	-.453	.528	.000	-.583	-.614
Aesthetics	.000	.662	.000	.000	.000	.000
Control	.000	.913	.000	.000	.000	.000
Info Quality	.000	.763	.000	.000	.000	.000
Credibility	.000	.701	.000	.000	.000	.000
Flow	.000	.831	.000	.000	.000	.000
Level of Satisfaction	.000	.000	.000	.811	.000	.000
Positive Emotion	.000	.000	.000	.867	.000	.000

Table 9.54 Standardised Indirect Effects Final Structural Model

	Level of Web Confidence	Web Characteristics	Time Spent	Customer Experience	Search Success	Customer Support
Time Spent on Site	.000	.000	.000	.000	.000	.000
Customer Experience	-.020	.191	-.051	.000	.037	.000
Search Success	-.144	.236	.000	.000	.000	.000
Customer Support	.038	-.231	.126	.000	.000	.000
Aesthetics	.000	.000	.000	.000	.000	.000
Control	.000	.000	.000	.000	.000	.000
Info Quality	.000	.000	.000	.000	.000	.000
Credibility	.000	.000	.000	.000	.000	.000
Flow	.000	.000	.000	.000	.000	.000
Level of Satisfaction	-.028	.961	.044	.000	.171	-.153

Positive Emotion	-.026	.896	.041	.000	.159	-.142

Tables 9.52 to table 9.54 illustrate the results of the standardised total effects, the standardised direct effects and the indirect effects.

Considering the direct effects of all of the variables within the final structural model it can be seen that the strongest direct effect is between website characteristics and control (.913) and between the website characteristics and customer satisfaction with the experience (.961).

From table 9.54 on the standardised indirect effects, it can be seen that there are strong indirect effects between web characteristics and Positive Emotions (.809) and between web characteristics and level of satisfaction (.961) and between web characteristics and customer support (-.231) and between web characteristics and search success (.236). Thus, if website characteristics go up by 1 standard deviation Positive emotions go up by .809, level of satisfaction goes up by .961, the need to seek social support goes down by -.231 and a successful search goes up by .236.

Looking at the total effects table of all variables (table 9.52) there are numerous strong effects. The strongest total effect is the relationship between website characteristics and the level of satisfaction with the experience. It can be seen from table 9.53 and 9.54 that a number of direct effects and indirect effects make up the total effect for various constructs, increasing the overall total effect size. In addition, table 9.52 and table 9.53 outlined the total effects that stem solely from the direct effects. Lastly table 9.52 and table 9.54 outline the total effects that arise solely from the indirect effects through mediating variables.

9.23 Summary of Structural Model, Modifications and Comparisons

Four modifications were made to the initial online customer experience structural model. Three parameters were added to the model from the Modification Indices output within AMOS Graphics. In line with Byrne (2013) each modification to the model was made one modification at a time. Each modification made to the model was supported

both statistically and theoretically making the modification valid. The added parameter within the first modification of the model was between website characteristics and customer experience. This added parameter therefore suggested that the website characteristics have a direct effect on the customer's experience.

The second added parameter in the second modified structural model was between Website Characteristics and Seek Customer Support. This added parameter therefore suggested that the website characteristics has an effect on the need to seek customer support through synchronised social interaction, where website characteristics are perceived positively customers will not require online customer support.

The third added parameter in the third modified structural model was between Website Characteristics and Search Success. This added parameter suggested that the website characteristics has an effect on the success of a customer's search, where the website characteristics are perceived positively customers will have a successful search. However, we can see the mediating effect of the perceived length of time spent on the website. Thus, if customers perceive to spend longer than deemed necessary, even if the website characteristics are perceived positively customers will require online customer support with a service advisor. In addition, if customers perceive to spend longer than necessary, despite positive website characteristics customers will have an unsuccessful search and abandon their activity.

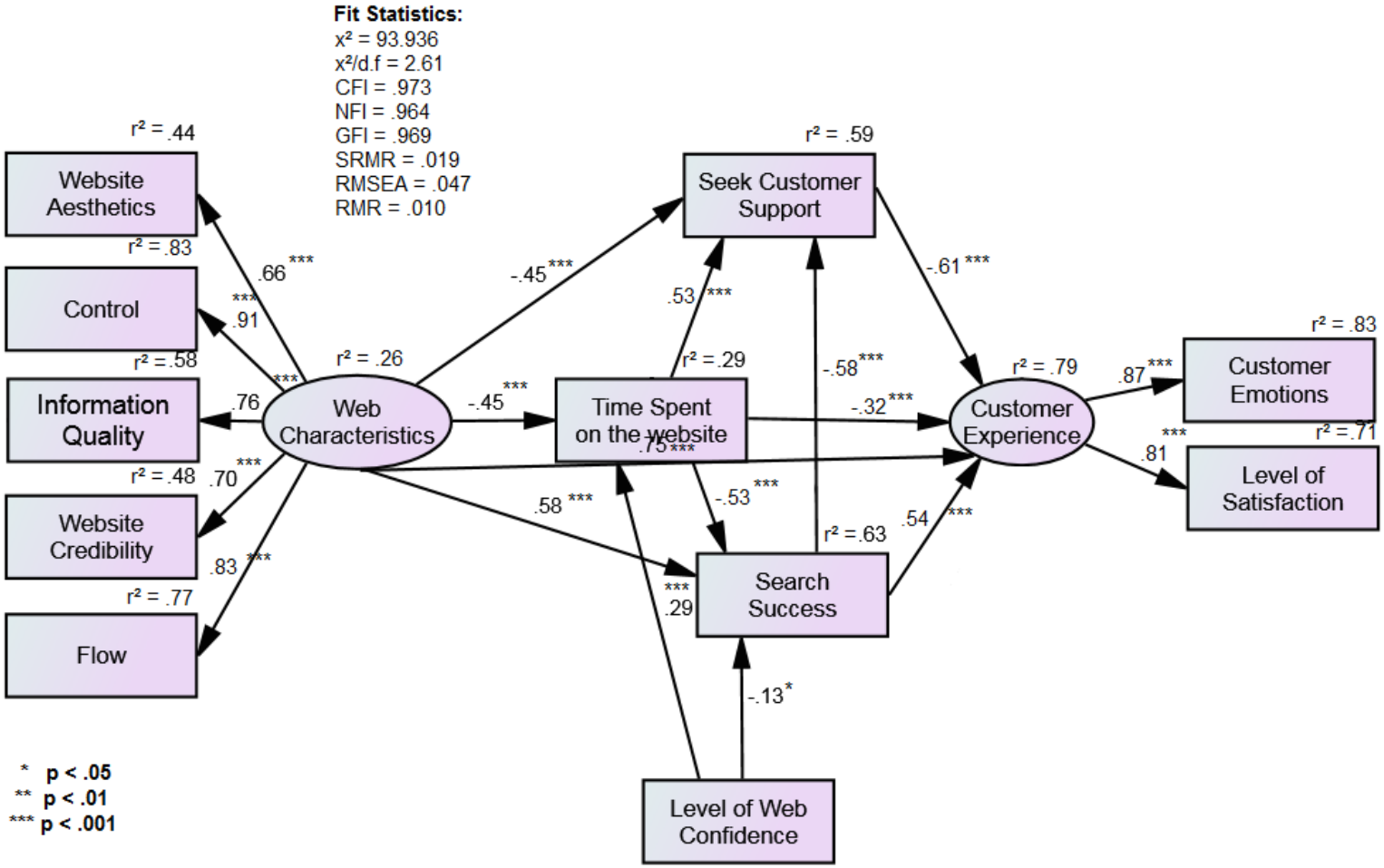
The final modification to the structural model involved deleting a non-significant parameter that added no value to the structural model. The deleted parameter (between 'Level of Web Confidence' and the 'Customer Experience') shows that the level of confidence a customer has does not have a direct effect on the customer experience influencing the customer's level of satisfaction with the experience or their emotions.

The modifications of the model resulted in significant improvements in model fit. The model fit statistics improved marginally, when comparing the third modification to the fourth (final) modification. Thus, the final modification proved to be statistically significant as well as logical. The model comparison statistics further confirmed the evaluation when both the EVCI and CAIC statistics were compared together. The comparisons of the aforementioned EVCI and CAIC as well as other model fit statistics

including the chi-square, relative x^2 chi-square, CFI, NFI, GFI, SRMR, RMSEA and the RMR all show that the final model outperforms the initial structural model, the first, second and third modified structural model and thus most precisely explains the online customer experience and the role of online customer support via synchronised social interaction in the business advisory context.

Further to this, the results of the discriminant validity analysis show that each construct of the final structural model contains discriminant validity and thus the model developed in this study can be deemed as being valid. Figure 9.12 outlines the final structural model indicating regression weights, R^2 values, levels of significance and fit indices.

Figure 9.12 Final Structural Model



9.24 Customer Support

Further support is offered with regard to the requirement of customer support via synchronised social interaction from the 'help cards' issued to participants during the website experiments. As detailed earlier, participants of the online experiment were given help cards that could be used during any task across the three website experiments. Once a participant used a help card they could move on to the next task. However, the help card provided the researcher with practical (in action) evidence of the requirement of customer support during a negative experience. Table 9.55 provides a summary of the use of 'help cards' during the online experiments.

Table 9.55 Summary of Help Card Usage during Online Experiments

Experiment	**Task**	**Number of participants who attempted tasks**	**(N) Help Card Used**
Exp1	Task1	160	80
	Task 2	159	45
	Task 3	85	6
Total		**404**	**131**
Exp2	Task 1	160	75
	Task 2	160	34
	Task 3	89	9
Total		**409**	**118**
Exp3	Task 1	160	90
	Task 2	157	82
	Task 3	46	8
Total		**363**	**180**

Overall Total (N)		**1,176**	**429**
Overall Total (%)			36%

Table 9.55 outlines further evidence in addition to the structural equation model shown in figure 9.12 and the evidence from the in-depth interviews that 36% of 1,176 attempts at tasks illustrated that they would have liked customer support while trying to complete their task. The results from the structural equation model, the initial in-depth interviews and the online experiment confirm the requirement of online customer support during search for business advisory information, the in-depth interviews shed some light that this may be due to tasks on such websites being somewhat unfamiliar to the user and to an extent, complicated due to the nature of the type of tasks carried out on the website, however, the variables outlined in this chapter and discussed in the subsequent chapter contribute to the need for support during search.

Additionally, table 9.56 outlines the number of abandoned searches from the online experiments.

Table 9.56 Summary of Abandoned Searches during Online Experiment

Experiment	**Task**	**Number of participants who attempted tasks**	**(N) Abandoned Searches**
Exp1	Task1	160	23
	Task 2	159	11
	Task 3	85	12
Total		**404**	**46**
Exp2	Task 1	160	18
	Task 2	160	12
	Task 3	89	9
Total		**409**	**39**

Exp3	Task 1	160	22
	Task 2	157	16
	Task 3	46	22
Total		**363**	**60**
Overall Total (N)		**1,176**	**145**
Overall Total (%)			12%

From Table 9.56 it can be seen that 12% of 1,176 searches were abandoned. Numerous respondents commented as noted in the researcher's logbook that they would have abandoned their search had they not had the option to use a 'help card'. In addition to the results from the structural equation modelling where a statistically significant relationship (p = .000) was found between the need to seek customer support and the customer experience, with a strong regression weight of -.61, where if a customer requires to seek online customer support through synchronised social interaction they are not having a positive online experience. The results from table 9.57, table 9.58 and the structural equation modelling emphasise the need for customer support online during search for online business advisory information. In total 48% of 1,176 searches were uncompleted, thus providing customer support through synchronised social interaction may aid in allowing customers to adequately complete their search.

9.25 Conclusion

First of all, this chapter outlined the demographics of the study's sample, 160 participants took part in an online experiment followed by an online questionnaire, with an even split between males and females, and a broad range of age groups. Participants' usage of the Internet, confidence using the Internet, and usage of social networking sites was outlined.

Furthermore, a repeated measure ANOVA was conducted to examine the suitability of business students making up the majority of the sample. The repeated measures ANOVA outlined that there was no difference between business people and business students, thus making the sample suitable. A second repeated measures ANOVA was

conducted to identify the representativeness of the sample of websites that were selected. The second repeated measures ANOVA showed that each website was statistically significantly different, thus making the sample of websites representative and the results generalisable across all types of business advisory websites.

Moreover, Cronbach Alpha's were calculated to test the reliability of the scales used in the study. Each scale produced an alpha value above the critical value of .7. Additionally, composite mean averaged scales were further tested by calculating Cronbach's Alpha to ensure reliability, again producing values above .7.
As a new scale was developed to measure the perceived length of time spent on the website, following Churchill's (1979) scale development procedure, Cronbach's Alpha was calculated along with an EFA and CFA to validate the scale.

A series of MANOVA's were conducted in order to identify if differences existed between groups on each of the variables within the study. A MANOVA test showed that there was no difference between males and females on any of the variables within the study. A second MANOVA test also showed that there was no difference between age groups on any of the variables in the study. A third MANOVA test further highlighted that there was no significant difference between how often customers used the Internet on the variables in the study. Additionally, a fourth MANOVA found that there was no difference between how often customers use social networking sites on the variables within the study. Finally, a last MANOVA was calculated to establish if differences existed between the levels of customer's confidence in using the Internet on the variables within the study, the results from the MANOVA found this statistically significant, thus differences exist.

Furthermore, a confirmatory factor analysis was conducted to examine the validity of the variables in the study for Structural Equation Modelling. The Structural Equation Model was then specified and estimated to test the relationships hypothesised in the study. The results showed that only one hypothesis was not supported. Due to the initial structural model having marginally adequate fit, 4 modifications were made to the model, supported both statistically and theoretically, before arriving at the final structural model, which showed good fit and statistically significant relationships.

The subsequent chapter will provide a discussion on the results obtained within this chapter and the literature outlined in chapters 2 – 4, as well as the qualitative results outlined in chapter 7.

CHAPTER 10

DISCUSSION

10.0 Introduction

The purpose of this chapter is to discuss the findings from the online experiment in chapter 9 in relation to the in-depth interview findings in chapter 7 and the findings of previous studies from the literature in chapters 2 – 4. Within this discussion the chapter will discuss the findings of the research in relation to the research objectives: (1) Establish which variables influence the online customer experience during a utilitarian search for business advisory information and services. (2) Investigate the role of customer emotions while searching for business advisory information and services online. (3) Establish the role of online customer support through social interaction in relation to a customer's online experience. (4) Examine the effect of a customer's search success on the online customer experience (5) Develop a comprehensive online customer experience model incorporating variables influencing the customer experience during the initial customer journey to find online business advisory information and services.

