PERCEIVED INTERACTIVITY, ATTITUDES AND AVOIDANCE OF SPONSORED POSTS: A THEORETICAL AND EMPIRICAL INVESTIGATION OF BLOG READERS

By

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DEDICATION

Dedicated to my wife - Ezlika

My children - Rahil and Imaan

My parents – Punyabati and Samarendra

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DECLARATION

I hereby, declare that:

This thesis is presented in accordance with the regulations for the degree of Doctor of Philosophy.

This thesis has not been previously submitted nor accepted for any degree at the University of Warwick or any other university.

To the best of my knowledge, the work presented in the thesis is entirely my own and with relevant and appropriate acknowledgement where external sources and references have been used.

Before the submission of the thesis, a few papers were presented in international academic conferences and accepted for publications, which are listed below. A book chapter was also published as well. The remaining parts have not been published to date.

- Mutum, D. (2010). Perceived online interactivity of blogs. Accepted for publication in Proceedings of European Advances in Consumer Research, Volume 9, EACR Conference, 30 June – 3 July, 2010, London, UK.
- Mutum, D. and Ghazali, E. (2010). Perceived online interactivity and attitude towards blogs. Proceedings of the Academy of Marketing Conference 2010, Academy of Marketing Conference 6-8 July, 2010, Coventry, UK. (No. 0241. ISBN 9781846000317).

- Mutum, D. and Wang, Q. (2010). Consumer Generated Advertising in Blogs. In: Eastin, M. S., Daugherty, T. and Burns, N. M. (eds.) Handbook of research on digital media and advertising: IGI Global
- Mutum, D. (2009). Consumer attitudes towards blogs: A conceptual model. In Proceedings of the Academy of Marketing Conference 2009, Academy of Marketing Conference, 7-9 July, 2009, Leeds, UK. (Digital format. ISBN 9780956009968).

Upon acceptance of this thesis, I give my consent for its availability within the inter-university library loans; and that, its title and abstracts are made available to other organisations upon formal requests.

Signature :

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ABSTRACT

Despite the profound implication of blogs for marketing communications, there are very few theoretical and empirical studies on this emerging social phenomenon. This study is one of the first to investigate how blog users engage with blogs. Specifically it looks at the relationship between perceived interactivity and attitude towards blogs and between perceived interactivity and sponsored posts on blogs. It also looks at how personal factors and blog characteristic factors influences consumers' attitude towards blogs and sponsored posts on blogs.

Key literature was reviewed, following which a conceptual framework was developed which was partly based on the advertising hierarchy of effects model and incorporating adaptations of the concepts of need for cognition, technology acceptance model as well as the concepts of perceived interactivity, perceived credibility, attitude towards Websites and avoidance of advertising.

427 completed responses were received out of which 408 responses were used for the initial analysis. After removal of outliers, 399 responses were used for the final analysis. Confirmatory factor analysis was used to refine the constructs and to test for convergent validity, discriminant validity and construct reliability. Structural equation modelling was used to look at the various fit measures and also to empirically test the proposed hypotheses.

The results indicate that the higher the interactivity of blogs, the more likely it was for blog users to have a more favourable perception of sponsored posts on the blogs. On the other hand, perceived interactivity was found to be a

highly significant and important negative predictor of the avoidance of sponsored posts on blogs. This means that a positive attitude towards blogs does not directly translate into a positive attitude towards sponsored posts on blogs.

Using the new typology of mediations and non-mediations as given by Zhao *et al*. (2010), the importance of the attitude towards blogs construct was also highlighted as it was found to have a mediating effect between perceived interactivity and avoidance of sponsored posts on blogs as well as between perceived credibility and avoidance of sponsored posts on blogs constructs.

The study also revealed some serious issues with old and widely accepted constructs, specifically, the need for cognition and the technology acceptance model.

Moreover, the results show that the need for cognition of blog users; the perceived interactivity and perceived credibility of the blog (and the blogger) are positively related to the attitude towards blogs.

GLOSSARY

Blog:	An interactive website with posts that are updated frequently and may contain links, images, video or music clips, of interest to its author or authors that are archived and arranged in reverse chronological order.
Blogger:	An individual who blogs (writes on blogs).
Blogosphere:	The community of blogs, bloggers and blog posts (Wright, 2006).
Blog User:	Consumers who visit blogs. They may or may not interact with the blogger or other users on blogs.
Consumer Generated Advertising:	Sponsored content on blogs, wikis, forums, etc. (Walker, 2006).
Sponsored Post/ paid posts/ sponsored reviews:	The promoted blog entries or posts that contain links that point to the home page or specific product pages of the website of the sponsor for which the blogger receives compensation in the form of money, products, services or in other ways (Mutum and Wang, 2010).

Chapter 1: Introduction

1.1 Background of the Study

Understanding new technologies is extremely difficult due to the high uncertainty regarding cost and benefit trade-offs, which in turn makes it hard for marketers to measure adequately the potential impact of these new technologies for the business. Out of various online media available to marketers, 'Blogs' are the newest and potentially the most attractive. They have become a part of what Deighton and Kornfeld (2007, p. 2) describes as a *"digital interactive transformation in marketing"*.

The blogging revolution shows no signs of slowing down and according to a report by Universal-McCann (2009) on the impact of social media, 71 percent of active internet users read blogs. Blog participation has also increased with more people leaving comments on blogs (an increase to over 50 percent in 2009). The report also shows that over 29 percent of internet users have blogged about a product or brand. Furthermore, according to Technorati's State of the Blogosphere 2008 report, approximately 133 million blogs (Winn, 2009) were indexed by Technorati, as compared to approximately 70 million blogs in 2007 (Sifry, 2007). Interestingly, the 2008 Technorati report also mentions that a majority of bloggers (54 percent) had advertising on their blogs (White, 2009). Another report by the Pew Internet and American Life Project in 2008 (Smith, 2008), reveals that 12 percent of internet users have created or work on their own online journal or blog, while about 33 percent of all American internet users read blogs. In Europe, around three percent or four million internet users actively write blogs (Forrester, 2006). Blogging has also gained wide acceptance in Asia. Take a look at Malaysia for example. A survey by Microsoft Malaysia revealed that nearly half (41 percent) of Malaysians online are actively blogging (Microsoft, 2006). While in China, the number of bloggers is expected to cross the 100 million mark (SinoCast, 2006). It is not surprising that the word 'Blog' was chosen as the top word of 2004 by Merriam-Webster (BBC, 2004).

The term '*weblog*' was first coined by Jorn Barger on his *Robot Wisdom* website on 17 December 1997 (Kottke, 2003). A few years later, in mid 1999, Peter Merholz, came up with the word 'blog' after breaking the word weblog into the phrase 'we blog' in the sidebar of his blog Peterme.com. Though some authors argue that the word is not a *portmanteau* of the word Web and log, the terms 'blog', 'weblog' and 'Web log' are often used interchangeably (Kottke, 2003, Economist, 2006). Various authors have also defined the word 'blog' differently. The popular belief that blogs are personal online journals (BBC, 2004) may not be accurate as most blogs are 'public' and interactive in nature (Adamic and Glance, 2005, Marken, 2005, Kelleher, 2006). A number of blogs focus on specific topics ranging from politics and sports to entertainment and technology. It is also not uncommon for bloggers (people who write blogs) to have more than one blog with multiple themes. Some of the well-known blogs like Slashdot (http://slashdot.org/), Engadget (http://www.engadget.com/) and Boing Boing (http://boingboing.net/), have multiple contributors as well.

A better definition of the word 'blog' was given by Wright (2006) who defines it as a Web page that contains regularly posted inlays that are archived and arranged in reverse chronological order. *The Oxford Dictionary of Modern Slang* has a similar definition of a blog but incorporates the author – the blogger*: "an Internet website containing an eclectic and frequently updated assortment of items of interest to its author"* (Ayto and Simpson, 2005). Our definition of blog recognises their interactive nature and the fact that there may be more than one author.

Acknowledging the interactive nature of blogs they are defined as "*interactive websites with posts that are updated frequently and may contain links, images, video or music clips, of interest to its author or authors that are archived and arranged in reverse chronological order*" (Mutum and Wang, 2010, p. 249).

Another term that is commonly used with regards to blogs is *Blogosphere* which has gained popular usage. Brad L. Grahamon was the first person to use the term '*Blogosphere*' on his blog on September 10, 1999. It was re-coined by William Quick later in 2002 who wrote *"I propose a name for the intellectual cyberspace we bloggers occupy: the Blogosphere"* on his blog (Mutum and Wang, 2010, p. 249).

Blogging is a movement, a phenomenon and a revolution. It is an excellent example of a recent social phenomenon that has resulted in a paradigm shift. It has changed and is still in the process of changing how everything works. No institution has remained untouched - families, communities, the press, businesses and even governments. All these institutions had to figure out how to adopt and adapt to this new 'social movement'. A few years ago people used to exchange telephone number. Then came emails and now it is blog URLs/ addresses. What is exciting is that someone does not need to be a very tech savvy person in order to join in this new wave and even pensioners and housewives can start blogging straightaway as long as they have internet access.

Traditional marketing communication used to be mostly composed of one way information flow from the companies to the customers. Most companies do not handle their own marketing campaigns even though many have their own marketing department. Marketing agencies usually planned, created and implemented advertising campaigns or other forms of promotion for their clients. The clients dictate their objectives and usually have a role in shaping the marketing campaign. However, the creative work is left up to the agencies.

Now, with online media such as blogs, companies can interact directly with customers in their corporate blogs or by providing incentives for bloggers to review or write about their products and services. This may be in line with McKenna's (1991) strategic view of relationship marketing which involves genuine customer involvement and placing the customer first. Thus, blogs are enabling a new model of consumer collaboration, and in turn, they are affecting the locus of control of marketing communication. In other words, consumer generated advertising has created a new commercial path for business to consumers. The history of the commercialisation of blogs of and the more recent developments will be discussed in more detail in the next chapter.

A number of major corporations including General Motors among others, have started their own corporate blogs, which is an indication of this growing realisation of the importance of blogs (Lee *et al.*, 2006, Moulds, 2007). It is no longer a rarity for CEOs to blog and the list include Jonathan Schwartz, CEO of Sun Microsystems (http://blogs.sun.com/jonathan/), Tony Fernandes, CEO of Air Asia Berhad (http://www.tonyfernandesblog.com/) and George F. Colony, Chairman of the Board and Chief Executive Officer, Forrester Research (http://blogs.forrester.com/colony/), etc. (Mutum and Wang, 2010). It is estimated that 58 (11.6 percent) of the Fortune 500 companies have business blogs (Socialtext.net, 2008).

The increasing popularity of consumer generated content including blogs raises a number of questions as well as new opportunities. There is a need to examine how consumers react to different advertising formats in this new medium. Some say that the effectiveness of blogs as an advertising medium is not proven as yet.

The literature review reveals that some studies have examined the marketing potential of blogs. Many companies are slowly but steadily embracing the fact that consumer generated advertising through blogs may actually be the next big thing. The increasing importance of blogs is highlighted in a report by The Nielsen Company which revealed that estimated online advertising spend on the top social network and blogging sites in the US almost doubled (119 percent), from approximately $49 million in August 2008 to approximately $108 million in August 2009. This was quite significant considering that the US was in recession at that time. The Neilsen (2009) report further suggests that the concerns regarding social media advertising have subsided or been addressed. However, there is still insufficient evidence to show that blogs are better or worse than other media concerning their effectiveness as an advertising medium. Businesses are naturally wary of investing in such a new medium when its long-term development prospect remains largely unknown.

Theoretically, there is also a need to understand how advertising works on blogs. This is examined in this study in the context of the traditional hierarchy-of-effects model (which is discussed in detail in the literature review chapter). Despite the profound implication of blogs for marketing communications, there are very few theoretical and empirical studies on this emerging social phenomenon.

1.2 Research Problems and Research Objectives

Though online advertising has been researched extensively, especially in Western countries, very limited lifestyle or attitudinal studies have been carried out on consumers concerning their perception of advertising on blogs. Most previous blog studies have focussed on bloggers and their motivations for blogging (Kumar *et al.*, 2004, Trammell and Keshelashvili, 2005). Other studies have focussed on the credibility of blogs as a source of information, especially with reference to news blogs, while others look at the benefits of having a corporate blog and ways in which companies can set them up.

Some of the literature that exists on blog marketing only discusses the possible advantages of using blogs as a marketing tool and the addition of blogs into the marketing mix (Koeppel, 2007, Ron and Tasra, 2007). The problem is that these studies totally ignore the perception of consumers towards blogs which carry advertisements and sponsored posts. Moreover, marketing research has not addressed the issue of the personal factors that drive consumers to visit blogs either nor linked it to the consumer attitudes towards blogs.

1.2.1 Overall Research Question

The unique defining feature of blogs that differentiates them from ordinary static websites is the interactivity that occurs between the blog readers and also with the blogger. Any discussion about blogs would be incomplete without touching on the electronic word-of-mouth transmission of information as well as the online interaction between bloggers and their readers and between the readers themselves on the blogs.

Furthermore, the literature review reveals that there are several conceptualisations of perceived interactivity and that a well accepted theory of interactivity is still lacking. It is hoped that this research will contribute to developing a valid theory of interactivity. As the study examines how consumers respond to advertising on blogs and more specifically to sponsored posts on blogs, there is a need to understand how advertising works on blogs.

Another issue that this research attempts to examine is the avoidance of advertising. There is evidence to show that consumers are increasingly getting fed up with advertising. For example, the results of a research conducted by Vizu Answers online research network which examined the attitudes of over 2000 consumers toward advertising in the different major media, including television, the internet and print reveals that consumers are frustrated and sometimes even have extreme levels of annoyance with advertising (Vizu, 2008). It was revealed that a general sense of irritation (29 percent) was the largest contributing factor to avoiding advertisements as opposed to a lack of trust (19 percent), or other reasons. In fact a majority of the respondents (56 percent) would rather eliminate all advertising than leave it as it is. Of concern to internet advertisers is the fact that, advertisements on the net were indicated to be the most invasive or irritating (48 percent) and consumers spent more effort (36 percent) avoiding ads on the internet than on TV (27.5 percent). However, apart from some comments by Kirkpatrick (2006), a prominent blogger, there is very little data available with regards to consumers' perception of advertisements on blogs, either as banners, buttons to text link ads, or in the form of sponsored posts.

Thus, given the unique nature of blogs, the overall research question of this research is to find out how interactivity relates to consumer attitudes towards blogs and specifically towards sponsored posts, a new form of online consumer generated advertising a new form of online consumer generated advertising. The study also seeks to investigate the conceptual and measurement issues of need for cognition, technology readiness, perceived interactivity and perceived credibility and builds on the traditional advertising hierarchy-of-effects theories.

1.2.2 Other Specific Research Objectives

This study has come up with some specific research objectives:

- To clearly define the antecedents of consumers' attitude towards blogs. In this study, the antecedents that have been identified are the individual characteristics of blog users (blog users are defined as the regular visitors to a blog) which includes technology readiness (Parasuraman, 2000) and the need for cognition (Cacioppo and Petty, 1982) as well as the characteristics of the blog, which are identified here in this study as perceived interactivity of the blog (Liu, 2003, Wu, 2006) and perceived credibility of the blog (Harmon and Coney, 1982, Ohanian, 1990).

- To investigate how the personal characteristics of blog users, namely, technology readiness (Parasuraman, 2000) and the need for cognition (Cacioppo and Petty, 1982) influence consumers' attitude towards blogs.
- As mentioned in section 1.2.1, this study seeks to investigate how the characteristics of the blog, namely perceived interactivity of the blog (Liu, 2003, Wu, 2006) relates to attitudes of blogs and ultimately towards sponsored posts on blogs.
- To investigate how perceived credibility of the blog (Harmon and Coney, 1982, Ohanian, 1990), influences consumers' attitude towards blogs. The credibility construct has generated a fair amount of debate among various scholars and numerous conceptualisations exist in the literature (Flanagin and Metzger, 2000, Metzger *et al.*, 2003a).
- To examine how the personal characteristics of blog users influence consumers' perception of interactivity on blogs, thus, contributing to the literature on the conceptualisation of perceived interactivity and to developing a valid theory of interactivity.
- To examine the relationship between attitude towards blogs and avoidance of the new form of advertising on blogs, namely sponsored posts on blogs.

- Based on the above objectives, to develop a structural model which presents a pattern of the relationships among the various constructs of the model.
- To examine the possible mediating effects in the SEM of consumer attitude towards blogs between Perceived Interactivity and Avoidance of sponsored posts on blogs.
- To examine the possible mediating effects in the SEM of consumer attitude towards blogs between Perceived Credibility and Avoidance of sponsored posts on blogs.
- To examine how the well accepted conceptualisations of need for cognition and technology readiness index apply in the context of blogs.
- Finally to help marketers (both academics and professionals alike) better understand how consumers perceive blogs as an advertising medium.

1.3 Research Methodology

1.3.1 Research Context and Targeted Respondents

Consumers who visit blogs form the context of this study. This study represents one of the first attempts to take an empirical look at the attitude of consumers towards blogs. Moreover, marketing professionals and academics alike are attracted to this new phenomena, not only due to the fact that they have changed the way we interact with each other but also due to the potential impact on businesses, especially marketing communications. However, there is evidence that consumers are increasingly avoiding advertisements and of a growing opposition to the commercialisation of blogs which is discussed in the second chapter. Thus this study looks at the avoidance of sponsored posts on blogs, which is a relatively new form of advertising.

This study also looks at antecedents of the attitude of consumers towards blogs, including the perceived interactivity, need for cognition, technology readiness index and the perceived credibility.

The data was collected via an online survey and the targeted sample comprises 'blog users' who are defined as consumers who visit blogs regularly, i.e., at least once a week. Respondents of the survey were asked to choose a blog they visit regularly and then respond to the questions keeping that particular blog in mind.

1.3.2 Data Collection

The initial exploratory research was carried out via queries posted on LinkedIn, the social network for professionals. Two questions were posted and a total of 12 responses were received.

Following this, two Professors in the Warwick Business School who were experts in marketing communications and consumer behaviour reassessed the questionnaire items for content validity.

The pilot test was then carried out which looked at PhD students in the University of Warwick who regularly visit blogs. They were invited to take part in the pilot via email invitations. Out of 358 PhD students who were sent an email, 86 completed responses were received and analysed.

The data was then collected using an online survey conducted over a period of four months ending 31 December 2009. For the final survey, 30 bloggers were contacted with a request to promote the online survey by writing a post linking to the survey. Some of those with a higher traffic were also offered financial incentives. Nine bloggers provided a unique link to the online questionnaire from their blogs.

427 completed responses were received, out of which 408 responses were used for the initial analysis. After removing the outliers, 399 responses were used for the final analysis.

1.3.3 Data Analysis

First, the scales were tested using a rigorous two-step approach as suggested by Anderson and Gerbing (1988). This involved conducting exploratory factor analysis followed by confirmatory factor analysis. Exploratory factor analysis was used to test for reliability, to identify initial evidence of unidimensionality (Gerbing and Anderson, 1988) and discriminant validity. Confirmatory Factor Analysis was carried out with AMOS 17.0 and the convergent validity, discriminant validity and composite reliability was assessed at this stage.

The last step involved the Structural Equation Modelling (SEM) using AMOS 17.0, which was used to test the hypotheses and to check for mediating effects as well.

1.4 Research Rationale

This study intends to make several original theoretical as well as managerial contributions. The intended theoretical and managerial contributions of this study are discussed below:

1.4.1 Intended Theoretical Contributions

Previous studies on blogs have mostly focussed on bloggers and their motivations for blogging (Kumar *et al.*, 2004, Trammell and Keshelashvili, 2005). Other studies have focussed on the credibility of blogs as a source of information, especially with reference to news blogs. However, it was found that marketing research has not really looked at the consumers who visit blogs. Previous studies have also neglected to investigate the influence of blogs on the whole consumers' purchase decision-making process. Furthermore, attitudes of consumes towards blog that carry sponsored posts, promoting a company, their products and/ or services remain largely un-researched.

To my knowledge, this research represents the first attempt to conceptualise and empirically examine how blog users (visitors to blogs) engage with blogs. This study is one of the first to study blog readers and how personal factors and blog characteristic factors influences consumers' perception of interactivity on blogs. In addition, this research proposes to fill the gaps mentioned above by investigating how blog users engage with blogs. It is hoped that the findings of this study will contribute to a more complete understanding of consumer attitudes toward blogs.

The research contributes to knowledge in the area of marketing communications by reconceptualising and empirically testing the online interactivity on consumer attitudes and on sponsored posts on blogs. Despite the growing importance and interest of sponsored posts on blogs, it is surprising that hardly any research has been carried out on this relatively new form of online consumer generated advertising.

This study will also look at the influence of different factors including the effect of individual differences on consumer attitudes towards blogs and redefine some key concepts, namely online interactivity and online credibility.

The credibility of blogs that carry sponsored posts, promoting a company, their products and/or services remains largely under researched. It is hoped that this study would also contribute to the body of knowledge in this area. The credibility of the blog is related to the credibility of the blogger and past studies on blogs have only looked at credibility of blogs as a source of news.

1.4.2 Intended Managerial Contributions

This study will benefit marketers as well as companies that are interested in gauging the potential that this new medium offers as a marketing and communication tool. Understanding how consumers perceive blogs as an advertising medium, will be highly useful for commercial bloggers as well as companies that specialise in blog advertising. One of the aims of the research would be is to develop profiles of consumers that visit blogs and to examine those with a higher likelihood of accepting sponsored content.

1.5 Overview of the Thesis Structure

The thesis is organised into eight chapters. Given below is the structure with brief description of each chapter as follows:

Chapter One: Introduction

The current chapter offers an overview of the study and provides a general framework for the design and implementation of the research. It also points out the gaps in the existing literature and the highlights the theoretical and managerial implications and contributions of the research.

Chapter Two: Emergence of Consumer Generated Advertising on Blogs

This chapter looks at the growth of consumer generated advertising and sponsored posts in particular. It also discusses some of the issues related to carrying sponsored posts on blogs.

Chapter Three: Literature Review

The literature review presents the advertising hierarchy of effects as the framework on which this study is based on. It also looks at the various constructs used in the study in which the constructs are defined and examined. This chapter looks at the theoretical perspectives that govern the relationship between the various constructs that influence attitude towards blogs and the relationship between attitude towards blogs and the avoidance of sponsored ads on blog.

Chapter Four: Conceptual Framework and Hypotheses

This chapter covers the hypotheses development and ultimately presents the conceptual framework of the study. The conceptual framework is operationalised as a research model.

Chapter Five: Methodology

This chapter deals with the research methodology adopted in this study. It starts off by explaining the philosophical grounding for the choice of methodology - positivism in this case. This research design formulation and the planning for data analysis are then discussed and the rationale of using an online survey is explained. The chapter also presents the various constructs and provides the original component statements along with the corresponding newly adapted statements used in this study.

Chapter Six: Results

This chapter presents the results of the empirical analysis. This includes the demographic results as well as the results of the principle component analysis. The results of the hypotheses which were covered in chapter 4 are also covered in this chapter, as well as a discussion of whether the hypotheses are supported or not and why.

Chapter Seven: Discussion

The discussion chapter links the results with the theoretical underpinnings. Implications of the findings in the previous chapter are discussed in detail here.

Chapter Eight: Conclusion

This final chapter summarises the findings of this research –basically the contributions to theory and practice. It also looks at the strengths and weaknesses of the research. The chapter also explains the limitations of the study and makes recommendations for future research.

Chapter 2: Emergence of Consumer Generated Advertising on Blogs

2.1 Introduction

This chapter looks at the emergence of advertising on blogs and also defines some of the key terms that will be used throughout the thesis, including the term 'sponsored posts'. This builds on the introduction and emphasises the uniqueness of this new form of advertising medium. It is hoped that this chapter will also add to the understanding of why the study of blogs and commercialisation of blogs is absolutely essential. The second section of this chapter clarifies some of the definitions and terminologies used. The third section discusses the disintermediation of advertising following the advent of customer generated advertising. The fourth section of this chapter looks at blogging as an occupation. The fifth section highlights the growing opposition of consumers towards the commercialisation of blogs and more specifically towards sponsored posts on blogs.

2.2 The Commercialisation of Blogs

As blogs became popular, it was not long before advertisers and companies saw the potential of this new medium. The only problem was that it was an untested medium and it was not known how the blogosphere would react. The earliest forms of advertising to appear on blogs were the graphical banners and text ads.

In this respect, Google or more specifically the Google adsense programme has been the market leader for contextual advertising solutions (Evans, 2008), whereby targeted advertisements are automatically displayed based on the content on the blog.

Other companies later started to sponsor content on blogs to create awareness and/or to promote their products and services. This led to the growth of a new branch of marketing communication known as *consumer generated advertising* (Walker, 2006), which refers to sponsored content on blogs, wikis, forums, etc.

As opposed to the graphical ads (in the form of banners or buttons), which have been around on websites for quite some time, the sponsored content may be in the form of feedbacks, reviews, opinion, videos, etc. Forrester Research uses the term '*sponsored conversation*' for this practice. According to Forester research, sponsored conversation involves paying bloggers to create transparent and genuine content about the brand (for example, sponsored posts, spokesbloggers). However, it should be noted that the compensation that bloggers receive for writing sponsored posts or sponsored communication is not limited to just money but they may also be compensated with products, services or in other ways.

Sponsored posts or *paid posts* or *sponsored reviews* can be defined as 'the promoted blog entries or posts contain links that point to the home page or specific product pages of the website of the sponsor for which the blogger receives compensation in the form of money, products, services or in other ways'.

Of course, this is nothing new and sponsored posts are rather an evolution of the paid insertions we see in most magazines and TV shows. Even movies carry sponsored products all the time – such as Aston Martin and BMW cars in James Bond movies. This is sometimes called '*product placement*' or '*embedded marketing*'. Looking at literature on product placements, one of the papers of note is that of Balasubramanian *et al*. (2006) who developed a conceptual model organised around the advertising hierarchy of effects model that shows how consumers respond to the messages. They have also listed several key differences and similarities between advertisements and product placements. The key differences were that messages are embedded in and not distinct from the editorial content in product placements and sponsored posts. In both cases, they don't identify the sponsor and have high levels of disguise and obtrusiveness.

According to Josh Bernoff of Forrester research, 'sponsored conversations' fits somewhere between public relations and advertising (Bernoff, 2009). He explained that PR involves trying to get a blogger to talk about you but you are still not sure whether this would be successful as the blogger might not talk about you. On the other hand, you can get a placement via advertising in the form of banners, buttons or text links on the blogs. However, you can only sponsored posts allow you to get the blogger promoting the product in their words which is more effective. Table 1 clarifies the differences between public relations, advertising and sponsored conversation, as given by Forrester Research. As pointed out in the figure, bloggers may require an incentive for them to take an interest in the post.

Table 1: Difference between PR, Advertising and Sponsored Conversation

	Public Relations	Advertising	Sponsored Conversation
What is it?	Attempts to influence bloggers in your space by providing relevant information (e.g., press releases, sending products for review)	Paying for ad space within a blog to reach the target audience (e.g., display ads, sponsorship)	Paying bloggers to create transparent and genuine content about the brand (e.g., sponsored posts, spokesbloggers)
Objective	Buzz	Reach	Buzz
Benefits	• Genuine • Trusted • In the blogger's own voice • Low cost	• Controlled message • Guaranteed reach	• Genuine • In the blogger's own voice • Low cost
Challenges	• Hard to get noticed • No guarantee of positive review	• Not conversational • Response rates low • Can be costly	• Lack of message control • No guarantee of positive review • May raise trust questions
When to use it	You have a product or service that actually interests bloggers.	You need reach in appropriate contexts to augment your media buy.	Your brand is unlikely to interest bloggers without an additional incentive.

Note: Adapted from Forester Research, Inc. (Bernoff, 2009)

2.3 Disintermediation

One of the major implications of the advent of consumer generated advertising has been the disintermediation – the reduction of intermediaries between companies and their customers. Companies are now moving away from advertising agencies and approaching consumers directly using their own corporate blogs or via bloggers, who are consumers themselves.

The very idea that bloggers who can be anybody with an internet access, could take over campaigns normally run by ad agencies with million dollar budgets, is really revolutionary. This has lead to a paradigm shift in the way ad campaigns are created and run and companies are in fact, actively working with bloggers today. The disintermediation has resulted in the breakdown of the traditional advertising model where the advertising agencies were usually the only interface with the customer. Some high profile successful campaigns involving bloggers include the launch of the Skype phone in the UK by British mobile company Hutchison 3G UK Limited. The company contacted prominent bloggers throughout the country and those who were interested were given free mobile phone samples and then asked to review them on their blogs. Various news and reviews of the phones written by bloggers around the web were then carried on a special blog developed by the company called 3mobilebuzz blog (www.3mobilebuzz.com) (Mutum and Wang, 2010).

This could have backfired if the bloggers had written negative reviews but it was a calculated risk. As it turns out, most of the reviews were positive. Other companies directly reaching out to their customers include Nokia, Asian low cost airline Air Asia and US retail giant, Kmart (Lukovitz, 2008).

Of course, it would be wrong to assume that there has been a complete disintermediation between businesses and the consumers. Despite the fact that traditional advertising firms have been slow to adopt this new medium, several start-up companies specialised in consumer generated advertising on blogs have stepped in to fill this vacuum. Blogitive, which started in early 2006, was the first online service to pay bloggers on a per-post basis (Shull, 2006).

2.4 Blogging as a Commercial Activity

The commercialisation of blogs has resulted in some interesting social impacts. The 2008 Technorati report showed that a majority of bloggers (54 percent) had advertising on their blogs (White, 2009). One important impact of blogging has been the empowering of the 'work at home mums' or WAHMs. Many creative and talented women who gave up their careers to care for a family (voluntarily or otherwise) have suddenly found their voice again and are getting paid to blog – many have become commercial bloggers. According to Mutum (2007b), it is the opportunity to make money online through their blogs that has become a stronger motivating force to blog, even though it was initially the social networking that motivated them. Now, a number of 'Daddy bloggers' are joining them as they see blogging as a lucrative occupation (Martelli, 2009). The top bloggers today make more than a million dollars annually (Mooney, 2007) and many have left their jobs to become full time bloggers.

2.5 Opposition to Sponsored Posts and New Developments

The opinion of experts and commentators towards commercial activity on blogs also differ vastly. Some believe that it enables the shift of locus and control of marketing communication from companies to consumers, facilitates open participation and hence is a positive progress towards democratisation. However, several others believe that using blogs for any form of commercial activity like consumer generated advertising will destroy the blogosphere's credibility (Kirkpatrick, 2006).

Obviously, not all bloggers welcomes the commercialisation of blogs with open arms. Grossman (2004, p. 3) gave the example of two blogs, namely, Gawker.com and Wonkette.com, noting *"they've lost their amateur status forever"* as a result of carrying ads. Kirkpatrick (2006) believed that this new development will completely destroy the blogosphere's credibility and Calacanis, a famous blogger, entrepreneur and founder of Weblogs Inc., even compared Izea's (previously PayPerPost.com) actions to prostitution (WOMMA, 2007). Such criticisms suggest that these forms of sponsored advertising on blogs are highly unethical.

The company most targeted by critics of sponsored posts is Izea (formerly known as PayPerPost.com). The main reason the Orlando based start-up is widely criticised is probably due to the fact that it popularised sponsored posts and is the present market leader for consumer generated advertising. Furthermore, it may also be due to the fact that they did not initially require any disclosure of the sponsored posts by the bloggers (Kirkpatrick, 2006, WOMMA, 2007). Despite this, the company has been going from strength to strength (Hof, 2006) and has even secured funding from investors.

Concerned with the rise in paid endorsements on blogs, the US Federal Trade Commission (FTC) introduced new rules governing endorsements and testimonials which came into effect in December 2009. According to the revised guides, bloggers need to disclose their 'material connections' (payments or free products) with advertisers (FTC, 2009). The revised guide also includes new examples of connections between advertisers and bloggers (which they call endorsers).

According to the FTC website:

"These examples address what constitutes an endorsement when the message is conveyed by bloggers or other 'word-of-mouth' marketers. The revised Guides specify that while decisions will be reached on a case-by-case basis, the post of a blogger who receives cash or in-kind payment to review a product is considered an endorsement. Thus, bloggers who make an endorsement must disclose the material connections they share with the seller of the product or service. Likewise, if a company refers in an advertisement to the findings of a research organization that conducted research sponsored by the company, the advertisement must disclose the connection between the advertiser and the research organization. And a paid endorsement – like any other advertisement – is deceptive if it makes false or misleading claims."

Ann Taylor Stores was among the first companies who have been warned under the new guidelines in the US. The company had given gifts to bloggers who had attended the preview of its summer 2010 fashion collection. Apparently a number of the bloggers had failed to disclose that they had received gifts when they blogged about the event. Ann Taylor does have a written policy regarding disclosures and the FTC warned the company to enforce the policies or face action from the authorities (Hailey and Knowles, 2010).

The US is the first country to introduce rules to control the spread of sponsored content on blogs and other social media and it will not be long before other countries follow suit.

2.6 Summary

The status of blogs as a medium that enables consumer collaboration, has led to a shift in the locus of control of marketing communication. Sponsored posts on blogs are a new form of advertising that has emerged on blogs, whereby bloggers are compensated in money or kind to write sponsored content on their blogs. This new phenomenon has given rise to a number of controversies and has resulted in a debate. On the other hand, many companies see a lot of potential in this newly emerging medium. Even governments are now moving in to control the spread of sponsored posts and also to benefit from the transactions by enacting legislation.

The commercialisation of blogs by the introduction of sponsored posts might affect the credibility perception of the blogs. Bloggers ultimately get to decide what to post because whatever they post will affect their credibility and ultimately their popularity. Several companies have realised the importance of the role that blogs play in the new model of marketing communication (Kirkpatrick and Roth, 2005, Economist, 2006, Wright, 2006). According to Deighton and Kornfeld (2007, p. 4), blogs are the *"non-marketing"* communication paths, or new traffic lanes not built for the convenience of marketers but for consumers. This has created new and unexpected challenges and opportunities for marketers to influence, participate or even fit in the social world of consumers. Marketers and companies need to understand the concerns of the bloggers and their readers and the ways they can be included in the overall marketing process.

Chapter 3: Literature Review

3.1 Introduction

The previous chapter, 'Emergence of Consumer Generated Advertising on Blogs', discusses in detail the commercialisation of blogs, specifically focussing on sponsored posts as well the growing opposition to the commercialisation and other recent developments. This chapter discusses some of the theories which were used as basis for building the framework of the research. The purpose of this chapter is to revisit the history and previous research and to report on current debates in the specific relevant topics and to set the background for the discussions though-out the rest of this thesis.

The first section of the chapter discusses the unique characteristics of blogs which distinguishes them from static websites and other social media. The chapter then looks at electronic word-of-mouth and the advertising hierarchy of effects. These two sections lay the foundation for the whole study. The following sections looks at respectively, the technology readiness index, the need for cognition, perceived interactivity and perceived credibility. This is followed by a section covering the consumer attitudes towards websites and then an examination of the various theories about attitudes towards advertising. The avoidance of sponsored posts, which is built on the avoidance of ads construct, is then discussed. All of the sections are summarised at the end of the chapter.

3.2 The Unique Characteristics of Blogs

Blogs have certain unique characteristics that are different from ordinary static websites as well as from other social media such as social networks (Facebook), wikis (Wikipedia) or user generated video sites (YouTube), etc. that necessitates theory to evolve.

The most unique characteristic is the interactivity that takes place on blogs – between the blogger and blog users – those who read the blogs, comment and leave feedback and continue the conversation on their own blogs (if they are bloggers) and between the blog users themselves. Most online studies conceptualising computer-mediated relationships have looked at static websites. The interactive nature of blogs necessitates a re-examination of various constructs that have been conceptualised before including perceived interactivity. Previous conceptualisations did not take the two way conversation occurring on blogs, not only between the blogger and the blog users but also between the blog users as well. This is discussed in more detail under section 3.4 below.

The conversational nature of blogs makes them ideal for building and maintaining computer-mediated relationships (Marken, 2005, Kelleher, 2006). A report by Forrester shows that bloggers are early adopters of technology; are active, multitasking Internet surfers, they trust other bloggers and are more open-minded than the average online consumer. Bloggers are opinion leaders and they recommend products when they like them – *"almost 70% of them tell* *their friends"* (Forrester, 2006). A survey carried out by Loudhouse Research and commissioned by Inferno PR, revealed that managers with purchasing responsibilities considered blogs the second best source for making an informed a business decision, behind industry reports. This contrasts with the opinion of managers with selling responsibilities who saw blogs as the least favourable source, behind industry reports (Moulds, 2007).

With the advent of online communities including blogs, such communication and interaction become not less but more prominent and are in real time. For example, consumers may suddenly come across a new gadget that has just been launched on a gadget blog. While going through the specifications and deciding whether to buy it, the reviews and comments or other customers regarding this gadget are readily available and can be used to help make the purchase decision.

Table 2 lists the characteristics of blogs compared to other social media and their possible impact on existing theories.

Table 2: Characteristics of Blogs Compared To Other Social Media

Factor	**Personal Blogs**	**Other Social Media**	**Impact on Theory**
Interactivity	Blog users can interact with bloggers and other users via comments on the post and widgets which allows them to chat on the blog. Most blogs allow anyone to comment whereas others allow only registered members. Most bloggers also allow their readers to contact them via email. Bloggers can also respond to a post on one blog by blogging a reply or comment on their own blogs which can link back to the original post via Trackbacks.	- Twitter users interact by replying to a tweet or retweeting, mentions or by sending a direct message. - Facebook allows friends to comment, "like" or share your updates on their own pages. - Flickr and most of the photo sharing sites also allow comments as well. - YouTube allows comments and video replies. Moreover, visitors can favourite the videos and even embed on their own sites, thus expanding the reach message to a larger audience.	In view of the social interaction that occurs in social media, there is a need to re-examine the definition of interactivity in this specific context
Content	Blogs are very versatile – they allow words, images, flash, widgets and even videos to be embedded in the posts. There are no word count limitations either. Though length of blog posts vary depending on the blogger. This allows bloggers to tell more detailed "stories", product and service reviews as well rants about product and services they don't like. This in turn allows more interaction from other users.	Certain limitations on other social media formats. For example, only 140 characters on Twitter. Facebook does allow users to link video and images as well. Updates on Facebook, LinkedIn and other social media are also typically shorter as compared to blog posts.	There is a need to examine the relationship between interactivity and attitudes towards blogs and also towards consumer generated advertising in blogs.
Credibility	Blog users may even view the biased tone of bloggers positively (Johnson & Kaye, 2004). Blog users judged blogs to be even more credible than traditional media (Johnson & Kaye, 2004).	Twitter is considered less credible than other sources (Schmierbach & Oeldorf-Hirsch, 2010, August). Lack of credibility studies on other social media	How would credibility affect attitudes towards the blogs?

Access to Archives	Blog posts are normally archived, arranged in reverse chronological order and blog users can access older posts. Allows deeper conversation on blogs.	Accessing old updates on other social media including Twitter, Facebook or LinkedIn is not easy if not impossible.	Are blogs more credible than other social media and how does it affect attitudes towards blogs?

3.3 Advertising Hierarchy of Effects Models and Electronic Word-of-Mouth

In marketing, any discussion about marketing communications and advertising would be incomplete without considering the advertising hierarchy of effects theories. Before we can even start to understand the consumers' avoidance of sponsored posts or 'consumer generated advertising', we need to understand the role of blogs in marketing communications. Highly relevant to this study is the importance of interpersonal influence and electronic word-of-mouth communications in this process (Litvin *et al.*, 2008).

Barry and Howard (1990) hypothesised that according to the traditional advertising hierarchy of effects model, consumers respond to advertising and marketing communication messages in an ordered sequential manner with cognitive ('thinking') in the beginning, followed by affective ('feeling') and finally conative or behavioural ('doing').

There have been several variations of advertising hierarchy of effects models published in marketing literature. One of the earliest is AIDA which stands for attention, interest, desire and action. E. St Elmo Lewis first came up with this model in the late 1800s and early 1900s (Barry and Howard, 1990). Later advertising hierarchy of effects models are similar to or are extensions of the AIDA model. Among those, an influential advertising hierarchy of effects model was proposed by Colley (1961) called the *Defining Advertising Goals for Measured Advertising Results* advertising model (or DAGMAR). The DAGMAR advertising model is very similar to AIDA and according to this model, a consumer gains 'Awareness' of a product followed by 'Comprehension'. The customer then develops 'Conviction' and finally takes 'Action' by purchasing or moving towards a purchase. Thus, the DAGMAR model is also known as the *ACCA advertising model*. The development of the DAGMAR model was important because it led to the definition of the 'target audience' and objectives of the advertising message. In the case of the blogosphere in the present research, the target audience would be the blog readers, a little known or researched demographic.

The most popular (and most cited) advertising hierarchy of effects model is the one given by Lavidge and Steiner (1961). According to them, consumers go through six steps before making an actual purchase, namely, 1) Awareness, 2) Knowledge, 3) Liking, 4) Preference, 5) Conviction and finally 6) Purchase. Another major contribution was made by Preston and Thorson (1983) who pointed out that advertising is a long term process and that a favourable response at one step is necessary but not sufficient condition for a favourable response at the next step.

Though not a focus of this study, it is important to mention the contribution of Lavidge and Steiner (1961). According to their concept of 'respondent involvement', which is related to consumer's psychological or economic commitment, more committed or involved consumers would take longer to go through the same steps before making a purchase decision.

The advertising hierarchy of effects models has also been widely criticised by a number of scholars (Barry and Howard, 1990, Weilbacher, 2001, Barry, 2002), with some questioning the linear progression as well as the sequence of steps. Some advertising hierarchy of effects models suggest that the influence of advertising message or marketing communication begins with purchase behaviour rather than with cognition. In other words, behaviour influences cognition and conation. Ray *et al*. (1973) came up with a conation-affect-cognition sequence whereby consumers' behaviour is formed first. Attitudes are then formed followed by learning. Another alternative sequence was put forward by Kiesler (1971). According to his conation-cognition-affect sequence, due to commitment, behaviour can force consumers to change their cognitions to come in line with their commitments (Barry and Howard, 1990).

Despite these criticisms and different models, the cognition-affect-conation sequence remains the most popular framework in advertising hierarchy of effects theories. The traditional model does provide a framework for marketing academics and practitioners to understand consumer's responses to marketing communication.

3.3.1 Link with Online Word-of-Mouth Communication

Review of literature indicates that only a few studies have examined the advertising hierarchy of effects models from an online perspective. The results of the experimental study by Bruner and Kumar (2000), indicates that the advertising hierarchy-of-effects as seen in the traditional media can be transferred to websites as well. Another study by Castañeda *et al*. (2009) also identified that the hierarchy of effects existed among different attitude concepts, namely, attitude towards the internet, attitude towards the website and attitude towards the brand related to a brick-and-click business. However, looking at the advertising hierarchy of effects model specifically in the context of online social networks including blogs, it looks like the driver behind the advertising hierarchy of effects is the interactivity or the electronic word-of-mouth communication which is occurring between the various participants. Though a theory of word-of-mouth communication is not the focus of the study here, it is acknowledged that it they can influence both attitudes and even purchase behaviour of consumers (Charlett *et al.*, 1995). As Brown *et al.* (2007) has indicated, the process of word-of-mouth communication differs in the online context. Furthermore, they have shown that participants of a social network view websites as the primary actor. According to them, online communities act as a social proxy for individual identification. This is relevant in this study because the word-of-mouth communication is part of what makes blogs interactive as will be discussed in the section on interactivity.

As shown by Hennig Thurau *et al.* (2004) the consumers' desire for social interaction is among the primary factors leading to electronic word-of-mouth behaviour besides *"desire for economic incentives, their concern for other consumers, and the potential to enhance their own self-worth"* (p.39).

Looking at it from the marketing perspective, word-of-mouth was initially defined as *"face-to-face communication about products or companies by those people who were not commercial entities"* (Litvin *et al.*, 2008, p. 3). Later Westbrook (1987, p. 261) differentiated word-of-mouth from other mass-media channels to define it as: *"informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods and services and/or their sellers."* Word-of-mouth is one of the mechanisms that customers use to evaluate alternatives in the overall consumer decision process. A review of the literature indicates that word-of-mouth might actually be the major driver of the diffusion or adoption of new products or services (Bass, 2004, Hu *et al.*, 2006). The post-purchase evaluation shared with others customers online might actually influence their decision as well. The advent of the Internet and computer-mediated communication has given rise to what is known as electronic word-of-mouth (Gruen *et al.*, 2006), which includes communication through online interactions including various social media. Research has indicated that electronic word-of-mouth may actually be a more credible source of information to customers as compared to other sources of information created by marketers (Bickart and Schindler, 2001).

However, as has been pointed out by various authors, the whole marketing communication process is not so straight forward and is dependent on various factors as well. Studies by Blackwell *et al.* (2006) and Mowen and Minor (1998) have shown that individuals differ from each other in distinctive patterns of behaviour. Blackwell *et al.* (2006) calls these factors *individual determinants,* whereas Mowen and Minor (1998) refers to these as *individual-difference variables*. Interactivity in the blogosphere is believed to be dependent on the personal characteristics of the participants – the blog users. The present study will use the term *personal characteristics*, namely the concept of need for cognition and technology readiness of the blog readers. The concept of perceived interactivity is further discussed in detail below.

3.4 Perceived Interactivity

Earlier studies on online interactivity focussed on the functional aspects, namely, the human interaction with a Web page, such as speed at which the pages and images loaded (Steuer, 1992, Deighton, 1996, Novak *et al.*, 2000, Coyle and Thorson, 2001, Campbell and Wright, 2008). In view of the increasing popularity of social media and with particular reference to blogs, there is a need to re-examine the interactivity construct. This is true especially in the case of blogs.

As discussed in chapter 1 and section 3.2, it is the interactive nature of blogs that distinguish blogs from other static websites and other social media. Sharing of ideas, information and other media is taking place on blogs between bloggers and blog users and between the blog users as well. It has been argued that interactivity can lead to affective or behavioural responses but should be separated from those consequences. However, communication on blogs is not just two-way, between blog visitors and the blogger but also happens between blog visitors talking to each other via comments or on specific widgets for that purpose if provided. This following sub-section highlights the importance of the perceived interactivity construct and also the different conceptualisations existing in literature.

3.4.1 Perceived Interactivity versus Actual Interactivity

In marketing literature, several authors have pointed out the importance of focusing on the perceived interactivity rather than the actual interactivity facilitated by interactive technologies (Wu, 1999, McMillan and Hwang, 2002, Sohn and Lee, 2005). Perceived interactivity is thus subjective or experiential and differs from the actual, objective or structural interactivity (Wu, 2006). As Schumaan *et al.* (2001) pointed out, it is the consumer's choice to interact and thus it is a characteristic of the consumer and not a characteristic of the medium. According to them, the medium is indeed important but it only serves to facilitate the interaction. The next sub-section examines the various conceptualisations of perceived interactivity and how it has evolved.

3.4.2 Conceptualisations of Perceived Interactivity

A definition of interactivity that incorporates two way communication was given by Rafaeli (1988, p. 11). He defines interactivity as: *"an expression of the extent that, in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions."* As compared to other definitions, interactivity was conceptualised as unidimensional and looks at the sequences in which messages relate to each other.

Steuer (1992) focussed on the real time participation aspect of interactivity defining it as "..the extent to which users can participate in modifying the form and content of a mediated environment in real time".

It was found that various conceptualisations of perceived online interaction on websites have incorporated the interactions between the website visitors and webmasters; however, these conceptualisations have not taken the interactions taking place between the visitors to the sites into consideration.

McMillan (1999) is among the few that seem to have incorporated this community nature of interaction. He identified four "types" of interactivity that may occur in computer-mediated environments based on direction of communication and control. The models were:

a) Rich Content: online environments with in-depth searchable content as well as resources which can be customised.

b) Virtual Community: including chat rooms, etc. with shared communication. The interactivity that takes place in blogs would fall into this model.

c) Packaged content: content created to attract an audience including email newsletters, corporate websites, etc.

d) Virtual transactions: Facilitating online transactions including sale, donations, customer support, etc.

On the other hand, Cho and Leckenby (1999) defined interactivity from an advertising perspective as "the degree to which a person actively engages in advertising processing by interacting with advertising messages and advertisers". Among the significant contributions of their study was their identification of two primary locations of interactivity, namely, human-human interaction and human-message interaction. However, even though Cho and Leckenby (1999) identified human-human interaction besides human-message interaction, they did not really examine this facet of interactivity in detail and only identified them as behavioural level interactions. They identified the second type of interactions, namely human-message interaction as referring to the perceptual level of interactions. The later type of interactions were further sub-divided into designed interactivity (presence of interactive features on the websites) and perceived interactivity (the level of subjective perception of interactivity).

Similarly, Liu and Shrum's (2002) conceptualisation of perceived interactivity also highlights user-user interaction in a computer mediated environment, besides user-machine and user-message interactions. They pointed out the problem with discussing user-user interactions in a computer mediated environment from an interpersonal communication perspective and the importance of the internet in breaking down the boundaries of traditional interpersonal communication.

Liu and Shrum's (2002) proposed a three-dimensional construct which captures all three types of interaction and defined interactivity as *"the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronised"*. This definition identifies the potential benefits and limitations of online interactivity. It should be noted that their paper was conceptual in nature and did not have a scale to measure perceived interactivity.

Building on their definition, Liu (2003, p.208) defines interactive communication as: *"a communication that offers individuals active control and allows them to communicate both reciprocally and synchronously".* This definition takes the users of a medium into consideration and also looks at how they communicate and interact with the medium. They came up with an interactivity scale which was shown to have high levels of validity and reliability by other researchers. Liu (2003) points out that this scale was developed to measure the interactivity of websites and also suggested the expansion of the scale to other forms of online communication including emails.

In his paper, Wu (2006) has examined the literature on perceived interactivity from two perspectives, namely the communicators (e.g., marketers') and the audience's (e.g., consumers'). He has included Rafaeli (1988), Cho and Leckenby (1999), Liu and Shrum (2002), and Steuer (1992). He has included the conceptualisations of Wu (1999) and McMillan and Hwang (2002) as coming from an audience's perspective tend, treating it as an individual trait. Based on the literature he highlighted three assumptions underlying the communicators' perspectives, namely, 1) the willingness of the audience to interact or respond 2) the potential for interactivity in the system can be realized by the audience and 3) "conversationality" is the ideal of interactivity. He concluded that the above assumptions may not always hold true. In the special context of this study which looks at interaction on blogs, all three assumptions are believed to hold true.

Taking a closer look at the items making up the dimensions identified by Wu (2006), it was found that there was only one statement that indicated two-way communication, with regards to communication with other customers to the site in real time. The component item of the perceived responsiveness dimension was, "I could communicate in real time with other customers who shared my interest in this website". This statement is quite important because it looks at the interaction between customers on the website.

3.4.3 Multidimensionality of the Perceived Interactivity Construct

As mentioned earlier, Rafaeli (1988, p. 11) conceptualised interactivity as a narrow unidimensional construct. However, most authors now agree that perceived interactivity is a multi-item scale and is multidimensional (Cho and Leckenby, 1999, Wu, 1999, Liu, 2003, Wu, 2006). For example, Cho and Leckenby (1999), while looking at interactivity from an advertising perspective postulated three dimensions (the antecedent variables) of interactivity, namely, 1) high level of involvement, 2) high perception of message-relatedness between the banner ad and the target ad, and 3) high perception of message-personalisation. These antecedents were believed to predict the degree of interactivity.

Another comprehensive conceptualisation of perceived interactivity based on behavioural interactivity was offered by Johnson et al. (2006), which covered four facets they identified by going through previous conceptualisations. They defined interactivity as: "the extent to which an actor involved in a communication episode perceives the communication to be reciprocal, responsive, speedy, and characterised by the use of nonverbal information" (p. 41).They identified the following four facets of perceived:

1. Reciprocity: the extent to which communication is perceived to be reciprocal or to allow mutual action.

2. *Responsiveness*: the degree to which the responses in a communication are perceived to be appropriate and relevant, and resolving the information need of the interaction episode or event.

3. *The speed of response*: the extent to which a response to a communication event is perceived to be immediate, or without delay.

4. *Nonverbal information:* the extent to which the communication is perceived to be characterised by the use of multiple channels for communicating information.

Out of these four, the later three latent variables were found to be significantly related to perceived interactivity (Johnson *et al.,* 2006).

Sohn and Lee (2005) also identified three distinct dimensions of perceived interactivity on the web, which were quite similar to Wu (2006) but which they named as control, responsiveness and interaction efficacy respectively. McMillan and Hwang's (2002) identified three elements that occur frequently among various conceptualisations of interactivity, namely, direction of communication, user control and time and pointed out that these are interrelated and overlap. The scale which they developed was supposed to represent all the three aspects but was found to be most closely associated with the concept of real-time conversations - highlighting the importance of speed in interaction.

In one study, following a number of interviews, McMillan and Downes (2000) identified two key dimensions of interactivity that are based on individuals' perceptions, namely, direction of communication and control of the communication experience. As they pointed out, two-way communication is more interactive than one-way communication.

On the other hand, Wu (1999) initially defined perceived interactivity of websites as a two-component construct consisting of navigation and responsiveness. He later redefined it "as a psychological state experienced by a site-visitor during his or her interaction with a website" (Wu 2006). According to him, perceived interactivity manifests in three dimensions, namely, perceived control; perceived responsiveness and perceived personalization.

On the other hand, Liu and Shrum (2002) proposed three dimensions of interactivity, namely, *active control*, *two-way communication*, and *synchronicity:*

Active control describes 'a user's ability to voluntarily participate in and instrumentally influence a communication';

- *Two-way communication*, refers to the two way flow of information; and
- *Synchronicity*, relates to the speed of the interaction.

Building on this, Liu (2003) later conceptualised and tested perceived interactivity, also as a multidimensional construct and the 15 items which represents the three correlated but distinct dimensions given above. As mentioned earlier, her scale has been adapted and used in the present study to look at the perceived interactivity of blogs.

Some of the important conceptualisations of perceived interactivity are summarised in Table 3.

Table 3: Different Conceptualisations of Perceived Interactivity

Author/s	Main Characteristics
Rafaeli (1988)	▪ unidimensional ▪ looks at the sequences in which messages relate to each other
Steuer (1992)	▪ focussed on the real time participation ▪ the extent to which users can participate in modifying the form and content of a mediated environment
McMillan (1999)	▪ based on direction of communication and control ▪ 4 "types" of interactivity that may occur in computer-mediated environments
Cho and Leckenby (1999)	▪ an advertising perspective ▪ interacting with advertising messages and advertisers. ▪ 2 primary locations of interactivity, viz., human-human interaction and human-message interaction ▪ some items were affective responses and/or behavioural intentions which may result in incorrect measures (Liu, 2003)
Wu (1999)	▪ 2 component construct consisting of navigation and responsiveness ▪ some items have affective responses and/or behavioural intentions and may result in incorrect measures (Liu, 2003) ▪ later redefined (Wu 2006)
McMillan and Downes (2000)	▪ 2 key dimensions: direction of communication and control of the communication experience ▪ two-way communication is more interactive than one-way communication
McMillan and Hwang (2002)	▪ 3 elements: direction of communication, user control and time and pointed out that these are interrelated and overlap ▪ scale found to be most closely associated with the concept of real-time conversations ▪ speed in interaction is important ▪ formative scale and might not be appropriate (Wu, 2006)
Liu and Shrum (2002)	▪ conceptual ▪ degree to which 2 or more communication parties can act on each other ▪ looks at the communication medium, and on the messages and the degree to which such influences are synchronised ▪ 3 dimensions: active control, two-way communication, and synchronicity

Liu (2003)	▪ based on Liu and Shrum (2002) ▪ 3 correlated but distinct dimensions: active control, two-way communication, and synchronicity ▪ looks at how users communicate and interact with the medium ▪ scale showed high level of validity and reliability and consistent ratings
Johnson *et al.* (2006)	▪ conceptualised 4 facets of interactivity: reciprocity, responsiveness, the speed of response and nonverbal information. Only the later 3 were found to be significant
Wu (2006)	▪ interaction with a website ▪ refers to the psychological state experienced by a site-visitor ▪ 3 dimensions identified: perceived control; perceived responsiveness and perceived personalization

3.4.4 Issues with the Existing Conceptualisations of Perceived Interactivity

As discussed above, it was identified that most conceptualisations of perceived interactivity have ignored the interactions taking place between the visitors to the sites. This is important in the context of social media where the medium facilitates communication between various users.

Besides this, other issues have also been identified with the various attempts to conceptualise perceived interactivity. For example, the perceived interactivity scales of Cho and Leckenby (1999) and Wu (1999) contained items which were deemed to have affective responses and/or behavioural intentions. According to Liu, (2003), these may result in incorrect measures of perceived interactivity. McMillan and Hwang's (2002) measure of perceived interactivity underwent a formal process of scale development. However, Wu (2006) pointed out that their interactivity scale was formative and their use of traditional scale development might not be appropriate. According to him, an appropriate measurement model should be reflective, where the observed indicators are assumed to be caused by the latent variable.

Another issue is with regards to the different meanings in different contexts. Even though the dimensions of perceived interactivity identified by Wu (2006) were similar to that of McMillan and Hwang (2002), Wu (2006) was opposed to using the term 'two-way communication' to define interactivity from an audience perspective. According to him the term can mean different things in different contexts and he preferred to use the term 'perceived personalisation' instead.

In Sundar and Kim's (2005) experimental study, the dimensions of perceived interactivity identified by other authors were used without their component items to measure perceived interactivity. While looking at interaction with ads, test subjects were asked to answer their thoughts about ads on three Likert-type scaled questions, namely, (1) Enabled two-way communication; (2) Enabled synchronous communication; and (3) Enabled active control.

3.4.5 Perceived Interactivity and Attitudes towards Websites

There is some evidence that the perceived interactivity of websites is related to consumer attitudes as well. Rafaeli (1988) related interactivity with attitudes, namely acceptance and satisfaction as well as other dimensions such as motivation and sociability among others. Chang and Wang (2008) also showed that attitude and behavioural intention is directly affected by users' internal and external motivation, and indirectly affected by interactivity. However, they conceptualised interactivity as composed of the constructs, perceived ease of use, perceived usefulness and flow experience.

Among the most significant studies in this area has to be the experimental study of students in the US and Korea (Ko *et al.*, 2005) which employed the uses and gratification theory as the theoretical framework to investigate the motivations and consequences of interactivity in the online context. They also found that different types of interaction had a positive effect on attitudes towards sites. The empirical study, further indicated that the effect of human-human interactions on attitude towards site were higher than human-message interactions. However, as the authors pointed out, the study had some limitations including the fact that the participants were in an experimental situation and suggested that future research should be carried out in less artificial experimental settings. Furthermore, their research was also based on the website of a printer company and this may make the results less generalisable.

Jee and Lee (2002) also established that *perceived interactivity* and *attitude toward the website* were highly correlated. As mentioned earlier, their perceived interactivity construct was based on Wu's (2006) conceptualisation and focussed on the human-machine or human-interface interaction. Another empirical study also showed that there was a positive association between *perceived interactivity* and the user's attitude to the web site (Johnson *et al.,* 2006).

In view of the interactions between users on blogs and the blogger and among visitors themselves, it is highly likely that improved perceptions of interactivity of a blog would result in positive attitude towards the blog. As mentioned earlier interactivity in the blogosphere is believed to be dependent on the personal characteristics of the participants – the blog users. The existing literature on these characteristics, namely the concepts of need for cognition and technology readiness of the blog readers are examined below:

3.5 Technology Readiness Index (TRI)

Technology readiness is an important factor influencing the usage and uptake of Web and related technologies (Parasuraman and Colby, 2001). Technology readiness was defined by Parasuraman (2000, p.48) as "*people's propensity to embrace and use new technologies for accomplishing goals in home life and at work*".

Technology readiness refers to the set of beliefs that lead people to adopt and embrace technology and studies have shown that technology readiness is a good predictor of the speed of adoption of technology and level of technology usage. It is used to explain consumers' individual differences with regards to usage of technology. However, there has been a lack of empirical studies (Zeithaml *et al.*, 2002) on technology readiness especially in the online context.

3.5.1 Multidimensionality of the TRI

The Technology readiness index (TRI) is a multiple-item scale to measure Technology readiness – the readiness to embrace new technologies. It uses a series of belief statements in a survey to quantify an individual's overall level of technology receptiveness. It should be noted that TRI only represents a set of beliefs and does not measure technological competence (Parasuraman, 2000, Parasuraman and Colby, 2001). Empirical studies have indicated that technology readiness is made up of a combination of positive and negative beliefs about technology (Dabholkar, 1994, Mick and Fournier, 1998). These beliefs can be categorised into four distinct dimensions as reflective indicators (Mick and Fournier, 1998, Parasuraman and Colby, 2001). The dimensions are as follows:

- *Optimism*: The optimism facet is defined as a positive view of technology and belief in the inherent benefits of technology, such as flexibility, efficiency, etc. (10 items).
- *Innovativeness*: Refers to the tendency to experiment and try out new technology and to be a thought leader (7 items).
- *Discomfort*: A perceived lack of control over technology and a lack of confidence in using the new technologies properly (10 items).
- *Insecurity*: Distrust of technology and scepticism about its ability to work effectively (9 items).

Among the various dimensions, the *innovativeness* dimension is probably the most researched. Agarwal and Prasad (1998) believed that the most important factors that influence individuals' cognitive interpretations of information technology are the personal traits. They brought forward a construct similar to *innovativeness* in the TRI, called *personal innovativeness*, which relates to the willingness of an individual to try out any new information technology. Called *personal innovativeness in information technology* (PIIT), it was described as symbolising the risk taking propensity that exists in certain individuals and not in others. Lu *et al.* (2005) showed that PIIT had a direct positive impact on perceived usefulness and perceived ease-of-use of wireless mobile technology.

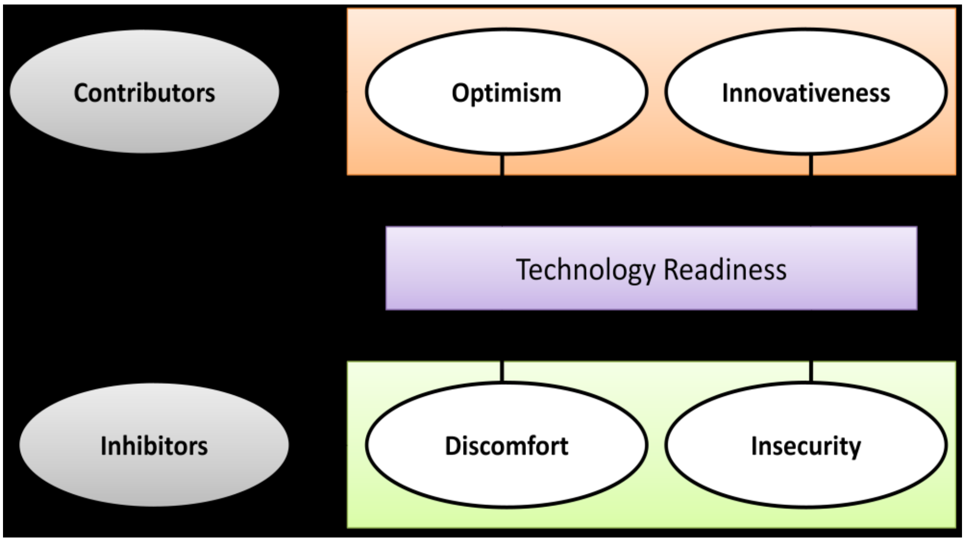


Figure 1: Technology Readiness Index
(adapted from Source: http://www.technoreadymarketing.com/TRI.php)

Referring to Figure 1, the dimensions, optimism and innovativeness are the drivers or contributors of technology readiness whereas discomfort and insecurity are the inhibitors that suppress technology readiness (Parasuraman and Colby, 2001). The four dimensions are relatively independent. In other words, someone can simultaneously have both positive and negative feelings about technology. However, every individual will have either the negative or positive feelings towards technology dominant (Parasuraman, 2000).