Recent research into information search has neglected the study of variables capable of influencing the customer's experience during information seeking. With regard to research on the customer experience, recent research has narrowly focussed on the online retail environment. This study aims to bridge a research gap and examine the variables capable of influencing a customer's experience during a utilitarian search for business advisory information and services. This helps to advance our understanding of online information seeking and the online customer experience. The study has identified new variables overlooked in previous studies capable of influencing the customer experience, while developing a new online customer experience model in relation to information search.

10.1 Online Information Search and the Customer Experience

The findings illustrated in chapter 8 outline the variables capable of influencing a customer's online experience during a utilitarian search for business advisory information. Previous studies with regard to the online customer experience have focused on the outcomes of the customer experience. This research has responded to calls for research (Verhoef et al, 2009) on what actually influences the customer during their holistic experience. Previous studies have focussed on the customer experience in relation to purchase intention; this research has introduced the importance of the customer experience during a customer's initial journey in seeking online information in a utilitarian context.

Kuhlthau (1989) was the first to include both the cognitive and affective component in information search. The literature outlined emotions as being prevalent in influencing a customer online, with frustration, doubt (confusion) and uncertainty being dominant emotions (Flavain-Blanco et al, 2011). The findings in this study from the online experiment highlight the role of customer emotions within the online environment during the customer's journey in seeking information and services. The findings illustrate that a negative customer experience results in the customer having negative emotions, while a positive customer experience results in a customer having positive emotions. These results are in line with previous offline customer experience research highlighting a role for emotions as part of the customer experience (Edvardsson et al, 2007; Lee and Lin, 2005) as well as research in hedonic online contexts (Rose et al, 2012) and research on the search process highlighting emotions as an integral part of information search (Case, 2012; Kuhlthau et al, 2008).

Extending previous findings, this research found that during a utilitarian information search, customer emotions are inherently part of the customer experience. While Rose et al (2012) suggest that satisfaction can be an outcome of an effective customer experience; this research further proposes and statistically confirms that the level of customer satisfaction along with positive emotions can inherently provide a measure of the customer experience. This finding extends the current body of literature (Edvardsson et al, 2007; Lee and Lin, 2005) and offers further insight into measuring the online customer experience.

Additionally, the results from the in-depth interviews illustrate that frustration, anxiety and uncertainty surround a utilitarian search for business advisory information. The findings outlined numerous reasons for such emotions including, the web site design, layout, navigation, poor quality information, website credibility, as well as the website being difficult to use. Furthering the results of previous studies, (Kuhlthau, 2004 and Flavian-Blanco et al, 2011) the online experiment supported by the in-depth interview findings show that the perceived length of time customers have to spend searching has an effect on a customer's emotions and level of satisfaction with the experience. The findings of this study suggest that cognitive approaches to research on human computer interaction and online consumer behaviour have somewhat underestimated the importance of emotions that have an influence on the customer experience. This study finds that positive emotions are inherently part of a good customer experience. If customers do not encounter a positive experience they will not have positive emotions and are likely to abandon their search.

To illustrate, respondents R14 and R11 from the in-depth interviews commented:

The frustration index is often very high when searching for information on websites, and I want to come away from a website feeling I have achieved something. (Respondent R14)

Respondent R11 also commented:

On many business advisory sites there's so much information, it's almost too much, information overload and that can actually be a problem, you become bombarded, you are unsure what to do, you often can't tell how good the information is and then you get frustrated and annoyed that you can't get what you're looking for. (Respondent R11)

Thus, the findings from the online experiment illustrate that a negative customer experience results in negative emotions along with dissatisfaction with the experience whereas a positive customer experience will result in positive customer emotions as

well as satisfaction with the customer experience, confirming the findings from the depth interviews with business and further extending the findings of previous studies.

10.2 Variables influencing the Customer Experience

The literature outlined 14 variables that were capable of effecting the online customer during searching for information from various studies, including information quality, website credibility, flow, telepresence, enjoyment, concentration, engagement, web skills, challenge, interactivity, interactive speed, control (ease of use, customisation, connectedness), website aesthetics and emotions (see Rose et al, 2012; Hoffman and Novak, 2009; Ding et al, 2009; Mollen and Wilson, 2010; Faiola et al, 2013; Guthrie et al, 2004; Brodie et al, 2013; Mathwick et al, 2005; Macmillan and Hwang, 2002; Song and Zinkhan, 2008; Gefen et al, 2003; Lee and Chen, 2010; Kim and Zhang, 2010; Hilligoss and Rieh, 2008; Van Noort et al, 2012; Wu et al, 2013; Liu and Shrum, 2002; Lee and Jeong, 2010; Harris and Goode, 2010). Further to this, the purpose of the in-depth interviews was to firstly identify the variables influencing the customer experience and secondly to provide parsimony and comprehensiveness, thus deleting those variables that can be seen as irrelevant for the study. The findings of the depth-interviews illustrated that from the 14 variables identified in the literature, 5 variables appear to influence the customer experience during a utilitarian search for business advisory information including; website aesthetics, flow, control, website credibility and information quality. As outlined in previous chapters, in addition to the literature, a sixth variable of ‘the perceived time spent on the website’ was identified through the online experiment and the depth interviews. Table 10.1 provides a clarification of the definitions of each of the variables pertinent to the study derived from a combination of the literature and the in-depth interviews.

Table 10.1 Variable Definitions

Variable	Definition
Website Aesthetics	*How appealing the look, feel and layout of the website is to a user.*
Control	*The level of customisation for users to see content relevant to their needs and the ability for the user to move around the site with ease, while choosing the areas of the site they want to go to.*
Information Quality	*Information that is accurate, current, complete and comprehensive and easily understandable allowing business to make assured decisions.*
Website Credibility	*The ability to establish if a website looks credible in order for customers to trust the services the website offers.*
Flow	*The complete focus and concentration on a task while being absorbed and engrossed in the activity.*
Time Spent on Website	*The perceived length of time users are prepared to spend searching for information on a website before halting their search*

10.3 Website Aesthetics

Much attention over recent years has been paid to the e-servicescape (Hopkins et al, 2010). Eroglu et al (2003) suggests that, much like the offline world, where customers can be influenced by an environment, in terms of its design, layout, lighting, music and general atmospherics, the online environment can be influenced by website aesthetics aiding in the creation of the online experience. The findings illustrated that the website aesthetics include the website's colour, graphics, images, layout and design. Li and Yeh

(2010) outline that the design of a website is crucial in influencing the online experience of a user, as the presentation of the website can effect a user's psychological state, which has been found in this study during a utilitarian search for business advisory information.

The quantitative findings in chapter 9 show that website aesthetics have a significant influence on the online customer experience and thus an important variable that marketers need to consider when developing and implanting design strategies for business advisory websites. The structural model found that website aesthetics make up a part of an underlying latent variable, 'website characteristics'. While previous studies have outlined the importance of website aesthetics in influencing a customer's experience online, no previous study has outlined a combination of variables including website aesthetics in influencing the online customer experience. The majority of previous studies have also focused on the hedonic context of the online shopping environment when discussing the influence of the aesthetics of a website. However, this study extends the literature by finding that the website aesthetics have a role to play during a goal directed utilitarian task of searching for information.

Additionally, the exploratory research supports the quantitative findings through highlighting the design, look and feel of a website as being an important factor in a customer's online experience. Respondents suggested that if the website did not look good then they would be unlikely to continue to use it.

Respondent R12 had commented:

'I think how a site looks is very important, if the site doesn't look good you are unlikely to stay or even go back. I need the site to be inviting to start looking at it. If there is simply just too much information displayed on the page it puts you off' (Respondent R12).

Supporting this, Respondent R3 suggested that:

The graphic design of the actual website. That's probably the most important. If I come across a website and it looks really boring, then I quickly click off it, no matter what,

even if it could help my business and I know that sounds a bit ridiculous. (Respondent R3).

The exploratory research findings highlight that individuals often make quick judgments on websites based on very little information and thus website aesthetics can often be seen as the start of a customer's journey and first touch point of a customer's service encounter with an organisation and in turn have a significant influence on the customer's experience. While this may be the case, during the online experiment participants spent up to 6 minutes on each website providing customers with a comprehensive overview of the website's aesthetics, thus this study finds that the website aesthetics have an influence on a customer initially and continually throughout the experience after a prolonged period of time on the website. Those participants who were unable to complete their search reflected on the layout and design of the site in terms of the website being difficult to navigate due to menus in unexpected areas of the website and content hidden with menus that customer's would not know to explore, thus preventing a successful search and positive experience. The quantitative results show that the website aesthetics have a significant effect on the customer experience, the length of time users spend on the website, the need to seek customer support and the success of the search as part of the variable website characteristics.

10.4 Level of Control

The literature outlined that the level of control a customer has on a website is a variable capable of influencing the customer's experience during an online shopping activity (Song and Zinkhin, 2008). The findings in chapter 9 from the online experiment found that the level of control a website provides a customer has an influence on the customer's experience during a utilitarian search for business advisory information. The structural model found that the level of control a website offers makes up a part of the underlying latent construct, website characteristics. Recently, previous studies have highlighted control as a variable capable of influencing the online customer experience, however, no previous study has outlined a combination of variables including the level of control in influencing the customer experience.

The in-depth interviews illustrated that the level of website control encompasses the level of customisation the website offers customers in terms of the ability to personalise the website towards the user's own needs, i.e. the ability to filter content, select particular content and options. In addition to this, the findings illustrated that the level of website control refers to the ability to easily move from one part of the website to another (also known as 'ease of use' within the body of literature). Rose et al (2012), Brodie et al (2011) Hun-Lee and Crange (2011) suggested that being able to connect and share information and knowledge with others is a further third part of the level of control on a website, however, this study did not find the concept on being able to connect and share knowledge as a key part of control. The online experiment found that being able to customise the experience and the ability to move from one part of the site to another as key aspects of the level of control. The in-depth interviews highlighted that businesses do not want to share knowledge with other businesses, particularly in the online environment and on online social networking sites, as this has the potential to impact on their competitive advantage. Whereas previous studies with regard to the online customer experience have assessed control in terms of consumers' use of online retail websites (see: Rose et al, 2012).

The measure of level of control in the quantitative phase of the study reflected both parts of control, customisation and ease of use. The quantitative analysis found control as a variable that has a significant effect on the customers' experience and the length of time a customer spends on the website. A website that offers customers a low level of control over the website will result in customers requiring to spend longer to complete their task which in turn has a negative effect on the customer's experience. Whereas, the structural model shows that if customers are provided with a level of control on the website they will be more likely to perceive to spend less time searching and subsequently have a positive customer experience. Overall, this study found that the level of control on the site along with website aesthetics makes up part of the underlying variable of website characteristics. The quantitative results show that the level of control customers are provided has a significant effect on the customer experience, the perceived length of time users spend on the website, the need to seek customer support and the success of the search as part of the variable website characteristics.

10.5 Information Quality

Previous studies highlighted the importance of the quality of the information provided on a website (Rieh, 2002). This study further extends the importance of the quality of the information on a website in relation to the customer's experience. The findings from chapter 8 show that the quality of the information on the website involving how accurate, how current, how complete and comprehensive as well as how easily understandable the information is, has an influence on the customer's experience. Previous studies have neglected to explore the influence of information quality in relation to the customer experience. In addition, information quality can also be seen as part of the newly identified underlying latent variable of website characteristics. The findings showed statistical significance in including the quality of the information on the website within website characteristics along with website aesthetics and level of control.

The results from the in-depth interviews support the findings from the online experiment. Respondents made the point that important business decisions may be made from the information that they have gathered from the business advisory website, thus the information needs to be of high quality. In line with previous studies (Guo et al, 2012; Flanagin and Metzger, 2000) the in-depth interviews found that the quality of information is often associated with accuracy, relevance, how current and the usefulness of information provided on a website. The in-depth interviews outlined the difficulty in assessing the quality of the information due to a lack of expertise, thus many respondents use heuristics in order to evaluate the quality of the information. In spite of this, where possible businesses will try to assess the factual accuracy of the information provided. Respondent R9 suggested:

The actual accuracy and quality of the information provided on the site is extremely important. I want to see supported facts and try and back that up, either by talking to the organisation or from other sources. (Respondent R9).

The quantitative findings from the online experiment outlined information quality as an important variable that influences the online customer experience. This research has extended beyond Ludin and Cheng's (2014) research that suggests that websites with

informative and valuable information help to reduce the amount of time searching for information or completing a task. Time was a variable that emerged from the in-depth interviews and highlighted in the quantitative analysis as a variable having a significant effect on the customer experience, while playing a mediating role between information quality as a part of website characteristics and the customer experience. Thus, the findings show that the quality of the information on the website as part of website characteristics has an effect on customer experience, the length of time users spend on the website, the need to seek customer support and the success of the search as part of the variable website characteristics.

10.6 Website Credibility

Website credibility is often considered as being somewhat intertwined with information quality (Flanagin and Metzeger, 2000). The online experiment found that website credibility has an influence on the customer's experience influencing customer emotions and the level of customer satisfaction. Literature to date has not explored the concept of website credibility in relation to the customer experience. The in-depth interviews outlined that customers conduct credibility evaluations that may result in customers abandoning their search and in turn have an effect on the customer experience.

The structural model in chapter 9 shows that website credibility also makes up the newly identified underlying latent variable of website characteristics. This is somewhat in line with Flanagin and Metzeger (2000) who suggest that information quality and website credibility are intertwined as well as respondents highlighting the website aesthetics as a cue for credibility evaluation. However, this research takes this one stage further and finds website aesthetics and control also combine with information quality and website credibility to influence the customer's experience.

The in-depth interviews found that customers are influenced by the credibility of the website as again, important business decisions are made from the services provided on the website. As a method discussed by Rieh (2002) and Lucassen and Schraagen (2011), businesses use particular methods to evaluate the credibility of a website, looking at key surface characteristics of the site. The in-depth interviews found that

customers conduct credibility evaluations of the website during the exploration stage of information search and thus influencing the customer experience. The findings illustrated that customers look for an official stamp of approval or recommendation from a credible partner while assessing the credibility of the website. In addition, customers evaluate other surface characteristics during their assessment of the credibility of the website, including being able to see contact information for the website and assessing if the website has been professionally designed. Each of these act as cues for evaluating the credibility of the website.