The combination of scores on the four dimensions represents the overall technology readiness of a consumer. Several empirical studies have indicated evidence of link between technology readiness and technology usage behaviours (Parasuraman and Colby, 2001).

Based on their technology readiness, Parasuraman and Colby (2001) have also grouped consumers into 5 different segments, namely, Explorers, Pioneers, Sceptics, Paranoids and Laggards. These categories are quite similar to the classification by Moore (2002) who looked at the diffusion of innovation. Moore used the terms Innovators, Early Adopters, Early Majority, Late Majority and Laggards.

3.5.2 Technology Readiness Index, Attitudes and Interactivity

The literature review reveals that there is a lack of studies investigating the effects of technology readiness on interactivity and on consumer attitudes. A few studies have shown that technology readiness is an antecedent of customer attitude towards online services. Results of these studies show that personality characteristics of consumers do influence customer perceptions about the level of interaction with technology as well as the attitude towards the use of technology. For example a study to explain the role of technology readiness towards usage of self-service technologies (SST) found that technology readiness influences the perceived SST service quality as well as behavioural intentions (Lin and Hsieh, 2006). Furthermore, Liu and Shrum (2002) proposed that people with lower computer-mediated communication apprehension would get more satisfaction from two-way communication on the Internet. Computer-mediated communication apprehension refers to the level of anxiety associated with communicating with others via a computer and these people tend to avoid interaction in a computer-mediated environment. Taking a fresh look at online communication, Liu (2007) emphasised the importance of distinguishing between the effects of the adoption of the online medium as well as from actual usage of the medium after it is adopted. A 10-item scale measuring interaction readiness was developed which she distinguished from the related concepts of interactivity and technology readiness. Interaction readiness focuses specifically on Internet technology and thus has a narrower focus as compared to Parasuraman's (2000) technology readiness index. She recommended that future research should look at how consumers with different interaction readiness levels respond to interactivity.

Another study by Liljander *et al.* (2006) looking at the effect of Technology readiness on customers' attitudes towards SSTs (including mobile, kiosk and internet) and their adoption behaviour, found that overall, technology readiness was found to have some limited but positive effect on customer attitudes towards using SSTs. Furthermore, optimism was found to have a positive effect on the perceived service quality, satisfaction and loyalty, whereas innovativeness had no effect. The innovativeness dimension was found to have only a marginal effect on attitudes towards using the Internet or a mobile phone to check-in. In another study looking at attitude towards technology-based service delivery, it was found that technology readiness is related to customers' attitude towards six innovative retail services, namely, digital shopping assistant, AVM, Self-Checkout, traceability info, dynamic promotion and dynamic pricing (Theotokis *et al.*, 2008).

Though the concept of technology readiness has helped provide valuable insights in understanding adoption, acceptance and usage of technology by consumers, it does not fully explain why blog users like certain blogs. Reading blogs and interacting on blogs can be seen as a cognitive activity and in order to understand why people engage in and enjoy interacting on blogs, the concept of the need for cognition is examined next.

3.6 Need for Cognition

When we examine consumers' perception of blogs and interaction on blogs, we cannot ignore the *need for cognition* (Cacioppo and Petty, 1982, Cacioppo *et al.*, 1996), which may affect the way in which individuals interact with the blogosphere. The scale reflects the extent to which people engage in and enjoy effortful cognitive activities. It is defined as *"the tendency for an individual to* *engage in and enjoy thinking"* (Cacioppo and Petty, 1982, p. 116). According to Fortin and Dholakia (2005, p. 390) the need for cognition refers to *"an individual's intrinsic enjoyment of and motivation to engage in effortful cognitive information processing"*.

The original need for cognition scale was composed of 34 items. A shorter 18 item scale was proposed later where the authors used a 5 point scale ranging from 1= extremely uncharacteristic of you (not at all like you) to 5 = extremely characteristic of you (very much like you). This shorter scale was shown to be more efficient, with similar validity and easier to administer (Cacioppo *et al.,* Cacioppo *et al.*, 1996) and was therefore adopted for this study.

3.6.1 Multidimensionality of the Need for Cognition Scale

Most studies assume the unidimensionality of the need for cognition scale. However, an exploratory study by Lord and Putrevu (2006) on both the long as well as the abbreviated scales using maximum-likelihood factor analysis indicated multiple dimensions. They identified four dimensions in both the original and abbreviated versions, which they named as enjoyment of cognitive stimulation, preference for complexity, commitment of cognitive effort and desire for understanding. According to the authors, the *enjoyment of cognitive stimulation* refers to the first factor where the items were found to share some indication of affect in relation to cognitively stimulating scenarios.

The items such as 'I would prefer complex to simple problems' loaded in the next dimension, which highlights a *preference for complexity* and was named as such. The items in the third dimension indicate the effort involved in the cognitions addressed by the statements and was labelled *commitment of cognitive effort*. Finally, the items that loaded onto the fourth dimension appeared to address a *desire for understanding* and hence the name.

3.6.2 Need for Cognition and Internet Usage Attitudes and Behaviours

In order to understand the role of the need for cognition in the consumer decision process, it is necessary to look at the online usage patterns of consumers. The need for cognition of consumers has been found to play a critical role in the formation of either positive or negative attitudes (Cacioppo and Petty, 1982, Haugtvedt *et al.*, 1992, Schiffman and Kanuk, 2000). Furthermore, a number of studies have looked at the internet usage behaviour of consumers. study of fifty experienced Web surfers by Kaynar and Amichai-Hamburger (2008) revealed that consumers used different Internet services mainly for three reasons Other studies have linked motivations of consumers to adopt technology, including online shopping with the need for cognition. For example it was shown that individuals with high need for cognition are intrinsically motivated while those with lower need for cognition require extrinsic motivation to engage in cognitive activities (Shang *et al.*, 2005, Chang and Wang, 2008).

Kaynar and Amichai-Hamburger (2008) also showed that there was a correlation between need for cognition and professional services use, with people high in need for cognition using information services in the internet relatively more than those with a lower need for cognition. In addition, Korgaonkar and Wolin (1999) also showed that consumers used the Web for a number of reasons besides retrieving information. Their study further indicated that motivations and concerns play a greater role in Web usage behaviour as compared to demographic factors.

3.6.3 Need for Cognition and Perceived Interactivity

The need for cognition was shown to be a significant predictor of consumers' perception of a website's interactivity in the context of making a purchase decision (Jee and Lee, 2002). However, it should be noted that perceived interactivity as conceptualised in their paper was based on Wu's (2006) conceptualisation and measured by a revised nine-item scale which focussed on the human-machine or human-interface interaction.

3.7 Multidimensional Perceived Credibility

There is an amazing wealth in consumer behaviour literature regarding the dimensions of credibility and their impact on various factors. However, there exists a debate with regards to the conceptualisation among various scholars in the literature depending on the view of the construct from different perspectives (Flanagin and Metzger, 2003, Metzger *et al.*, 2003a, Metzger *et al.*, 2003b).

It was also noted that in most of the definitions, most authors emphasise that credibility is a perceived quality (Self, 1996, Fogg and Tseng, 1999, Fogg *et al.*, 2001). The perceived quality of credibility was used by Fogg *et al.* (Fogg *et al.*, 2001, p.61) to clarify the construct. In their words: *"It does not reside in an object, a person, or a piece of information. Therefore, in discussing the credibility of a computer product, one is always discussing the perception of credibility."*

They also pointed out that the credibility perception is the result of the consumers evaluating multiple dimensions simultaneously. In other words, highly credible sources are perceived to have high levels of trustworthiness and expertise (Fogg *et al.*, 2001). A review of the literature also shows that there is a difference between trustworthiness and trust (Gefen, 2002, Hardin). This distinction is important because the latest studies have shown empirically that information credibility is distinct from trust (McKnight and Kacmar, 2007). While credibility is about believability, trust is about dependability. However, even though they are distinct, they are related. In other words, as the perceived credibility increases, this will ultimately lead to trust. Moreover, it was also discovered that authors were referring to the credibility of the source when they were talking about credibility. Credibility of a source or information is often defined as *believability* (Fogg and Tseng, 1999, Fogg *et al.*, 2001).

Expanding on this to include the online environment, Johnson and Kaye (2002, p.619) coined the term *webelievability* which refers to *"the degree to which people judge online information as credible".* This definition differs from the traditional definitions as it looks at the information presented rather than the source credibility. Harmon and Coney (1982) as well as Dholakia and Sternthal (1977), defined a credible source as someone who had the trustworthiness, expertness, and attractiveness attributes.

One of the most established and well validated perceived credibility scales was developed by Harmon and Coney's (1982), which measured consumers' perception of source credibility using six items (adjectives) on a seven-point differential scale. According to them, highly credible sources are perceived to have high levels of trustworthiness, expertise and attractiveness. They showed that speakers who have a higher credibility are more persuasive as compared to speakers with lower credibility. This credibility scale has been validated and adapted by a number of researchers including, Wiener and Mowen (1986), Gotlieb and Sarel (1991), Jung and Kellaris (2006), among others.

Ohanian (1990) developed another scale to measure the source credibility of celebrity endorsers. She showed that positive qualities such as physical attractiveness and likeability were transferred to the brand. Her findings were consistent with the findings of Hovland *et al.* (1953). Ohanian's credibility scale has also been widely adapted by a number of researchers in their own studies including Pornpitakpan (2003), Lafferty & Goldsmith (1999), etc.

On the other hand, the landmark study by Hovland *et al.* (1953) analysed the perceived credibility of communicators and identified two main dimensions of credibility, namely, expertness and trustworthiness. This landmark study found a link between the credibility principle and attitude change. They found that sources that are perceived to be more credible are more likely to produce a greater attitude change.

Berlo *et al.* (1970) proposed another three dimensional concept of source credibility. The dimensions were safety, qualification, and dynamism. It was found that the items which loaded highly on safety and qualification factors which are analogous to the trustworthy and expert dimensions first identified by Hovland *et al.* (1953),

According to Fogg *et al.* (2001) the *trustworthiness* dimension captures the perceived goodness or morality of the source. On the other hand, the *expertise* dimension captures the perceived knowledge and skill of the source. In other words, a highly credible site will have higher levels of perceived trustworthiness and expertise. In order to measure online users' perceptions of the credibility of a website, Fogg *et al.* (2002) developed 55 items under four factors, namely, expertise factors, trustworthiness factors, sponsorship factors, and other factors. The problem with their study was that the statements used to measure the credibility construct had quite low Cronbach's alpha values which indicates that they had problems with internal consistency reliability. Moreover, the construct had also not undergone rigorous tests for convergent and discriminant validity.

Walther *et al.* (2004) also identified trustworthiness, as one of the three dimensions of credibility besides safety, and dynamism. In another study, related to trustworthiness, site authorship and sponsorship were also identified as important criteria of web site credibility (Lynch *et al.*, 2001). They showed that the attributes and trustworthiness of the source author relates to source credibility.

Also building on the source credibility model developed by Hovland *et al.* (1953), the source credibility was shown to be composed of three dimensions, namely, the source's expertise, trustworthiness and attractiveness. He found the scale to be consistent with Hovland *et al.* (1953) as well.

3.7.1 Credibility and Link with Attitudes

There have been a number of studies on media credibility (Hardin, 2002, Metzger *et al.*, 2003a) and various authors have looked at the concept of media credibility from different perspectives. In recent years, the studies have been expanded to include the newly emerging computer mediated technologies. Taking a look at the development of online media, in the early 1990's, online media was considered less credible as a source of information as compared to the traditional media (Calabrese and Borchert, 1996, Houston, 1996). However, researchers soon found out that the web credibility showed similar characteristics to the older media, such as television and newspapers (Schweiger, 2000, Warnick, 2004). It was only recently that the online media was shown to be equally, if not more credible than traditional media in the eyes of their users (Flanagin and Metzger, 2000, Johnson and Kaye, 2000, Schweiger, 2000). The question is whether this applies equally to blogs – a relatively new online media.

Repeatedly, the main question that arises with regard to blogs is related to their credibility. The review of the literature shows that very little is known about how consumers perceive the credibility of blogs and how credibility perceptions relate to the perceived interactivity of blogs to influence attitudes towards blogs. The few studies on credibility of blogs do seem to confirm that blogs are indeed credible sources of information and blog users judged blogs to be even more credible than traditional media. One reason is that bloggers are perceived as independent and not controlled by corporate interests (Johnson and Kaye, 2004). However, these studies focused mainly on their credibility as sources of news, especially politics (Johnson and Kaye, 2004, Adamic and Glance, Yang, 2007). For example, studies have showed that there is a positive correlation between interpersonal communication and online news credibility (Kiousis, 2001). This is relevant to blogs which are often quite personal and depends on the individual tastes of the blogger.

Moreover, another reason that blogs have become so popular is because bloggers (individuals who blog) are not neutral (Grossman, 2004). In fact, blog readers may even view the biased tone of bloggers positively (Johnson and Kaye, 2004). Research has shown that bloggers were opinionated and open people, often revealing personal information on their blogs. Most bloggers are surprisingly open on their sites with some revealing intimate details of their life. It was found that many bloggers provided accurate identity and even contact information (via links to personal home pages) (Herring *et al.* 2004; Nardi *et al.* 2006).

A report by Forrester shows that bloggers are early adopters of technology; are active, multitasking internet surfers, they trust other bloggers and are more open-minded than the average online consumer. Bloggers are opinion leaders and they recommend products when they like them – *"almost 70 % of them tell their friends"* (Forrester, 2006). These factors may influence the perception of blogs as previous media studies has shown that the attributes and trustworthiness of the source author relates to source credibility (Lynch *et al.*, 2001). This may be linked to the fact that a site's credibility increases when the site conveys a real-world presence (Fogg *et al.*, 2000).

Furthermore, results of some studies also indicate that credibility influences attitude-toward-the-ad, attitude-toward-the-brand, and purchase intentions (Goldsmith *et al.*, 2000; Jung and Kellaris, 2006).

3.8 Consumer Attitudes towards Website

According to the Oxford *Dictionary of Psychology* (2009), *attitude* refers to the *"enduring pattern of evaluative responses towards a person, object, or issue"*. Furthermore according to the classical definition in the dictionary, it is a more or less consistent pattern of affective, cognitive, and conative or behavioural responses (or of feeling, thinking, and behaving) towards a psychological object. The underlying implication behind this definition is that is possible to have an attitude towards something without ever having the opportunity to express it in behaviour.

The literature review reveals that most of the definitions of attitude are quite similar. Shimp (2000, p.164) defined the term attitude as *"a general and enduring positive or negative feeling toward or evaluative judgment of some person, object or issue"*. The definition given by Hewstone and Stroebe (2001, p. 241), similarly refers to attitude as *"a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour"*. Robideaux (2002, p. 37) on the other hand, defines attitude as *"a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given subject"*.

Mowen and Minor (1998) points out that in consumer behaviour, it is quite common to use the term attitudes to refer to affect or a general evaluative reaction. They have distinguished between attitudes and beliefs where the later, refers to the cognitive knowledge about an object. However, many other authors have various belief constructs to explain consumer attitudes such as economic and social (Bauer and Greyser, 1968), materialism (Lee and Lumpkin, 1992; Mittal, 1994) and annoyance (Ducoffe, 1995; James and Kover, 1992).

The three-component model of attitude assumes that attitudes are a combination of three distinguishable modes of experience and reactions to an object, namely, affective, cognitive and behavioural (Breckler, 1984, Hewstone and Stroebe, 2001). This three-component model was used in the *attitude towards website* scale as conceptualised by Wu (1999). Most of the items in the scale was adapted from Kilbourne and Mowen (1986) and was used to capture the cognitive, affective and behavioural intention information.

Stevenson *et al.* (2000) and Bruner and Kumar (2000), used another *attitude towards websites* measure which encompasses a broader view and also draws from previous studies on the *attitude towards the ad* measure, such as using good vs. bad and like vs. dislike, to measure affective responses to the website. Chen and Wells (1999) came up with yet another *attitude towards websites* scale but with a narrower focus as compared to the earlier definitions given by Stevenson *et al.* (2000) and Bruner and Kumar (2000). This scale was developed while conducting research into advertising effectiveness involving the web and adapted from the *attitude towards the advertisement* scale (MacKenzie *et al.*, 1986) and has been proven to be reliable and valid. The statements in the attitude towards site scale were measured with a 5-point Likert-type scale ranging from Definitely Disagree to Definitely Agree (Chen and Wells, 1999, Chen *et al.*, 2002). In their study, three underlying factors of this construct were identified, namely, entertainment, informativeness, and organisation. They believed that a website can be good or bad in specific ways.

Chen and Wells' (1999) *attitude towards websites* scale is very similar to Ruiz's (2008) *satisfaction towards a company* scale. Ruiz's satisfaction measurement scales was in turn adapted from the satisfaction scales of Taylor and Baker (1994) and Oliver (1980). The present study uses a scale called *the attitude towards blog* scale, which was largely adapted from the Chen and Wells's (1999) *attitude towards website* scale as it was considered the most relevant. This present study is interested in finding out how the attitude towards blogs relates to advertisements or more specifically, sponsored posts on blogs. The following section discusses the consumer attitudes towards advertising in further detail:

3.9 Consumer Attitudes towards Advertising and Advertising Avoidance

3.9.1 Consumer Attitudes towards Advertising

Several advertising studies have tried to understand consumer responses towards advertising (Schlosser *et al.*, 1999, Robideaux, 2002, Rettie *et al.*, 2005). The most cited definition of *attitude toward an ad* was given by Lutz (1985, p. 53) who defines it as *"a learned predisposition to respond in a consistently favourable or unfavourable manner toward advertising in general".* Similarly another definition identifies *attitude toward an ad* as *"the aggregation of* *evaluations of perceived attributes and benefits of online advertising"* (Wang and Sun, 2010, p.334). It should be noted that the Lutz's definition refers to the consumer's general attitude toward advertising rather than attitudes toward specific advertisements. According to Burns and Lutz (2008) this definition does not reflect attitudes toward advertising on different mediums either.

Most of the previous studies on attitudes towards the ad have focussed on the impact on attitude towards brand and ultimately on purchase intentions (Mitchell and Olson, 1981, MacKenzie *et al.*, 1986). Moreover, several marketing studies have shown that consumers tend to transfer attitudes from varying sources to a new product, especially in branding studies (Gardner, 1985, Mao and Krishnan, 2006). For example, Gardner (1985) showed that attitudes towards ads could affect attitudes towards the brand. It has also been shown that the way consumers develop attitudes towards advertising are similar to the attitudes towards brands (Mitchell and Olson, 1981). In fact, several studies have looked at online advertising and suggested that individuals' attitudes toward online advertising are indeed important indicators for the effectiveness of online advertising (Haley *et al.*, 1994, Ducoffe, 1996).

3.9.2 Attitude towards Websites and Advertising

There is some evidence that attitude towards the website can influence the attitude towards advertising on individual sites (Bruner and Kumar, 2000, Stevenson *et al.*, 2000, Poh and Adam, 2002). These studies evaluated the attitude towards the website construct while looking at the effectiveness of online advertisements in conjunction with the advertising hierarchy of effect model. In other words, if a visitor to a site likes the site, then advertisements on the site are more effective and involve a deeper processing of the advertisements. However, the question is whether this will be applicable in a different medium like blogs as well, which are more interactive and more personal. It should be noted that measures used by Bruner and Kumar (2000) and Stevenson *et al.* (2000) are broader and draws on previous studies of attitude towards the ad. However, Chen and Wells also came up with an attitude towards the website which has a narrower focus. According to them, a website can be both good and bad in specific ways.

Other studies have indicated a link between attitude towards website and advertising effectiveness. In one study, Castañeda *et al.* (2009) looked at a web portal dealing with health matters and highlighted the key role that attitude towards the web site plays as an antecedent in improving attitude towards the sponsoring brand. They identified the hierarchy of effects operative among the three concepts of attitude in the study, namely, attitude towards the internet, attitude towards the web site and attitude towards the brand. The limitations of their study were that it was in an experimental setting using students and used one type of web site – a health portal which they called 'free-content site'.

The review of the literature indicates that opinion about the overall consumer attitudes towards online advertising are varied. Various studies that have looked at reactions to advertising stimuli have shown that ads can result in both positive as well as negative emotional responses to advertising. Some feel that the consumers' attitudes towards online advertising are positive (Korgaonkar and Wolin, 1999) while others found that consumers had a strong negative attitude towards advertising and its societal effect, with the negative perception increasing with years of usage of the consumer (Previte and Forrest, 1998, Schlosser *et al.*, 1999, Rettie *et al.*, 2005). However, there are studies which show that people can accept advertising in certain cases. For example, a study on attitudes toward mobile advertising showed that consumers in general have a negative attitude towards advertisements on mobile phone but their attitudes were favourable if advertisements were sent with permission (Tsang *et al.*, 2004).

The present study does not look at just the context, namely, blogs, but also the transfer of attitudes towards advertising in this new medium. Furthermore, as mentioned earlier, sponsored posts on blogs are a totally new development in online advertising and have different properties from typical advertising - banner ads, buttons, etc. It is yet to be seen whether this applies to blogs which are more interactive and personal in nature.

3.9.3 Avoidance of Ads

A study by Shavitt *et al.* (1998) showed that, overall, most Americans like advertising. However, this is more of an exception rather than the rule. As Shavitt *et al.* (1998) have themselves noted, most of the previous studies that examined the reactions to advertising stimuli, have reported a general distrust and other negative perceptions of advertising, which consequently can lead to an avoidance of advertising (Shavitt *et al.*, 1998, Schlosser *et al.*, 1999, Kelly *et al.*, 2008). Among the few studies that have looked at attitudes toward advertising on the Internet, Schlosser *et al.* (1999) also found that only a few (38 percent) respondents had an overall favourable attitude toward internet advertising.

There are a number of reasons why consumers might avoid advertising. For example in a study about TV ad avoidance, it was found out that consumers had a negative attitude toward advertising in the first place (Speck and Elliott, 1997, Edwards *et al.*, 2002). Consumers may find the advertising intrusive or because they feel that the advertising is misleading or simply because they find the advertisements annoying. These negative perceptions of advertising are likely to lead to an avoidance of advertising (Kelly *et al.*, 2008). The proliferation of ads was identified as one of the main reasons that have caused consumers to avoid ads in traditional media (Zanot, 1984). Similarly, Schultz (2006) also indicated that the oversaturation of advertising messages or advertising clutter in both traditional and non-traditional media including the internet has resulted in advertising avoidance.

The concept of *advertising avoidance* is well-researched but it's relevance in the online context has only been researched in recent years (Cho and Cheon 2004; Grant 2005). Advertising avoidance is defined as *"all actions by media* *users that differentially reduce their exposure to ad content"* (Speck and Elliott, 1997, p. 61). Their study looked at four media, namely, magazines, newspapers, radio, and television and found out that ad avoidance is most prevalent for television and magazines. Advertising avoidance can occur by cognitive, behavioural, and mechanical means and the measures of ad avoidance used by the authors included both cognitive (ignoring ads) as well as behavioural items (flipping past ads and ad elimination). Another finding of their study was that communication problems affect ad avoidance with effects varying depending on the nature of the medium (Speck and Elliott, 1997).

As mentioned earlier, there have been only a few studies that have looked at avoidance of advertising in the online context, including a study that focussed on social networking sites (Kelly *et al.*, 2008). While looking at the reasons why people avoid advertising on the internet, Cho and Cheon (2004) identified three responses to advertising stimuli, namely, cognitive, affective and behavioural. The cognitive component refers to the belief about an object while the affective part refers to the consumers' feeling or emotional reaction. The behaviour component includes all actions other than lack of attendance and includes actions such as scrolling down pages to avoid ads, clicking away from pages containing banners, etc. Cho and Cheon (2004) also identified three antecedents of the internet ad avoidance construct, namely, perceived goal impediment, perceived ad clutter and prior negative experience. Out of the three variables, the perceived goal impediment was found to be most significant. They also showed that ad avoidance on the net was different from other traditional media in several ways.

The *avoidance of sponsored posts* scale used in this study was adopted from the *ad avoidance* scale given by Cho and Cheon's (2004) and is a valid scale that had a higher content validity as compared to previous ad avoidance studies on other traditional media. It is different from the attitude towards the ad scale as it assumes that attitudes are a combination of three distinguishable modes of experience and reactions to an object, namely, affective, cognitive and behavioural (Breckler, 1984, Hewstone and Stroebe, 2001 p.242-243). The opposite of this scale would actually represent ad non-avoidance. In other words, positive attitudes towards advertising will lead to decreased avoidance (Rojas-Méndez and Davies, 2005, Rojas-Méndez *et al.*, 2009).

3.9.4 Perceived Interactivity and Advertising on Websites

The literature review has shown that there is some evidence that interactivity does affect perceptions of advertising online (Coyle and Thorson, 2001, Liu and Shrum, 2002, Fortin and Dholakia, 2005). As mentioned earlier, an experimental study of students in the US and Korea (Ko *et al.*, 2005) found that different types of interaction had a positive effect on attitude towards the website, which in turn leads to a positive attitude towards brand and purchase intentions. In yet another study, Sundar and Kim (2005) while looking at interaction with ads, showed that higher levels of ad interactivity were related to positive attitudes toward the ad. On the other hand, a study by Coyle and Thorson (2001) was unable to prove that attitudes toward websites that are more interactive will be more positive than those toward less interactive sites even though they showed that interactivity on the websites were positive linked to increased feelings of tele-presence.

Looking at the nature of interactivity, in particular the benefits and the limitations, in the advertising context, Liu and Shrum (2002) suggests that the influence of interactivity on advertising effectiveness may actually be a function of the consumer and the situation as well. For example, they proposed that more two-way communication would lead to more satisfaction when a user browses a web site for pleasure than when the user browses for information.

3.9.5 Credibility and Advertising Avoidance

As mentioned earlier, studies have shown that blogs were perceived to be credible sources of information (Johnson and Kaye, 2004). The question is whether the credibility perception of the blog will transfer to the advertisements on the site. Different studies have looked at the link between credibility and attitude towards ads from different aspects. Some studies have shown that credibility of ads was a strong predictor of attitude towards online ads. An example is the study by Wang and Sun (2010) which looked at consumers' beliefs about online advertising, attitudes toward online advertising and consumer behavioural responses in the U.S., China, and Romania. The research showed that consumers have a more positive attitude toward online advertising when they believe online advertising is credible and trustworthy.

On the other hand, other studies have looked at the effect of advertising on web credibility. For example, advertisements were found to have a negative effect on the credibility of sites with .org domain while viewed positively on sites with .com or .edu domains (Walther *et al.*, 2004). It has also been found that a website's credibility may be reduced if it has distracting advertisements (Fogg *et al.*, 2000). Yet another study showed that the presence of commercial content on sites had a negative impact on the credibility of the sites (Burbules and Callister, 1998). However, there have been limited studies that looked at the converse, namely, to see whether credibility will affect the attitudes towards advertisements.

One study that looked at web users' beliefs, attitudes and behaviour towards web advertising, showed that falsity/no sense was negatively related to attitudes towards web advertising (Wolin *et al.*, 2002). In other words, web users' positive attitudes towards ads go down then they perceive the ads as deceptive.

However, several studies have looked at the credibility of the endorsers or advertiser (Goldberg and Hartwick, 1990, Goldsmith *et al.*, 2000) as well at the benefits of using endorsers and the link to advertising (Atkin and Block, 1983, Freiden, 1984). Goldsmith *et al.* (2000) showed that both corporate credibility and endorser credibility had significant impacts on attitude-toward-the-ad, attitude-toward-the-brand, and purchase intentions. The results of their experimental study also showed that endorser credibility had a greater influence on the attitude-toward-the-ad. Here *endorser credibility* refers to the believability of a spokesperson or endorser in an ad, their attractiveness, expertise, and trustworthiness.

It was considered important to also look at endorser credibility since this study looks at blogs and bloggers can be considered as endorsers. In yet another study, perceived credibility of the website was found to have a direct effect on ad credibility which in turn influences attitude toward the ad (MacKenzie and Lutz, 1989).

3.10 Summary

The review of the literature reveals a wide range of opinions and conceptualisation of some of the key constructs used in the study. Some key issues have been identified and highlighted:

3.10.1 Blogs are Unique

The unique nature of blogs which differentiates them from static websites and other social networks has been highlighted. The interactive nature of blogs is the important characteristic that distinguishes them from other static websites (Mutum and Wang, 2010). This has made it necessary to re-examine the previous conceptualisations of perceived interactivity. Other constructs have been examined in detail and expanding on the work done by previous authors, revised conceptualisations have been presented with respect to this relatively new medium – blogs and the need for theory to evolve. The literature review also shows how the traditional model of the advertising hierarchy of effects, provides a framework to help understand consumers' responses to marketing communication.

3.10.2 Conceptualisation and Measurement of Perceived Interactivity

The conceptualisation and measurement of perceived interactivity remains one of the most debated concepts. The literature review has revealed that a clear, valid and universally accepted conceptual framework of understanding perceived online interactivity was lacking. While some authors use it to mean the human interaction with the web, such as speed of interaction (Steuer, 1992, Novak *et al.*, 2000, Campbell and Wright, 2008), few focussed on the social exchanges (Deighton and Kornfeld, 2007). However, it was clear that most of the existing conceptualisations of perceived interactivity have failed to incorporate the human-human interactions in the online context.

The few studies that have incorporated the social aspect of interactivity have not really examined the antecedents in the online context. Furthermore, it was found that the existing definitions of perceived interactivity and empirical studies have failed to accommodate the increasing social interactions taking place online due to the popularity of social media and specifically, blogs. Thus this study hopes to fill this gap by coming up with a fresh new conceptualisation of perceived interactivity in the context of blogs and taking into consideration that people are talking to each other online. It is hoped that the findings of this study will add to our understanding of interactivity on social media and specifically blogs.

The literature review also examined the two antecedents of perceived interactivity, namely, *the technology readiness index* and the *need for cognition,* which have been discussed in some detail.

3.10.3 Sponsored Posts -a New Mode of Advertising

Sponsored posts constitute a relatively new mode of advertising in the online medium and have different properties from the typical advertising that we see on websites such as banner ads, buttons, etc. Advertisers and companies are approaching bloggers to carry sponsored content on their blogs. These are also known as sponsored posts, paid posts or sponsored reviews, which contains links that point to the home page or specific product pages of the website of the sponsor (Cherkoff, 2004).

To my knowledge, there have been no studies that have looked at the attitudes of consumers towards sponsored posts at all. Furthermore, there is an ever increasing amount of literature that reports distrust and other negative perceptions of advertising in general (Shavitt *et al.*, 1998, Kelly *et al.*, 2008). More specifically, expert opinion seems to also indicate a negative perception and opposition with regards to sponsored posts on blogs (Kirkpatrick, 2006, WOMMA, 2007). The chapter discusses the avoidance of ad construct and how it differs from attitudes towards advertising. It was found that there have been some studies on internet advertising avoidance (Cho and Cheon, 2004), however, none that have looked at blogs. The concept of avoidance of ad is expected to help understand the relationship with other antecedents, namely perceived interactivity and with attitude towards blogs, which was adapted from attitude towards website. In view of the current huge debate about the commercialisation of blogs, it is hoped this study will fill this gap in the literature to some extent.

3.10.4 Perceived Interactivity and Relationship with Attitudes towards Blogs and Advertisements on Those Blogs

Various conceptualisations of the attitudes towards website were reviewed. Past literature suggests links between perceived interactivity and attitude toward the website and attitudes towards advertisements. Again, it was found that previous studies have not examined how the social interactions would affect the perception of consumers towards blogs which carry advertisements and sponsored posts.