The literature discussed two forms of website credibility assessment, surface characteristics credibility and content credibility, the findings from the online experiment illustrate that business advisory websites should focus on the surface characteristics of the site in order to convey website credibility. As previously mentioned website credibility and information quality can be somewhat overlapping in features, content credibility is more appropriately labelled 'quality of information' as this is an assessment of the factual accuracy of the information gathered. Thus, this research distinguishes information quality from website credibility, while acknowledging the interlinking features of both variables. The quantitative results show that website credibility has a significant effect on the customer experience, the length of time users spend on the website, the need to seek customer support and the success of the search as part of the variable website characteristics. The less credible the website appears to be; the longer customers require to search trying to assess the credibility of the site. Additionally, the more credible the website appears customers will be more likely to have a positive experience, and have a successful search.

10.7 Flow

In line with findings from previous studies (Hoffman and Novak, 2009), the findings from the online experiment illustrated that flow has a significant effect on the customer experience. However, in addition to previous research, this research has found that flow has an effect on the length of time a customer spends on the website. If users rate the level of flow as being low, where they are unable to fully concentrate on and become engrossed in their search, customers feel that they are spending too much time searching for the information. Whereas, if the website allows customers to become focussed and

engrossed in the task, customers feel as though they are not wasting time searching on the website, however customers still remain conscious and sensitive of the time they spend searching. This finding is somewhat in contrast to previous studies examining flow, which highlight time distortion and customers becoming unaware of time as a part of flow, however previous studies have explored flow in the hedonic context of shopping and gaming, where customers go to browse, play and spend time. This study finds in a goal directed utilitarian context, customers are aware and conscious of the length of time spent on the website.

There is an abundance of literature in reference to the concept of flow, which was first coined by Hoffman and Novak (1996) in the context of browsing online. The literature in chapter 4 highlighted that originally Csikszentmihalyi (1997) described flow as 'a situation in which an individual has completely focused motivation and where the individual is fully immersed, absorbed and engaged in the task at hand, with a loss of self-consciousness and experiencing enjoyment in the process'. However, this research regards flow as previously outlined in table 10.1 as '*the complete focus and concentration on a task, while being absorbed and engrossed in the activity'.* As highlighted in chapter 7, enjoyment is a variable that is unimportant to customers searching in a utilitarian context for business advisory information. Thus, in contrast to many other studies, this research does not regard enjoyment as a part of flow. Section 8.3.2 of Chapter 8 outlined the various measures of flow. It can be seen from table 8.1 in chapter 8 that there is no universally agreed measure of flow as many research studies have measured flow in a number of different forms. Unidimentional and multidimensional measures of flow have been extensively used. However, a common theme was identified with regard to the measure of flow. A measure of concentration and focus was consistent within the numerous measurements proposed in previous studies. From the analysis of the in-depth interviews and the findings of previous studies, it was appropriate that this study used a measure of flow with an emphasis on concentration, focus, absorption and being engrossed in the task. The findings illustrated that being able to focus without distraction as an important provision of a business advisory website, linking to the length of time customers are willing to spend on the website. Allowing customers to become absorbed in the information provided on the website, while allowing customers to become fully engrossed and focussed on

the task is important in order to evoke positive customer emotions and satisfaction with the experience.

10.8 Website Characteristics

As previously discussed, Lu et al (2011) highlight that a number of challenges are posed in the online environment with regard to providing customers with an exceptional experience due to the characteristics of the online environment. This research has found that website aesthetics, control, website credibility, information quality and flow all have an effect on the customer experience during the initial journey to finding information or services. However, in addition this study finds that an underlying variable of 'website characteristics' exists which encompasses the aforementioned website aesthetics, control, information quality, website credibility and flow. The literature has suggested that numerous variables are capable of influencing the customer experience, however this study extends the current body of literature by introducing a new underlying latent variable influencing customer's emotions and level of satisfaction with their experience during a utilitarian search for information.

Previous studies have explored the variables of website aesthetics, control and flow influencing the customer experience predominantly within a hedonic context of online shopping, however this research extends the literature by introducing website credibility and information quality while combining each of the variables into an underlying latent construct, identifying that each variable should be given equal attention. A review of the literature outlined that the variables of website aesthetics, control, information quality, website credibility and flow as having overlapping features. Through statistical techniques (CFA) the online experiment discovered that the variables can be considered together as one. Supporting this, the discussions with respondents of the in-depth interviews further confirmed this view, with respondents discussing many of the variables in relation to each other. Chapter 7 outlines discussions on website aesthetics in relation to how easy the website is to use, further discussions occurred on website credibility in relation to information quality and the design of the website. Flow (the ability to concentrate and focus on the task) was discussed in relation to the design and level of control over the website. Thus, the theoretical and empirical evidence provided from the literature and the in-depth

interviews offered significant rational to test a higher order variable combining website aesthetics, control, information quality, website credibility and flow.

The quantitative results outlined in chapter 8 showed strong regression weights between each of the variables on the underlying latent construct 'website characteristics' with each variable having statistical significance at p = .000 level. Meaning that each of the variables combine together to make a new variable 'website characteristics'. Thus, this study examined the effect of each of these variables as one on the perceived length of time spent on the website, the need to seek customer support, the effect on the success of the search and ultimately the customer's emotions and level of satisfaction with the experience. Therefore, the quantitative results further extend our theoretical understanding of the variables influencing the online customer experience and confirm evidence provided from previous studies and the in-depth interviews. While each of these variables can influence the customer experience on their own individually, this study finds that in order to advance our understanding theoretically on the online customer experience and to provide practical implications, each of the aforementioned variables should be considered together with an equal level of importance.

10.8.1 Website Characteristic's effect

The quantitative findings illustrate that the combined latent variable of website characteristics has a statistically significant direct effect on the customer's experience influencing emotions and the customer's level of satisfaction. This extends the current body of research on the online customer experience, where previous studies have individually assessed some of the relationships of the aforementioned variables. The findings from the quantitative research provide online business advisory providers insight into the combination of variables that together influence a customer's experience while searching on a business advisory website rather than pointing towards the importance of one variable over another.

This study has found that website characteristics (the combination of website aesthetics, control, website credibility, information quality and flow) has a statistically significant effect on the perceived length of time spent searching on a business advisory website. Therefore, if customers believe the website characteristics are good they will perceive to spend less time searching for the information or services they require from the

website, thus resulting in a positive experience educing positive emotions and satisfaction with the experience. Conversely, should customers perceive the website characteristics as being poor this would result in the customer perceiving the need to spend more time searching and thus resulting in a negative experience educing negative emotions and dissatisfaction with the experience.

The findings in chapter 9 illustrate that the website characteristics have a direct effect on the need to seek customer support through synchronised social interaction. The results show that positive website characteristics (including website aesthetics, control, website credibility, information quality and flow) reduce the need for online customer support. However, should customers perceive website characteristics as being poor, online customer support is required. Previous research has not detailed the requirement for online customer support during a customer's online experience. This research finds that customers require support when the website aesthetics are poor, the level of control customers are provided is inadequate, the quality of the information on the website is poor and when the credibility of the site appears poor as well as the site not allowing the customer to concentrate fully and become engrossed in their task.

It can also be seen that the website characteristics have a statistically significant effect on the success of the search. The findings in the previous chapter show that when website characteristics are rated well; this has a positive effect on the customer having a successful search. The findings of the in-depth interviews and the online experiment further found that when the website characteristics are regarded as being poor; customers will abandon their search and result in having an unsuccessful search. As a result, these findings highlight the equal importance of the five aforementioned website characteristics in directly influencing the customer experience, the length of time spent on the website, the need to seek customer support and the success of the customer's search.

10.9 The mediating variable of Perceived Time Spent on the Website

Previous studies have not explored the role of the perceived length of time spent on the website affecting the customer's experience. Limited research from Ludin and Cheng (2014) and Luo et al (2010) acknowledge that the length of time spent searching online

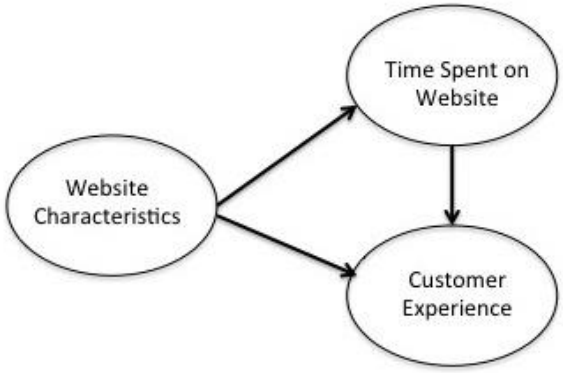
may be influenced by the quality of the information provided. Conversely, this study provides a full examination of 'the perceived time spent on the website' in relation to the customer's experience. While time is often considered an economic factor (Payne et al, 1996), it appears to have an important impact on the holistic customer experience from the results obtained in both the online experiment and the in-depth interviews.

The perceived length of time spent on the website initially emerged from the depth interviews as respondents discussed searching for business advisory services as a utilitarian, goal directed task. Respondents highlighted that due to the task being a 'work' related activity under somewhat time-constrained conditions of the normal working day, then the task can be considered as being goal-directed. Respondents suggested that they would be highly unlikely to go to a business advisory website just to browse the information and services provided. Respondent R1 commented:

'For a work related activity I search online with a goal, I don't search just to browse this would be a waste of my time' (Respondent R1).

The findings in chapter 8 from the quantitative results show that as well as the direct influence website characteristics have on the customer experience, the perceived length of time spent on the website also plays a mediating role between website characteristics and the customer experience, figure 10.1 outlines the mediating role of the perceived length of time spent on the website between website characteristics and the customer experience.

Figure 10.1 Time Spent on website mediating effect



While the findings in chapter 9 show a statistically significant direct relationship between website characteristics and the customer experience, a statistically significant ($p = .000$) mediating effect was also found with the perceived length of time spent on the website between web characteristics and the customer experience. The findings outline that while the website characteristics can be perceived positively by customers, should customers be required to spend longer than perceived necessary searching on the website, the customer will in turn have a negative experience. In addition, the results highlight that if the website characteristics are poor the customer will be required to spend more time searching for the information or services the customer requires. In turn, the longer customers perceive to spend searching on the website results in a negative customer experience, resulting in negative emotions and dissatisfaction. The introduction of 'time spent on the website' adds an important variable to the online customer experience and information search domain that has been overlooked in marketing and information science literature to date.

The in-depth interviews analysed in chapter 7 further outline the importance of the length of time spent on the website and support the findings of the online experiment. Discussions with regard to website design, ease of use, the ability to concentrate, emotions, satisfaction, the quality of the information on the website and the credibility of the website was discussed in relation to the length of time spent on the site. Respondents first of all commented that it was important to find information quickly without wasting time. However, respondents made further comments:

'If I can't go on to a website and find what I need within the first couple of minutes, I simply leave the site.' (Respondent R8).

Respondent R7 also commented that if the design of the site is not good, it is likely the task will take longer:

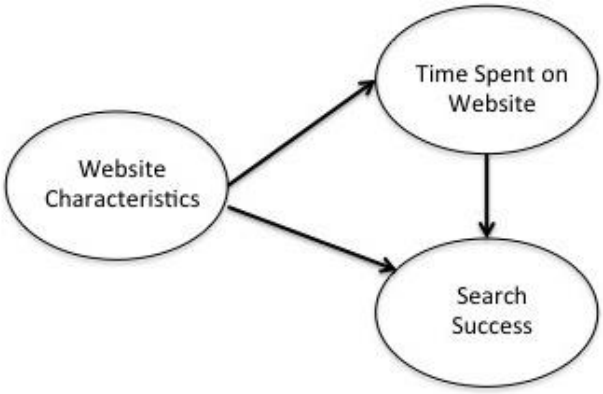
'If it (The Website) *doesn't look good you are not going to hang around on it or take the time to look through the information. It is likely to take longer and in business you're time constrained.' (Respondent R7).*

Respondent R14 also commented in relation to having control over the website:

Time is a big factor because you can lose hours online. So, it's getting in and out quickly, so the use of something that allows you to narrow down the options, you know, if it's funding, you know, what kind of business, what is it that you're looking for? So, if you have that facility to put in the advanced search functionality, you feel you are getting what you want quickly. (Respondent R14).

Each of these comments are statistically supported in the structural model which highlights that customers who need to spend longer than percieved necessary on the website will result in having an unsuccessful search and in turn result in customers abandoning their search. Thus we can also see the mediating effect of the perceived length of time spent on the website between the website characteristics and the success of the search as shown in figure 10.2. Therefore, should customers perceive the website characteristics positively but are required to spend longer than perceived necessary customers will have an unsuccessful search and abandon their task on the website.

Figure 10.2 Mediating Website Characteristics and Search Success



In addition to the perceived length of time spent on the website having a mediating effect between the website characteristics and the customer experience, as well as the website characteristics and the success of the search, the length of time spent on the website also has a mediating effect between website characteristics and the need to seek customer support online. The findings illustrated that the longer customers perceive to spend on the website searching for information or services, the need to seek customer support increases. While good website characteristics results in customers not requiring

online customer support via synchronised social interaction, this can be mediated by the perceived length of time spent on the website, therefore while good website characteristics can reduce the need for customer support, the longer customers require to spend on the website results in customers requiring customer support.

Due to the emergence of this new variable, as discussed in chapter 8, this study developed a new five point likert scale to measure 'the perceived time spent on the website' with four measurement items derived from the in-depth interviews. Following a further review of the literature and due to the fact 'the perceived time spent on the website' is a new variable to be introduced to marketing literature; no relevant scale could be obtained to measure the variable. In line with theory development researchers (Kerlinger's, 1979; Labovitz and Hagedorn, 1971), researchers ought to answer questions of 'what', 'how', 'why', 'who', 'where' and 'when' thus, if rational for a new scale to be introduced to the literature exists in order to help answer some of these questions, then researchers should take the steps to do so. In line with Churchill's (1979) scale development procedures, the scale was fully validated by first defining the variable, followed by a pool of scale items, these items where tested within the pilot study removing unnecessary items. Four items were then tested using Cronbach's Alpha coefficient, followed by an exploratory factor analysis and a confirmatory factor analysis. As a result, this study has made a further theoretical contribution through adding a new validated scale to the literature measuring the length of time spent on the website.

10.10 Customer Support

An objective of this study is to examine the role of customer support via synchronised social interaction in relation to the customer's online experience. With advancements in technology the literature suggests that customers can be supported online through socially interacting with a service representative (Truel and Connelly, 2013). The in-depth interviews outlined that businesses are not willing to seek or offer customer support to or from other businesses online. Respondents outlined that sharing knowledge with other businesses operating within the same industry will likely have an impact on their competitive advantage and become counterproductive. However, online customer support with online service staff was seen as highly beneficial. This study

found multiple significant relationships with regard to the customer experience and online customer support. The study's findings in Chapter 9 outlined that should customers feel they are spending more time on the website than they perceive necessary they will require online customer support through one to one interaction with a company representative. The findings also showed that if customers perceive the website characteristics (including website aesthetics, level of control, information quality, website credibility and the level of flow) as being effective then customers will not require online customer support. However, as previously discussed this relationship is mediated by the perceived length of time spent on the website. Therefore, while the website characteristics may be perceived positively, the length of time spent searching on the site can result in customers requiring to seek customer support regardless of the positively perceived website characteristics. Conversely, where customers perceive the website characteristics as being poor, customers will require online customer support with a company representative. In addition, the online experiment identified that customers who have an unsuccessful search require customer support in order to help them find the information or services they require. Respondents of the online experiment and in-depth interviews suggested that searching for business advisory information is not a day-to-day task and therefore it can be difficult to find the information required and thus support is often needed. Finally, the structural model illustrates that customers who need to seek customer support do so as they are having a poor experience, with negative emotions of frustration, anxiety and disappointment as well as being dissatisfied with the experience. The findings illustrated that when customers do not have a level of control over the site, being able to move through the website with ease and customise the website to their own individual needs then they are likely to require customer support in order to find the services they require. Respondents also elaborated on the aesthetics of the website as a fundamental reason for requiring customer support, where a poor design, look and feel of the website gives off the impression that the website may be difficult to use as well as a negative judgement on the credibility of the website. The comments from the respondents further support the rational of the higher order variable of website characteristics and therefore the reason why each of the variables combining to create 'website characteristics' should be considered together with equal importance. The literature to date has not explored the need for online customer support in the form of synchronised social interaction in relation to the online customer experience. This study specifically

establishes this requirement in the context of a utilitarian search for business advisory information and services.

Further evidence is offered with regard to the requirement of customer support from the use of the 'help cards' issued to participants during the website experiments. As detailed in chapter 9, participants of the online experiment were given help cards that could be used during any task across the three website experiments. Once a participant used a help card they could move on to the next task. However, the help card provided the researcher with practical (actual) evidence of the requirement of customer support via synchronised social interaction. The results found that of the 160 respondents, 36% of the 1,176 attempted tasks required customer support in order to complete the task. The experiment captured customers' rational for seeking customer support. Table 10.2 below outlines the most popular responses.

Table 10.2 Factors Leading to Customer Support

Percentage (%) of Respondents	**Factor Leading to Customer Support**	**Variable in the Study**
71% of Respondents	The Website was not easy to use (couldn't find the required information)	Control
66% of Respondents	Respondents did not feel that they could filter information relevant to the search in an easy manner.	Control
63% of Respondents	Respondents moved back and forth on the website. The navigation of the website proved troublesome and information was not where it would be expected.	Website Aesthetics/Control

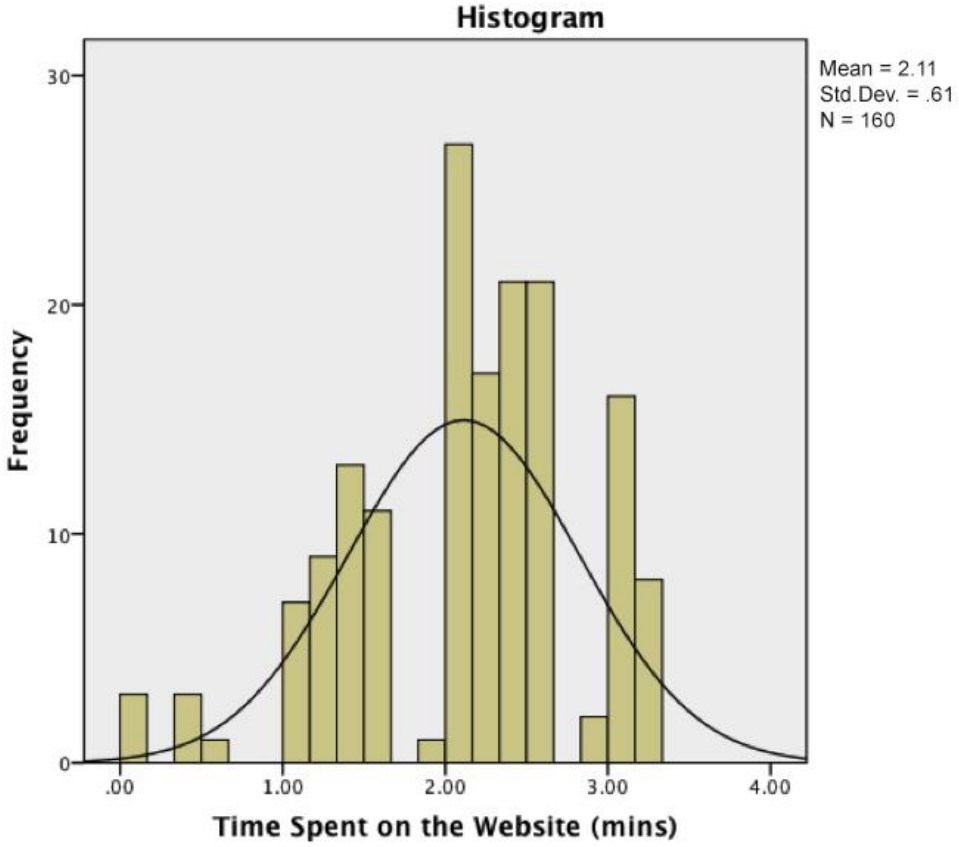
61% of Respondents	Spending too long searching on the website	Time Spent on the Website
58% of Respondents	Frustration and annoyed with the website	Emotions
52% of Respondents	Unable to identify if the information is correct and accurate	Information Quality

Table 10.2 illustrates customer's comments from the online experiment with regard to the need for customer support via social interaction. The findings show that a poor level of control (involving how easy the website is to use and the ability to customise the experience) is the dominant factor leading to seeking online customer support. The findings also show overlapping with the level of control, the website aesthetics have an influence on a customer's need to seek online customer support. The length of time spent on the website (more time than the customer perceived as being necessary) was another variable that respondents highlighted as a key variable influencing their decision to seek online customer support. Amongst participants' comments, emotions of frustration were apparent with many participants becoming annoyed with not being able to find the information they were looking for and thus turning to seeking online support. Finally, table 10.2 highlights information quality as another reason for participants seeking customer support, with participants commenting on the difficulty to identify if the information was correct as well as being accurate. These findings provide further insight into the requirement for online customer support with a company representative.

In addition, the methodological approach provided the researcher with the capability of recording the time that help cards were used. As outlined in chapter 9, the average time customers used help cards was 2 minutes and 11 seconds. Offering customers, the option of support at this point may prove fruitful and offer customers a proactive service in the aim of enhancing the customer's experience. The results indicate that customers seeking online customer support are having a poor experience with negative emotions of frustration, disappointment and confusion, as well as being dissatisfied with the

experience. Offering customers support through synchronised social interaction with a company representative may provide the customer with the services they require. Figure 10.3 below outlines the point in which participants used help cards within the experiment.

Figure 10.3 Time point help cards were used



As previously discussed, the mean average time participants used the help cards across the three business advisory websites was at 2 minutes and 11 seconds. The graph illustrates a standard deviation of .61, therefore this suggest that the optimal range in offering online support is between 1 minute 10 seconds and 3 minutes 12 seconds.

While previous studies have not examined the requirement of customer support in relation to the customer experience, the literature suggests that customers can be supported online through socially interacting with a representative (Truel and Connelly, 2013). Kuhlthau's (1994) early research on searching for information outlined that individuals often require support through 'intervention'. Kuhlthau's (1994) work on the

zone of intervention outlines the importance of social interaction with others in order to move through the search process. Robson and Robinson (2015) highlight a role for communication between a searcher and information provider. The findings of this research highlight the need for support as illustrated by Kuhlthau (1994) in the offline environment. Engeldinger (1988) suggests that leaving individuals after guiding them to a mass of information is doing a disservice to individuals. Therefore, this research has made a contribution to knowledge by finding that customers require online customer support through social interaction due to poor website characteristics, spending longer than perceived necessary on the website and due to having an unsuccessful search.

The in-depth interviews outlined the importance of being able to communicate with a representative on a business advisory website. A live chat style function as discussed in the literature by Etemad-Sajadi (2014) and Chattaraman et al (2012) was outlined in the in-depth interviews in chapter 8 as a tool that is useful in helping customers overcome difficulties in search and address pain posts of frustration, uncertainty, website credibility, poor quality information and difficult to use sites. Truel and Connelly (2013) outlined that live chat services allow a website user to seek 'service related information' from a real human representative who provide answers through the synchronous media. The in-depth interviews outlined the usefulness of a live chat feature. Respondent R1 in particular commented:

*'A business advisory site such as (*Name Removed*) is all about providing advice and support. Providing a live chat function offers even more support! So, as 'support' is what the service is all about, I see something like a live chat as a function that is vitally important as you are taking that support digitally and moving it into the 21st Century, this for me beats waiting in a telephone line for someone to answer, you can work away while 'chatting' (Respondent R1).*

The findings illustrated the usefulness of a live chat function, which offers businesses privacy while communicating with a company representative online as well as the media being synchronised. Online communities and social networking websites such as Facebook, Twitter and LinkedIn were outlined in the literature as platforms that offer organisations the ability to provide online customer support (Greenberg, 2010).

However, the findings of this study outlined that customers would not seek advice on such websites due to the openness of the discussion. Businesses outlined their concerns with communicating in such channels that offered their business little privacy. Businesses commented that they would not want their interactions with an online business advisory provider to be documented and seen by other competing businesses and customers, thus private online communication in the form of live chat functions and online help desks that offer synchronised social interaction were outlined as the most appropriate tools to offer online customer support. While respondents outlined the inappropriateness of social networking sites used as customer support functions, their use in providing businesses with up to date information and communication messages on new business developments and business advisory availability was supported.

Thus, the findings from the depth interviews further support the findings of the online experiment, illustrating the role of online customer support.

10.11 Search Success

Previous research studies have identified that negative emotions play a vital role in customers either continuing or abandoning their search (Flavian-Blanco et al, 2011 and Chowdhury et al, 2011). The information obtained may conflict with the customer's previously held opinions, which can result in the search being abandoned due to levels of frustration, confusion and uncertainty as identified in this study. The findings from the online experiment showed that 12% of 1,176 searches were abandoned without using a help card. Numerous respondents commented as noted in the researcher's logbook that they would have abandoned their search had they not had the option to use a 'help card' symbolising that they would have liked synchronised social interaction as discussed in section 10.10, thus in total 48% of 1,176 tasks were uncompleted. The findings in chapter 9 emphasises that the website characteristics have a significant effect on the success of the customer's search. Website characteristics that are perceived as being good by the customer have a statistically significant relationship with a successful search, meaning that good website characteristics will result in a successful customer search. However, the findings as previously discussed highlight that the website characteristics are mediated by the length of time a customer perceives to spend on the website. Should a customer believe that they are required to spend

longer than they perceive as necessary, despite good website characteristics the customer is likely to have an unsuccessful search resulting in the search being abandoned and a negative customer experience. The structural model shows that should customers perceive they are required to spend longer on the website than necessary the success of the search will fall by -.53 having a statistically significant effect. The findings further elaborate that the success of the search has an effect on the customer's experience. A strong relationship between the search success and the customer experience was found, where if a customer was successful in their search the customer experience would increase by .54 having a significant effect increasing positive emotions and the level of satisfaction with the experience. Therefore, it is important to acknowledge the variables of website characteristics encompassing website aesthetics, level of control, information quality, website credibility and flow as well as time spent on the website influencing the success of the search in order for customers to have a positive experience educing positive emotions and satisfaction with the experience. However, despite positively perceived website characteristics, if the customer is unable to successfully complete their search, they will have a negative experience.

In addition, the search success has a relationship with the need to seek online customer support through one to one social interaction with a company representative. The findings indicate that customers who have an unsuccessful search will seek social interaction in the form of customer support. Participants within the online experiment and the in-depth interviews elaborated that they would expect an online help function to help them to find the information or services they are looking for through guiding them through the navigation of the website or by providing a link to the appropriate page, which in turn provides customers with a successful search. Thus, we can see that while a customer may have an initial unsuccessful search, online customer support may provide the service recovery that customers expect and thus provide customers with a positive customer experience.

As explained in chapter 9, a customer's search success was calculated by the recorded time it took participants to complete tasks. Thus, in order to measure the success of the search, the average time for a successful search was worked out for each task (x3) in each experiment (x3). Using the recorded time for completing a successful search allowed the researcher to measure how successful a customer was in searching for their

tasks rather than the customer's perception of success. Previous studies may have found it difficult to measure success without the use of an online experiment providing participants with the experience of searching for business advisory services and offering the researcher scope to measure success. The methodology used in the study allowed the researcher to measure the 'actual' level of success, rather than a participant's perception of success.

Information Science research (Kuhlthau, 2004; Wilson, 1999; Ellis's, 1993) has established the cognitive and affective holistic processes leading to a successful search, however, external factors that could influence a customer during these stages and subsequently the success of the search have been somewhat overlooked in previous studies and remain an important issue for marketers and information scientists to understand. The focus of most marketing research has been on the end purchase intention; however, in the area of online business advisory provision, practitioners need to understand what variables influence the success of the search.

10.12 Demographic Differences

Furthermore, chapter 9 conducted multivariate analysis of variance tests (MANOVA) to identify if differences existed between groups. The results highlighted that there was no significant difference between males and females and between age groups (18-25, 26-34, 35-42, 43-50, 50+). Previous studies have outlined that demographic differences can exists when searching online (Hyldegard, 2009; Chatteraman et al, 2012). Chatteraman et al (2012) found that older users are more likely to use online help functions such as live chat; however, while achieving a broad age range, this study does not find any difference between age groups with regard to seeking online customer support or for any other variables in the study.