As mentioned in the introduction chapter, previous studies on blogs have focussed on bloggers and their motivations for blogging (Kumar *et al.*, 2004, Trammell and Keshelashvili, 2005). Others have looked at credibility perceptions of blogs (Johnson and Kaye, 2004, Adamic and Glance, Yang, 2007). However, marketing research has not addressed the issue of the factors that drive consumers to visit blogs nor linked it to the consumer attitudes towards blogs and whether this attitude towards blogs would be transferable to advertising carried on the blogs.

It has been shown that different types of interaction can have a positive effect on attitude towards site which in turn leads to a positive attitude towards brand and purchase intentions (Ko *et al.*, 2005). Other authors have used this in the context of the advertising hierarchy of effects model (Bruner and Kumar, 2000, Stevenson *et al.*, 2000, Poh and Adam, 2002). The difference in this study is that it seeks to find out how this interactivity ultimately affects the 'avoidance of sponsored posts'.

Thus, this chapter provides an overview and discussion of the major theories and constructs used in this study. The next chapter, Chapter 4, will extend the discussions in this chapter by proposing the conceptual model and relevant hypotheses.

Chapter 4: Conceptual Framework and Hypotheses

4.1 Introduction

This chapter follows the review of relevant literature in the previous chapter and proposes several hypotheses for testing based on the gaps which have been identified in the literature. The context of this study – blogs, is relatively new and very few empirical studies have looked at blogs especially from the marketing perspective.

This chapter has five main sections. First of all, the section on the proposed conceptual model integrates the key theories and concepts discussed in the previous chapter and present the proposed conceptual model. The next section discusses the antecedents of perceived interactivity as conceptualised in this study. This is followed by the conceptualisation of the relationship between the characteristics of the blog user, the characteristics of the medium (the blog) and attitude towards blogs. Conceptualisation of the relationship between the avoidance of sponsored posts and the antecedents, including attitude towards blogs is presented in the next session. This is followed by a list of the hypotheses. Finally, the last section provides a summary of this chapter.

4.2 Proposed Conceptual Model

The proposed conceptual model is shown in Figure 2 and can be divided into three parts:

1. The antecedents of perceived interactivity and (i.e., *need for cognition* and the *technology readiness index),* which can be grouped under characteristics of the blog users.

2. Attitude towards blogs and the antecedents (i.e., need for cognition and the technology readiness index, perceived interactivity and perceived credibility).

3. Relationship between characteristics of the blog (i.e., perceived interactivity and perceived credibility), attitude towards blogs and avoidance of sponsored posts.

A total of six constructs are examined in this study, namely, the need for cognition, technology readiness index, perceived interactivity, credibility attitude towards blog and avoidance of sponsored posts on blogs. *Perceived interactivity* and *perceived credibility* are the characteristics of the medium – blogs.

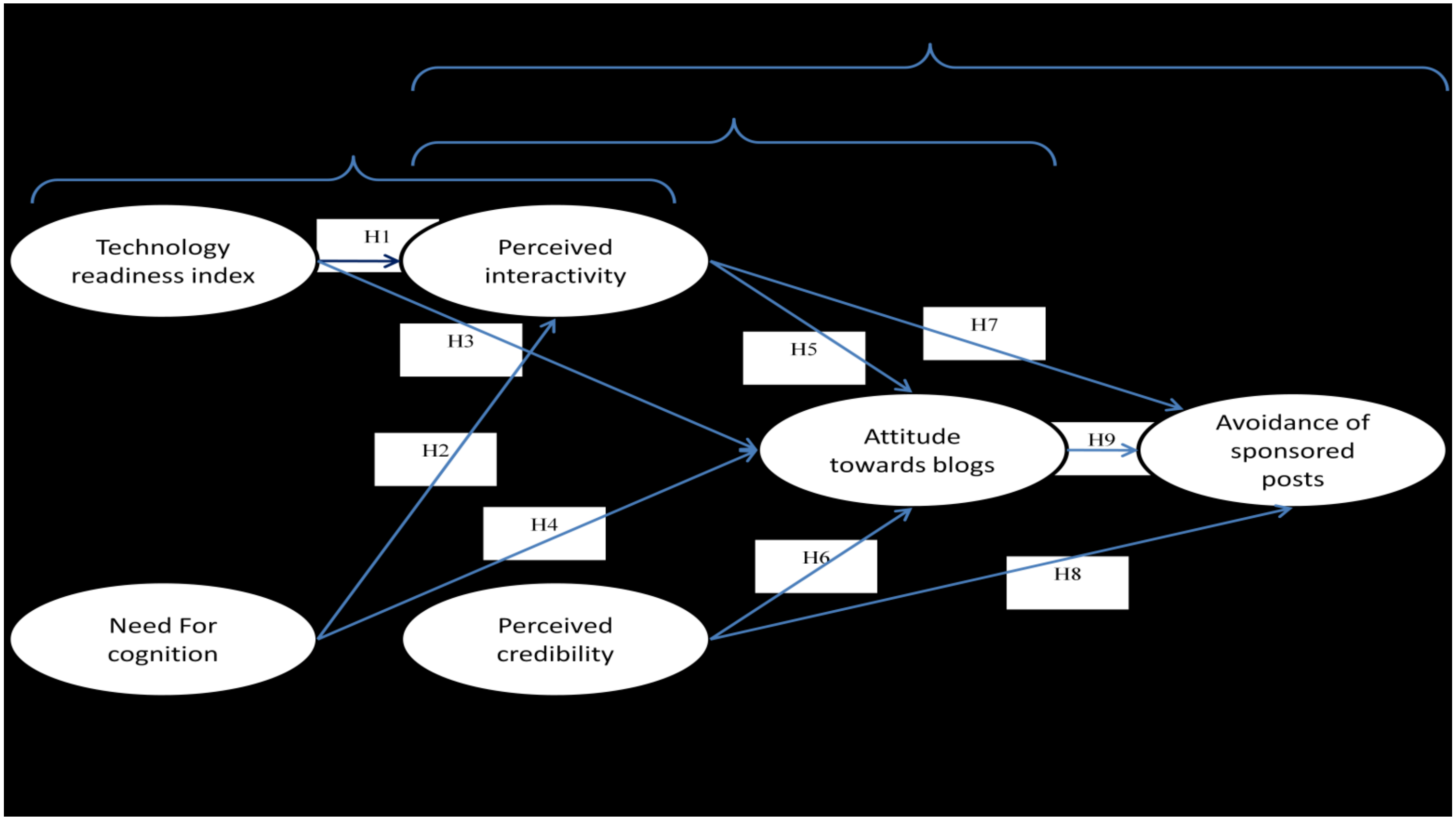


Figure 2: Conceptual Framework

4.3 Antecedents of Perceived Interactivity

As mentioned earlier, that there are several conceptualisations of *perceived interactivity* and a well accepted and validated theory of interactivity is still lacking. Interactive communication was defined by Liu (2003) as *"a communication that offers individuals active control and allows them to communicate both reciprocally and synchronously."* In this study perceived interactivity refers to the overall perceived interactivity formed by the combination of the *synchronicity* and *perceived communication* dimensions.

Two constructs have been identified as the antecedents of perceived interactivity in this study, namely, Technology Readiness Index (Parasuraman, 2000) and the Need for Cognition (Cacioppo and Petty, 1982, Cacioppo *et al.*, 1996).

4.3.1 Technology Readiness Index and Perceived Interactivity

The Technology Readiness Index (TRI) (Parasuraman, 2000) measures a population's propensity to embrace and adopt technology-based products and services for everyday use, both at home and at work and it is expected that higher technology readiness would mean that the population has a higher readiness to interact effectively with technology as well as interacting with other consumers on blogs. Some studies have shown that technology readiness has a role in influencing customer perceptions of technology, such as towards usage of self-service technologies (SST) (Lin and Hsieh, 2006). In another study, personal innovativeness in Information technology, which is similar to the innovativeness dimension of the TRI, was shown to have a direct positive impact on perceived usefulness and perceived ease of using of wireless mobile technology (Lu *et al.*, 2005).

Different people have different emotions towards interacting over computer-mediated environments and Liu and Shrum (2002) proposed that those with computer-mediated communication apprehension would tend to avoid interacting over the internet. The literature review thus indicates that there is some evidence which suggests that technology readiness influences customer perceptions about technology and adoption of technology. Thus, it is very likely that technology readiness is related to the perceived interactivity as well. Parasuraman's (2000) definition of technology readiness refers mind set of individuals - the overall positive and negative feelings about technology and this research argues that this mind-set of technology users (the willingness to adopt the technology) will also affect their perception of the characteristics of the technology. It was thus considered appropriate to examine this in the context of blogs. In other words, a technologically ready consumer will perceive the technology (blogs) to be more interactive and this leads to the first hypothesis:

Hypothesis 1: Blog users' technology readiness is positively related to blog users' perceived interactivity of blogs.

4.3.2 Need for Cognition and Perceived Interactivity

Some studies have also shown that there is a link between the need for cognition and perceived interactivity. For example, in an experimental study looking at perceived interactivity of three websites, the need for cognition was shown to be an antecedent of perceived interactivity and it was the significant predictor that influenced perceptions of high or low interactivity of websites (Jee and Lee, 2002). Despite the fact that Jee and Lee's (2002) conceptualisation of perceived interactivity looked at the context of making a purchase decision and was based on Wu's (2006) conceptualisation which focussed on the human-machine or human-interface interaction, the need for cognition is expected to be related to the perceived interactivity of blogs. In other words, blog users with high need for cognition are likely to perceive the blog they like, as having greater interactivity:

Hypothesis 2: The need for cognition is positively related to perceived interactivity of the blog.

4.4 Antecedents of the Attitudes towards Blogs

A measure with a narrower focus as compared to the earlier definitions by Stevenson *et al.* (2000) and Bruner and Kumar (2000) was developed by Chen and Wells (1999) while conducting research into advertising effectiveness involving the Web (Chen and Wells, 1999, Bruner and Kumar, 2000, Stevenson *et al.*, 2000). This construct was called the *attitude toward the website* scale and was adapted from the *attitude towards the advertisement* scale (MacKenzie *et al.*, 1986). The *attitude towards the website* (Chen and Wells, 1999) has been proven to be a reliable and valid scale. The present study uses a scale called *the attitude towards blog* scale, which was largely adapted from the Chen and Wells' (1999) *attitude towards website* scale, which was considered the most relevant. This study has identified three antecedents of the attitude towards blogs, namely, technology readiness index, the need for cognition and perceived interactivity. These are examined below:

4.4.1 Technology Readiness Index and Attitude towards Blogs

Prior studies have looked at the technology readiness as an antecedent of customer attitude towards online services. It was shown that personality characteristics of consumers do influence customer perceptions about the level of interaction with technology as well as the attitude towards the use of technology. For example, Lin and Hsieh's (2006) study on self-service technologies usage which found that technology readiness influences the perceived self-service technologies service quality as well as behavioural intentions. Another study by Liljander *et al.* (2006) looking at the effect of technology readiness on customers' attitudes towards self-service technologies (including mobile, kiosk and Internet) and their adoption behaviour, found that overall, TR has some positive effect on customer attitudes towards using self-service technologies. Theotokis *et al.* (2008) also showed that technology readiness is related to customers' attitude towards six innovative retail services. It is therefore, hypothesised that:

Hypothesis 3: Blog users' overall technology readiness is positively related to their attitude towards blogs.

4.4.2 Need for Cognition and Attitude towards Blogs

As discussed above, the personality of consumers, including their need for cognition has been found to play a critical role in the formation of either positive or negative attitudes (Cacioppo and Petty, 1982, Haugtvedt *et al.*, 1992, Schiffman and Kanuk, 2000). Thus, based on the assumption that the need for cognition would also play a role in framing their perceptions towards blogs, it is hypothesised that there is a positive relationship between the overall need for cognition and the level of attitude towards blogs. Consumers with a high need for cognition would have a more positive attitude towards blogs.

Hypothesis 4: The blog users' overall need for cognition is positively associated with attitude towards blogs.

4.4.3 Perceived Interactivity and Attitude towards Blogs

Johnson *et al.* (2006) found that there was a positive association between perceived interactivity and the user's attitude to the web site. Their study is among the few to show empirically a positive and direct relationship between perceived interactivity and attitude towards websites. They identified four facets of perceived interactivity, namely, reciprocity, responsiveness, nonverbal information, and speed of response. However, their conceptualisation of perceived interactivity emphasise the human-machine or human-interface interaction. This does not include the reciprocity facet or two-way communications in blogs, which was discussed but not included in their construct of perceived interactivity. Similarly Cho and Leckenby (1999) also found that intention to interact as well as the presence of interactive features on a website is positively related to the attitude towards the site. On the other hand, McMillan *et al.* (2003) showed that involvement with the subject and level of engagement, a dimension of perceived interactivity, were linked to positive attitudes towards the site.

As such the present study seeks to test the previously established results that interactivity has a positive relationship with attitudes towards websites in the context of blogs. Furthermore, perceived interactivity, as conceptualised in this study, acknowledges that blogs have really unique characteristics which differentiate them from generic non-interactive websites. The conceptualisation in this study incorporates and emphasises the human-human interaction as opposed to earlier ones that emphasised only machine-human or human-interface interaction. It should be pointed out that even though Cho and Leckenby (1999) identified the human-human facet of interactivity, they believed that it was behavioural whereas the perceived interactivity as conceptualised in this research measures this human-human aspect as part of perceived interactivity. Similarly, Jee and Lee (2002) also established that *perceived interactivity* and *attitude toward the website* were highly correlated. However, their perceived interactivity construct was based on Wu's (2006) and only focussed on the human-machine or human-interface interactions as well. Thus, it is hypothesised that the level of perceived interactivity with the blog will be positively associated with blog users' attitudes toward the blog.

Hypothesis 5: Overall perceived interactivity of the blog is positively related to attitudes toward the blog.

4.4.4 Perceived Credibility of Blogs and Attitude towards Blogs

The literature review identified some studies that have demonstrated a link between credibility and consumer attitudes. For example, sources that are perceived to be more credible are more likely to produce a greater attitude change (Hovland *et al.*, 1953). As shown by Fogg *et al.* (2002), credibility of a site is strongly related to the frequency of updates. This can be related to blogs because one of the unique characteristics of blogs is that they are frequently updated - one of the reasons they have become so popular. A look at the top 10 blogs on Technorati's list of the Top 100 Blogs (Winn, 2009) reveals that they post on average more than 10 times a day.

Hence, it is hypothesised that there is a positive relationship between the perceived credibility of blogs and the attitude towards blogs. A higher perceived credibility will lead to positive attitude towards the blogs.

Hypothesis 6: Overall perceived credibility of the blog is positively related to attitude towards the blogs.

4.5 Consumer Avoidance of Sponsored Posts on Blogs

An increasing number of literature reports a general distrust and other negative perceptions of advertising (Shavitt *et al.*, 1998, Schlosser *et al.*, 1999, Kelly *et al.*, 2008). There are a number of reasons why consumers might avoid advertising. For example in a study about TV advertising avoidance, it was found out that consumers had a negative attitude toward advertising in the first place (Speck and Elliott, 1997, Edwards *et al.*, 2002). Consumers may find the advertising intrusive or feel that the advertising is misleading or simply find the advertisements annoying. As a result of these attitudes toward advertising, consumers are likely to develop advertising avoidance as a consequence. The *advertising avoidance* construct has been defined as *"all actions by media users that differentially reduce their exposure to ad content"* (Speck and Elliott, 1997, p. 61). The opposite of this scale would actually represent ad non-avoidance.

The *avoidance of sponsored posts* scale used in this study was adopted from the *ad avoidance* scale given by Cho and Cheon's (2004) and assumes that attitudes are a combination of three distinguishable modes of experience and reactions to an object, namely, affective, cognitive and behavioural (Breckler, 1984, Hewstone and Stroebe, 2001). Cho and Cheon's (2004) showed that the latent variables of internet ad avoidance, namely, perceived goal impediment, perceived ad clutter and prior negative experience explained why people avoided advertising on the internet. However, this study will not be examining these three antecedents of the internet ad avoidance construct. Rather, this study looks at the relationship between perceived interactivity of blogs, perceived credibility of blogs and the attitude towards blogs with avoidance of sponsored posts on blogs.

4.5.1 Perceived Interactivity and Avoidance of Sponsored Posts on Blogs

There is some evidence that interactivity does affect perceptions of advertising online (Coyle and Thorson, 2001, Liu and Shrum, 2002, Fortin and Dholakia, 2005). Ko *et al.* (2005) also found that different types of interaction had a positive effect on attitude towards the website, which in turn leads to a positive attitude towards brand and purchase intentions. In yet another study, Sundar and Kim (2005) while looking at interaction with ads, showed that higher levels of ad interactivity were related to positive attitudes toward the ad. Thus, it is highly likely that perceived interactivity with the blog will be negatively associated with avoidance of the sponsored posts on the blogs. In other words people who perceive the blogs as more interactive would be most likely to have a more favourable perception of sponsored posts on the blogs (non avoidance of sponsored posts). This argument is hypothesised as follows:

Hypothesis 7: The perceived interactivity of the blog is negatively related to the avoidance of sponsored posts on the blog.

4.5.2 Perceived Credibility and Avoidance of Sponsored Posts on Blogs

As mentioned earlier, studies have shown that blogs were perceived to be credible sources of information (Johnson and Kaye, 2004). The question is whether the credibility perception of the blog will transfer to positive perception of the advertisements on the site. Several studies have looked at the credibility of the endorsers or advertiser (Goldberg and Hartwick, 1990, Goldsmith *et al.*, 2000) as well as to the benefits of endorsers and the link to advertising (Atkin and Block, 1983, Freiden, 1984).

There have been few studies that looked at the effect of advertising on web credibility and it was found that it depended on the nature of the site and the site's domain. For example, advertisements were found to have a negative effect on the credibility of sites with .org domain while they were viewed positively on sites with .com or .edu domains (Walther *et al.*, 2004). It has also been found that a website's credibility may be reduced if it has distracting advertisements (Fogg *et al.*, 2000). Furthermore, another study showed that the presence of commercial content on sites had a negative impact on the credibility of the sites (Burbules and Callister, 1998). The question is whether the converse is true? In other words, would higher (or lower) perceived credibility lead to positive (or lower) attitudes towards sponsored posts on blogs?

If a blog/blogger is perceived as credible, would this perceived credibility be transferred to products and services recommended by that blog/blogger? Wolin *et al.* (2002) showed that falsity/no sense was negatively related to attitudes towards web advertising. In other words, web users' positive attitudes towards ads go down when they perceive the ads as deceptive.

Some studies have also shown that corporate credibility and endorser credibility had significant impacts on attitude-toward-the-ad, attitude-toward-the-brand, and purchase intentions (Goldsmith *et al.*, 2000; Jung and Kellaris, 2006). Jung and Kellaris (2006) in a study of French and American consumers found that perceptions of source credibility positively influenced Attitude towards ad. The results of the experimental study by Goldsmith *et al.*, (2000) also showed that endorser credibility had a greater influence on the attitude-toward-the-ad. Here *endorser credibility* refers to:

- the believability of a spokesperson or endorser in an advertisement,

- their attractiveness,
- expertise, and
- trustworthiness.

Since we are talking about blogs, bloggers are opinion leaders (Forrester, 2006) and can be considered as having similar characteristics to endorsers. Another study also showed that credible endorsers would lead to positive attitudes towards ads (Lafferty and Goldsmith, 1999). Thus, it is argued that higher perceived credibility would lead to less avoidance of sponsored posts on blogs. The perceived credibility of a blog will be negatively related to consumer avoidance of sponsored posts on the blog. This argument is hypothesised as:

Hypothesis 8: The perceived credibility of the blog is negatively related to the consumer avoidance of sponsored posts on the blog.

The question is, if a viewer likes the website, will they be more receptive or negative to advertisements carried on the site? This leads to the conceptualisation of the relationship between attitude toward blogs and advertising avoidance.

4.5.3 Attitudes towards Blogs and Avoidance of Sponsored Posts on Blogs

Some studies have showed that, attitude toward the website can influence the attitude towards advertisements (Bruner and Kumar, 2000, Stevenson *et al.*, 2000, Poh and Adam, 2002). These studies have shown that consumers tend to transfer attitudes from varying sources to a new product, especially in branding studies (Gardner 1985; Mao and Krishnan 2006). That is, if a visitor to a website like the site, they may be more receptive to advertisements on the website with a deeper processing of the advertisements.

This study examines the relationship between attitudes towards the blog and avoidance of sponsored posts on the blogs using the *avoidance of sponsored posts* scale (Cho and Cheon, 2004). The opposite of this scale would actually represent ad non-avoidance. In other words, positive attitudes towards advertising will lead to decreased avoidance (Rojas-Méndez and Davies, 2005). It has been shown that positive attitudes towards advertising will lead to decreased avoidance (Rojas-Méndez and Davies, 2005, Rojas-Méndez *et al.*, 2009). Other studies have indicated a link between attitude towards website and advertising effectiveness. For example, an experimental study of students in the US and Korea (Ko, Cho et al. 2005) found that different types of interaction had a positive effect on attitude towards site, which in turn leads to a positive attitude towards brand and purchase intentions. Studies by Stevenson *et al.* (2000) and Bruner and Kumar (2000) also suggest that attitude toward the website can be used in conjunction with the advertising hierarchy of effects model to evaluate the effectiveness of online advertisements. Their findings suggest that attitude toward the website may influence the advertising hierarchy of effects, most notably attitude toward the ad shown from individual websites. That is, if a viewer likes the website, they may be more receptive to advertisements on the website accompanied by deeper processing of the advertisements.

Thus it can be argued that blog users who have a more positive perception of a blog would have lower avoidance of sponsored posts on the blog. This study does not look at just the context, i.e., blogs but also the transfer of attitudes towards advertising in this new medium - blogs. This leads to the next hypothesis of this study is:

Hypothesis 9: The attitude towards blogs is negatively related to avoidance of sponsored posts on the blog.

4.5.4 Mediating Effects of Attitude towards Blogs

It was earlier hypothesised that the level of perceived interactivity with the blog will be positively associated with blog users' attitudes toward the blog. It was also hypothesised that the level of perceived interactivity with the blog will be positively associated with blog users' attitudes toward the blog. Furthermore, it was argued that argued that blog users who have a more positive perception of a blog would have higher avoidance of sponsored posts on the blog. Though their research did not look at mediating effects, Ko *et al.* (2005) found that different types of interaction had a positive effect on attitude towards the website, which in turn leads to a positive attitude towards brand and purchase intentions. Thus it was hypothesised that:

Hypothesis 10: The attitude towards blogs mediates the relationship between perceived interactivity and avoidance of sponsored posts on the blog.

Earlier, it was also hypothesised that there is a positive relationship between the perceived credibility of blogs and the attitude towards blogs. Thus a higher perceived credibility is expected to lead to positive attitude towards the blogs. Furthermore, it was also proposed that source credibility might actually be transferred to ads placed on the blogs. This was based on the findings of previous studies which found that credibility and endorser credibility had significant impacts on attitude toward the advertisement, attitude toward the brand, and purchase intentions (Lafferty and Goldsmith, 1999, Goldsmith *et al.*, 2000), it was proposed that perceived credibility would be negatively related to avoidance of sponsored posts on blogs. Thus:

Hypothesis 11: The attitude towards blogs mediates the relationship between perceived credibility and avoidance of sponsored posts on the blog.

The 11 research hypotheses which have been proposed in this study are presented in Table 4.

Table 4: Research Hypotheses

No.	Hypothesis
1	The innovativeness dimension of technology readiness (TR) is positively related to blog users' perceived interactivity (PI) of blogs.
2	The need for cognition (NFC) is positively related to perceived interactivity (PI) of the blog.
3	The innovativeness dimension of technology readiness (TR) is positively related to blog users' attitude towards blogs (ATB).
4	The need for cognition (NFC) is positively related to the attitude towards blogs (ATB).
5	Overall perceived interactivity (PI) of the blog is positively related to attitudes towards blogs (ATB).
6	Overall perceived credibility (PC) is positively related to attitude towards blogs (ATB).
7	Overall perceived interactivity (PI) of the blog is negatively related to the avoidance of sponsored posts on the blog (ASP).
8	Perceived credibility (PC) of the blog is negatively related to the avoidance of sponsored posts on the blog (ASP).
9	Attitude towards blogs (ATB) is negatively related to avoidance of sponsored posts on the blog (ASP).
10	The attitude towards blogs mediates the relationship between perceived interactivity and avoidance of sponsored posts on the blog.
11	The attitude towards blogs mediates the relationship between perceived credibility and avoidance of sponsored posts on the blog.

4.6 Summary

This chapter presents a conceptual framework in view of the increasing popularity of consumer generated media, more specifically blogs. The conceptual model examines the salient factors that are likely to influence consumer attitude towards blogs and towards avoidance of advertising on blogs, more specifically on sponsored posts on blogs, in conjunction with the advertising hierarchy of effects model.

The major theories and constructs that were discussed in the literature review chapter have been integrated to come up with the appropriate and relevant hypotheses to be tested. Finally, the chapter presents a conceptual framework of the antecedents of the attitude towards blogs, especially perceived interactivity and the consequent avoidance of sponsored posts on blogs. A total of 13 hypotheses were derived from the literature review. The first four relate to the antecedents of and the relationship with blog users perceived interactivity. The next six hypotheses deal with the antecedents of and relationship with the attitude towards blogs and the last three hypotheses look at the avoidance of sponsored posts on blogs. The hypotheses are summarised in Table 4.

The next chapter presents the results of the exploratory factor analysis, confirmatory factor analysis and Structural equation modelling.

Chapter 5: Research Methodology

5.1 Introduction

This research follows a quantitative approach and this chapter describes the methodological framework adopted. The methodology followed in this research follows the six-step marketing research process as set out by Malhotra (2004). The steps are, 1) problem definition, 2) approaching the problem, 3) research design formulation, 4) data collection, 5) data preparation and analysis and 6) report preparation and presentation.

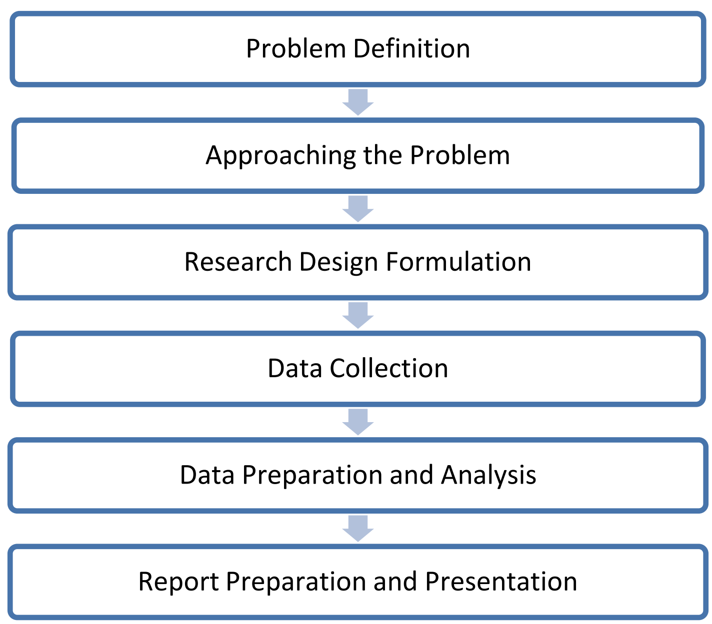


Figure 3: Six-step Marketing Research Process (Malhotra, 2004)

Problem definition and steps to approach the problem have been covered in the previous chapters. This includes the formulation of objectives, research questions, conceptual models and hypotheses.

This chapter addresses the third and fourth steps, namely, research design formulation which includes precise definition of variables, sampling process, research instrument and the planning for data analysis. The fifth and six steps are not covered in this chapter even though the analysis techniques employed will be touched upon briefly.

The chapter is organised into four sections and begins with Section 5.2, which explains the philosophical grounding for the choice of methodology. Section 5.3 is concerned with the sampling procedure and data collection method. Section 5.4 elaborates on the development of the measurements used in the study. It reviews the constructs and the choice of the scales adopted. Section 5.5 describes the questionnaire. Section 5.6 looks at the data analysis techniques adopted to address the research questions and testing of the hypotheses and finally Section 5.6 summarises the whole chapter.

5.2 Philosophical Position

Understanding the ontological (i.e. the study of being or existence) and epistemological (i.e. study of the way knowledge is obtained) orientation within one's personal paradigm should be the first step as this will determine the entire course of the research project (Hussey and Hussey, 1997). According to Blaikie (2000, p. 8) ontology is the starting point of all research followed by epistemological and methodological positions and refers to *"claims or assumptions that are made about the nature of social reality"*. This includes *"claims about 'what exists, what it looks like, what units make it up and how these units interact with each other."* However, before any researcher can start looking into the concepts of 'truth' and 'reality', there is a need to answer one fundamental question, namely 'how do we know what we know?' The answer to this question underpins our research direction and leads us back to the fundamental theme of 'epistemology' or the theory of knowledge (Mutum, 2007a).

Pollock and Cruz (1999) define epistemology as an attempt to make sense of the possibility, nature, and limits of human intellectual achievement by illuminating the difference between knowledge and opinion in an understanding of what it is really to know or really to believe reasonably. On the other hand, (Blaikie, 2000, p.8), defines epistemology as *"the possible ways of gaining knowledge of social reality, whatever it is understood to be".* This leads to the concept of *paradigm* in the social sciences context. It was Thomas Kuhn (1970) who defined and popularised the concept. According to him, a paradigm refers to the set of linked assumptions about the world, which is shared by any given scientific community and includes beliefs, values, and techniques, etc. (Suppe, 1977).

5.2.1 Positivism in relation to the Field of Marketing and Consumer Behaviour

Positivism emerged in early nineteenth-century Europe and the chief exponent was Auguste Comte, a French philosopher (Pickering, 2001). Logical positivism - also called logical empiricism, later developed in the early 20th century and holds that statements or propositions are meaningful only if they can be empirically verified (Anderson, 1983). The concept of verification was then later replaced by the more liberal testability criterion - the idea of *"gradually increasing confirmation"* (Carnap, 1953, p. 48). This moderate version of positivism came to be known as logical empiricism.

It is important to understand the Positivist ontological position of objectivism which implies that *"social phenomena confronts on us as external facts that are beyond our reach or influence"*, as opposed to constructivism which asserts that *"social phenomena and their meanings are continually being accompanied by social actors"* (Bryman and Bell, 2007, p. 726). In other words, in objectivism there must be a clear separation of factual statements from subjective value judgements.

In the positivist paradigm, epistemology or the 'ways of knowing' are more straightforward and as mentioned before, more objective as compared to the interpretivist paradigm. There is a fixed structure of the research – the research design, which allows for more accurate answers to the research questions (Cote and Foxman, 1987, Hudson and Ozanne, 1988, Hunt, 1991, Simonson *et al.*, 2001). There are also strictly formalised procedures and protocol for establishing and testing the hypotheses (Goulding, 1999). Using empirical methods reduces the tendency to re-invent the wheel as happens sometimes in interpretivist studies. There is also the belief that utilisation of standardised research procedures makes it easier to replicate in different situations and conditions.

The basic positivist paradigm, which is based on methods established in the natural sciences, assumes that the world exists independently of those who live in it. The premise behind this philosophy is the belief that reality exists beyond the researcher's perception either as an entity, an attribute or a cause (Bruner, 1986). The data collected is believed to be the true measure of reality or representative of the population. Most consumer research from a positivist perspective aims to produce findings that are generalisable (Cote and Foxman, 1987), which can then be used to frame marketing strategies. This contrasts with interpretivist research, which mostly applies to the isolated incidents. In fact, a positivist approach may be the only solution in research involving a countrywide or multinational study involving thousands of consumers. Following an interpretivist approach would be extremely difficult, costly and time consuming if not impossible. Positivists believe that science is a way to get to the truth and to understand the world well enough so that we might predict and control it. According to the hypothetico-deductive methodology, scientific inquiry proceeds by formulating a hypothesis in a form that could conceivably be falsified by a test on observable data (Popper, 2002).