Additional MANOVA tests outlined that there were no differences between the frequency of participants using social networking sites such as Facebook, Twitter, LinkedIn and Google+ on any of the variables within the study. Numerous researchers have outlined social network users as being more Internet savvy and having higher expectations when operating online and expect to be able to connect and share with others online (Greenberg, 2010; O'Reilly's, 2007), however despite the differences

between social network users and non-social network users within the literature, the results from the MANOVA test in chapter 9 illustrate that no differences exist between how often customers use social networking sites on any of the variables in the study.

Further to this, chapter 8 showed that there were no differences found on how often participants used the Internet on any of the variables in the study. Previous studies have outlined that the level of Internet experience that a customer has, will have an effect on the outcome of a customer's search experience (Al Makari and Sanderson, 2011; Jenkins et al, 2003; Sutcliffe et al, 2000). However, again this study found that there was no difference on the outcome depending on how often customers use the Internet (Internet experience). This may be explained from the depth interviews that while customers may have Internet experience, their level of experience using a business advisory website may well be low, thus reducing all respondents' actual experience to a similar level.

Despite this, chapter 9 highlighted through a final MANOVA test that the level of confidence an individual has in using the Internet (ranging from not confident, somewhat confident, confident, very confident) is significantly different on the variables within the study ($p = .000$). Lee et al (2011), Ding et al (2009) and Hoffman and Novak (2009) refer to the term 'Level of Internet Skills' as a similar concept to the level of confidence in using the Internet. These studies suggested that a customer's level of Internet skills have an effect on the customer's experience. This study found as illustrated in chapter 9 that the customer's level of Internet confidence has an effect on the length of time customers are willing to spend on the website. The more confidence the customer has in using the Internet will result in the confident searcher being unwilling to spend longer than they perceive necessary searching for information and services. Thus, confident searchers are even more time sensitive than less confident searchers.

Further results showed that the level of confidence a customer has in using the Internet has a relationship with the success of the search. Interestingly, the results find that those who are confident in searching are more likely to abandon their search on a business advisory website than less confident searchers. Participants of the in-depth interviews and the online experiment elaborated that using a business advisory website was not a

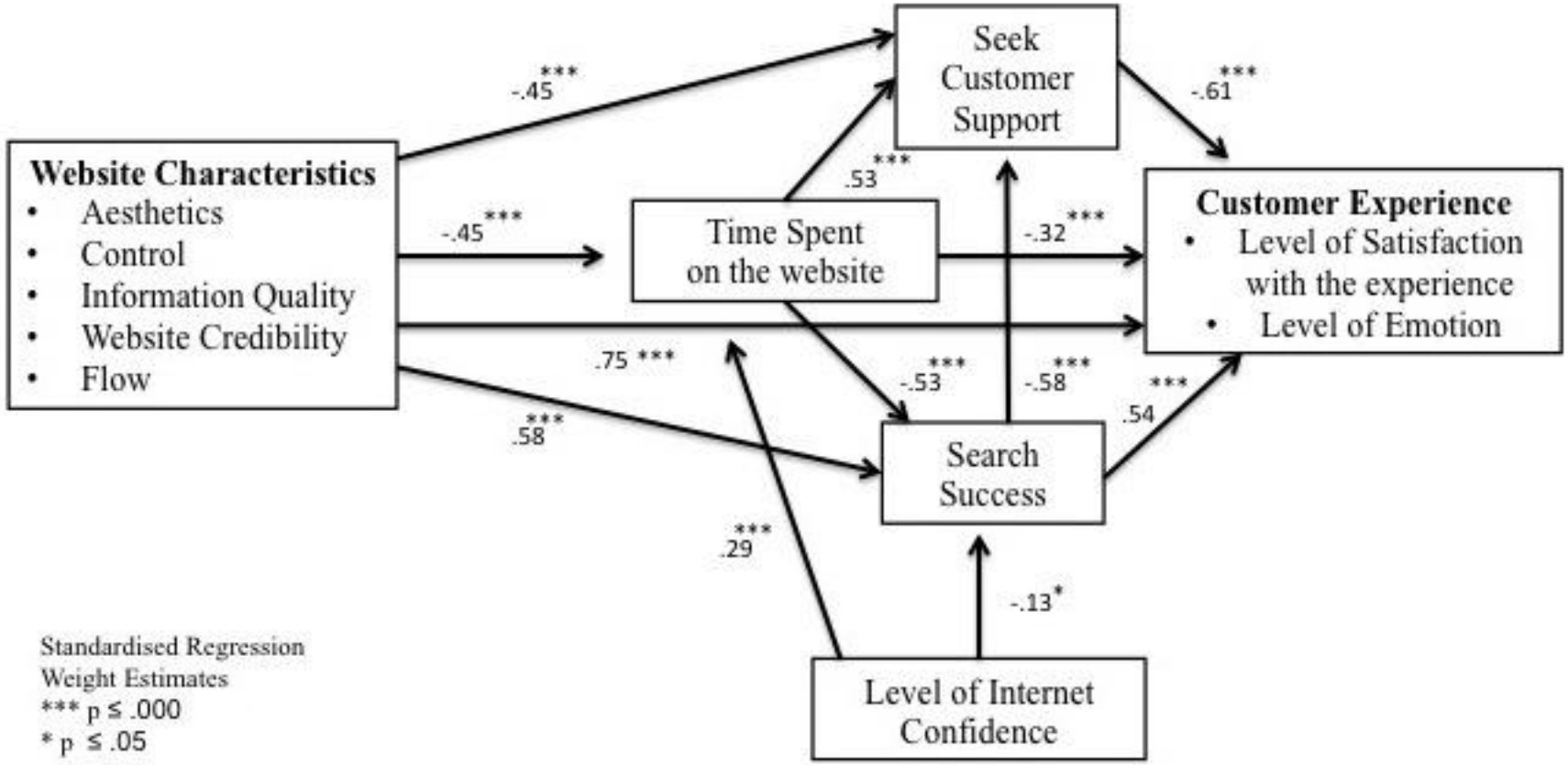
familiar activity, thus while those participants may be confident in using the Internet in general, the confidence in using a business advisory website may actually be low in comparison and therefore result in customers having an unsuccessful search. However, based on the psychological reactance theory (Brehm, 1966) where past experiences create expectations, confident searchers appear to become frustrated and disappointed in the website than those less confident searchers, thus confident searchers are quicker to abandon their search and seek customer support than those less confident searchers.

10.13 A validated online customer experience model

This research has produced a validated online customer experience model. The results from chapter 9 and the discussions outlined in the previous sections within this chapter provide an outline of the temporal order of variables affecting the online customer experience. This order is in line with the proposed temporal order that was outlined in the conceptual development chapter (Chapter 5).

However, chapter 7 provided the study with parsimony and comprehensiveness by highlighting those variables that are important to the study and thus deleting those that added no value. As a result, a number of variables (enjoyment, challenge, web skills, connectedness, telepresence and engagement) have been removed from the initial temporal order outlined in chapter 5. While previous studies (Mollen and Wilson, 2010; Lee et al, 2011; Faiola et al, 2013; Hoffman and Novak, 2009) outlined each of the variables as having an influence on the customer experience this study found that each variable did not provide sufficient support to be tested in the quantitative phase of the study. The results from the online experiment along with the results of the in-depth interviews and the literature reviewed bring the research to the online customer experience model shown in figure 10.4.

Figure 10.4 Online Customer Experience Model



As previously outlined in chapter 9, four modifications were made to the model, which were made with both statistical and theoretical support. As discussed in the previous sections, starting from the far left, the model shows website aesthetics, control, information quality, website credibility and flow making up the latent variable website characteristics. The mediating role of the length of time spent on the website can be seen as discussed in section 10.4 of this chapter, mediating the relationship between website characteristics and the customer experience, the need to seek customer support, as well as the success of the search. However, a direct relationship between website characteristics and the online customer experience can also be seen in the model, with a regression weight of .75. In addition to web characteristics influencing the time spent on the website and the customer experience, another important finding from this research is the relationships between website characteristics and the need to seek customer support through synchronised social interaction and the relationship between the website characteristics and the success of the search. Both of these relationships outlined have not been tested in any other previous studies. These relationships highlight the combined importance of the website characteristics including, website aesthetics, level of control, website credibility, information quality and flow and their subsequent influence on the need to seek online customer support, the length of time spent on the website, the success of the customer's search and the overall customer experience.

The model in figure 10.4 also shows that customers seek customer support when they do not have a successful search, should a customer have a successful search there is no need for online social interaction in the form of customer support. In addition, customers who have a successful search will have a positive customer experience resulting in positive emotions and satisfaction, in contrast those customers who do not have a successful search will have a negative customer experience and either seek online customer support or abandon their search. The introduction of online customer support through social interaction with a company representative has provided insightful findings. Those customers who seek online customer support do so due to having a poor customer experience as shown in the theoretical model in figure 10.4, caused by poor website characteristics, the perception of spending too long on the website and having an unsuccessful search. A customer's perception of spending longer

than perceived necessary can be seen as a key driver for the need to seek online customer support.

Additionally, the only significant personal characteristic that was found from the MANOVA tests was the 'level of Internet confidence'. Therefore, this moderating variable was included in the model and found significant relationships with the perceived length of time spent on the website and the success of the search, illustrating that confident searchers are more time sensitive than less confident searchers and are therefore unwilling to spend more time than is perceived as being necessary searching for information or services. In addition, confident searchers are more likely to abandon their search than less confident searchers.

10.14 The Customer Journey

The findings in chapter 7 and 9 illustrated the sequence of variables influencing the customer during their online search for information and services. The website aesthetics were outlined as the first impression a customer obtains from the website and the first touch point of the customer's service encounter at task initiation. The in-depth interviews illustrated that after the initial influence of the website aesthetics during a customer's journey to obtain information and services, the level of control offered by the website involving the ability to easily move through the website and customise the experience to content relevant to the customer can be seen as the second variable that influences the customers experience in the exploration stage of their website journey. Following this, respondents outlined the importance of being able to fully concentrate and become engrossed in the activity entering the state of 'flow' during the exploration stage. Respondents therefore illustrated that if the website aesthetics are poor and the website is not easy to use or customisable towards the user's needs, customers will not be able to become engrossed and fully concentrate on their search. Thus, at this point customers may require online customer support in the form of one to one communication with a company representative.

Further to this, the next stage for customers is assessing the credibility of the website and the quality of the information on the website in the evaluation stage of the search. As previously discussed within this chapter, customers conduct credibility evaluations

through assessing the surface characteristics of the website as well assessing the website aesthetics after a prolonged exposure to the design, look and layout of the website. During the evaluation of the quality of the information, customers assess the accuracy of the information, the completeness and comprehensiveness of the information, how current the information is and how easy the information is to understand. Figure 10.5 outlines the points where variables influence the customer journey during a utilitarian search for business advisory information.

Figure 10.5 Customer Journey to Information

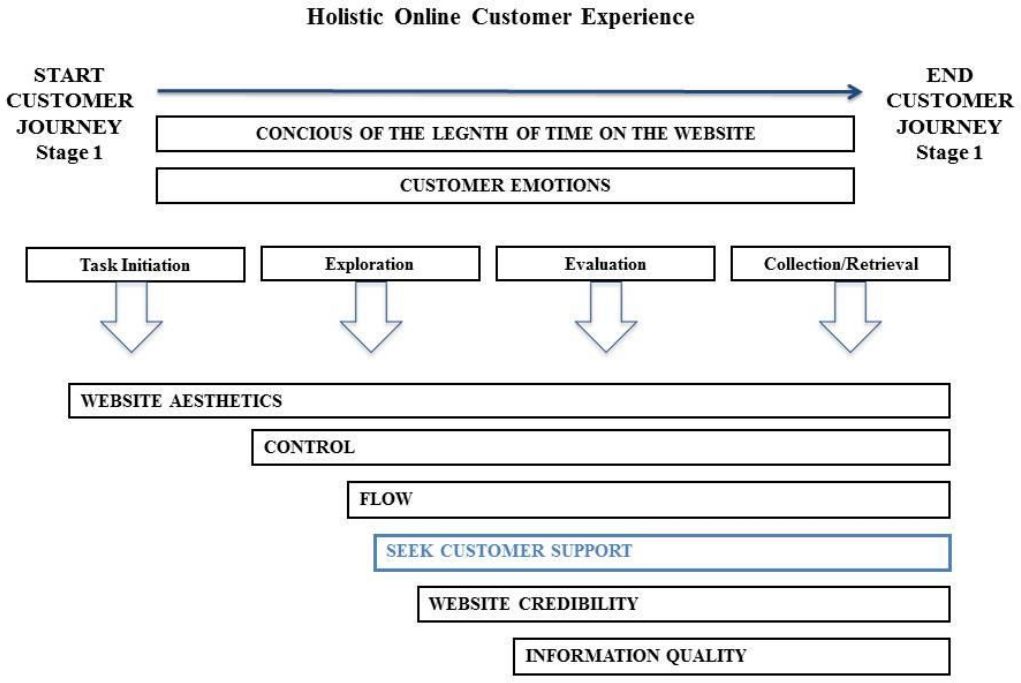


Figure 10.5 incorporates information search theory (Kuhlthau, 2004) from information science outlining the points of information search of task initiation, exploration, evaluation and collection/retrieval adapted from Kuhlthau (2004) and Ellis (1989). While figure 10.5 outlines the point in which each variable influences the customer experience during their search for information, the variable continues to influence the customer from the point of initial influence to the retrieval of the information. Figure 10.5 illustrates that customers are continually conscious of the length of time spent on the website during a utilitarian search for business advisory information and services

(in contrast to previous studies suggesting that customers often experience time distortion within the online environment) as well as customer emotions being prevalent throughout the entire search process. Additionally, Figure 10.5 highlights that the need to seek customer support can commence any time after the customer feels they are unable to focus on the task (focus formulation) and find the information they are seeking. This finding is in line with the point in time that was outlined in section 10.11 where customer support with a company representative would be beneficial between 1 minute 10 seconds and 3 minutes 12 seconds and an average time of 2 minutes and 11 seconds. Customers will initiate their task and explore to an extent before requiring to seek customer support if necessary, thus customers do not simply come to the website and seek help immediately. Figure 10.5 provides further theoretical understanding on the point in which variables influence the customer experience during a utilitarian search for information.

10.15 Conclusion

This chapter discussed the findings of the online experiment and the exploratory in-depth interviews in relation to the research objectives and the theoretical underpinnings of the study. The research findings suggest that online customer support is required via synchronised social interaction when the website characteristics are poor, the customer is required to spend longer than perceived necessary and when the customer does not have a successful search. In general, the research finds that online business advisory providers should focus their attention on providing customers with a positive online experience, thus resulting in positive customer emotions and satisfaction. The findings of this research provide online business advisory providers with an understanding on how to provide the optimal customer experience. Further theoretical understanding has been provided on the online customer experience during information search. This study has established a new variable of ‘website characteristics’ derived from the combined variables of website aesthetics, level of control, information quality, website credibility and flow, which has an influence on the customer experience, the length of time customers are willing to spend on the website, the need to seek online customer support, and the success of the search. Previous studies have acknowledged the role of some of these variables individually influencing the online experience, however this study has introduced information quality, website credibility, perceived time spent on the

website, the need for customer support and search success as variables influencing the customer's experience while searching for business advisory information or services.

This chapter also highlighted the importance of the variable 'the perceived length of time spent on the website' as having an influence on the customer's experience as well as mediating the relationship between website characteristics and the customer experience, website characteristics and the need to seek customer support, as well as website characteristics and the success of the search. The length of time spent on the website has not been explored within marketing, management and information science literature. This study finds in a goal directed utilitarian search, the perceived length of time spent on the website has a significant influence on the customer's experience. In contrast to previous studies that outline individuals feeling the notion of 'time distortion' during an online activity, the findings of this research illustrate that customers are time conscious during a search for business advisory information. Additionally, previous studies have found that a cognitive and affective process influences a customer's search and the likelihood of an overall positive customer experience. This study has extended such research and introduced external variables capable of influencing a customer's search and subsequently the customer's experience.

The next chapter will discuss the conclusions of the study directly in relation to each of the research objectives and the research hypotheses. Within the subsequent chapter the key methodological and theoretical contributions will be outlined as well as the practical managerial implications for online business advisory providers consequential of the results in the study. Additionally, the study's limitations and directions of future research will be outlined.

CHAPTER 11

CONCLUSIONS AND IMPLICATIONS

11.0 Introduction

The purpose of this chapter is to conclude the thesis in a clear and concise manner. In order to explain how each of the research objectives were met, this chapter is structured as follows. Firstly, the research objectives are concluded in relation to the findings of the research. Secondly, the methodological, theoretical and managerial implications of the study are discussed. Following this an outline of the study's limitations along with recommendations for future research are presented.

11.1 Conclusion of Objective 1

The first research objective in this study was to, *'Examine the variables influencing the online customer experience during a utilitarian search for business advisory information and services'.*

The research concludes that in relation to objective one, five independent variables were identified as influencing the online customer experience during a utilitarian search for business advisory information and services. A review of the literature revealed numerous variables capable of influencing the customer experience. However, in order to provide the study with parsimony and comprehensiveness (Whetten, 1989), exploratory in-depth interviews reduced the number of variables to be tested in the quantitative phase of the research. It was unanimously found from the in-depth interviews that the following variables despite highlighted by previous studies did not have an effect on the customer experience while searching for business advisory information or services, namely enjoyment, engagement, challenge, skill, telepresence, interactivity, connectedness and interactive speed. This may be due to the goal-directed and utilitarian nature of business advisory information search in comparison to the context of many other previous studies, which mainly focused on online shopping.

Despite this, the variables of website aesthetics, control, information quality, website credibility and flow all have an effect on the customer's experience. This study advanced previous research and found that each of the aforementioned variables all combine together to create an underlying variable of 'website characteristics' that has a direct effect on the customer's experience. Previous studies have outlined website aesthetics (Reinecke et al, 2013; Harris and Goode, 2010), control (Song and Zinkhin, 2008; Rose et al, 2012) and flow (Hoffman and Novak, 2009) as influencing the customer online. This study has also introduced information quality and website credibility as influencing the customer's experience. Additionally, previous studies have not found an underlying construct of each of these variables combined in influencing the customer's experience. Not only have previous studies examined some of these variables individually; research has been constrained to the online shopping environment and thus, the 'utilitarian' context of searching for online business advisory information and services provides a new area of research. This research therefore posits that online business advisory providers need to turn their attention towards the variables of website aesthetics, control, information quality, website credibility and flow in order to provide customers with a positive online experience.

In addition, this study found that the perceived length of time spent on the website plays a significant role in influencing the customer's experience. The perceived length of time spent on the website emerged from the in-depth interviews and echoed every conversation with participants in relation to the other aforementioned variables. For example, in relation to website aesthetics, the findings illustrated that if the website aesthetics were not good, customers perceived that it took longer searching on the website than necessary. In relation to control, the findings outlined that if the website isn't easy to use, allowing the customer to move from one point of the site to another, while allowing the customer to filter content relevant to their business, respondents suggested that they perceived that searching took longer. Additionally, the findings highlighted that if a website had poor quality information along with the perception of the website not being credible, customers percieved that searching for information on the website took longer than necessary, thus resulting in them abandoning their search. Lastly, the findings highlighted that if you are unable to focus clearly on the task then customers perceived the task to take longer than needed. The quantitative findings outlined that the variable of website characteristics influences the length of time a

customer is willing to spend during a utilitarian search for information. The quantitative findings revealed a mediating role for time spent on the website between website characteristics and the customer experience. The findings show that the longer customers perceive to need to spend during a utilitarian search for information or services on a business advisory website the more likely they are to have a negative experience, despite positive website characteristics. This finding contributes significant value to the literature on the customer experience, as it is one that has not been established in any previous studies.

Moreover, the length of time customers spend on the website has an influence on the need to seek customer support through one-to-one social interaction. Customers who perceive to spend longer than deemed necessary searching on the website will require online customer support with a company representative. The findings highlighted that the length of time spent on the website has a moderating effect between the website characteristics and the need to seek customer support. Thus, while the website characteristics may be perceived positively by customers, if the customer is required to spend longer than they perceived necessary it would result in the customer requiring to seek online customer support. In addition, the results showed that the length of time spent on the website also has a mediating effect between the website characteristics and the success of the search. Thus, though customers may regard the website characteristics positively, should customers perceive to spend longer than necessary searching on the website they will have an unsuccessful search and abandon their search on the website.

In addition, this research found that a personal characteristic of the level of confidence in using the Internet has an effect on the customer's experience. The findings of the online experiment illustrated that the customer's level of confidence in using the Internet effects the length of time spent on the website as well as the success of the search. Thus, confident searchers are more time sensitive when searching for business advisory information and more likely to perceive to spend longer than necessary. Confident searchers are also more likely to abandon their search than less confident searchers. In contrast to some previous studies, this study did not find other personal characteristics such as gender, age and how often the customer uses the Internet as moderators on the customer experience during information search.

Thus, we can conclude that website characteristics encompassing website aesthetics, control, information quality, website credibility and flow has an effect on the customer experience. In addition, the perceived length of time spent on the website, the need to seek customer support and the success of the search has an effect on the customer experience as well as the personal characteristic of the customer's level of confidence in using the Internet.

11.2 Conclusion of Objective 2

The second objective of this study was to, *'Investigate the role of customer emotions while searching for business advisory services online.'*

Previous research outlined emotions as having an important role on the information search process (Kuhlthau, 2004; Flavian-Blanco et al, 2011) and the customer experience (Edvardsson, 2005; Rose et al, 2012; Wang et al, 2012; Verhoef et al, 2009). Meyer and Schwager (2007) defined the customer experience as the subjective response to any direct or indirect contact with a company. Thus, Schmtt (1999), Verhoef et al (2009) and Teixeria et al (2012) suggest like the search process itself, the customer experience is a holistic process as it involves the customer's cognitive and affective components. This study outlined the collection of positive customer emotions as well as a level of customer satisfaction as a measure of the customer experience. This is in line with the literature, which suggests customer experience and customer satisfaction are interlinked (Meyer and Schwager, 2007). The literature highlighted that emotions can result in search tasks being abandoned (Kuhlthau, 2004). Flavian-Blanco et al (2011) found that emotions are prevalent prior, during and post online search, with Rose et al (2012) introducing emotions as a part of the online customer experience. This research finds that positive customer emotions (affect) as well as the level of satisfaction with the experience (cognition) combine to make up the customer experience. This finding provides further theoretical understanding on the online customer experience and its measures. Previous research had highlighted a utilitarian search as a cognitive process. However, this research highlights that customer emotions are prevalent during search and a key part of the measure of the customer experience.

11.3 Conclusion of Objective 3

The third objective of this study was to, *'Establish the role of online customer support through social interaction in relation to a customer's experience.'*

The literature suggests that customers can be provided support online through socially interacting with a customer representative (Truel and Connelly, 2013). Kuhlthau's (1994) early research on searching for information outlined that individuals often require support through 'intervention' when searching for information both offline and online (Kuhlthau et al, 2008). The in-depth interviews outlined the importance of being able to communicate with a representative on a business advisory website. A live chat function as discussed in the literature by Etemad-Sajadi (2014) and Chattaraman et al (2012) was highlighted in the in-depth interviews in chapter 7 as a tool that is useful in helping customers overcome difficulties in search and address pain points of frustration, uncertainty, website credibility, poor quality information and difficult to use sites. Truel and Connelly (2013) outlined that live chat services allow a website user to seek 'service related information' from a real human representative who provide answers through the synchronous media. Services delivered online were once considered a relatively impoverished experience due to the inability to interact with service personnel, however the advancements in technology over recent years as discussed by Truel and Connelly (2013) has established new mediums such as live chat technology and online help desks that offer social interaction and customer support online.

This research found from the in-depth interviews and the open ended questions within the online experiment significant evidence towards the importance of being able to communicate with service representatives during a utilitarian search for business advisory information on business information websites. The results found that customers wish to communicate with service personnel through private channels such as live chat functions or online help desks. Customer support through social networking sites such as Facebook, Twitter and LinkedIn were seen as inappropriate due to the open and non-private nature of the channels. Respondents illustrated the need to be able to communicate with service staff in a private manner, with customers instead highlighting social networking sites as communication mediums to keep customers up to date rather than a customer support function.

The results of the structural equation modelling found a statistically significant relationship between the need to seek customer support via synchronised communication and the customer experience. The results found that if a customer perceives to spend longer than necessary searching for services or information on a business advisory website, then the customer will require synchronised social interaction online with a company representative in order to help complete their tasks. The results also showed that the newly developed variable 'website characteristics' (encompassing website aesthetics, control, information quality, website credibility and flow) has a significant direct effect on the need to seek customer support online with a high regression value, illustrating that if the website characteristics are perceived positively, then the customer will not need online customer support. In spite of this, the perceived length of time spent on the website mediates this relationship, therefore if customers perceive to spend longer than necessary on the website even with positively perceived website characteristics, customers will require online customer support. In addition, if the website characteristics are perceived negatively then customers will require one to one customer support as discussed in the in-depth interviews.

Additionally, the findings illustrated that customers seek online customer support due to having a negative online customer experience, with emotions of frustration, disappointment, doubt and confusion, as well as being dissatisfied. The literature to date has not explored the need for online customer support in the form of synchronised social interaction in relation to the customer experience. This study specifically establishes this requirement in a utilitarian context of searching for online business advisory information or services. Thus, we can conclude that there is a role for online customer support through synchronised social interaction when a customer has a negative online experience while searching for business advisory information or services.

11.4 Conclusion of Objective 4

The fourth objective of this study was to, *'Examine the effect of a customer's success in completing their search in relation to the online customer experience'.*

Previous studies have failed to explore a customer's success in terms of completing their task in relation to the customer experience. This oversight is often due to the methodology undertaken. This study was able to assess the success of a customer's search due to the nature of the online experiment; further details are given in section 10.6. Verhoef et al (2009) outline that many research studies that have aimed to explore the customer experience, but instead focussed on the outcomes of the experience. This study further extends the literature and finds a relationship between the success of a customer's search and the customer experience, thus if a customer has an unsuccessful search while seeking business advisory information or services they will experience negative emotions and thus have a negative experience. Therefore, this highlights the importance of the provision of online customer support, as those who have an unsuccessful search will require online customer support. In contrast however, those who have a successful search will encounter positive emotions and satisfaction with the experience.

Literature on information seeking outlined both the cognitive and affective process involved (Kuhlthau et al, 2008). However, little attention has been paid to the role of the success of the search in influencing the customer experience. It is important that online business advisory providers gain an understanding on what influences a customer's success when searching for business advisory information online. This research outlines that the website characteristics and the length of time spent on the website has an influence on the customer's success with their search.

The structural equation modelling highlighted that the length of time spent on the website has a direct effect on the success of the search. The findings show that the longer customers are required to spend searching for information on a business advisory website, they become more likely to abandon their search. However, the discussion of the findings in chapter 10 highlighted that customers would stay on the website and continue with their search if they were able to seek online customer support. Lastly, a personal characteristic of a customer's level of confidence in using the Internet has an effect on the customer's success with their search. Those confident searchers are more likely to abandon their search than less confident searchers, possibly due to past experiences and expectations of being able to quickly complete their search.