In the field of marketing, the debate pertaining to a relevant philosophy commenced in the early 1980s and the landmark event relating to this debate was the American Marketing Association (AMA) theory conference in 1982. The conference Chairperson pointed out in his speech that *"logical empiricism is the dominant philosophical approach employed in marketing and it has come to us in our borrowing of theory construction and research methods from psychology and economics"* (Deshpande, 1983, p. 104). Later on, several scholars started calling for a more naturalistic and pluralistic attitude towards consumer research (Anderson, 1986, Fischer, 1990, Hirschman, 1993, Goulding, 1999, Dawes and Brown, 2000). Today there are two main alternative research paradigms in the field of consumer behaviour, namely 'Positivism' and 'Interpretivism' (Hudson and Ozanne, 1988, Barker *et al.*) and the characteristics of the two paradigms are quite distinct (Reichardt and Cook, 1979).

Simonson *et al.* (2001) points out that research on more traditional issues in consumer behaviour, such as purchase decisions making, persuasion, regret and affect, is positivist. While on the other hand, modern consumer research often uses interpretivist methods that focus on particular consumption experiences and angles of consumer behaviour that had not previously been regarded as important in consumer research.

5.2.2 Criticisms of Positivism

It is not surprising that the criticisms of the positivist philosophy often reflect the 'interpretivist' philosophy. Kuhn (1970) criticised the positivist's belief that science is rational and steadily progressive. He gave certain examples of 'paradigm shifts' in the history of science that were not exactly based on strictly rational grounds. He also did not agree with the positivist view of scientific progress as one where old theories became integrated within newer, larger theories and so on and so forth. This led to his concept of incommensurability where *"two groups of scientists see different things when they look at the same point and in the same direction"* (Kuhn, 1970, p. 150).

Another major criticism attacks at the heart of positivist philosophy itself – that science is 'value-free'. The critics say that the exclusion of value judgements is itself a value judgement while others contend that it is impossible to carry out analysis without making value judgements (Tacconi, 1996). In other words, it is impossible to be objective. This also relates to the criticism that positivist consumer researchers are too engrossed with empirical issues (Ryan, 1986) and treat consumers as passive objects rather than as active subjects (May, 1981, Wells, 1993). According to them, this results in an inability to convey the richness and complexity of consumer experience (Varney, 1994). As Kruger (2003, p. 1) points out that it can be *"difficult to get the real meaning of an issue by looking at numbers"*. Similarly, critics of positivism also attack the claims of universalism and generalisability. It is argued that rich insights into this complex world are lost if such complexity is reduced to a series of law-like generalisations (Saunders *et al.*, 2003). Duhem (1953) has noted that it is impossible to conclusively refute a theory because realistic test situations depend on much more than just the theory that is under investigation.

As discussed above, the positivist philosophy has been criticised by several authors with some even declaring it dead (Gartrell and Gartrell, 2002). However, a review of recent papers published in most of the top ranking marketing journals proves this to be false. Qualitative/ interpretivist methods have not been so well accepted by marketing professionals. As Hunt (1994) noted, the reason may be due to fact that advocates of qualitative methods have grounded them in relativism, constructionism and subjectivisim, which marketers deem untrustworthy. Furthermore, in response to the criticisms of the 'value-free' concept, several positivists have accepted that values do influence objectivity. However, as they point out, researchers try to minimise the impact of the values on the analysis and findings (Babbie, 1995)

Objectivity in research is essential in order to avoid researcher bias that occurs due to predetermined assumptions. It is believed that this researcher bias can be reduced to a large extent by using a positivist approach. Though it can be argued that it cannot completely be eliminated, the bias can be managed by using double blind research techniques and statistical methods such as factor analysis (Cote and Foxman, 1987, Hunt, 1993). In order to make sure that a test measures what it was designed to measure; researchers within the positivist tradition also commonly employ various measures of validity such as, construct validity, internal validity, external validity and statistical conclusion validity (Weber, 2004).

Also in response to the arguments of the interpretivists, it can be argued that focusing too much on the individual's consciousness of the research subjects may result in missing the macroscopic elements of consumer behaviour (such as a theoretical comprehension of the larger social context and social structures), which is important to generate knowledge (Hudson and Ozanne, 1988). In other words, they risk losing sight of the bigger picture.

Thus, critics of positivism have been good at pointing out the weaknesses of positivism but very few have actually recommended alternative approaches or solutions to those problems. This does not mean that any single stance is superior over the other. Both paradigms can complement each other and recent theories and concepts obtained using interpretivist research should be tested using quantitative analysis. Consumer research methods that fall under both positivist and interpretivist paradigms have their own strengths and limitations and it is up to the researcher to decide which path would lead them to the 'truth'.

Having looked at different scientific methods of research, my proposal involves a hypothetico-deductive (conjectures and refutations) methodology. The research is operationalised using a model and the research findings will be drawn based on an online survey using a close-ended questionnaire. Advanced statistical techniques tested the constructs and relationships. Conclusions were drawn based on the statistical results. As such, the research was initiated on the epistemological assumption that it is possible to observe the world in a neutral, objective manner.

5.3 Sampling Procedure and Data Collection Method

This research looks at personal blogs on the Web. This study differs from previous experimental studies, which involved manipulating websites to control access to information. Data collection was via an online survey, which was conducted over a period of four months ending on 31 December 2009. A survey is *"a research strategy in which quantitative information is systematically collected from a relatively large sample taken from a population"* (De Leeuw *et al.*, 2008, p.2).

5.3.1 Sampling

The survey employed non-probabilistic sampling and self-selection as this method is considered the best way to reach the target sample – the 'blog users'. As described above, several steps were taken to reduce the coverage error. The non-probability sampling method was selected because it was found to be the most efficient method available to access the blog users, who are mostly anonymous.

This study proved to be quite challenging as compared to previous studies, which had looked at online consumers. The targeted sample comprises 'blog users' who are defined as, 'consumers who visit blogs regularly'. The term 'blog user' was considered more appropriate as compared to the more restrictive 'blog visitor'. First, there are no known databases of blog users and the researcher could only depend on the cooperation of bloggers who provided access to their blog users. Here it is automatically assumed that all of the blog users must have access to the internet in one way or another in order to be able to visit the blogs.

5.3.2 Invitation to the Survey

It is a fact that most popular blogs have visitors from all around the world. Apart from blogs which are written in local languages or dialects or blogs with restricted access, readership is not restricted by geographical man-made boundaries. In other words, the physical location of the blogger does not matter anymore.

Respondents of the survey were directed to choose a blog they visit regularly and then respond to the questions keeping that particular blog in mind.

In order to ensure a high response rate, various personal blogs written in English and the bloggers based in the UK, the US and Malaysia, were randomly identified. 30 bloggers were then contacted with a request to promote the online survey by writing a post linking to the survey. Some of those with a higher traffic were also offered financial incentives, for example, US$5 for the post and US$1 for every completed questionnaire from their unique link. Certain criteria were listed before the bloggers were contacted, namely, these were:

1. **Their blogs must be personal blogs.** These are blog about topics of personal interest and not corporate blogs. The reason is that consumer responses to personal and corporate blogs are expected to be different. Corporate blogs are mostly used as PR tools and naturally they are expected to blog positive things about their products and services.

2. **They must have at least 50 visitors per day**. There is no well accepted criteria for what number of unique visitors a blog should have for it to be considered a popular blog and the number of visitors here (50) was arbitrarily taken. The researcher personally feels that taking a hugely popular blog may lead to possible bias in responses.

3. **They must be written in English**. The reason why only blogs in English were chosen is because blogs in English are the most popular and attract a wide range of users. This in turn is expected to help obtain generalisable results.

4. **They are the only blogger writing on the blog**. There are several blogs with multiple bloggers but no blogger can have the same writing style and different writers can have different fans. This study looks at the perceptions and attitudes of the blog users towards a blog and it was felt that having multiple bloggers can confuse the blog users when answering the survey.

Table 5: List of Blogs that Carried Invitations to the Online Survey

Name of Blogger	Blog URL	No. of daily visitors (approx.) as of 1st Jan 2010
Azlynne	http://azlynne1972.blogspot.com	50
Elizabeth	http://table4five.net	700
Fida	http://fidaabbott.blogspot.com	248
Heidi	www.littlepeoplewealth.com	270
Emila	http://emilayusof.com	294
John	http://jangbokjae.com	100
Mariuca	http://www.mymariuca.com	169
Khadijah	http://pausetoreflect.blogspot.com	113
Nana	http://naidschamber.blogspot.com	100
Dilip	http://ok-lah.blogspot.com	184
Dilip	http://www.adamok.net	215

Nine bloggers responded to the invitation and agreed to provide a unique link to the online questionnaire from their blogs. All of the bloggers fulfilled the four criteria given above. Table 5 lists the blogs that carried information about the survey. The researcher also carried posts along with links on two of his personal blogs. All together, the blogs had a total average of 2443 daily visitors (as of 31 January 2010).

5.3.3 Justification for Using Online Survey

The online survey methodology was considered the most appropriate for this study not only because of its advantages relative to other methodologies, but in the case of blogs, may very well be the most effective method to collect data from the blog users.

The online survey method is gaining in popularity and was selected because it offers several advantages as compared to the traditional post method of data collection for both the researcher as well as respondents alike (de Leeuw, 2008). The advantages of using an online survey method include faster collection of data and greater convenience to respondents and researcher alike (Bruner and Kumar, 2000, Stevenson *et al.*, 2000, Reips, 2007). They are also more cost effective, have a greater visibility and accessibility than other survey modes (Reips, 2007, Manfreda and Vehovar, 2008). Furthermore, respondents perceive online surveys as more important, interesting, and enjoyable than traditional surveys (Stanton, 1998). Some studies have shown that web-based methods are valid and sometimes generate higher quality data than laboratory based studies (Buchanan and Smith, 1999, Birnbaum, 2001, Reips, 2007). Other advantages include ability to generate random order of items accessed by each respondent. This gives equal weight to all options and reduces the 'primacy effect' – the phenomenon where there is a tendency for the first items presented in a series to be remembered better or more easily, or for them to be more influential than others. Online surveys thus help in alleviating question choice bias. Finally, online surveys are 'environmentally friendly' as they eliminate the need for using paper (Yun and Trumbo, 2000).

5.3.4 Limitations of Online Survey

One of the most common limitations associated with web surveys is the coverage error. Coverage error results when *"people are systematically excluded from the sampling frame or are not given an opportunity to participate in the survey"* (Manfreda and Vehovar, 2008, p.269). However, it is less critical for web surveys aimed at Internet users only and for web surveys of special populations where all members of the target population have Internet access such as this study. Non-coverage is not an issue here as the target population are all regular blog users and logically, are expected to have access to the internet. Another problem with unrestricted self-selected web surveys are multiple completions, in other words, the same individual can take the survey again. To deal with this problem, the survey also recorded Internet Protocol (IP) addresses of the respondents. Similar IP addresses were checked but no discrepancies were found. Moreover, most of the respondents had provided name and email addresses (377 out of 409 respondents) for the lucky draws. It was found that one respondent had answered twice (same email address), the second response was deleted from the final analysis.

In summary, an online self-administered questionnaire was deemed to be the most suitable and practical method for collecting quantitative data for this study. Besides the advantages mentioned above, the web-based survey is probably the only way of collecting data from blog users, most of whom are anonymous. Furthermore, this was the most cost effective and best in terms of, geographic coverage as well.

5.4 Pretesting the Questionnaire

Prior to the actual survey, the research instrument underwent a few stages of rigorous pretesting and a pilot test. Summers (2001), has pointed out that a rigorous pre-test of the questionnaire can help improve it considerably. Pretesting was critical in this study as most of the scales have been adapted and revised to fit in with the context of the study.

The online queries on Linkedin.com were followed by face-to-face interviews with five PhD students in Warwick Business School, University of Warwick, who fulfilled the criteria of the sample (i.e., they were blog readers) to test the face validity of the survey instrument. Based on the feedback from the interviews, the language of some of the statements was simplified.

Before the pilot, two experts in marketing communications and consumer behaviour further evaluated the items making up each construct for content validity. Both experts were professors in marketing in Warwick Business School. Modifications were made to several items after taking their comments and suggestions into consideration.

5.4.1 Pilot Test

The pilot test looked at PhD researchers who read blogs in the University of Warwick. Email invitations to take part in the survey, were sent to 358 PhD researchers with the requirement that they had visited a blog in the past year.

The 86 completed responses received, were then analysed. The method of analysis consisted of exploratory factor analysis followed by reliability test. Respondents were solicited to leave comments after each question in the questionnaire.

The pilot test confirmed that most of the constructs apart from the perceived credibility construct were reliable. However, several of the respondents left negative comments regarding the wording of the items measuring each construct.

One significant contribution of the pilot test result was the dropping of the ‘credibility’ construct. The reliability of the dimensions was brought into question as all of them had low Cronbach’s Alpha scores below the well accepted cut-off criteria of 0.7 set by Nunnally (1978) and Nunnally and Bernstein (1994). Furthermore, the items that loaded on each dimension did not correspond to the dimensions identified by Fogg *et al.* (2001). Following this, the well established and validated perceived credibility scale by Harmon and Coney (1982) was adapted.

Furthermore based on the results of the pilot test, several items were dropped (discussed below) from the other constructs as well, while the languages of others were further simplified in order to make the statements more parsimonious. This is discussed in further detail under Review of Constructs and Choice of Scales.

5.4.2 Incentives

Incentives are often used to increase response rates and also to complete the whole questionnaires (Manfreda and Vehovar, 2008, p. 275). Various incentives were offered to encourage blog users to take part in the survey as well. These included a £100 cash prize with winners having the option of donating the money to a charity of their choice. Other prizes included 10 Amazon vouchers worth £10 each. Besides that, the researcher made a pledge to make a 50p donation to Cancer Research UK, for each completed survey.

5.5 The Sample

The incentives seem to have worked as 427 completed responses were received. Out of 491 respondents who had started the questionnaire, 64 respondents had not completed the survey and were rejected from further analysis.

The respondents were supposed to choose a blog they visit regularly; however, 19 respondents listed links to sites other than personal blogs and hence they were deleted.

The sites listed by these respondents are as given below:

- The survey link: 1
- An online forum: 1
- Social network: 1
- Closed in-house company blog: 2
- Community blog: 1
- Corporate blog: 6
- EBay: 1
- Other websites: 7

408 responses were thus used for the initial analysis. The sample size (408 responses) in this study satisfies the criteria that a sample should preferably be

more than 100 for factor analysis to proceed (Hair *et al.*, 2010) and is higher than 300 cases, the number that is considered *"comfortable"* by Tabachnick and Fidell (2007 p. 613). The ratio of observations to the number of variables is sufficiently high for factor analysis to be considered appropriate (Bryant and Yarnold, 1995, Hair *et al.*, 2010).

Nine multivariate outliers were later removed from the sample after examining the Mahalanobis measure (this is discussed later in this chapter) and finally **399** responses were used for the final analysis.

5.6 Review of Constructs and Choice of Scales

There are six constructs examined in this study. They are: the need for cognition, technology readiness index, perceived interactivity, credibility attitude towards blog and avoidance of sponsored posts on blogs.

5.6.1 Technology Readiness Index (TRI)

The original Technology readiness index (TRI) (Parasuraman, 2000) comprised of 36-items with 4 dimensions as reflective indicators, which were measured on a 5-point Likert type scale (1 = strongly disagree; 5 = strongly agree). The dimensions were: Optimism (10 items), Innovativeness (7 items), Discomfort (10 items) and Security (9 items).

Based on the results of the interviews and pilot study, only ten relevant items were retained and ultimately used in the online questionnaire. Respondents were asked to rate the items on a seven-point Likert type scale ranging from (1) strongly disagree to (5) strongly agree. Most of the items used in this study were from the innovativeness dimension identified in the study mentioned above. These are as follows:

- I keep up with the latest technological developments.
- If I buy a high-tech good or service, I prefer to have the basic model over one with a lot of extra features.
- I find I have fewer problems than other people in making technology work.
- Technology always seems to fail at the worst possible time.
- Other people come to me for advice on new technologies.
- In general, I am among the first in my circle of friends to acquire new technology when it appears.
- I enjoy the challenge of figuring out high-tech gadgets.
- It seems my friends are learning more about the newest technologies than I am.
- I can usually figure out new high tech goods and services without help from others.

- It is embarrassing when I have trouble with a high-tech gadget while other people are watching me

The TRI is a copyrighted instrument. Professor Parasuraman has granted permission for its use in this research, and waived the fee typically charged to commercial users.

5.6.2 Need for Cognition

The original scale composed of 34 items by Cacioppo and Petty (1982). However, a shorter 18 item scale to measure the Need for Cognition was proposed later (Cacioppo *et al.*, 1996). The authors used a 5 point scale ranging from 1= extremely uncharacteristic of you (not at all like you) to 5 = extremely characteristic of you (very much like you). The scale used in this study is adapted from the shorter 18 item scale (Cacioppo *et al.*, 1984). Following the pilot test., the number of items in the scale was further reduced to 13. Another difference as compared to the scale developed by Cacioppo *et al.* (1996) is that the items were assessed using 7-point Likert scales instead of a 5 point scale, ranging from (1) strongly disagree to (7) strongly agree. A 7-point Likert scale was adopted because it gives more room for respondents to select the answers of their choice. It is easy to administer and respondents also easily understand how to use the scale (Hair *et al.*, 2010 p. 259). The items used to measure the need for cognition are given below in Table 4:

Table 6: Need for Cognition Scale

Item Code	Item
nfc01	I feel relief rather than satisfaction after completing a task that required a lot of mental effort
nfc02	I find satisfaction in deliberating hard and for long hours.
nfc03	I like tasks that require little thought once I've learned them.
nfc04	I like to have the responsibility of handling a situation that requires a lot of thinking.
nfc05	I prefer to think about small, daily projects than long-term ones.
nfc06	I really enjoy a task that involves coming up with new solutions to problems.
nfc07	I try to anticipate situations where there is a likely chance I will have to think in depth about something.
nfc08	I usually end up deliberating about issues even when they do not affect me personally.
nfc09	I would prefer complex to simple problems
nfc10	It's enough for me that something gets the job done; I don't care how or why it works.
nfc11	Learning new ways to think doesn't excite me very much.
nfc12	The idea of relying on thought appeals to me.
nfc13	The notion of thinking abstractly is appealing to me.

5.6.3 Perceived Interactivity

This construct was composed of 13 items which were adapted from Liu's (2003) conceptualisation of perceived interactivity, while two more items were taken from Wu's (2006) perceived interactivity scale making it a total of 15 items (see Table 7) to measure the perceived interactivity construct.

As discussed in the literature review chapter, a number of conceptualisations and scales of perceived interactivity exist. However, Liu's (2003) conceptualisation of perceived interactivity along with two items adapted from Wu's (2006) perceived interactivity scale were used in this study as they were shown to have high validity and reliability and also incorporate the human-human interactions in the online context.

Table 7: Perceived Interactivity Items

Author	Item code	Original Item	Modified Item
Liu (2003)	pi01	I felt that I had a lot of control over my visiting experiences at this website’	I felt that I had a lot of control over my visiting experiences at this blog.
	pi02	While I was on the website, I could choose freely what I wanted to see.	I could choose freely what I wanted to see on the blog.
	pi03	While surfing the website, I had absolutely no control over what I can do on the site.	I had absolutely no control over what I can do on the blog.*
	pi04	The website is effective in gathering visitors' feedback.	The blog is effective in gathering visitors' feedback and comments.
	pi05	The website facilitates two-way communication between the visitors and the site.	This blog facilitates two-way communication.
	pi06	It is difficult to offer feedback to the website.	I felt that it is difficult to offer feedback on the blog.*
	pi07	The website makes me feel it wants to listen to its visitors.	I felt that the blog wants to listen to its visitors.
	pi08	The website does not at all encourage visitors to talk back.	I felt that the blog does not encourage visitors to give feedback.*
	pi09	The website gives visitors the opportunity to talk back.	The blog gives visitors the opportunity to give feedback.
	pi10	When I clicked on the links, I felt I was getting instantaneous information.	Clicking on the links gave me information quite fast
	pi11	I was able to obtain the information I want without any delay.	I was able to obtain the information I want without any delay.
	pi12	The website was very slow in responding to my requests	The blogger was very slow in responding to my requests.*
	pi13	Getting information from the website is very fast.	Getting information from the blog was very quick.
Wu (2003)	pi14	I could communicate with the company directly for further questions about the company or its products if I wanted to	I felt that I could communicate with the blogger directly.
	pi15	I could communicate in real time with other customers who shared my interest in this website	I felt that I could communicate with other visitors to the blog.

Note: * = Reverse scaled items

The scale also avoids the issues identified by various authors, such as scales having affective responses and/ or behavioural intentions or formative scales. Modifications were made to the items to make them more succinct and parsimonious based on feedback from the pilot test followed by suggestions made by the two experts in Marketing during the scale development stage. The modifications include changing websites to blog, using 'feedback' instead of 'talk back' and 'quite fast' instead of 'instantaneous' (see Table 5).

The items were measured using a 7-point Likert type scale ranging from (1) strongly disagrees to (7) strongly agree. Four of the items were reverse scored.

5.6.4 Perceived Credibility

The credibility scale from by Fogg et al (2001) was initially chosen but later dropped after the results of the pilot test showed that it has problems of reliability. Another perceived credibility scale was selected which comprises of six adjectives with seven point semantic differential scales. Five items were adapted from Harmon and Coney (1982) and the adjectives were trustworthy/not trustworthy, open-minded/ close-minded, trained/untrained, experienced/not experienced and expert/not expert. One adjective, insincere/ sincere was adapted from Ohanian (1990).

5.6.5 Attitude towards Blog

This scale is composed of eight items out of which six were adapted from Chen and Wells's (1999) attitude toward the website scale. The construct also includes two additional statements based on interviews with the PhD students. In contrast to the attitude toward the website scale (Chen and Wells, 1999, Chen *et al.*, 2002), where the statements were measured with a 5-point Likert type scale, the attitude towards blog scale is measured using a 7-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The items used in the attitude towards website and attitude towards blog scales are shown in Table 8.

Table 8: Attitude towards Website and Attitude towards Blog Scales

Item Code	Attitude toward the Website	Attitude towards the blog
ab01	The website makes it easy for me to build a relationship with the company.	This blog makes it easy for me to build a relationship with the blogger
ab02	I would like to visit this website again in the future	I would like to visit the blog again in the future
ab03	I'm satisfied with the service provided by this website.	I am satisfied with this blog
ab04	I feel comfortable in surfing this website	I feel comfortable surfing this blog
ab05	I feel surfing this website is a good way for me to spend my time.	I feel surfing this blog is a good way to spend my time
ab06	Compared with other websites, I would rate this one as (one of the worst – one of the best)	Compared with other blogs, I would rate it as one of the best
ab07		I am not happy with this blog * #
ab08		Visiting this blog was a satisfying experience #

Note: # = New statements developed based on interview; * = Reverse scaled item

5.6.6 Consumer Avoidance of Sponsored Posts on Blogs Construct

This construct comprises of nine statements (see Table 9) which were adapted from previous studies on online advertising and more specifically the *ad avoidance* construct (Cho and Cheon, 2004, Jin and Villegas, 2007). This scale was adapted taking into consideration the feedback from experts on the LinkedIn social network and the student interviews.

Blog users rated nine items measuring attitude towards sponsored posts with a seven-point Likert scale ranging from 'strongly disagree' to 'strongly agree'.

Table 9: Consumer Avoidance of Sponsored Posts on Blogs Scale

Item Code	Original statements *	Attitude towards sponsored posts
as01	I intentionally don't click on any links on the sponsored posts, even if the ads draw my attention.	I would not click on the links on sponsored posts/ advertorials
as02	I click away from the page if it displays sponsored posts without other content.	I would click away if the blog displays sponsored posts/ advertorials
as03	It would be better if there were no sponsored posts on blogs	It would be better if there were not sponsored posts/ advertorials on the blog
as04	I close windows to avoid sponsored posts.	I would close the browser to avoid sponsored posts/ advertorials on the blog
as05	I intentionally ignore any sponsored posts on blogs	I do intentionally ignore any sponsored posts/ advertorials on the blog
as06	I like to read sponsored posts if they are written by credible bloggers	I like sponsored posts/ advertorials
as07	I hate sponsored posts	I hate sponsored posts/ advertorials
as08	I scroll down blogs to avoid sponsored posts	I would scroll down the blog to avoid sponsored posts/ advertorials
as09	I would prefer that there are no sponsored posts on blogs	I would prefer that there are no sponsored posts on the blog

Note: *= Original statements (Cho and Cheon, 2004, Jin and Villegas, 2007)

5.7 Description of the Questionnaire

The survey instrument – the online questionnaire, was 16 pages long. See Appendix 3 for a copy of the questionnaire. The first page contains the information that the survey is only for blog users (or blog visitors) who have visited blogs in the past 12 months. The next page detailed the incentives, the prizes and the instructions for answering the online survey questionnaire. The instructions pointed out that all questions required an answer. Assurances about the confidentially of the answers were also provided. This was required to increase the confidence of the respondents.

The third page was quite crucial because it specifically mentions the requirement that the respondents have to think of a blog that they have visited most frequently in the past 12 months. Respondents, who were bloggers, were not allowed to choose their own blogs to avoid bias. This was considered important after the pilot test revealed that bloggers were ranking their blog favourably for a majority of the questions. Also based on findings of the pilot test, the respondents were recommended to have the blog open in another browser window while responding to the questions.

The respondents were required to provide the name of the specific blog they had in mind and the blog URL. The answer to this question helped to verify whether the respondents had chosen a personal blog. The next page contained two more questions about the blog that the respondents had chosen, namely, when they first started visiting the blog and the frequency of visits to the blog.

Page five covers the six items measuring the credibility construct, while pages six and seven had items measuring the attitude towards blogs and perceived interactivity constructs respectively. Items measuring the consumer avoidance of sponsored posts construct were in page eight. Pages nine and ten collected information regarding the respondents' experience using technology and had a total of 5 questions in the multiple choice format.

Items in page 11 measured the 'technology readiness index' while page 12 had items measuring the 'need for cognition' The next three pages collected demographic information of the respondents including gender, age, etc. This was used in developing a demographic profile of the respondents. Finally, the last page expressed gratitude for completing the survey. Respondents interested in taking part in the lucky draws were required to provide their contact information.

5.8 Analysis

Initial analysis of the data commenced following the two-step approach as suggested by Anderson and Gerbing (1988). This involved conducting exploratory factor analysis (EFA) followed by confirmatory factor analysis (CFA). EFA was carried out by using the statistical software SPSS 17.0 and is used to test for reliability, to identify initial evidence of unidimensionality (Gerbing and Anderson,

1988) and discriminant validity (Farrell, 2010) prior to a more confirmatory assessment via CFA. The CFA utilised the Maximum Likelihood (ML) method to estimate the model using the AMOS 17.0 software.

The last step involved the Structural Equation Modelling (SEM), which was used to test the hypotheses and to check for mediating effects as well. The model construction is thus composed of two steps, namely a first step that involves testing for fit and construct validity of the Confirmatory factor analysis (CFA) model, followed by testing the structural model and the significance of the relationships. This follows the two step method of model construction as used by Cho and Cheon (2004) and Jin and Villegas (2007). The Maximum Likelihood method is the most commonly used approach in structural equation modelling and the estimates using ML techniques have been found to be quite robust even when data are not normally distributed (Chou and Bentler, 1995).

5.8.1 Distribution Issues

Traditionally, normality of the sample is one of the basic assumptions required in order to carry out structural equation modelling (SEM) analysis (Byrne, 2010). Normality means that the distribution of the data is normally distributed with mean=0, standard deviation=1 and a symmetric bell shaped curve. Normally the Skewness and Kurtosis measures are checked:

- **Skewness**: value should be within the range ±1 for normal distribution.
- **Kurtosis**: Value should be within range ±3 for normal distribution.

However, it was found that our data departs somewhat from normality (some variables exceed the criteria given above). Among the most common methods for handling non-normal data, researchers are increasingly using the bootstrapping techniques in SEM. This is discussed in detail below.

5.8.2 Bootstrapping

To handle the non-normal data, bootstrapping was carried out to test the effects of non-normal distributed variables on the structural model (Efron *et al.*, 1993).

According to (Preacher and Hayes, 2004, p. 721): *"Bootstrapping is a nonparametric approach to effect-size estimation and hypothesis testing that makes no assumptions about the shape of the distributions of the variables or the sampling distribution of the statistic."*

The Bollen-Stine p-value is used to assess overall model fit (i.e., $p > 0.05$). If the Bollen-Stine bootstrap is $p < 0.05$, the model is rejected. However, according to Byrne 2001, the Bollen-Stine probability results are highly sensitive to sample size and should not be used as indicator of goodness of fit. This issue was not covered in the second edition of the book (Byrne, 2010).

To proceed with the bootstrapping, the Bollen-Stine bootstrap under 'Analysis Properties' in AMOS was unchecked. The number of bootstrap samples drawn by AMOS was then specified at 1000. It should be noted that there is no recommended number of samples drawn and the number 1000 was arbitrarily chosen here in this research. 'Bias-corrected confidence intervals' was requested and the corresponding confidence level was set at 90 (by default). 'Bootstrap ML' was also selected before bootstrapping was run using AMOS. As mentioned earlier, Bootstrapping is becoming popular as it overcomes the limitations of statistical methods, such as the assumption of normality of sampling distributions before running SEM.

5.8.3 Dealing with Outliers

In statistics, outliers refer to those scores that are substantially different from all the others in a particular set of data (Byrne, 2010). The presence of outliers can seriously distort statistical tests (Hair *et al.*, 2010). Multivariate outliers differ from univariate outliers in that they have extreme scores on more than one variable as opposed to a single variable (Tabachnick and Fidell 2007). Baumgartner and Homburg (1996) noted that the detection (and removal of outliers) in SEM is relatively new.

There are various methods used to evaluate multivariate outliers including Mahalanobis distance, leverage, discrepancy, and influence. Among these methods, the most common and easiest method to detect multivariate outliers is by looking at the Mahalanobis distance (D^2) (Tabachnick and Fidell 2007, p.73). An outlier usually has a D^2 value that stands distinctly apart from the general distribution of observations (Byrne, 2010, Hair *et al.*, 2010). In this study, the serious multivariate outliers (that were at a maximum distance from the others), were removed from the final study. By looking at the Mahalanobis distance measure, a further nine multivariate outliers were removed from the sample and final analysis was carried out on the 399 respondents.

5.8.4 Principal Component Analysis

Principal component analysis (PCA) was carried out using the statistical software SPSS version 17.0. PCA differs from exploratory factor analysis (EFA) in the communality estimates used. EFA is used to indicate the factors (or dimensions) that account for covariation among the observed variables (Byrne, 2010). The term principal component analysis is often used interchangeably with EFA by various authors, which sometimes leads to confusion. In fact, a review of past literature by Guadagnoli and Velicer (1988) showed that there was very little difference between solutions derived using the two techniques. Hair (2010) has pointed out that in EFA, factors are derived from statistical results and not from theory. The primary purpose of factor analysis is to analyse interrelationships among a large number of variables and to explain these variables in terms of their common underlying dimensions (factors). This involves condensing or summarising the data into a smaller set of factors (Hair *et al.*, 2010). PCA establishes what linear components exist within the data and how a particular variable might contribute to that component (Field, 2005, p.631). Field (2005) also pointed out that PCA is a psychometrically sound and conceptually less complex procedure.