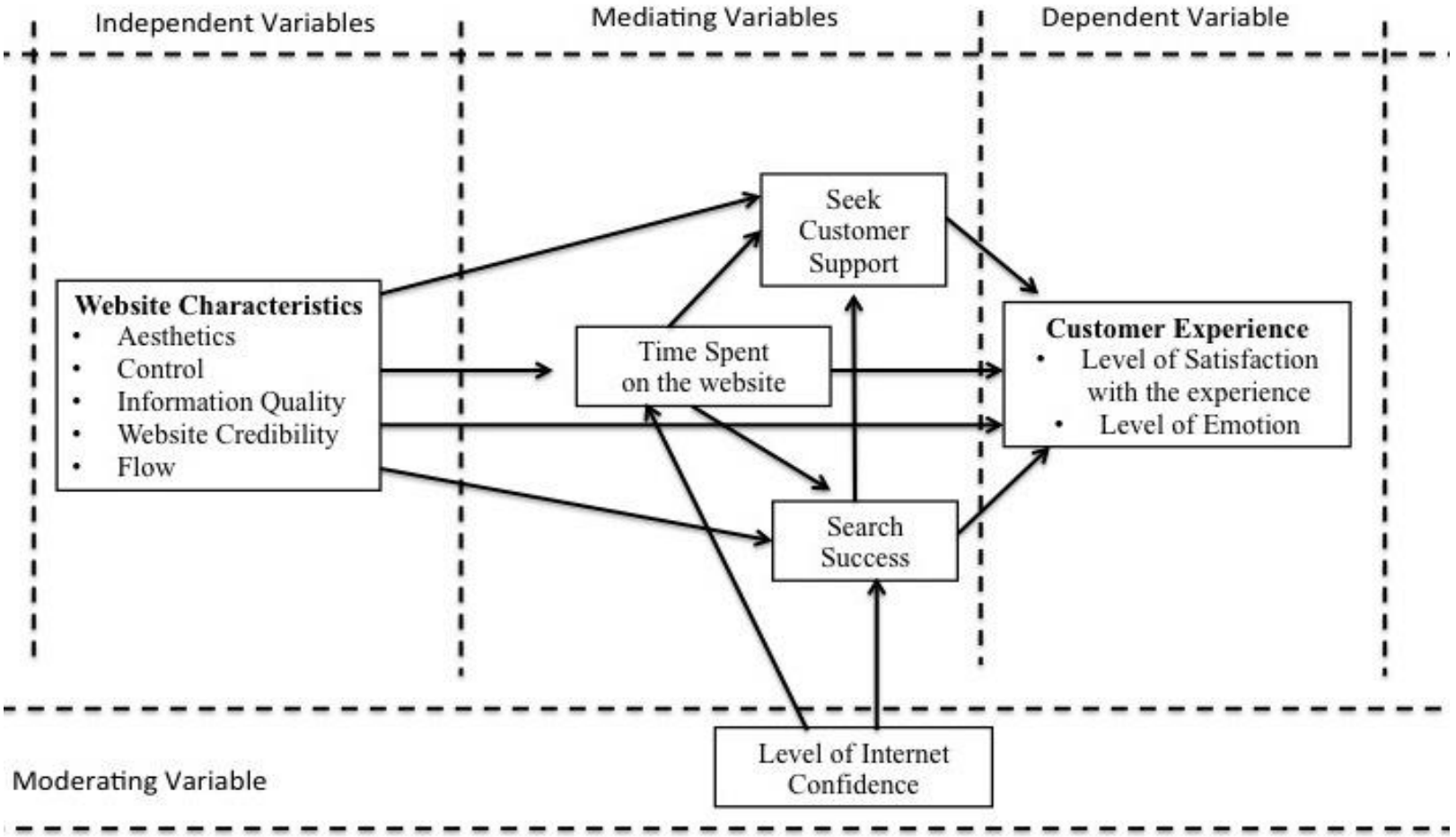
Thus, this study can conclude that the success of a customer's search has an effect on the customer's experience. In addition, the longer a customer requires to spend on a business advisory website the less likely they are to have a successful search. Lastly, the more confidence customers have in using the Internet the more likely they are to abandon their search.

11.5 Conclusion of Objective 5

The fifth objective of this study was to, *'develop a comprehensive online customer experience model during a utilitarian search incorporating variables influencing the online customer experience.'*

As previously discussed the literature outlined numerous variables capable of influencing the online customer experience. However, limited research has explored the customer experience during a utilitarian search, in particular a search for business advisory information and services. Therefore, while variables could be established from the literature (mainly focussing on the hedonic activity of online shopping and gaming), this research undertook exploratory in-depth interviews to identify the variables relevant to the novel context of this study. The quantitative phase of the research through the use of structural equation modelling produced a validated online customer experience model (figure 11.1) both supported theoretically and empirically. While the context of this study is searching for business advisory information or services, the model may be useful in understanding the customer experience in other utilitarian contexts. As has been previously discussed, research within the online customer experience remains scant, thus this research adds knowledge and offers a significant contribution to the area through developing a new online customer experience model and identifying the variables influencing the customer experience during a utilitarian search to further our understanding on the online customer experience and online information search.

Figure 11.1 Online Customer Experience Model



The online customer experience model shown in figure 11.1 provides a contribution to knowledge on research into the online customer experience within an information search context. The first box 'website characteristics' can be seen as the stimulus influencing mediating variables of the newly established variable, the perceived length of time spent on the website, the need to seek customer support and the success of the customer's search. Finally, the model shows each of these variables having direct and indirect effects on the customer experience influencing customer's emotions and level of satisfaction. Additionally, the personal characteristic of the 'level of Internet Confidence' has a moderating effect on the perceived time spent on the website and on the customer's success with search. The theoretical model in figure 11.1 supports some of the findings and helps to extend the work of previous online customer experience research (Verhoef et al, 2009; Teixeria et al, 2012; Hoffman and Novak, 2009; Luo et al; 2011; Rose et al, 2012; Klaus, 2013). The model introduces new variables of website credibility, information quality, perceived length of time spent on the website, online customer support and the success of the search that have been previously overlooked in relation to their influence on the online customer experience.

11.6 Methodological Conclusions

The adoption of a pragmatic philosophical stance provided the research with scope to adopt a mix methods approach in order to answer the research objectives. The literature highlighted that research within the area of the online customer experience is limited, thus exploratory in-depth interviews were deemed necessary to explore the variables influencing the customer experience within the study's novel context. First of all the research has drawn on an extensive range of literature from, services marketing, information science, human computer information and consumer behaviour in order to extend knowledge within the marketing domain. As well as providing parsimony and comprehensiveness, the qualitative in-depth interviews provided the basis for creating the quantitative phase of the research.

An online experiment followed by an online questionnaire for data gathering provided the study with a method that would allow the researcher to answer the research objectives and contribute to knowledge. The online experiment provided participants with the experience of using business advisory websites to search for information and

services. Due to the use of an online experiment, the researcher was able to measure the success of the participants' search as detailed in chapter 9. Thus, through the adoption of such methods the research was able to meet the research objectives, produce a new online customer experience model and introduce a new context to the literature. Such findings may not have been possible through methods deployed in previous studies.

11.7 Theoretical Contribution and Implications

This study makes a number of theoretical contributions to enhance our understanding of the online customer experience and information search. Firstly, a new theoretical model on the online customer experience has been introduced outlining the variables capable of influencing and mediating a customer's experience during a utilitarian search for information and services on business advisory websites. Previous research with regard to the online customer experience has mainly focussed on the outcomes of the OCE, this research on the other hand has developed an empirically tested online customer experience model outlining the variables influencing the customer experience during search. The theoretical model aids our understanding of the online customer experience, where research is scant and on online information search.

Secondly, an important objective of this research was to establish the role of customer support through social interaction in relation to a customer's online experience. The literature suggests that customers can be provided help online through socially interacting with a service representative (Truel and Connelly, 2013). Kuhlthau's (1994) early research on searching for information outlined that individuals often require support through 'intervention' when searching in the offline environment. This study finds that there is a 'need' for online customer support through social interaction via tools such as live chat and online help desks when searching for business advisory information and services. Like the offline environment, customers often need the support of service personnel; this study finds that customers require the same support in the online environment. The findings illustrated that customers who perceive to spend longer than necessary while searching for business advisory information or services require online customer support through synchronised social interaction. Additionally, those customers who have an unsuccessful search require online customer

support. The findings also showed that customers who seek online customer support do so as they are having a negative online experience. These findings add significant value to research within the domain of services marketing and information science. Researchers to date have not established the need for online customer support in relation to the online customer's experience. As a result, this finding helps to extend our theoretical knowledge of information search and the online customer experience.

The third contribution to knowledge is the evidence from both the exploratory in-depth interviews and the structural equation modelling for the previously unidentified variable of the perceived length of time spent on the website in effecting the customer experience. This variable refers to the length of time that customers perceive as being necessary to retrieve online business advisory information and services. Previous studies have overlooked the variable of the perceived length of time spent on the website influencing the customer experience. In contrast to previous studies, this research has found that customers are extremely time conscious during a utilitarian search for business advisory information and services. Previous studies have highlighted that customers often experience time distortion during an online activity, however such findings have emerged during hedonic online activities, such as shopping and gaming. Thus, this study adds to our theoretical understanding of the online customer experience in a utilitarian context as it finds that the perceived length of time spent on the website plays a mediating effect on variables including the website aesthetics, level of control, information quality, website credibility and flow as well as directly influencing the customer's experience during a utilitarian search. The results show that while customers may regard the website characteristics encompassing, website aesthetics, the level of control the website provides customers, the quality of the information, the credibility of the website and the website's provision to allow customers to become focused and engrossed (flow) positively, the perceived length of time spent on the website plays a mediating role. As a result, customers who are required to spend longer than they perceive as being necessary while searching for business advisory information and services will have a negative experience resulting in the search being abandoned.

Due to the emergence of the new variable of the perceived length of time spent on the website, this study made a further theoretical contribution through developing and

validating a new five point likert scale to measure the perceived length of time spent on the website with four measurement items derived from the in-depth interviews. Following a further review of the literature and due to the fact that the perceived length of time spent on the website is a new variable to be introduced to the literature, no relevant scale could be obtained to measure this variable. Thus, in line with Churchill's (1979) scale development procedures as previously discussed a new validated scale has been introduced to the literature.

The fourth contribution of this research is the identification of the specific points that each variable influences the customer's experience during their search. Developing upon information science literature on the information search process, the findings illustrated the point at which variable influences the customer depending on the stage of the customer's search. Thus, at task initiation customers are influenced by the website aesthetics. The level of control a customer has on the website influences the customer at the exploration stage of the search, following this, flow influences the customer at the exploration stage after the influence of control. During the exploration stage, customers may also seek customer support should they not achieve a focus. Following this, at the evaluation stage of the search customers conduct credibility and information quality evaluations before reaching the information retrieval stage. These findings provide significant theoretical insight into the order in which variables influence a customer's experience during search.

The fifth contribution to knowledge comes from the evidence that finds a new theoretical underlying latent variable of 'web characteristics' encompassing website aesthetics, level of control, information quality, website credibility and flow affecting the online customer experience. Previous studies (Khalifa and Liu, 2007; Song and Zinkhan, 2008; Hoffman and Novak, 2009; Ha et al, 2010; Rose et al, 2012) have outlined variables capable of influencing the customer experience, however this study extends the current body of literature by first introducing information quality and website credibility as variables influencing the customer experience as well as introducing a new higher order variable. The findings of this research show that the combined latent variable 'website characteristics' has a direct and indirect effect on the customer experience through the perceived length of time spent on the website, needing to seek customer support and the success of the search.

Moreover, this study outlined the collection of positive customer emotions as well as a level of customer satisfaction as a measure of the online customer experience. This is in line with previous studies suggesting that the customer experience is made up of cognitive (Novak et al, 2000; Hoffman and Novak, 2009) and affective (Rose et al, 2012) processes. The results showed high regression weights with statistical significance at .000. Therefore, this study further confirms previous studies measures and theoretical underpinning of the online customer experience in a new context.

A further theoretical contribution of this research is the identified relationship between the success of a customer's search and the customer experience. Those customers who have a successful search will encounter positive emotions and satisfaction with the experience. However, conversely, those customers who have an unsuccessful search will either abandon their search resulting in a negative experience, or require online customer support. Should online customer support not exist, customers will abandon their search. Previous research has failed to acknowledge the success of a customer's search as influencing the customer experience.

In addition, this study finds that a customer's level of confidence in using the Internet plays a moderating role and has an effect on the perceived length of time customers are willing to spend on the website and the customer's likelihood of a successful search. Confident searchers are more likely to perceive spending longer than necessary on the website (thus, more time sensitive than less confident searchers) as well as being more likely to abandon their search, therefore resulting in an unsuccessful search. While marketers are unable to directly influence such a personal characteristic, marketers should note that a customer's confidence could influence their experience online.

Lastly, this study has responded to calls for research on exploring the online customer experience in multiple contexts (Klaus, 2013). This study has explored the online customer experience within a novel utilitarian context of searching for information and services on business advisory websites regarding business growth, leadership, developing employees, exporting, funding, and critical day-to-day advice on running a business with information and services on tax and law. Past research has often explored the customer experience in relation to the online shopping environment (Ha et al, 2010;

Khalifa and Liu, 2007; Hoffman and Novak, 2009) and investigating repurchase intention (Rose et al, 2012). This study has found that searching for online business advisory information and services is a goal-directed task influenced by the aforementioned variables. Moreover, this research responded to calls to investigate the variables that 'influence' a customer's experience rather than simply exploring the outcomes of the customer experience (Verhoef et al, 2009). Thus, this research provides an understanding of the variables that influence the customer during their journey to find information and services.

11.8 Managerial Implications

This research offers online business advisory providers numerous managerial implications. The findings suggest that the website aesthetics, the level of control the website provides customers, the quality of the information on the website, the credibility of the website and the websites offering to customers to allow them to concentrate on their task (flow) altogether have an equal effect on the customer's experience. The website aesthetics refer to the design, look and layout of the website. The level of control refers to how easy the site is to use and the ability to customise the experience by filtering and controlling content relevant to the customer. The quality of the information refers to the accuracy, relevance, how current and the usefulness of information provided on the website. Website credibility refers to the assessment of key surface characteristics of the site, including an assessment of the sources, checking accreditation or company credentials, the brand of the website, the URL and the websites aesthetics. Lastly, flow refers to the extent to which the website allows the customer to concentrate and focus, while feeling absorbed and engrossed in the task.

Thus, this study helps managers and marketing professionals responsible for the provision of online business advisory websites to distinguish between those variables that make a distinct difference to the online customer experience to those that have little to no influence. The aesthetics of the website appear to have an important influence on the customer experience and the first variable to influence a customer's experience on a business advisory website during their search. Therefore, managers ought to provide business advisory websites that are aesthetically appealing, clear for the user to understand and navigate, uncluttered with an effective layout. Secondly, it is important

that managers provide customers with websites that offer customers a level of control and empowerment during their search. Two methods of enhancing the online customer experience through the level of control a customer has on a business advisory website is firstly to ensure the website is easy to use. Websites that prove to be difficult to use induce negative customer emotions and dissatisfaction with the experience, websites that easily communicate how to use the website in a way that fits with the search process of an individual will result in emotions of calmness and confidence. Secondly, offering customers the ability to customise their experience on the site creates a sense of personal control over the site and the customer's actions, allowing customers to filter content, save and favourite content. In addition, managers ought to offer customers cues on the quality of the information provided on the website, providing customers with chain references as sources of the information, time and date stamps all act as cues to allow customers to assess the accuracy, relevance, how current and the usefulness of the information. Further, the credibility of the website has an influence on the customer's experience, websites that customers perceive as non-credible will result in customers having a negative experience, thus managers should offer customers further website credibility cues such as a clear way to contact the organisation, information about the brand, a credible URL and a professionally designed website. Lastly, it is important that managers provide individuals searching for business advisory information with a website that allows them to focus on their task at hand without distractions, allowing individuals to become engrossed in their task. Online business advisory providers that adapt their websites to meet the requirements of each of these variables, with equal importance, will help to provide an enhanced customer experience.

Much industry research refers to the importance of customers spending a longer length of time on the website as a benchmark of a successful website. This study however highlights to marketers and managers of business advisory websites to use such a benchmark with caution as this research finds that the longer customers spend searching on a website, the less likely they are to have a positive experience as well as being less likely in having a successful search and needing to seek online customer support. Thus, even if customers perceive the website characteristics positively, if the length of time customers are required to spend searching for the information or services is longer than perceived necessary it will result in a negative experience. As a result, marketers should

focus on offering business advisory websites that allow customers to complete their tasks in a timely manner and be conscious of the time-constraints surrounding businesses. Continued usability testing through the use of the scale developed in this study would illustrate to managers, customers' ability to complete tasks in a timely manner. The findings of the online experiment showed that customers who are required to spend more than 3 minutes and 12 seconds on a business advisory website will likely abandon their search with respondents of this research requiring online customer support between 1 minute 10 seconds and 3 minutes 12 seconds.

As previously discussed, a distinctive difference between the online and offline environment is the ability to socially interact with a customer representative and seek help. With the advancements of recent technology, new features such as live chat technology and online customer helpdesks allow organisations to offer customer support online in the form of synchronised social interaction. This research found that customers who do not have a successful search and spend longer than perceived necessary during search require online customer support. Therefore, like the offline environment where customers seek the help of service staff to find information, services or products, help is also required in the online environment. Thus, a further implication for marketers and managers of online business advisory websites is to provide customers with online support. Simply providing customers with information and self-service functions may be a disservice to customers. An introduction of online customer support may help to prevent customers abandoning their search as shown in the theoretical model. However, this study found that online customer support should be provided through private channels such as the aforementioned live chat or online help desks as opposed to non-private channels such as social networking websites, namely Facebook, Twitter and LinkedIn due to the open and public nature of these websites.

Finally, it is important for marketing practitioners and managers responsible for the provision of online business advisory websites to note that providing the 'tools' for customers to have a successful search also results in a positive customer experience. Thus, online business advisory providers should aim to provide customers with an online experience that entails good website characteristics that can reduce the length of time customers are required to spend searching and online customer support for customers when needed to help overcome an unsuccessful search, preventing

individuals from abandoning their search and ultimately providing a positive online customer experience.

11.9 Limitations and recommendations for future research

The findings and the contributions of this research are somewhat constrained by certain limitations, of which opportunities for future research arise. While the online experiment informed the need for online customer support via synchronised social interaction, in order to further explore customer support online, researchers could develop a website with an integrated customer support system such as a 'live chat' function and a website without to compare the difference on the customer's experience. This would help to advance the research undertaken in this study and assess actual behaviour with a support function.

In line with the previous recommendation, researchers could examine the customer's experience analysing customer's emotions and level of satisfaction after the use of an online customer support system. In addition, to further our theoretical understanding of the length of time customers are willing to spend searching for information and services, future research could establish the length of time customers are willing to spend using an online support system.

This study focuses on a specific service setting, while it would seem reasonable that the findings identified would extend to similar utilitarian information search and service settings, further research on the newly established variable of the length of time customers are willing to spend on the website in other information search and service settings may prove fruitful in order to develop our theoretical understanding.

Additionally, it would be insightful for providers of online business advisory websites to identify if the same variables influence the customer experience on mobile devices. This study conducted the research in the situation of searching on desktop and laptop devices. With the rise of mobile websites and customers using mobile devices to access the Internet for information and services it would be prudent to investigate if differences exist.

Finally, while managerial implications apply for online business advisory providers, this research has found that online customer support is required if a customer does not have a positive experience on a business advisory website. It would valuable for future research studies to explore if a role for online customer support exists within other utilitarian and hedonic contexts.

11.10 Conclusion

The aim of this study was to explore the variables influencing the online customer experience while searching for online business advisory information and services and establishing the role of online customer support through synchronised social interaction. The research addressed five key research objectives as outlined in this chapter. Firstly, the variables capable of influencing the online customer experience in the study's context were established. Secondly, the role of customer emotions while searching for online business advisory information and services was answered. Thirdly, the role of customer support through synchronised social interaction in relation to a customer's experience was found. Fourthly, the effect of a customer being able to successfully complete their search on the online customer experience was established. Finally, a new online customer experience model was developed and presented in this chapter bringing together all of the research objects. The chapter outlined the theoretical contribution of this study along with the managerial implications for an array of online business advisory providers. Finally, the limitations of the research along with future recommendations were presented.

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APPENDIX 1

Sample In-depth Interview Topic List

The purpose of this interview is to explore the varibales important in providing an effective online customer experience during a utilitarian search for business advisory information and services online. In addition the research aims to gain an understanding on customer attitudes towards online customer support in the form of synchronised online social interaction.

(Letters a, b, c, d etc. act as prompts under the general topic areas. Each question will be asked from the point of view of the respondent's personal life and working life (business life).

1) **Introduction**

   a) Introduction of the interviewer
   b) Explain the purpose of the interview
   c) Explain the purpose and the objectives of the study
   d) Interviewee background

2) **Internet Behaviour**

   a) Frequency of use, daily, weekly…
   b) Duration of use- number of hours per week.
   c) General Purpose, information searching, online gaming, communities joined.
   d) Goal Directed or Exploratory browsing
   d) What is important to you when browsing a website?

3) **Online Information**

   a) Do you use the Internet as a source of information?
   b) Do you use family or friends as a source of information?
   c) What types of information are being sought – videos, pictures, reviews, ratings?
   d) What types of information are the most important to assist with decision-making?
   e) Information perceptions- How perceptions of trustworthiness, credibility, quality and reliability of information are determined?
   f) Do you ever use help or assistance online?

4) **The key components of online social Interaction**

   a) What do you perceive as social Interaction (offline and online)?
      i) Commenting
      ii) Reviewing

iii) Instant live chat
iv) Sharing
v) Liking
vi) Recommendations

b) Do you get involved in talking to others online?
c) Share information with others?
d) Do you expect to be able to speak to others online? (Organisation/other Users)
e) What platforms or tools could be used for online social interaction?

5) **Social Network Usage**

a) What Social Networks/Online communities do you use?
b) Why do you use them/Why don't you use them, Number of hours spent.
c) Do you like to participate in conversations in SN, post content?
d) Do you get enjoyment out of social interaction online?
e) Do you talk to business on social networks?
f) Would you seek business advisory information on social networks?

6) **Social tools on a website**

a) Do you notice any social tools when you are on a website?(i.e. Like boxes, share boxes, social comment, reviews, ratings) Picture Examples*
b) Would you use them to share content, like content, comment on content, review content?
c) Why do you use any of these social tools?
d) Is a level of skill required to interact online?
e) Is the experience more enjoyable being able to interact with others?
f) Would you interact with a business advisory provider online?

7) **Live Chat**

a) Have you ever used live chat on a website (what was the experience like)
b) Why did you engage in live chat or not
c) Would you use live chat over using the telephone
d) How would it make you feel if you visited a website and they had a live chat option
e) Does it make a website seem more trustworthy if you can instantly chat
f) Do you seek help often when searching for information
g) Do you often seek support on websites (use of contact forms)

8) **Online Commenting and Reviewing**

a) Have you ever commented on anything online or reviewed anything
b) Why did you comment
c) Do you feel its useful to communicate with someone online
d) In your experience have commenting systems been easy to use? Does it require a level of skill?
e) Is content more engaging if you can read reviews, see connections, comment

9) **Ability to ask a question when browsing online**

a) Do you like having the ability to communicate with an organisation online?
b) Would you feel more valued as a customer if the response was in real time?
c) Does it help you when browsing?
d) Do you feel you have a level of control having the ability to interact, share content, rate content, add a review.

10) **Is social Interaction important to you when browsing a website?**

a) What do you like/dislike about it
b) Does social interactivity add to your enjoyment when browsing a website?
c) Do you feel more engaged in what you're doing?
d) Do you feel you are in a social environment?
e) Does it make you feel you have a more customised experience?
f) Does it make you feel more in control on the site- customisation, feel more connected?
g) Do you expect to be able to communicate in some form on a website?

11) **What is important to you when online?**

a) The look of the website
b) Enjoying your experience
c) Engaging site or content
d) Being engrossed in what your doing
e) Being able to concentrate on your task
f) Ease of use of a site
g) Usefulness of the site
h) A site that matches your skills
i) Being able to customise your experience
j) Being so focused on what your doing you forget about other things
k) Being offered help to find what you need

12) **Is the credibility of the website important to you?**

a) Have you ever thought about how trustworthy a website is?
b) How do you evaluate the credibility of a website?
c) What stage of your search would you think about website credibility?
d) What influences your evaluation of credibility?
e) Does your credibility evaluation of the site influence your experience?
f) Does being able to communicate with the organisation online impact on the credibility of the site?
g) Does being able to communicate with peers impact on the credibility of the site?

13) **Is having a level of customisation and flexibility when searching important to you?**

a) Feel in control over what you are doing
b) Able to go where you want to on the website
c) Choose what you want to see
d) Your actions determine your experience
e) Able to share content if you desire
f) Able to connect with others if you desire
g) Able to customise your personal space

14) **For you what creates a satisfactory experience when searching for information?**

15) **Closing Phase**

a) Check to ensure all areas have been covered
b) Any additional information interviewee would like to give
c) Any questions
d) Thank interviewee

APPENDIX 2

Sample Experiment Tasks

This research aims to understand the process of searching for online business advisory information and gain an understanding as to which variables influence the online customer experience.

Instructions:

- You have six minutes to complete each task; you may not complete the full task, if the task is uncompleted after six minutes simply move on to the next task. The researcher will keep track of time.
- You have help cards for each task; simply hand over this help card to the researcher if you get to a point where you feel help would be beneficial. This is to represent where help would have been beneficial, no actual help will be provided.
- After completing each task you are required to answer a number of questions.
- Tasks where you are asked to complete a form or register, please use Test as first and last name as well as test@test.com for your email address.

Task Background	Task 1
Go to www.scottish-enterprise.com **(A and B business background)** You want to gather information on funding opportunities within the biotechnology industry. You are interested in seeking support to help improve productivity and the profitability of your business. You are aware of how other companies have received services to improve their business.	A) Locate information on support opportunities that are specific to the biotechnology industry to improve productivity & profitability.

Task Background	Task 1
Go to www.scottish-enterprise.com **(A and B business background)** You want to gather information on funding opportunities within the biotechnology industry. You are interested in seeking support to help improve productivity and the profitability of your business. You are aware of how other companies have received services to improve their business.	(B) Register for further information on life science investment or specialist support.

Task Background	Task 1
Go to www.scottish-enterprise.com **(C business background)** You have a fashion clothing business and you want to gather more information on the options for the first steps into exporting. You are interested in registering for an introductory event about exporting. You are also keen to get your thoughts together ahead of going to the event by exploring some self-assessment tools for your company and yourself.	(C) Locate information on first steps to exporting

Task Background	Task 2
Go to http://www.hie.co.uk **(A business background)** You are starting a new technology business in Inverness; you have heard many tech businesses have gained advisory information in exporting. You are interested in finding out more information about regulations and taxation. ---------- **(B business background)** You own a software management company and you are looking to expand by selling into international markets. You are aware some companies have received support to do this. You want to know what you should do with your website. ---------- **(C business background)**	A) Find out if you can apply for this support and find one contact persons name to get more support. ---------- B) Find out information on how you can adapt your website for an international audience. Find the key points. ----------

You own a digital agency, which has been running for 5 years with a growing team located in Inverness. You want to find out about mentoring support in leadership and skills for the management team.	C) Find out if you are able to apply for mentoring advice and who you would contact

Task Background	**Task 3**
Go to http://business.wales.gov.uk (A) You want to gather information on funding opportunities for your software business based in Wales, which has just secured a new project in the USA. You are interested in specialist industry support to help grow your business. You are also interested in using social media as a way of growing your business. --- (B & C) You own a Limited Internet based advertising company. You have taken on 4 new members of staff and would like to seek funding for training. You have heard that other companies have obtained business mentoring by a specialist within their industry; you are also interested in business mentoring with a specialist in the online environment.	(A) Locate information on funding opportunities that are specific to supporting new creative products and services**.** --- (B) Search for any funding available for staff training and locate funding that would be suitable. (C) Search for information on applying for business mentoring support.

APPENDIX 3

Table A9.1

Experiment Business Sample (20 participants)

Experiment Participant	Gender	Age	Position Held	Business	Number of Employees
Participant 1	Male	35	Company Director	SME	4
Participant 2	Male	38	Company Director	SME	6
Participant 3	Male	44	Company Director	SME	9
Participant 4	Female	29	Company Director	SME	3
Participant 5	Female	38	Company Director	SME	2
Participant 6	Male	51	Company Director	SME	12
Participant 7	Female	45	Senior Manager	SME	7
Participant 8	Male	25	Company Director	SME	6
Participant 9	Male	26	Company Director	SME	3
Participant 10	Female	52	Company Director	SME	4
Participant 11	Male	39	Company Director	SME	4
Participant 12	Female	42	Company Director	SME	8
Participant 13	Female	31	Company Director	SME	2
Participant 14	Female	40	Company Director	SME	3
Participant 15	Male	33	Company Director	SME	0
Participant 16	Male	49	Company Director	SME	5.5
Participant 17	Male	42	Company Director	SME	3
Participant 18	Male	62	Company Director	SME	6

Participant 19	Female	38	Company Director	SME	5
Participant 20	Female	46	Company Director	SME	9