The strength of inter-correlations is inferred from the Bartlett's tests of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The Bartlett's test of sphericity is used to test the null hypothesis that the variables are uncorrelated in the population. In other words, the population correlation matrix is an identity matrix (that is, where items correlate perfectly with themselves and not at all with other items). Inability to reject this null hypothesis indicates inappropriateness of factor analysis. On the other hand, statistical significance ($p<0.05$) of the Bartlett's test of sphericity indicates that sufficient correlations exist among the variables for factor analysis to proceed. On the other hand, the KMO measure of sampling adequacy is an index used to examine the appropriateness of factor analysis with low values of 0.5 and less indicates that the correlations between pairs of variables cannot be explained by other variables and that factor analysis is inappropriate. On the other hand, values between 0.5 and 1.0 are desirable (Malhotra, 2004). The absence of these tests raises the question as to whether the data set is suitable for factor analysis.

The factors were extracted by running the principal component analysis with the orthogonal Varimax with Kaiser Normalization approach. This process follows the Eigen-value rule where only those factors with an Eigen-value of 1.0 and above are retained. Only items with factor loadings of 0.50 and above were considered following (Hair *et al.*, 2010, p. 118), even though other authors have used lower values such as the criterion of 0.32 as a rule of thumb for the minimum loading of an item (Tabachnick and Fidell, 2007, p. 649).

Items that loaded on more than one factor despite the rotation were dropped from the final analysis. The factors were re-examined and renamed if necessary. The communalities of the variables were examined as well. Communality represents the amount of variance accounted for by the factor solution for each variable. Communalities lower than 0.50 was considered as not having sufficient explanation (Hair *et al.*, 2010, p. 119).

5.8.4.1 Coefficient of internal consistency

Internal consistency is defined as the degree to which all the items of a test or instrument measure the same attribute or dimension (Cronbach, 1951). In other words, the internal consistency reliability means that all of the items (or statements) in the questionnaire measures the same construct for which they are designed. The degree of correlation is closely related to internal consistency. The higher the correlation, higher the internal consistency and subsequently, lower the measurement error as well. In effect indicator models, a high internal consistency of the instruments or scales is very much desired (Kottner and Streiner).

Cronbach's Alpha is the most frequently used estimate of internal consistency. As such this study also estimates the internal consistency or the internal consistency reliability of each of the dimensions by using Cronbach's coefficient alpha, with 0.7 as the recommended cut-off (Nunnally, 1978, Nunnally and Bernstein, 1994). Sometimes, the Cronbach's alpha can be improved further by deleting some of the items from the construct.

The item-to-total correlations and inter item correlations are also examined in order to assess internal consistency. According to the rule of thumb, item-to-total correlations should exceed 0.50 and inter item correlations should exceed 0.30 (Hair *et al.*, 2010, p. 125).

5.8.5 Confirmatory Factor Analysis

As opposed to PCA which is used when the links between observed and latent variables are unknown or uncertain, confirmatory factor analysis (CFA) is used when the researcher has some knowledge about the underlying variable structure (Byrne, 2010). In other words CFA allows us to either confirm or reject the preconceived theory (Hair *et al.*, 2010).

The statistical software AMOS 17.0 was used to carry out the confirmatory factor analysis. The standardised factor loading of the items were examined and those lower than 0.5 were removed if they had high modification indices (MI) as well. After each removal, the model was re-estimated and checked. This was carried out in order to find out whether dropping the items changed the conceptual definitions of the constructs.

5.8.5.1 Validity and Reliability

Convergent validity refers to the extent indicators of a specific construct converge or share a high proportion of variance in common (Hair *et al.*, 2010, p. 689). The convergent validity of the scale items was assessed using the three criteria following Bagozzi and Yi (1988): All the standardised loadings are examined. Different authors have specified different guidelines. Fornell and Larcker (1981) provided more stringent specifications that require factor loadings of 0.7 and above in order to be considered as having convergent validity. Bagozzi and Yi (1988) allowed for slightly lower requirement of 0.6 and above. According to Hair (2010, p. 649) factor loadings of 0.5 and above are considered good.

Moreover, all factor loadings should be significant. Finally the average variance extracted (AVE), also known as the Rho vc used for evaluating the convergent validity from each construct should be greater than 0.50. The construct is considered to have convergent validity if the AVE is more than 0.50 (Fornell and

Larcker, 1981). Once the convergent validity and unidimensionality is established, composite validity is measured (Gerbing and Anderson, 1988, Cortina, 1993). The composite reliabilities (CR), which is indicated by the Joreskorg Rho is used as an estimate of construct reliability and should exceed the rule of thumb value of 0.60 for all the constructs as suggested by Bagozzi and Yi (1988).

Discriminant validity was assessed by looking at the highest correlation between any pair of constructs and comparing with the square roots of AVEs. The value of the highest correlation between any pair of constructs in the model should lower than any of the square roots of AVEs.

Another test for discriminant validity involves comparing the AVE values with the square of the correlation estimate between the constructs. This test is considered more rigorous than the earlier one. The average variance extracted (AVE) estimates should be greater than the squared correlation estimates to exhibit sufficient evidence of discriminant validity (Fornell and Larcker, 1981, p. 710).

5.8.6 Structural Equation Modelling

Structural equation modelling (SEM) is a widely accepted comprehensive statistical approach to test hypotheses. It is a confirmatory rather than an exploratory approach and is an extension of several multivariate techniques (Hoyle, 1995, Byrne, 2010, Hair et al., 2010). The reason this technique has become so popular is due to the ability to "simultaneously estimate multiple dependence relationships (similar to multiple regression equations) while also incorporating multiple measures for each concept" (i.e., akin to factor analysis) (Hair et al., 2010, p. 627). It is for this reason that it is sometimes called the second generation of multivariate analysis.

5.8.6.1 Model Fit Assessment

The *Bootstrapping* goodness of fit measure was examined first and the null hypothesis that the model is correct is confirmed using the Bollen-Stine bootstrap ($p = .001$). Examination of the various measures of fit was the carried out, to see if the model is a good-fit. There are numerous fit indices and various authors have different opinion concerning which indices to report. For example, Kenny (2010) points out the current consensus not to use the GFI and AGFI measures. This is because sample size affects these measures and can be large for models that are poorly specified.

The indices are also classified broadly into two main groups, namely, the Goodness-of-Fit Indices, e.g., GFI, CFI, NFI and TLI, or under the Badness-of-fit Indices, e.g., RMSEA and SRMR.

The measures to be examined in this thesis include the ratio of the chi-square statistics compared to the degrees of freedom, ($\chi 2/df$), the Tucker-Lewis coefficient (TLI) and the comparative fit index (CFI) results. The minimum specified cut-offs

(0.95) indicates a good model fit. The Standardised Root Mean Square Residual (SRMR) is examined. A value of less than 0.08 is considered a good fit. (Bentler and Bonett, 1980, Hu and Bentler, 1999, Kenny, 2010). Finally, the root mean square error of approximation (RMSEA) is also examined. The rule of thumb of 0.05 or less indicates a close fit of the model in relation to the degrees of freedom (Hu and Bentler, 1999, Byrne, 2010).

5.8.6.2 Mediating effects

Baron and Kenny's (1986) criteria has become the defacto method for establishing mediation since their paper was published. However, recent studies have pointed out certain flaws in their procedure (Iacobucci *et al.*, 2007, Zhao *et al.*, 2010).

The SEM bootstrap method (Efron, 1979, Efron *et al.*, 1993, Preacher and Hayes, 2004) with 1000 bootstrap samples was used to examine for indirect (mediating) effects. This procedure has been found to be a more robust method as compared to the Sobel's (1982) test to produce unbiased estimates of mediating effect (Preacher and Hayes, 2004, Iacobucci *et al.*, 2007, Cheung and Lau, 2008, Kenny, 2008).

Two possible mediating effects in the SEM were examined in this study, namely:

- Perceived Interactivity → Attitude towards Blogs → Avoidance of Sponsored Posts on Blogs.
- Perceived Credibility → Attitude towards Blogs → Avoidance of Sponsored Posts on Blogs

Zhao *et al.* (2010) has identified three patterns of mediation and two patterns of non-mediation in a non-recursive three-variable causal model, namely:

- Complementary mediation: Mediated effect (a x b) and direct effect (c) both exist and point at the same direction. This is similar to Baron and Kenny's (1986) partial mediation effects.
- Competitive mediation: Mediated effect (a x b) and direct effect (c) both exist and point in opposite directions. Classified as non mediation by Baron and Kenny (1986).
- Indirect-only mediation: Mediated effect (a x b) exists but no direct effect. This corresponds to full mediation as given by Baron and Kenny's (1986).
- Direct-only non-mediation: Direct effect (c) exists but no indirect effect. Classified as non-mediation by Baron and Kenny (1986).

- No-effect non-mediation: Neither direct effect nor indirect effect exists. Classified as non-mediation by Baron and Kenny (1986).

5.8.7 Alternative Models

It is a common practise to have a few alternative models to see if there is a better fit. However, this research does not have any alternative models. Covariance based Structural Equation Models (SEM) does allow both confirmatory (theory testing) and exploratory modelling (theory development).

In theory testing we can have either strictly confirmatory theory testing: the researcher formulates one single model and has obtained empirical data to test it. Model is either accepted or rejected.

Only one model has been used, as this research is not involved in theory development but rather in theory testing. Theory testing using alternative models involves specifying several alternative models (or competing models) and on the basis of an analysis of a single set of empirical data one of the models should be selected. Furthermore, modifying hypothesised models in order to obtain a better fit is frowned upon by few scholars (Mueller, 1996). Thus, only one model is specified in this study.

5.9 Limitations of the Empirical Research

Despite the advantages of empirical research to help understand consumer behaviour in the online context, it is necessary to point out that it does have certain limitations. This study used an online survey method to study the relationships between the various constructs. As mentioned earlier in the section on the philosophical position adopted in this study, the analysis results are objective and generalisable. However, it is believed that qualitative research including the use of more longitudinal research designs could probably help to complement or add to this research by taking at look at the individual stories and take a deeper look at how individual blog users feel about sponsored posts and the relationship between interactivity and attitudes.

5.10 Summary

This chapter discusses the research methodology employed in this study. The positivist approach as the epistemological position underpinning the study is examined in detail in section 5.2. Section 5.3 looks at the sampling process and data collection method. The chapter also discusses the justification for using an online survey method in sub section 5.3.1. Like all research methodologies, the methodology adopted in this study has some limitations as well, for example, the use of online surveys (section 5.3.2). However, the chapter has also pointed out the steps taken to overcome these limitations. This chapter also discusses the unique nature of blog users and the reasons why the sampling method used in the study is the most effective to gather data from blog users. Section 5.4 discuss the various constructs used in this study while section 5.5 looks at how the data was analysed.

Chapter 6: Data Analysis Results

6.1 Introduction

This chapter presents a comprehensive presentation of the results of the data analysis. The first section presents the demographic profile of the respondents. This is followed by the principal component analysis results of the various constructs used in the study. The section looks at the internal consistency or the internal consistency reliability. The third section of this chapter presents the findings of the confirmatory factor analysis. This includes the list of items removed and the reasons for their removal. Also presented are the convergent validity, discriminant validity and construct reliability results.

The fourth section presents the finding of the structural equation modelling which covers the model fit summary and summary of the hypothesis testing including the findings of the tests for mediation.

Regarding the response, a total of 427 completed responses were received. As mentioned in the methodology chapter, the blogs that carried invitations to the survey altogether had a total average of 2194 visitors per day (as of 31 January 2010). Thus, the response rate can be estimated as 19.46 percent. Out of the total responses received, 408 were useable for the initial analysis. As previously discussed in the methodology chapter, a further nine multivariate outliers were removed from the sample and final analysis was carried out on 399 respondents.

6.2 Demographic Profile of the Respondents

The detailed demographic and blog usage information of the 399 respondents are provided in Table 8.

Regarding the gender distribution, female respondents (72.9 percent) greatly outnumbered the male respondents (27.1 percent). The higher number of female respondents may be attributed to the fact that eight out of nine bloggers besides the researcher, who agreed to promote the survey questionnaire to their visitors, were women. It can be assumed that most visitors to these personal blogs are women as well due to the nature of the topics posted on their blogs which are more likely to appeal to female readers.

As for the age of respondents, it was noted that most of the respondents were 25 years and older, with 46.6 percent of the respondents from the 25-34 age group. The second largest age group was the 35-44 with 25.3 percent of the respondents from this age group. 18 percent of the respondents were from the 16-24 years age group. 7.3 percent were in the 45 to 54 age group while only 2.8 percent were in the 55 to 64 age group.

The respondents were also fairly highly educated with more than 50 percent having at least a Bachelor's degree and higher qualification. 39.8 percent of the respondents indicated that they have a bachelor's degree while 34 percent had a Master's degree. Those who had further education (including diplomas) made up

12.8 percent. There were an almost equal number of respondents with a doctorate (5.5 percent) and those with high school or equivalent (5 percent). Only one respondent indicated that she had done one year of drama school. 2.8 percent of the respondents indicated that they had 'other' level of education. Two respondents did not answer this question.

Table 10: Characteristics of the Respondents and Blog Usage

Characteristics	n	Valid %
Gender		
Male	108	27.1
Female	291	72.9
Age		
16-24	72	18.0
25-34	186	46.6
35-44	101	25.3
45-54	29	7.3
55-64	11	2.8
Education Level		
High School or equivalent	20	5.0
Further Education	51	12.8
University First Degree (Bachelor's Degree)	158	39.8
Master's Degree	135	34.0
Doctorate	22	5.5
Others	11	2.8
No replies (missing values)	2	
Employment Status		
Self-employed with employees	21	5.3
Self-employed without employees	87	22.1
Employee in managerial positions	84	21.3
Employee at foreman or supervisory positions	29	7.4
Other Employees	104	26.4
Students	46	11.7
Unemployed /Retired/ Stay at home mums	23	5.8
No replies (missing values)	5	

Years using the internet		
Less than 1 year	2	0.5
1 to 3 year	11	2.8
4 to 6 years	36	9.0
7 to 9 years	80	20.1
10 years and more	270	67.7
Hours spent browsing blogs / week		
Less than 1 hour	37	9.3
1 to 10 hours	197	49.4
11 to 20 hours	59	14.8
More than 20 hours	106	26.6
Years visiting blogs		
Less than 1 year	26	6.5
1 to 3 year	227	56.9
4 to 6 years	121	30.3
7 to 9 years	17	4.3
10 years and more	8	2.0
Do you have a Blog?		
Yes	267	66.9
No	132	33.1
Years blogging		
Less than 1 year	54	20.2
1 to 3 years	144	53.9
4 to 6 years	56	21.0
7 to 9 years	12	4.5
More than 10 years	1	0.4
No replies	132	

As for employment, 26.4 percent were ordinary employees. A surprisingly large number of the respondents (22.1 percent) were self-employed (without any employees). An almost equal number of respondents were employed in managerial positions (21.3 percent). 11.7 percent of the respondents were students (at various levels). Next were those at supervisory positions (7.4 percent). 5.8 percent were either unemployed or retired. This included several housewives/ stay-at-home-mums/ homemakers. An almost equal number of respondents were entrepreneurs with employees (5.3 percent). Five respondents did not answer the question.

The internet usage profiles of the respondents are discussed below. It is clear from the answers that most of the respondents are quite internet savvy with the majority of respondents having been using the net for 7 years and more. In fact, 67.7 percent respondents said that they had been using the Internet for 10 years and more. They were followed by those who have been using the internet between 7 to 9 years (20.1 percent). 9 percent of respondents have been surfing the net between 4 to 6 years. They were followed by those who had been on the net for 1 to 3 years. Only 0.5 percent of the respondents have been using the internet for less than a year.

The respondents were also asked whether they owned a blog and it was not surprising that an overwhelming number of the respondents were in fact bloggers as well. A majority of the respondents (66.7 percent) were bloggers with 53.9 percent of the sample saying that they had been blogging for 1 to 3 years. 21 percent of the bloggers have been blogging for 4to 6 years. An almost equal number of people (20.2 percent) have been blogging for less than a year. 4.5 percent of the respondents had been blogging for 7 to 9 years. One respondent (0.4 percent) had been blogging for 10 years or more.

Almost half of the respondents (49.1 percent) spent 1 to10 hours in browsing blogs per week. They were followed by 26.5 percent of respondents who spent more than 20 hours per week browsing blogs. Next were those who spent between 11 to

20 hours per week (15 percent). 9.4 percent of the respondents visit blogs for less than one hour every week.

The majority of the respondents (56.9 percent) have been visiting blogs for 1 to 3 years. This was followed by 30.3 percent who had been visiting blogs for 4 to 6 years. 6.5 percent of the respondents had been visiting blogs for less than a year while 4.3 percent of the respondents had been visiting blogs for 7 to 9 years. Only 2 percent of the respondents had been visiting blogs for 10 years and more. Almost half of the respondents (49.4 percent) spent between 1 and 10 hours browsing blogs per week. They were followed by 26.6 percent of respondents who spent more than 20 hours per week browsing blogs. Next were those who spent between 11and 20 hours per week (14.8 percent). 9.3 percent of the respondents visit blogs for less than one hour every week.

An examination of the blogs listed by the respondents as the one they visit regularly (and assumed to be their favourite personal blogs) reveals that many of the blogs do carry sponsored posts. This inference was based on the observation of the researcher who has been blogging since 2007 and has considerable experience in writing sponsored posts as well. This was an interesting observation as results (given later) show that they have a negative perception of sponsored posts on blogs. This is discussed in detail in the following chapter.

6.3 Principal Component Analysis

Hair et al. (2010) have suggested that the sample with the original data can be split into two sets with the first data set used to develop the measures, and the second data set to validate the measures. However, due to certain limitations – namely time and sample size restrictions (not large enough), the same sample was used to analyse the data following the two-step approach suggested by Anderson and Gerbing (1988). First of all, principal component analysis (sometimes referred to as exploratory factor analysis) is carried out followed by confirmatory factor analysis (CFA). Principal component is often used interchangeably with EFA by various authors as is the case in this study.

Given below are the results of the principal component analysis along with the results of the test for internal consistency or the internal consistency reliability. Only items with factor loadings of 0.40 and above were considered acceptable (though values greater than 0.50 are preferred for practical significance) following Hair *et al.* (2010, p. 118) even though some authors have used the criterion of 0.32 as a rule of thumb for the minimum loading of an item (Tabachnick and Fidell, 2007, p. 649). Items that loaded on more than one factor despite the rotation were dropped from the final analysis.

6.3.1 Technology Readiness Index

On running the Principal Component Analysis, the Bartlett’s test of sphericity was found to be statistically significant ($p=0.000<0.05$) and indicates that sufficient correlations exist among the variables for factor an analysis to proceed.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.841 and as such, considered good (Hair *et al.*, 2010). Principal Component Analysis with Varimax rotation and Kaiser Normalisation resulted in two factors. Factor one had 7 items while the second factor had three items. Factor one corresponds to Parasuraman’s (2000) innovativeness dimension while the second dimension corresponds to the discomfort dimension.

Cronbach's Alpha based on standardised items of the first factor was 0.841. This is higher than 0.7 and meets the requirements set by Nunnally (1978) and Nunnally and Bernstein (1994). The Cronbach's Alpha of the construct cannot be improved any further as indicated by the table.

Table 11: Technology Readiness Index Construct

Item Code	Item	Communalities	Factor 1	Factor 2	Cronbach's Alpha if Item Deleted
tri05	Other people come to me for advice on new technologies.	.655	.808		.799
tri01	I keep up with the latest technological developments.	.595	.771		.812
tri06	In general, I am among the first in my circle of friends to acquire new technology when it appears.	.535	.732		.818
tri07	I enjoy the challenge of figuring out high-tech gadgets.	.514	.712		.819
tri09	I can usually figure out new high tech goods and services without help from others.	.485	.696		.822
tri03	I find I have fewer problems than other people in making technology work.	.489	.689		.821
tri08*	It seems my friends are learning more about the newest technologies than I am.	.432	.544		.838
tri04*	Technology always seems to fail at the worst possible time.	.612		.782	.430
tri10*	It is embarrassing when I have trouble with a high-tech gadget while other people are watching me	.518		.715	.110
tri02*	If I buy a high-tech good or service, I prefer to have the basic model over one with a lot of extra features.	.262		.422	.300

Note: * = Reverse scaled item; Shaded number represent problematic item

However, the inter-item and item-total correlation data as given in Table 12 shows that the item-total correlation of the item tri08 is lower than the 0.50 threshold as given by Hair (2010).

Table 12: Technology Readiness Index (TRI) Inter-Item Correlation Matrix

Item Code	tri08r#	tri06	tri01	tri05	tri09	tri07	tri03	Corrected Item-Total Correlation
tri08*	1.000							.470
tri06	.344	1.000						.598
tri01	.334	.544	1.000					.648
tri05	.431	.588	.545	1.000				.710
tri09	.350	.326	.363	.508	1.000			.575
tri07	.271	.463	.577	.476	.417	1.000	.387	.590
tri03	.365	.342	.431	.468	.556	.387	1.000	.584

Note: * = Reverse scaled item; Shaded numbers represent problematic items

The Cronbach's Alpha based on standardised Items of the second factor is 0. 371 and thus indicates low internal consistency reliability as it is lower than the threshold of 0.7. Moreover, the Cronbach's alpha cannot be improved any further by deleting any of the items and thus the whole factor is removed from further analysis. The TRI as measured by 6 items, namely tri01, tri03, tri05, tri06, tri07 and tri09 and the Cronbach's Alpha based on standardised items of this factor is 0.838. Based on the statements, it can be observed that this dimension corresponds to the ***innovativeness*** dimension identified by Parasuraman (2000). Innovativeness is seen as a driver or contributor of technology readiness.

6.3.2 Need for Cognition

The Bartlett's test of sphericity was statistically significant ($p=0.000<0.05$) and indicates that sufficient correlations exist among the variables for factor analysis to proceed. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.796 and as such is considered good (Hair *et al.*, 2010).

It was found that the items measuring the *need for cognition* loaded into three factors (refer to Table 13). Eight items loaded in the first factor while three loaded in the second factor. Only two items loaded in the third factor.

Table 13: The Need for Cognition Construct

Item Code	Item	Communalities	Factors		
			1	2	3
nfc04	I like to have the responsibility of handling a situation that requires a lot of thinking.	.558	.701		
nfc13	The notion of thinking abstractly is appealing to me.	.588	.692		
nfc09	I would prefer complex to simple problems.	.542	.676		
nfc12	The idea of relying on thought appeals to me.	.586	.661		
nfc07	I try to anticipate situations where there is a likely chance I will have to think in depth about something.	.509	.647		
nfc06	I really enjoy a task that involves coming up with new solutions to problems.	.464	.615		
nfc02	I find satisfaction in deliberating hard and for long hours.	.458	.556		
nfc08	I usually end up deliberating about issues even when they do not affect me personally.	.338	.532		
nfc11*	Learning new ways to think doesn't excite me very much.	.541		.721	
nfc10*	It's enough for me that something gets the job done; I don't care how or why it works.	.430		.632	
nfc05*	I prefer to think about small, daily projects than long-term ones	.431		.553	
nfc03*	I like tasks that require little thought once I've learned them.	.568			.738
nfc01*	I feel relief rather than satisfaction after completing a task that required a lot of mental effort	.471			.661

Note: * = Reverse scaled item; Shaded numbers represents problematic item

The Cronbach's Alpha Based on standardised items of the first factor or dimension was 0.798. The item nfc08: ‘I usually end up deliberating about issues even when they do not affect me personally’, was found to have a very low communality (0.338). The item-to-total correlations and inter item correlations were examined in order to assess internal consistency. As mentioned in the methodology chapter, the rule of thumb measures are used where item-to-total correlations should exceed 0.50 and inter item correlations should exceed 0.30 (Hair *et al.*, 2010, p. 125).

Table 14: Inter-Item Correlation Matrix

Item Code	nfc02	nfc04	nfc06	nfc07	nfc08	nfc09	nfc12	nfc13	Corrected Item-Total Correlation
nfc02	1.000								.452
nfc04	.458	1.000							.618
nfc06	.304	.488	1.000						.517
nfc07	.323	.423	.422	1.000					.521
nfc08	.177	.197	.184	.266	1.000				.325
nfc09	.318	.498	.356	.325	.259	1.000			.571
nfc12	.260	.351	.299	.263	.224	.416	1.000		.530
nfc13	.264	.367	.326	.372	.247	.433	.620	1.000	.570

Note: Shaded numbers represent problematic items

Referring to Table 14, some of the item-to-total correlations and inter item correlations do not exceed the rule of thumb thresholds. As such it is clear that this construct has some problems with internal consistency, more specifically the items nfc02: ‘I find satisfaction in deliberating hard and for long hours’, nfc12: ‘The idea of relying on thought appeals to me' and nfc08: 'I usually end up deliberating about issues even when they do not affect me personally'.

Table 15 below indicates that the Cronbach's Alpha and thus the internal consistency reliability can be improved to 0.809 by removing the item nfc08. Deletion of any other variable in the factor only reduces the Cronbach's Alpha. However, the item nfc02: 'I find satisfaction in deliberating hard and for long hours' was removed from the final analysis as well because of the question of internal consistency issues as mentioned above as well as due to the fact that it had low factor loading (0.556< 0.7) and low communalities (0.458). The item nfc12 was retained in the analysis.

Table 15: Internal consistency reliability of the Need for Cognition Construct

Item Code	Item	Cronbach's Alpha if Item Deleted
nfc02	I find satisfaction in deliberating hard and for long hours.	.774
nfc04	I like to have the responsibility of handling a situation that requires a lot of thinking.	.765
nfc06	I really enjoy a task that involves coming up with new solutions to problems.	.772
nfc07	I try to anticipate situations where there is a likely chance I will have to think in depth about something.	.780
nfc08	I usually end up deliberating about issues even when they do not affect me personally.	.780
nfc09	I would prefer complex to simple problems.	.781
nfc12	The idea of relying on thought appeals to me.	.793
nfc13	The notion of thinking abstractly is appealing to me.	.809
nfc05*	Learning new ways to think doesn't excite me very much.	.498
nfc10*	It's enough for me that something gets the job done; I don't care how or why it works.	.367
nfc11*	I prefer to think about small, daily projects than long-term ones.	.347

Note: *= Reverse scaled item

Cronbach's Alpha Based on standardised items of the second factor was 0.508 and is lower than 0.7 thresholds. Deleting any other variable in the factor only reduces the Cronbach's Alpha. The item nfc05* 'I prefer to think about small, daily projects than long-term ones' had low factor loading (0.532) and low communalities (0.431) as well.

Cronbach's Alpha Based on standardised items of the third factor was 0.498 and is also lower than 0.7 thresholds. Thus it does not meet the minimum requirements. Finally, only one dimension of the need for cognition is considered reliable and is composed of six items, namely, nfc04: 'I like to have the responsibility of handling a situation that requires a lot of thinking', nfc06: 'I really enjoy a task that involves coming up with new solutions to problems', nfc07: 'I try to anticipate situations where there is a likely chance I will have to think in depth about something', nfc09: 'I would prefer complex to simple problems', nfc12: 'The idea of relying on thought appeals to me' and nfc13: 'The notion of thinking abstractly is appealing to me'. Some of the items correspond to the items in the *enjoyment of cognitive stimulation* dimension as identified by Lord and Putrevu (2006). Please refer to Appendix 1 for list of items listed under this dimension in their study. In this study, the *need for cognition* construct is unidimensional. The Cronbach's Alpha of the construct is 0.798 and it cannot be improved any further by deleting other items.

6.3.3 Perceived Interactivity

The Bartlett's test of sphericity was statistically significant ($p=0.000<0.05$) while the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.875 and as such is considered good (Hair *et al.*, 2010).

Principal component analysis resulted in three factors (see Table 16). The item pi02 'I could choose freely what I wanted to see on the blog,' loaded on factors two and three. Thus this item was deleted and removed from further analysis.

As indicated in the Cronbach's Alpha based on standardised items of the first factor was 0.864 and the internal reliability of the construct cannot be improved any further by deleting other items as shown in Table 16, the item-to-total correlation of the item pi12 is below 0.50 and several inter item correlations are below the threshold of 0.30.

The item pi12: 'The blogger was very slow in responding to my requests' is discarded from the analysis even though removing it does not improve the Cronbach's Alpha of the construct because of low communality (0.283) and problems in inter-item correlations as explained above. The items that loaded onto the first factor was related to communication and corresponds to the factor '*2 way communication*' as given by Liu (2003) and were named as *Perceived Communication*.

Table 16: Principal Component Analysis of the Perceived Interactivity Construct

Item Code	Item	Communality	Factors 1	2	3	Cronbach's Alpha if Item Deleted
pi05	This blog facilitates two-way communication.	.627	.762			.841
pi09	The blog gives visitors the opportunity to give feedback.	.617	.757			.843
pi04	The blog is effective in gathering visitors' feedback and comments.	.658	.753			.839
pi14	I felt that I could communicate with the blogger directly.	.544	.685			.845
pi07	I felt that the blog wants to listen to its visitors.	.483	.672			.850
pi08	I felt that the blog does not encourage visitors to give feedback.*	.496	.655			.852
pi06	I felt that it is difficult to offer feedback on the blog.*	.480	.638			.850
pi15	I felt that I could communicate with other visitors to the blog.	.401	.623			.859
pi12	The blogger was very slow in responding to my requests.*	.283	.495			.864
pi13	Getting information from the blog was very quick.	.795		.886		.634
pi10	Clicking on the links gave me information quite fast	.781		.866		.648
pi11	I was able to obtain the information I want without any delay.	.512		.652		.850
pi02	I could choose freely what I wanted to see on the blog.	.583		.581	.443	
pi03	I had absolutely no control over what I can do on the blog.*	.661			.799	
pi01	I felt that I had a lot of control over my visiting experiences at this blog.	.599			.692	

Note: * = Reverse scaled item; Shaded number represents problematic item

Table 17: Inter-Item Correlation Matrix of Perceived Interactivity of Factor 1

Item Code	pi05	pi09	pi04	pi14	pi07	pi08	pi06	pi15	pi12	Corrected Item-Total Correlation
pi05	1.000									.682
pi09	.556	1.000								.683
pi04	.606	.733	1.000							.710
pi14	.518	.468	.553	1.000						.640
pi07	.469	.502	.480	.403	1.000					.589
pi08	.396	.519	.447	.350	.434	1.000				.567
pi06	.411	.467	.440	.437	.375	.490	1.000			.582
pi15	.408	.322	.379	.531	.364	.296	.313	1.000		.502
pi12	.440	.250	.333	.320	.304	.291	.351	.244	1.000	.442

Note: Shaded numbers represent problematic items

The Cronbach's Alpha based on standardised items of the second factor was 0.787 and also fulfils the criteria of internal consistency. The Cronbach's Alpha of the construct can be improved further to 0.850 by deleting the item pi11 'I was able to obtain the information I want without any delay,' but removing this will leave the construct with only 2 component items and as such this item is retained.

After examining the items that loaded into this dimension, it was found that the items were related to the speed of access and corresponds to the '*synchronicity*' dimension as given by Liu (2003). As such the dimension was named *Synchronicity* in this study as well.

The Cronbach's Alpha based on standardised items of the third factor, *Perceived Control*, which is similar to the *Active control* dimension as given by Liu and Shrum (2002), was only 0.507 and does not fulfil the criteria of internal consistency. Thus, ultimately there are only two dimensions making up the perceived interactivity construct, namely, *Perceived Communication* and *Synchronicity.*

6.3.4 Perceived Credibility

After Principal Component Analysis was run on the items measuring the Perceived Credibility construct, it was found that all the items loaded into one factor. Looking at the Bartlett's test of sphericity, p=0.000 and null hypothesis is rejected, indicating appropriateness of factor analysis. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.849 and as such is considered good (Hair *et al.*, 2010).

Table 18: The Credibility Construct

Item Code	Item	Communalities	Component	Cronbach's Alpha if Item Deleted
cred01	Trustworthiness	.744	.863	.849
cred02	Open-mindedness	.278	.527	.907
cred03	Training	.717	.847	.853
cred04	Experience	.813	.902	.839
cred05	Expertise	.697	.835	.855
cred06	Sincerity	.630	.793	.860

Note: Shaded number represents problematic item

Examining the component that was extracted reveals that the item cred02: 'Open-mindedness', had a factor loading of 0.515, which is higher than the acceptable values as given by Tabachnick and Fidell (2007). However, the item was found to have a very low communality (0.278) and indicates that the factor model is not working well for that indicator. This may cause a problem in interpreting the factor on which it was loaded and the item cred02: 'Open-mindedness', may have to be discarded.

In order to evaluate the internal consistency or the internal consistency reliability of the credibility dimension, the item-to-total correlations and inter item correlations are examined. According to the rule of thumb, item-to-total correlations should exceed 0.50 and inter item correlations should exceed 0.30 (Hair *et al.*, 2010 p.125).

Looking at Table 18, the item-to-total correlations and inter item correlations exceed the rule of thumb thresholds apart from item cred02: 'Open-mindedness'. The construct can thus be considered to have internal consistency.

Table 19: Inter-Item Correlation Matrix of the Credibility Construct

Item Code	cred01	cred06	cred02	cred03	cred04	cred05	Corrected Item-Total Correlation
cred01	1.000						.775
cred06	.737	1.000					.702
cred02	.368	.476	1.000				.419
cred03	.636	.506	.280	1.000			.739
cred04	.723	.597	.348	.814	1.000		.823
cred05	.617	.516	.326	.725	.750	1.000	.734

Note: Shaded number represents problematic item

The internal consistency was further tested using Cronbach's alpha. The Cronbach's coefficient alpha based on standardised items was 0.882, which is higher than 0.7 and thus meets the minimum threshold requirements as given by Nunnally (1978) and Nunnally and Bernstein (1994).

As shown in Table 19, the removal of the item cred02: Open-mindedness, further improves the Cronbach's Alpha considerably to 0.907. Thus, perceived credibility is made up of the items, cred01: Trustworthiness, cred03: Training, cred04: Experience, cred05: Expertise and cred06: Sincerity.

6.3.5 Attitude towards Blogs

On running the Principal Component analysis, the Bartlett's test of sphericity was found to be statistically significant ($p=0.000<0.05$) while the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0. 885 and as such is considered good (Hair *et al.*, 2010). Principal Component Analysis resulted in the extraction of a single factor.

In order to assess internal consistency the item-to-total correlations and inter item correlations are examined. According to the rule of thumb, item-to-total correlations should exceed 0.50 and inter item correlations should exceed 0.30 (Hair *et al.*, 2010 p.125). Looking at Table 19, all the item-to-total correlations and inter item correlations for all the items apart from ab01, exceed the rule of thumb thresholds. The construct can thus be considered to have internal consistency.

Table 20: Principal Component Analysis of Attitude towards Blogs

Item Code	Item	Communality	Factor	Cronbach's Alpha if Item Deleted
ab01	This blog makes it easy for me to build a relationship with the blogger	.156	-	.895
ab02	I would like to visit the blog again in the future	.774	.879	.822
ab03	I am satisfied with this blog	.759	.871	.820
ab04	I feel comfortable surfing this blog	.753	.868	.823
ab05	I feel surfing this blog is a good way to spend my time	.560	.833	.833
ab06	Compared with other blogs, I would rate it as one of the best	.537	.748	.835
ab07	I am not happy with this blog * #	.387	.733	.847
ab08	Visiting this blog was a satisfying experience*	.695	.622	.819

Note: # = New statements developed based on interview; * = Reverse scaled item

The Cronbach's Alpha of this construct is 0.854 which satisfies the requirements for internal consistency as given by Nunnally (1978) and Nunnally and Bernstein (1994).

Table 21: Inter-Item and Item-Total Correlation Matrix of Attitude towards Blogs

Item Code	ab01	ab02	ab03	ab04	ab05	ab06	ab07	ab08	Corrected Item-Total Correlation
ab01	1.000								.315
ab02	.274	1.000							.791
ab03	.294	.707	1.000						.781
ab04	.221	.798	.796	1.000					.758
ab05	.208	.625	.544	.590	1.000				.628
ab06	.197	.580	.588	.538	.490	1.000			.611
ab07	.190	.522	.503	.514	.351	.329	1.000		.503
ab08	.387	.660	.690	.605	.616	.616	.395	1.000	.769

Note: Shaded numbers represent problematic items

Again, the item ab01, 'This blog makes it easy for me to build a relationship with the blogger', was found to have low communality (0.156) and also did not load as its factor loading was below 0.4. Deleting this item can further improve the Cronbach's alpha scores of this construct to 0.895 and thus the item was removed from further analysis. Another item ab07, 'I am not happy with this blog' also had low communality (0.387) and was also removed from analysis as well. The Cronbach's Alpha of this construct composed of six items, namely ab02, ab03, ab04, ab05, ab06 and ab08 is 0.902.

6.3.6 Consumer Avoidance of Sponsored Posts on Blogs

The Bartlett's test of sphericity was statistically significant (p=0.000) while the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.923 and as such was considered good (Hair *et al.*, 2010). Principal Component Analysis resulted in a single factor (see Table 22).

The Cronbach's Alpha value based on standardised items was 0.914, which satisfies the requirements set by Nunnally (1978) and Nunnally and Bernstein (1994).

Table 22: Principal Component Analysis - Avoidance of Sponsored Posts

Item Code	Statement	Communality	Factor	Cronbach's Alpha if Item Deleted
as1	I would not click on the links on sponsored posts/ advertorials	.604	.777	.901
as2	I would click away if the blog displays sponsored posts/ advertorials	.384	.620	.912
as3	It would be better if there were no sponsored posts/ advertorials on the blog	.668	.818	.897
as4	I would close the browser to avoid no sponsored posts/ advertorials on the blog	.479	.692	.907
as5	I intentionally ignore any sponsored posts/ advertorials on the blog	.727	.853	.897
as6*	I like sponsored posts/ advertorials	.572	.756	.904
as7	I hate sponsored posts/ advertorials	.663	.814	.899
as8	I would scroll down the blog to avoid sponsored posts/ advertorials	.632	.795	.899
as9	I would prefer that there are no sponsored posts/ advertorials on the blog	.627	.792	.899

Note: * = Reverse scaled item; Shaded numbers represent problematic items

To further test for internal consistency, the item-to-total correlations and inter item correlations were examined (See Table 23). Both were found to exceed the rule of thumb thresholds, that is, all inter-item correlations were found to be more than 0.3 and all item-to-total correlations were found to be more than 0.5. The construct can thus be considered to have internal consistency.

Table 23: Inter-Item Correlation Matrix - Avoidance of Sponsored Posts

Item Code	as9	as5	as1	as7	aa3	as8	as4	as2	as6	Item-Total Correlation
as9	1.000									.722
as5	.616	1.000								.796
as1	.506	.691	1.000							.702
as7	.637	.675	.584	1.000						.748
as3	.714	.632	.566	.620	1.000					.752
as8	.554	.668	.572	.565	.585	1.000				.729
as4	.458	.507	.420	.494	.504	.567	1.000			.620
as2	.459	.459	.376	.442	.420	.416	.525	1.000		.545
as6	.512	.605	.636	.583	.579	.558	.402	.337	1.000	.679

The item as2, ‘I would click away if the blog displays sponsored posts/ advertorials’ has a low communality of 0.384. Removing or retaining it does not make any changes to the Cronbach’s alpha scores of the construct. In other words, the internal consistency cannot be improved further by deleting any more items.

6.4 Estimating the Measurement Model

In this study, the measurement model was estimated by the Maximum Likelihood method using the structural equation modelling programme AMOS 17.0. As mentioned in the methodology chapter, a two-step approach to model construction was adopted (Jin and Villegas, 2007). The first step involves testing the hypothesised measurement model with the collected data for fit and construct validity using the confirmatory factor analysis (CFA) model. This is followed by testing the structural model and the significance of the relationships. It should be mentioned here that the use of CFA along with the SEM techniques is a relatively new way to test for the validity of constructs used in the model. This technique provides for a more rigorous analysis and has been found to provide better coefficient estimates as compared to the traditional regression analysis (Bollen, 1989).

As the data was non-normal, bootstrapping was carried out to test the effects of non-normal distributed variables on the structural model. The standardised regression weights are given in Table 24.

6.4.1 Items Dropped

The standardised regression weight of the items, pi14 'I felt that I could communicate with the blogger directly' in the *perceived communication* dimension scale was lower than 0.5 and also had high correlation with the item pi15: 'I felt that I could communicate with other visitors to the blog' and thus the item pi14 was removed from further analysis.

The items, as2: 'I would click away if the blog displays sponsored posts/ advertorials' and as4: 'I would close the browser to avoid sponsored posts/ advertorials' were also dropped from the attitude towards sponsored posts construct because of low factor loadings.

Other items were also dropped in order to increase the average variance extracted (AVE), also known as the 'Rho vc' used for evaluating the convergent validity of a construct. These are discussed in detail below.

6.4.2 Convergent Validity and Construct Reliability

This section presents the average variance extracted (AVE) or Rho vc and the Joreskorg Rho findings. AVE is used to examine the *convergent validity* of a construct. A construct is said to have convergent validity if the Rho vc is more than 0.5 (Fornell and Larcker, 1981). On the other hand, the *Joreskorg's Rho* indicates *construct reliability*.

Following the verification of the convergent validity and unidimensionality, the composite validity of the construct is then measured (Gerbing and Anderson, 1988, Cortina, 1993).

6.4.2.1 AVE and Construct Reliability for Technology Readiness Index

The technology readiness index construct has seven items, namely, 'I keep up with the latest technological developments' (tri01), 'I find I have fewer problems than other people in making technology work' (tri03), Technology always seems to fail at the worst possible time' (tri04), 'Other people come to me for advice on new technologies' (tri05), 'In general, I am among the first in my circle of friends to acquire new technology when it appears' (tri06), 'I enjoy the challenge of figuring out high-tech gadgets' (tri07) and 'I can usually figure out new high tech goods and services without help from others' (tri09).

The AVE (Rho vc) = 0.470, while the Joreskorg Rho which indicates construct reliability, was 0.841. In order to further improve the AVE and hence the convergent validity, item ‘I find I have fewer problems than other people in making technology work’ (tri03), was removed as it has a low standardised regression weight. The estimates were calculated again. This leads to an increase in the AVE of the construct to 0.488 but was still below the convergent validity threshold of 0.5 (Fornell and Larcker, 1981). There was only a minor change to the Joreskorg Rho (construct reliability) which becomes 0.825 and is above the threshold of 0.6 for construct reliability.

Removing the item tri09, ‘I can usually figure out new high tech goods and services without help from others’, which has a standardised regression weight of 0.56 and after calculating the estimates, the AVE (Rho vc) = 0.532 and the Joreskorg Rho was 0.819 which is more than 0.60, indicating acceptable convergent validity and construct reliability. As mentioned earlier, all the items loaded into one factor which corresponds to the *innovativeness* dimension identified by Parasuraman (2000).

6.4.2.2 AVE and Construct Reliability of the Need for Cognition Construct

The AVE for the need for cognition construct with six items, namely, ‘I like to have the responsibility of handling a situation that requires a lot of thinking’ (nfc04), ‘I really enjoy a task that involves coming up with new solutions to problems’ (nfc06), 'I try to anticipate situations where there is a likely chance I will have to think in depth about something' (nfc07), 'I would prefer complex to simple problems' (nfc09), 'The idea of relying on thought appeals to me' (nfc12) and 'The notion of thinking abstractly is appealing to me' (nfc13) was 0.4, which is lower than the threshold of 0.5 while the Joreskorg Rho value was 0.799. This exceeds the 0.6 threshold.

In order to improve the convergent validity of the construct, the item nfc07, 'I try to anticipate situations where there is a likely chance I will have to think in depth about something' and the item nfc06, 'I really enjoy a task that involves coming up with new solutions to problems' with low factor loadings (low standardised regression weights) are removed and the estimates are calculated again. This leads to an increase of the AVE from 0.400 to 0.455 which means that the convergent validity of the construct still does not meet the 0.5 threshold. There is also a minor change to the Joreskorg Rho value as well from 0.799 to 0.767. Removal of the item nfc04 leads to an increase in the AVE (Rho vc) to 0.511 and the Joreskorg Rho value is 0.754. However, the need for cognition construct is now left with only 3 items, namely 'I would prefer complex to simple problems' (nfc09), 'The idea of relying on thought appeals to me' (nfc12) and 'The notion of thinking abstractly is appealing to me' (nfc13) and raises questions about the reliability of the construct and choice of items, especially considering the fact that the need for cognition construct initially had 13 items measuring it.

6.4.2.3 AVE and Construct Reliability for the Perceived Interactivity Dimensions

6.4.2.3.1 Synchronicity Dimension

The AVE (Rho vc) of the *synchronicity* dimension measured by the three items, namely, 'Clicking on the links gave me information quite fast' (pi10), 'I was able to obtain the information I want without any delay' (pi11) and 'Getting information from the blog was very quick' (pi13), was 0.597, which is more than the threshold of 0.5. The Joreskorg Rho which indicates construct reliability was 0.811, which is higher than the 0.6 threshold as well. Thus, the *synchronicity* dimension is measured by three items.

6.4.2.3.2 Perceived Communication Dimension

The AVE (Rho vc) of the seven items in the *perceived communication* dimension scale, namely, pi04, pi05, pi06, pi07, pi08, pi09 and pi15 was 0.458 which is lower than the threshold of 0.5 and indicates that the dimension does not have convergent validity. However, the Joreskorg Rho was 0.851, which is higher than the 0.6 threshold. The item 'I felt that I could communicate with other visitors to the blog' (pi15) has standardised regression weight lower than 0.5. Removing it from the model and measuring the estimates show that the AVE (Rho vc) improves to 0.49

which is very near the acceptable threshold of 0.5. The Joreskorg Rho is 0.850, which indicates construct reliability. Thus, the *perceived communication* latent variable was left with six items.

6.4.2.4 AVE and Construct Reliability of the Attitude towards Blogs

The AVE (Rho vc) of the attitude towards blogs construct was 0.635 which is more than the 0.5 threshold, while the Joreskorg Rho which indicates construct reliability was 0.912, which is higher than the 0.6 threshold as well. Thus the attitude towards blogs construct, which is measured by six items, namely, ab02, ab03, ab04, ab05, ab06 and ab08 shows acceptable convergent validity and construct reliability.

6.4.2.5 AVE and Construct Reliability for the Avoidance of sponsored posts on blogs

Testing the AVE (Rho vc) of the avoidance of sponsored posts on blogs construct with seven items, namely, as01, as03, as05, as06, as07, as08 and as09 resulted in the AVE (Rho vc) = 0.598 which is higher than the 0.5 threshold and indicates convergent validity. On the other hand, the Joreskorg Rho is 0.912 (higher than the 0.6 cut-off), which indicates construct reliability.

6.4.2.6 AVE and Construct Reliability of Perceived credibility

Testing the average variance extracted (AVE) (Rho vc) of the perceived credibility construct with five items namely, tri01, tri03, tri05, tri06 and tri07, the Rho vc =

0.667, which is more than 0.5 and indicates convergent validity (Fornell and Larcker, 1981), while the Joreskorg Rho, which indicates construct reliability was 0.908. This figure is higher than the 0.6 threshold as suggested by Bagozzi and Yi (1988).

6.4.3 Summary of Constructs and Model Fit

The completely standardised loadings and t values, which are shown as Critical ratio (CR) in the AMOS output, are given in Table 22. Here parameters (variance) of the constructs fixed to 1. Composite reliability of all four constructs ranges between 0.771 and 0.912.

The results of the principal component analysis revealed the presence of two second order variables of the construct, perceived interactivity, namely synchronicity and perceived communication. They were confirmed and validated in the confirmatory factor analysis.

Table 24: Summary of the Confirmatory Factor Analysis Results (Final Measurement Model)

Item Code	Item	Constructs							t-Values
		tri	nfc	syn	pc	atb	as	pcr	
tri01	I keep up with the latest technological developments	.751							16.207
tri05	Other people come to me for advice on new technologies	.764							16.590
tri06	In general, I am among the first in my circle of friends to acquire new technology when it appears	.709							15.021
tri07	I enjoy the challenge of figuring out high-tech gadgets	.690							14.498
tri09	I can usually figure out new high tech goods and services without help from others	.561							11.205
nfc09	I would prefer complex to simple problems		.552						10.570
nfc12	The idea of relying on thought appeals to me		.759						14.428
nfc13	The notion of thinking abstractly is appealing to me		.808						15.301
pi10	Clicking on the links gave me information quite fast			.884					19.911
pi11	I was able to obtain the information I want without any delay			.564					11.476
pi13	Getting information from the blog was very quick			.831					18.390
pi04	The blog is effective in gathering visitors feedback and comments				.833				19.518
pi05	This blog facilitates two way communication				.696				15.144
pi06	I felt that it is difficult to offer feedback on the blog				.578				11.965
pi07	I felt that the blog wants to listen to its visitors				.619				13.013
pi08	I felt that the blog does not encourage visitors to give feedback				.611				12.802
pi09	The blog gives visitors the opportunity to give feed back				.841				19.808
ab02	I would like to visit the blog again in the future					.865			21.294

ab03	I am satisfied with this blog					.863			21.232
ab04	I feel comfortable surfing this blog					.872			21.596
ab05	I feel surfing this blog was a good way to spend my time					.693			15.398
ab06	Compared with other blogs, I would rate it as one of the best					.686			15.215
ab08	Visiting this blog was a satisfying experience					.779			18.139
as01	I would not click on the links on sponsored posts/ advertorials						.756		17.268
as03	It would be better if there were no sponsored posts/ advertorials on the blog						.805		18.936
as05	I intentionally ignore any sponsored posts/ advertorials on the blog						.806		18.967
as06	I like sponsored posts/ advertorials						.732		16.481
as07	I hate sponsored posts/ advertorials						.787		18.306
as08	I would scroll down the blog to avoid sponsored posts/ advertorials						.741		16.783
as09	I would prefer that there are no sponsored post on the blog						.782		18.128
cr01	Trustworthiness							.793	18.619
cr03	Training							.859	21.043
cr04	Experience							.927	23.855
cr05	Expertise							.808	19.168
cr06	Sincerity							.674	14.857
Average Variance Extracted (AVE) (Rho vc):		.488	.534	.597	.496	.635	.598	.667	
Composite Reliability (Joreskorg Rho):		.825	.771	.811	.852	.912	.912	.908	

Goodness of Fit Statistics:
χ² = 1058.402; df = 539; CMIN/DF = 1.964; RMSEA = 0.049 (PCLOSE = 0.612); GFI = 0. 863; CFI = 0.931; AGFI = 0.840; NFI=.870; NNFI = 0.924; SRMR = .0459; RMR=0.103; NPAR =91; IFI=0.931; TLI=0.924.

Note: nfc = Need for Cognition; tri = Technology readiness index; syn= Synchronicity; pc = Perceived communication; atb = Attitude towards blogs; as = Avoidance of sponsored posts and pcr = Perceived credibility.

Analysis of the responses using the discrepancy divided by degrees of freedom (Chi-square/df) =1.714. According to Byrne (1989 p.55) a ratio less than 2.00 represents an inadequate fit. However, as pointed out by Anderson and Gerbing (1988), there are no consistent standards for what is considered an acceptable model but is reported here for purely academic purposes.

The Tucker-Lewis coefficient (TLI) = 0.924 and the comparative fit index (CFI) = 0.963 results fulfils the minimum specified cut-offs (0.9), indicating good model fit (Kenny, 2010).

The Standardised Root Mean Square Residual (SRMR) = 0.0459 and indicates a well-fitting model as a value less than 0.08 is considered a good fit (Bentler and Bonett, 1980, Hu and Bentler, 1999, Kenny, 2010).

The root mean square error of approximation (RMSEA) = 0.049 also fulfils the rule of thumb (0.05 or less) (Byrne, 2010) to indicate a close fit of the model in relation to the degrees of freedom.

It also fulfils Hu and Bentler's (1999) recommended cut-offs for RMSEA (0.06).

The goodness of fit index (GFI) = 0.863. However, the current consensus is not to use the GFI measure (Kenny 2010).

6.4.4 Convergent Validity

All the three criteria for convergent validity as given by Bagozzi and Yi (1988) are met by the model.

- AVE for all the constructs exceeds 0.50 apart from the technology readiness index and perceived communication constructs which are marginally below the benchmark (0.488 and 0.4.96 respectively).

- Factor loadings of all items are greater than the 0.5 as well.

- Furthermore the composite reliabilities (CR - which can be used as an estimate of construct reliability) exceed the rule of thumb value of 0.60 for all the constructs.

6.4.5 Discriminant Validity

Table 25 shows the correlation matrix together with the Cronbach's alpha, composite reliability (CR), average variance extracted (AVE), mean and standard deviation.

Table 25: Correlation Matrix

Construct	Alpha	CR	AVE	NFC	TRI	SYN	PC	ATB	AS	PCR
NFC	0.734	.825	.488	.699						
TRI	0.820	.771	.534	.292	.731					
SYN	0.787	.811	.597	.036	.159	.773				
PC	0.845	.852	.496	.058	.135	.381	.704			
ATB	0.902	.912	.635	.033	-.014	.506	.531	.797		
AS	0.912	.912	.598	-.133	.098	.282	.234	.156	.773	
PCR	0.907	.908	.667	-.009	-.076	.296	.327	.420	.031	.817
Mean				4.843	4.552	5.66	5.642	6.267	4.696	5.664
SD				3.260	6.157	2.868	6.524	4.5726	10.347	6.856

Note: Need for Cognition (NFC); Technology Readiness Index (TRI); Synchronicity (SYN); Perceived Communication (PC); Attitude towards blogs (ATB) Attitude towards sponsored posts (ATS) and Perceived Credibility (PCR); Shaded numbers = AVE values

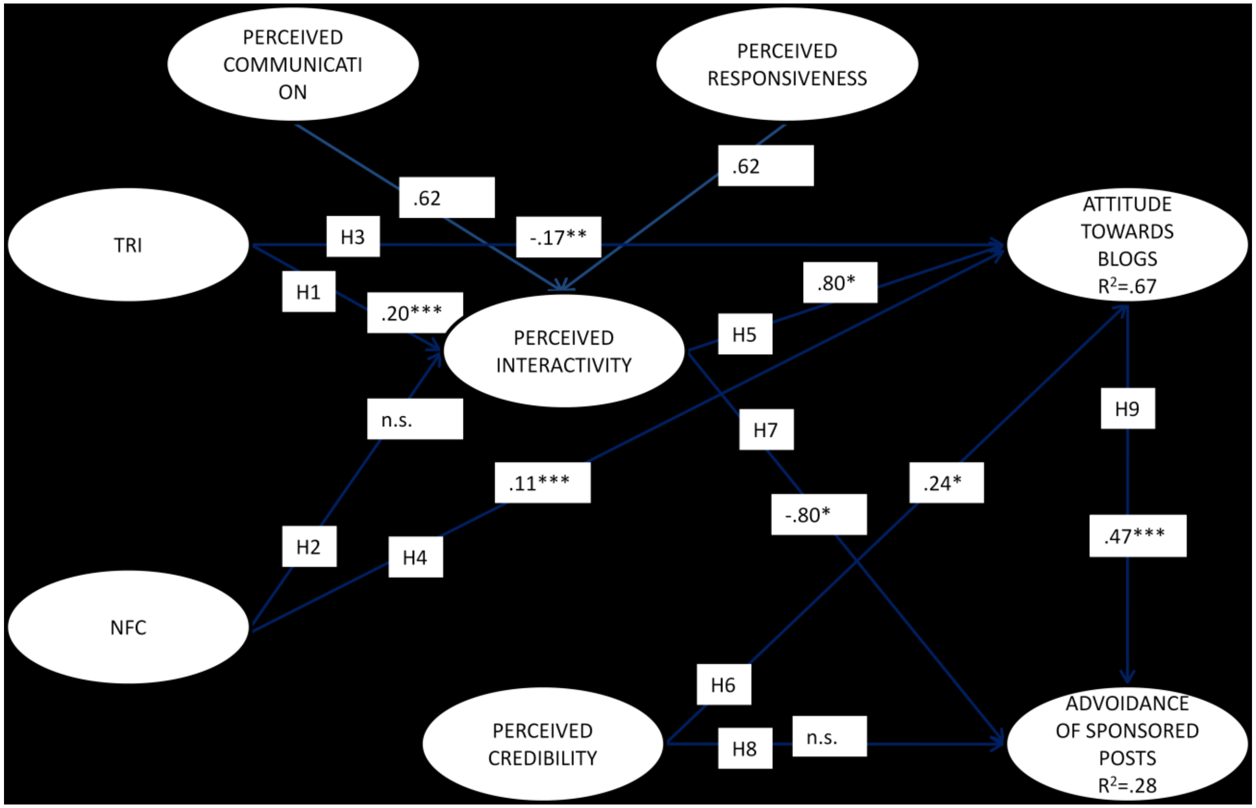
A rigorous test for discriminant validity involves comparing the highest correlation between any pair of constructs with the square roots of AVEs. Discriminant validity can be demonstrated if variance shared between the constructs is less that the square root of the average variance extracted by the constructs. Table 25 shows that the highest correlation between perceived communication and attitude towards blogs in the CFA model is 0.531. This value is lower than any of the square roots of AVEs (shaded diagonally in the matrix) thus establishing discriminant validity. In other words, the latent construct explains more of the variance in its item measures that it shares with another construct (Fornell and Larcker, 1981, p. 710). It can be concluded that the measures in the study exhibits sufficient evidence of discriminant validity.

These results suggest that our measurement model is adequate so as to proceed with the examination of the structural model, namely the examination of the research hypotheses. The next phase of data analysis constitutes the estimation of the structural model.

6.5 Structural Equation Modelling

The structural model presents a pattern of the relationships among the various constructs of the model. The results of the structural equation modelling show that the model was recursive with 630 distinct sample moments and 84 distinct parameters which were estimated. The degree of freedom was (630 - 84): 546. The minimum was achieved and the model is significant with probability level = 0.000. The structural model with the path coefficient results for the various hypotheses tested is given in Note: * Significant at 0.001 level (two-tailed), ** Significant at 0.01 level (two-tailed), *** Significant at 0.05 level (two-tailed), n.s. Not significant

Figure 4. Please see Appendix 2 for the detailed structural model as generated by AMOS.



Note: * Significant at 0.001 level (two-tailed), ** Significant at 0.01 level (two-tailed), *** Significant at 0.05 level (two-tailed), n.s. Not significant

Figure 4: Structural Equation Model

6.5.1 Model Fit Summary

The various fit measures are summarised in Table 26 below:

Table 26: Summary of fit Measures

Full name of Fit Index	Recommended Cut-offs	Observed value in study
Ratio of Chi-square to degrees of freedom (χ^2/df)	> 2.00	2.043
Comparative Fit Index (CFI)	> 0.9	0.924
Standardised Root Mean Square Residual (SRMR)	0.08 or less	0. 081
Root Mean Square Error of Approximation (RMSEA)	0.05 or less	0.05
Goodness of Fit Index (GFI)	> 0.8	0.857
Bentler-Bonett Index or Normed Fit Index (NFI)	0.90 - 0.95	0.862
Tucker Lewis Index or Non-normed Fit Index (NNFI)	> 0.9	0.917

Analysis of the responses using the discrepancy divided by degrees of freedom (Chi-square/df) = 2.043. As pointed out by (Anderson and Gerbing, 1988), there are no consistent standards for what is considered an acceptable model fit using the Chi-square/df measure but it is reported here for purely academic purposes. According to Byrne (1989 p. 55) a ratio > 2.00 represents an inadequate fit and as such our model just satisfies the benchmark.

The *comparative fit index* (CFI) = 0.924 results fulfils the minimum specified cut-offs (0.9), indicating good model fit (Bentler and Bonett, 1980, Kenny, 2010).

The *standardised Root Mean Square Residual* (SRMR) = 0. 081, is slightly higher than the benchmark (0.08 or less) (Bentler and Bonett, 1980, Hu and Bentler, 1999, Kenny, 2010).

The *root mean square error of approximation* (RMSEA) = 0.05 and fulfils the benchmark (0.05 or less) to indicate a close fit of the model in relation to the degrees of freedom (Byrne, 2010). It also fulfils Hu and Bentler's (1999) recommended cut-offs for RMSEA (0.06 or less) as well as the recommendation by Hair *et al.* (RMSEA <0.08).

The *goodness of fit index* (GFI) = 0.857 fulfils the recommended cut-off (GFI >0.8) (Seyal *et al.*, 2002). However, the current consensus is not to use the GFI measure (Kenny, 2010) or the AGFI measures as they are affected by sample size.

Another index is the *Bentler-Bonett index or Normed fit index* (NFI) and the NFI value is 0.862 which is lower than the acceptable values (between 0.90 and 0.95) (Bentler and Bonett, 1980). However, the *Tucker Lewis index* or *Non-normed fit index* (NNFI) is 0.917 and is higher than the required cut-off of 0.9 and is the model is thus considered good (Bentler and Bonett, 1980).

The *square multiple correlations* (R-squared values) for the '*attitude towards blogs'* statement is 0.668, which indicates that the predictors of '*attitude towards blogs*' explain a respectable 66.8 percent of its variance. Furthermore, the square multiple correlations for the *avoidance of sponsored posts on blogs* construct is

0.282. In other words, the predictors explain a quite acceptable 28.2 percent of its variance of the 'attitude towards sponsored posts on blogs' construct.

6.6 Results of Hypothesis Testing

The structural model with the path coefficient results for all the 11 hypotheses tested is shown in Table 27. For a hypothesis to be supported, the parameter estimate should be significant and have the predicted sign.

Table 27: Path Analysis

Hypothesis	Path	Standardized Coefficients	S.E.	t-values
H_1	TRI → Per. Interactivity	0.200***	0.028	2.542
H_2	NFC → Per. Interactivity	- 0.079ns	0.036	-1.036
H_3	TRI → Atblog	- 0.171**	0.031	-3.120
H_4	NFC→ Atblog	0.108***	0.040	2.016
H_5	Per. Interactivity→ Atblog	0.796*	0.191	6.586
H_6	Cred → Atblog	0.237*	0.021	5.177
H_7	Per. Interactivity→ Aspon	-0.802*	0.812	-3.441
H_8	Cred → Aspon	-0.044ns	0.075	-0.605
H_9	Atblog → Aspon	0.470***	0.421	2.457

Note: t-values shown as critical ratio (CR) in AMOS output.
* Significant at 0.001 level (two-tailed), ** Significant at 0.01 level (two-tailed), *** Significant at 0.05 level (two-tailed), ns Not significant

The results indicate that six out of 11 direct effects hypothesised and tested by the structural model (as shown in Figure 4), were significant, namely:

1. Hypothesis 1: Technology Readiness Index → Perceived Interactivity
2. Hypothesis 2: Technology Readiness Index → Attitude towards Blogs
3. Hypothesis 4: Need for Cognition → Attitude towards Blogs
4. Hypothesis 5: Perceived Interactivity→ Attitude towards Blogs
5. Hypothesis 6: Perceived Interactivity→ Avoidance of Sponsored Posts on Blogs
6. Hypothesis 7: Perceived Credibility → Attitude towards Blogs

Out of these seven relationships, the signs of associations between the constructs were in congruence with the hypothesised relationships apart from Technology Readiness Index → Attitude towards Blogs (H_2), where the resulting sign was negative and Perceived Interactivity→ Avoidance of Sponsored Posts on Blogs (H_6) where the resulting sign was positive.

6.6.1 Technology Readiness and Perceived Interactivity

H_1 tested the relationship between technology readiness and perceived interactivity. It was hypothesised that technology readiness is positively related to blog users' perceived interactivity of blogs. It should be noted that here, perceived interactivity refers to the overall perceived interactivity formed by the combination of the synchronicity and perceived communication dimensions.

The standardised regression weight is 0.203 and with a t value of 2.543. The relationship is positive and statistically significant at $p < 0.05$, two-tailed. H_1 is thus supported.

6.6.2 Need for Cognition and Perceived Interactivity

H2 was proposed to test the relationship between the need for cognition with perceived interactivity of the blog the user likes. In other words, blog users with high need for cognition are likely to perceive the blog they like, as having greater interactivity. However, the hypothesised direct relationship between the need for cognition and perceived interactivity was not statistically significant and thus H_2 is not supported. The standardised regression weight is -0.079 and with a *t* value of -1.036.

6.6.3 Technology Readiness Index and Attitude towards Blogs

H_3 hypothesised that the higher the levels of the innovativeness dimension of technology readiness, the stronger the attitude towards blogs. Despite the fact that the relationship between the innovativeness dimension of technology readiness and attitude towards blogs was statistically significant ($p < 0.01$, two tailed), the sign was negative as opposed to the expected and hypothesised positive relationship. Thus H_3

was also not supported. The standardised regression weight is -0.171 and with a *t* value of -3.120.

6.6.4 Need for Cognition and Attitude towards Blogs

H_4 posits that the need for cognition dimension of the need for cognition is a predictor of attitude towards blogs and there exists a positive relationship. The result shows that as hypothesised, the relationship between the two is statistically significant ($p<0.05$, two-tailed) and that the need for cognition is a predictor of the attitude towards blogs. The standardised regression weight is 0.108 and with a t value of 2.016. H_4 is thus supported.

6.6.5 Perceived Interactivity and Attitude towards Blogs

H_5 hypothesised that the level of *perceived interactivity* with the blog will be positively associated with blog users' *attitudes toward the blog*. Results show that there is a strong positive relationship between *perceived interactivity* and blog users' *attitudes toward the blog*. H_5 is empirically supported (standardised regression weight is 0.796; *t* value of 6.586; $p = 0.001$).

6.6.6 Perceived Credibility and Attitude towards Blogs

H_6 posited that the *perceived credibility* of a blog will be positively associated with blog users' *attitudes toward the blog*. The result shows that, as hypothesised, the relationship is highly significant (p = 0.001) and there is a positive relationship between the two. This indicates that the *perceived credibility* of the blogs is a predictor of *attitude towards blogs* and thus H_6 is supported (standardised regression weight is 0.237; *t* value of 5.177).

6.6.7 Perceived Interactivity and Avoidance of Sponsored Posts on Blogs

H_7 hypothesises that overall *perceived interactivity* of the blog will be negatively associated with *avoidance of the sponsored posts* on the blog. As hypothesised, perceived interactivity was found to be a highly significant and important predictor of the *avoidance of sponsored posts* on blogs (p = 0.001) with a negative relationship. Results show that standardised regression weight is -0.802 and with a *t* value of -3.441. H_7 is therefore supported.

6.6.8 Perceived Credibility and Avoidance of Sponsored Posts on Blogs

H_8 tested the relationship between *perceived credibility* of a blog and *avoidance of sponsored posts* on the blog. It was hypothesised that *perceived credibility* will be negatively related with *avoidance of sponsored posts* on the blog. However, results show that the link between *perceived credibility* and *avoidance of sponsored posts* on blogs was not statistically significant. The standardised regression weight is -0.044 and with a *t* value of -0.605.Thus, H_8 is rejected.

6.6.9 Attitudes towards Blogs and Advertising Avoidance

Next, H_9 examines the relationship between *attitude towards blogs* and the *avoidance of sponsored posts* on blogs. The standardised regression weight is 0.470 and with a *t* value of 2.457. The relationship between *attitude towards blogs* and *avoidance of sponsored posts* on blogs was found to be significant ($p < 0.05$) but the direction was positive. As mentioned before, the parameter estimate should be significant and have the predicted sign for the hypothesis to be supported.H_9 is therefore not supported. However there is a relationship and there is a need to explain the possible reasons for the unexpected sign (or direction of the relationship). The possible reasons are further discussed in the next chapter.

6.6.10 Mediating Effects

As explained in the methodology, the structural equation modelling bootstrap method (Efron, 1979, Efron *et al.*, 1993) with 1000 bootstrap samples was used to examine for indirect (mediating) effects. This procedure has been found to be a more robust method as compared to the Sobel test to produce unbiased estimates of mediating effect (Cheung and Lau, 2008, Kenny, 2008).

6.6.10.1 Mediation between Perceived Interactivity and Avoidance of Sponsored Posts

Two possible mediating effects in the SEM were examined, namely

- Perceived Interactivity > Attitude towards blog > Avoidance of sponsored posts on blogs. (H_{10})

- Perceived Credibility > Attitude towards blogs > Avoidance of sponsored posts on blogs. (H_{11})

Table 28: Structural Effects: Mediation

Hypothesis		Standardised β	SE	Lower Bound	Upper Bound	Sig. (two-tailed)(ρ)
	Perceived Interactivity					
H_{10}	Direct Effect → Avoidance of sponsored posts on blogs	-0.802	0.755	-2.279	-0.465	0.002*
	Indirect Effect → Avoidance of sponsored posts on blogs (via Attitude towards blogs)	0.374	0.724	0.115	1.808	0.004*
	Total Effect (direct and indirect)	0.428	0.082	-0.568	-0.309	0.001**
	Perceived Credibility					
H_{11}	Direct Effect → Avoidance of sponsored posts on blogs	-0.044	0.181	-0.234	0.089	0.733 ns
	Indirect Effect → Avoidance of sponsored posts on blogs (via Attitude towards blogs)	0.111	0.176	0.039	0.536	0.003*
	Total Effect (direct and indirect)	.067	0.062	-0.036	0.168	0.280 ns

Note: * Significant at 0.01 level; ** Significant at 0.001 level; ns=not significant

As shown in Table 28, both the indirect (mediated) effect between perceived Interactivity and avoidance of sponsored posts on blogs via the attitude towards blogs construct and direct effects between perceived interactivity and avoidance of sponsored posts on blogs were significant at the 0.01 level and point in opposite directions (opposite signs). It should be noted that the direct effect is negative whereas the indirect mediating effect is positive.

It should be noted that the findings is in contrast to Baron and Kenny (1986) who categorised this pattern of mediation as '**non mediation**'. However, according to the latest typology of mediations and non-mediations as given by Zhao *et al.* (2010) this indicates **competitive mediation** (i.e., mediated effect (a x b) and direct effect (c) both exist and point in opposite directions) between perceived interactivity and avoidance of sponsored posts on blogs and hence H_{10} is accepted.

6.6.10.2 Mediation between Perceived Credibility and Avoidance of Sponsored Posts

Examining the second possible mediating effects in the SEM, it was found that the indirect (mediated) effect between perceived credibility and avoidance of sponsored posts on blogs via attitude towards blogs was significant ($p= 0.003$) at the 0.01 level. However, the direct effect between perceived credibility and avoidance of sponsored posts on blogs was not significant. Again following the typology of mediations and non-mediations as given by Zhao et al. (2010), this indicates **indirect-only mediation** (i.e., mediated effect (a x b) exists but no direct effect) between perceived credibility and the avoidance of sponsored posts on blogs. This overlaps with **full mediation** as given by Baron and Kenny (1986). Again, the direct effect is negative whereas the indirect mediating effect is positive. Thus, H_{11} is also accepted.

6.7 Summary

The various constructs in the conceptual model were tested for internal consistency or the internal consistency reliability. It was found that all the items in the technology readiness construct loaded into one factor which corresponds to the innovativeness dimension. Out of the three factors of the perceived interactivity construct, only two dimensions, namely, perceived communication and synchronicity were found to have internal consistency reliability, based on the results of the principal component analysis. Results of the confirmatory factor analysis and various fit indices indicate good model fit. Furthermore, all the three criteria for convergent validity are met by the model**.** The tests of reliability and validity also indicated that the model exhibits sufficient evidence of reliability and discriminant validity.

Following the test for reliability and validity, the hypotheses were examined and re-specified. Out of the 11 hypotheses which were conceptualised in Chapter 4, it was found that six hypotheses were supported. Two other proposed relationships were found to be significant but their signs (direction) were different to what was proposed. These need to be examined further and possible reasons behind the unexpected signs are discussed in the next chapter. From the results, perceived interactivity emerged as an important antecedent of both the attitudes towards blogs as well as avoidance of sponsored posts constructs.

The attitude towards blogs construct was also found to have a mediating effect between perceived Interactivity and avoidance of sponsored posts on blogs as well as between perceived credibility and avoidance of sponsored posts on blogs constructs. The important findings are discussed in detail in the following Discussion chapter (Chapter7).

Chapter 7: Discussion

7.1 Introduction

The previous results chapter presented the detailed empirical results of the various analyses including the structural equation modelling. The previous chapter also tested the various hypotheses.

This chapter extends the discussions initiated in the previous chapter and presents the interpretations of the results of the hypotheses testing and other findings given in the previous chapter while looking at the theoretical underpinnings of the findings. The results of the empirical tests have shed some light on the various relationships mentioned above as well as the transference of attitudes. This chapter seeks to show how the empirical results of this study relate to the research questions which were laid out in the first chapter. Based on the literature, this study has developed and empirically tested a conceptual model which incorporates:

1) The relationship between perceived interactivity and its proposed antecedents (i.e. technology readiness and the need for cognition),

2) The relationship between characteristics of the blogs users and characteristics of the blog with users' attitudes towards blogs, and

3) The relationship between the characteristics of blogs (i.e. perceived interactivity and perceived credibility) and attitudes towards blogs with blog users' avoidance of blogs.

The chapter starts off by looking at the demographic profile of the respondents and discussing some of the interesting findings. The next section examines the conceptual and measurement issues of the constructs and the findings of the results which reveal that innovativeness was the unique individual dimension of technology readiness index found to be reliable and valid. This is followed by a discussion of why Ohanian's (1990) conceptualisation of perceived credibility was selected for this study.

The discussion then revisits the research questions and looks at the hypothesised relationships that are supported as well as those which are refuted. The next section then looks at the two possible mediating effects in the structural equation model. Section 6.6 summarises the whole chapter.

7.2 Profiles of Respondents

Unlike most previous studies that used students, this study involved a quite diverse group of blog users with varied demographic background and blog use experience. For example, a look at over 100 empirical studies that have used the need for cognition scale reveals that most of the studies listed used students as their respondents (Cacioppo *et al.*, 1996).

The demographic results also show that the respondents had high educational qualifications with more than 50 percent of them having at least a Bachelor's degree and higher. An interesting observation was that a surprisingly high number of the respondents indicated that they were self-employed (without any employees). Though this was not indicated in the answers, there was a possibility that many of the respondents had a business which they ran from home. This inference comes from the fact that an overwhelming number of the respondents (66.7 percent) were bloggers with 53.9 percent of them reporting that they had been blogging for 1 to 3 years. The '2008 state of the blogosphere' report (White, 2008) revealed that the majority of the bloggers (54 percent) have advertising in one form or another on their site. Many bloggers actually see blogging as self employment and in view of the number of respondents who are bloggers themselves, this does raise the question whether bloggers make up the majority of blogs users (or visitors) of other blogs as well. These questions remain unanswered and are out of the scope of this present study. These are interesting questions and would have to the examined in detail in future research.

There were also some other unique characteristics of the respondents of this study. As reported in the results chapter, female respondents (72.8 percent) greatly outnumbered the male respondents (27.2 percent). The results of 'The BlogHer-iVillage 2010 Social Media Matters Study' show that a majority of women online are active social media users. Moreover, it was revealed that women actively seek advice and recommendations on blogs and message boards (BusinessWire, 2010). However, this may be also attributed to the fact that eight out of nine bloggers besides the researcher, who agreed to promote the survey questionnaire to their visitors, were women. It would be safe to assume that most visitors to these personal blogs are women as well as the topics they post on their blogs are most likely to attract more women.

7.3 Issues with Reverse-scaled Items

One of the observations was that almost all the constructs had problems with the reverse-coded items and most of these items were not present in the final validated and reliable constructs. This comes as no surprise because other studies have reported similar problems with reverse-coded items. For example, Podsakoff *et al.* (2003) thought that they may be the source of method bias and Schmitt and Stults (1986) demonstrated that some respondents failed to recognise reverse-coded items resulting in factors representing reverse-coded items. Moreover, Herche and Engelland (1996) also criticised them arguing that reverse-coded items would degrade the uni-dimensionality of scales. There were also other issues as well with some of the scales which are discussed below.

7.4 Personal Characteristics of the Blog Users

Blogs users visit blogs for a number of reasons. According to a report on blogs, it was revealed that more people visit blogs for entertainment (65.7 percent) as compared to those who read for education or information (32.5 percent) (Vizu, 2007). In this study, the blog users were directed to select a blog they liked and to answer the questions in the questionnaire keeping the particular blog in mind.

As mentioned earlier in the literature review, the marketing communication process is also dependent on various personal factors as well. They were called individual determinants by Blackwell *et al.* (2006) whereas, Mowen and Minor (1998) refers to these as individual-difference variables. This study did not look at 'emotion' or 'involvement' because the blog users were asked to select blogs they frequented regularly (and assumed to be their favourites). What makes the blogs different from other media like TV or newspapers is the interactivity. Hence this study looks at the need for cognition, which refers to enjoyment of thinking which is assumed to be a pre-requisite in order to interact. Blog users need to read the blog posts and the comments and reflect before they can make their own contribution to the conversation going on.

This study has identified two main personal factors which are referred to as personal characteristics, namely, *technology readiness index* and the *need for cognition*. Both constructs were conceptualised as multi-dimensional but after running the tests for reliability and validity, both constructs were found to be uni-dimensional in this study.

7.4.1 Technology Readiness Index

The technology readiness index (TRI) is a well established scale and has been successfully used in a number of studies. As shown in the preceding results chapter, only one factor of the technology readiness index, namely the innovativeness dimension, was found to have high internal consistency reliability as indicated by the Cronbach's alpha. This dimension corresponds to Parasuraman's (2000, p. 311) innovativeness dimension, which he refers to as the tendency to experiment and try out new technology and to be a thought leader.

Other studies have also reported similar problems in obtaining the four independent dimensions (Taylor *et al.*, 2002, Yi *et al.*, 2003, Liljander *et al.*, 2006). For example, Liljander *et al.* (2006) found that only *optimism* and *innovativeness* formed unique individual dimensions and the *discomfort* and *insecurity* dimensions were dropped from further analyses. They further questioned the power of the *optimism* and *innovativeness* dimensions to explain consumer adoption with respect to self service technologies (SSTs).

7.4.2 Need for Cognition

It was found that the items measuring the *need for cognition* (NFC) construct loaded into three factors. Eight items loaded in the first factor while three loaded in the second factor. Only two items loaded in the third factor. Ultimately, only one dimension (or factor) was considered reliable which is composed of six items, namely, nfc04, nfc06, nfc07, nfc09, nfc12 and nfc13. The need for cognition construct was left with only 3 items and considering the fact that the *need for cognition* construct initially had 13 items, this does raise questions about the reliability of the *need for cognition* construct and choice of items especially in the context of blogs.

7.5 Characteristics of the Blog

This study further identified two constructs which related to the characteristics of the blog, namely, perceived interactivity and perceived credibility, both of which were found to affect the blog users' *attitude towards the blog* as well as their *avoidance of sponsored posts* on blogs. There were some issues with the constructs which are discussed below:

7.5.1 Perceived Interactivity

As the results in chapter 6 have shown, the principal component analysis resulted in three factors. The first dimension corresponds to the factor '*2 way communication*' as given by Liu (2003) and was named as *perceived communication*. Whereas the second dimension was named *synchronicity* as it corresponds to the synchronicity dimension as given by Liu (2003). However, another third dimension, which corresponds to the *perceived control* dimension in previous studies, was found to have low internal consistency reliability and was dropped from further analysis. This is a significant finding because previous studies on perceived interactivity have shown the perceived or active control dimension to be the most important and essential dimension of the interactivity construct (McMillan, 2000, McMillan and Hwang, 2002, Wu, 1999, Wu, 2006). This may indicate that the adapted scale for this particular dimension has reliability problems in this particular context. SEM thus looked at the overall effect of perceived interactivity which was a combination of the perceived communication and synchronicity dimensions.

7.5.2 Perceived Credibility

The perceived credibility construct was initially adapted from the conceptualisation of this construct by Fogg *et al.* (2001) which was composed of two dimensions, namely, the *trustworthiness* dimension and the *expertise* dimension. However, as mentioned in the literature review chapter, their credibility construct had quite low Cronbach's alpha values which indicate that they had problems with internal consistency reliability. Furthermore, the construct had not undergone rigorous tests for convergent and discriminant validity. Results of the pilot test also showed that there were several problems with this construct and as a result, the construct was completely dropped in favour of the well established and accepted constructs of credibility given by Harmon and Coney (1982) and Ohanian (1990).

Thus the final credibility scale used in the structural equation modelling in this study consisted of four items adapted from the Harmon and Coney's (1982) credibility scale plus one item (the adjective insincere/ sincere) from Ohanian's (1990) scale. Results of the principal component analysis showed that all the items loaded into one factor – meaning that the perceived credibility of blogs construct was unidimensional. This means that the credibility construct used here was in contrast to some previous studies which showed that the construct was multidimensional (Hovland *et al.*, 1953, Fogg and Tseng, 1999, Lynch *et al.*, 2001, Walther *et al.*, 2004). The results cannot be really compared with that of Fogg and Tseng 1999 and others because the scales used to measure perceived credibility were completely different. Fogg and Tseng 1999 used statements to measure credibility whereas in this study, adjectives are used.

The next section discusses the hypothesised relationships that were conceptualised in Chapter 4 and examines the hypotheses which are supported, as well as those which are refuted.

Table 29 Summary of Hypotheses Testing

No.	Hypothesis	Hypothesis acceptance/ rejection
	Antecedents of Perceived Interactivity:	
H_1	Blog users' overall technology readiness is positively related to blog users' perceived interactivity of blogs.	Accepted
H_2	The need for cognition is positively related to perceived interactivity of the blog.	Rejected
	Antecedents of Attitude towards Blogs:	
H_3	Blog users' overall technology readiness is positively related to their attitude towards blogs.	Rejected
H_4	The blog users' overall need for cognition is positively associated with attitude towards blogs.	Accepted
H_5	Overall perceived interactivity of the blog is positively related to attitudes toward the blog.	Accepted
H_6	Overall perceived credibility of the blog is positively related to attitude towards the blogs.	Accepted
H_7	The perceived interactivity of the blog is negatively related to the avoidance of sponsored posts on the blog.	Accepted
H_8	The perceived credibility of the blog is negatively related to the consumer avoidance of sponsored posts on the blog.	Rejected
H_9	The attitude towards blogs is negatively related to avoidance of sponsored posts on the blog.	Rejected
H_{10}	The attitude towards blogs mediates the relationship between perceived interactivity (PI) and avoidance of sponsored posts (ASP) on the blog.	Accepted
H_{11}	The attitude towards blogs mediates the relationship between perceived credibility (PC) and avoidance of sponsored posts (ASP) on the blog.	Accepted

7.6 Discussion of the Hypotheses

Overall, the tests of reliability and validity also indicated that the model exhibits sufficient evidence of reliability and discriminant validity. A summary of the research findings are provided in Table 29. Out of 11 hypotheses, 8 were accepted while 3 were rejected. The results also show that the predictors of *attitude towards blogs*, namely, *need for cognition*, *technology readiness index, perceived interactivity* and *perceived credibility* explain a respectable 66.8 percent of its variance. Furthermore, the predictors of the *avoidance of sponsored posts on blogs*, i.e., *perceived interactivity, perceived credibility* and *attitude towards blogs*, also explain 28.2 percent of its variance.

7.6.1 Technology Readiness Index as an Antecedent of Perceived Interactivity

H_1 posited that a positive relationship between technology readiness and perceived interactivity. Technology readiness was believed to be an antecedent of perceived interactivity on blogs because technology readiness represents a set of beliefs that altogether measures an individual's readiness to try out new technologies. Among the dimensions of technology readiness, the innovativeness dimension is probably the most researched. For example, it was shown that a similar conceptualisation called *personal innovativeness in information technology* had a direct positive impact on perceived usefulness and perceived ease of using of wireless mobile technology (Lu *et al.*, 2005). As discussed earlier, in this study the innovativeness dimension was the only dimension of the technology readiness construct which was used for the final analysis.

Liu and Shrum (2002) proposed that people with lower *computer-mediated communication apprehension* would get more satisfaction from two-way communication on the Internet. Computer-mediated communication apprehension, which refers to the level of anxiety associated with communicating with others via a computer, can be considered to be the opposite of innovativeness, which refers to *"the tendency to be technology pioneer and thought leader"* (Parasuraman, 2000, Parasuraman and Colby, 2001, p. 311). Thus, Liu and Shrum's (2002) proposal does appears to be in line with the present findings, which shows that this particular personal characteristic of the blog users – that technology readiness, was indeed significant in determining the level of perception of the blogs interactivity; hence providing support for the hypothesis. The findings (standardised regression weight = 0.203; t value =2.543; $p < 0.05$) supports H_1. Thus blog users with higher technology readiness scores will perceive blogs to have higher interactivity as compared to those with lower technology readiness scores. It should be noted here that the only the innovativeness dimension of technology readiness was considered.

7.6.2 Need for Cognition as an Antecedent of Perceived Interactivity

H_2 was proposed to test the relationship between the need for cognition and perceived interactivity of the blog. However, the hypothesised direct relationship between the need of cognition and perceived interactivity was not found to be statistically significant and thus H_2 is not supported. This implies that the perceived interactivity of the blog is not determined by the need of cognition.

7.6.3 Technology Readiness Index and Attitude towards Blogs

H_3 was proposed to test the relationship between the technology readiness of blog users and their attitude towards blogs. The attitude towards blog scale was largely adapted from Chen and Wells's (1999) attitude towards website scale. It was hypothesised that that the higher the levels of the technology readiness, the stronger would be their attitude towards blogs. Individuals who are more willing to accept new technology are expected to have a more positive view of blogs. The results of the analysis showed that while the link between Technology Readiness of blog users and their attitude towards blogs was statistically significant ($p < 0.01$). Unexpectedly, Technology Readiness was found to have a weak negative impact (-0.171) on attitude towards blogs. The sign was negative as opposed to the hypothesised positive relationship and thus H_3 was rejected.

As the items making up the technology readiness index in this study correspond to the innovativeness dimension, the results indicates that the higher the innovativeness of the blog users, the lower their attitude towards blogs. This goes against the findings of previous studies which indicate that technology readiness has a positive effect on customer attitudes towards use of technology, including self service technologies (SSTs)(Liljander *et al.*, 2006, Theotokis *et al.*, 2008). However, it has been shown that consumers with high technology readiness while readily adopting the Internet as a source of information may actually hold back when two-way communication is involved (Liu, 2007). Moreover, Walczuch *et al.* (2007) showed that the Innovativeness dimension of technology readiness had a negative impact on technology usefulness perceptions.

A possible explanation in line with the previous findings is that even though innovative individuals are the early adopters of technology and many of them are the opinion leaders who are very technology savvy and they are also more critical of technology as compared to other people. These individuals are aware of the latest developments in technology and also have higher expectations. There is definitely a need to further examine the innovativeness dimension in other contexts and with different samples.

7.6.4 Need for Cognition and Attitude towards Blogs

H_4 was based on the findings of previous studies which show that the *need for cognition* plays a critical role in the formation of either positive or negative attitudes (Cacioppo and Petty, 1982, Haugtvedt *et al.*, 1992, Schiffman and Kanuk, 2000). The hypothesis posits that there is a positive relationship between the *need for cognition* (NFC) and the level of *attitude towards blogs* (ATB). The results show that the hypothesis H4 is empirically supported (standardised regression weight = 0.108; t value =2.016 $p<0.05$, two-tailed). In other words blog users who had a higher need for cognition would also have a more positive perception of blogs.

7.6.5 Perceived Interactivity and Attitude towards Blogs

H_5 was based on the findings of previous studies which have indicated a positive relationship between previous conceptualisations of interactivity and attitudes towards websites. However, the present study tries to find out whether this applies to blogs which are different from static websites and moreover, interactivity as conceptualised in this study incorporates the reciprocity facet or two-way communications in blogs.

The results show that the relationship was highly significant ($p = 0.001$) and that perceived interactivity is an important and positive predictor of the attitude towards blogs (standardised regression weight = 0.796; t value = 6.586). This indicates that the findings of this study are in line with earlier studies which indicated that interactivity and attitude toward the website are highly correlated (Jee and Lee, 2002, Ko *et al.*, 2005, Johnson *et al.*, 2006). The contribution is that this was in a different context, i.e. blogs and the perceived interactivity construct as conceptualised here includes the human-human interactions name, between bloggers and blog users and between the blog users as well whereas those earlier studies emphasised only the human-machine or human-interface interaction in their conceptualisations of interactivity.

7.6.6 Perceived Credibility and Attitude towards Blogs

To my knowledge, there have been only a few empirical studies which have investigated the relationship between credibility and consumer attitudes in the online context. This study makes a contribution towards this end by assessing the relationship between credibility and consumer attitudes towards blogs.

It was hypothesised that there is a positive relationship between the perceived credibility of blogs and the attitude towards blogs. This hypothesis was based on the few studies which have shown a link between credibility and consumer attitudes. For example, Hovland *et al.* (1953) showed that sources that are perceived to be more credible are more likely to produce a greater attitude change. The result shows that, as hypothesised, the relationship is highly significant ($p = 0.001$) and there is a positive relationship between the perceived credibility of blogs and the attitude towards blogs. This means that the higher the perceived credibility of a blog, the stronger will be the positive attitude towards the blog. As discussed in review of literature, other studies have confirmed blogs as credible sources of information (Kiousis, 2001, Johnson and Kaye, 2004, Adamic and Glance, Yang, 2007). Though they looked at online communities, Brown *et al.* (2007) also noted the value that individuals placed on information and sources they perceived as highly credible. This clearly indicates the importance of credibility in the context of social media.

7.6.7 Perceived Interactivity and Avoidance of Sponsored Posts on Blogs

The literature review revealed that there was some evidence that interactivity does affect perceptions of advertising online (Coyle and Thorson, 2001, Liu and Shrum, 2002, Fortin and Dholakia, 2005). For example, the study by Ko *et al.* (2005) showed that a different interaction ultimately leads to a positive attitude towards brand and purchase intentions. Thus, H_7 proposed an inverse relationship between overall perceived interactivity of the blog and consumer avoidance of the sponsored posts on the blog.

Not surprisingly, the directionality conformed to the hypothesised relationship. Furthermore, perceived interactivity was found to be a highly significant ($p = 0.001$) and important negative predictor of the avoidance of sponsored posts on blogs (standardised regression weight =-0.802; t value =-3.441). Thus, blog users who perceive the blogs as more interactive would be most likely to have a more favourable perception of sponsored posts on the blogs (non avoidance of sponsored posts). As noted in the literature review, the avoidance of sponsored posts scale used in this study was adopted from the ad avoidance scale given by Cho and Cheon's (2004) and is shown to be a valid scale with a higher content validity as compared to previous ad avoidance studies on other traditional media.

7.6.8 Perceived Credibility and Avoidance of Sponsored Posts on Blogs

H_8 was proposed to test the relationship between perceived credibility of a blog and consumer avoidance of sponsored posts on the blog. Though the resulting directions of the relationship were consistent with the hypotheses, it was found that the link was not statistically significant (the standardised regression weight = -0.044 and with a t value = -0.605).

This indicates that the perceived credibility of a blog (and of the blogger) does not determine the avoidance of sponsored posts on blogs. However, the relationship will be explored further to see if the attitude towards blogs mediates the relationship between perceived credibility of a blog and consumer avoidance of sponsored posts on the blog. This will be discussed in detail in the section on mediation.

7.6.9 Attitude towards Blogs and Avoidance of Sponsored Posts on Blogs

H_9 was proposed to test the relationship between attitude towards blogs and the avoidance of sponsored posts on blogs. The results of previous studies that have looked at the relationship between attitude towards attitude towards websites and attitudes towards advertising indicate that the positive attitudes towards the site are transferred to the ads or brands (Ko *et al.,* 2005, Bruner and Kumar, 2000, Stevenson *et al.*, 2000, Poh and Adam, 2002)

As discussed earlier, blogs are more interactive than static websites and sponsored posts are different from the advertising that we associate with websites including banners and buttons. So the question was whether positive attitudes towards blogs would translate into positive attitudes towards the sponsored posts on the blogs as well? It was hypothesised that the consumer attitudes towards blogs would be negatively related to avoidance of sponsored posts on the blogs. In other words, it was expected that as the attitude towards a blog increases positively, the avoidance of sponsored posts on the blogs would decrease – that the blog users would like the sponsored posts more.

The results of the study show that there is indeed a significant ($p < 0.05$) and strong relationship (standardised regression weight = 0.470 and with a t value = 2.457) between the attitude towards blogs and avoidance of sponsored posts on blogs. However, the sign was positive as opposed to the hypothesised negative relationship. This indicates that the more positive the attitude towards the blog, the more negative would be the perception of sponsored posts on the blogs and hence a higher avoidance of sponsored posts on blogs. To explain the results, it can be assumed that on blogs which are visited regularly by a consumer, there is a deeper internal processing of the sponsored posts on these blogs as compared to those which they are not really interested in.

Earlier studies on linkages between attitudes towards sites and attitudes towards ads did not take a very important factor into account – the growing negative response towards advertisements on the net and as well as on blogs (Shavitt et al., 1998, Kelly et al., 2008).

In the special context of blogs, an increasing number of prominent technology commentators have also expressed their opposition to sponsored posts or other forms of advertising on the blogs as they feel that such blogs are no longer independent or have lost their credibility (Grossman, 2004, Johnson and Kaye, 2004, Kirkpatrick, 2006). Grossman (2004) was really critical when two popular blogs, Gawker.com and Wonkette.com, started carrying advertisements as if that was something really negative.

Some blogs actually advertise the fact that they do not carry sponsored posts. For example, blogger Kirkpatrick proudly pointed out that the popular technology blog Techcruch.com, does not carry ads (Kirkpatrick, 2006). He believes that this new development (that is, sponsored posts on blogs) will completely destroy the blogosphere's credibility.

The personal nature of blogs and the fact that favourite blogs were selected by the blog users in this research is expected to lead to an increase in ad avoidance. Thus if the blog users already have a negative perception of advertisements on blogs, the effect is actually intensified. Though not examined in this study, it has been shown a general distrust and other negative perceptions of advertising can lead to an avoidance of advertising (Shavitt *et al.*, 1998, Schlosser *et al.*, 1999, Kelly *et al.*, 2008) and future studies should look into this issue. In case of users who do not like advertisements, the feelings might be even more intense in the case of blogs they like, i.e., consumers will hate sponsored posts even more on blogs they like as compared to those blogs which they do not like.

7.7 Mediating Effects

As explained in the methodology, the SEM bootstrap method (Efron, 1979, Efron *et al.*, 1993) with 1000 bootstrap samples was examined for indirect (mediating) effects. The test for mediation in this study has adopted the very new typology of mediations and non-mediations as given by Zhao *et al.* (2010). As mentioned in the methodology chapter, the SEM bootstrap method has been found to be more robust as compared to Sobel's (1982) test to produce unbiased estimates of mediating effects (Cheung and Lau, 2008, Kenny, 2008). In fact, Zhao *et al.* (2010) have shown that the bootstrap test is superior to the Sobel test popularized by Preacher and Hayes (2004).

As shown in the previous chapter, two possible mediating effects in the structural equation model were examined, to see if they could explain the hypothesised relationships, namely:

- Perceived Interactivity → Attitude towards blogs → Avoidance of sponsored posts on blogs; and
- Perceived Credibility → Attitude towards blogs → Avoidance of sponsored posts on blogs.

The results are discussed below:

7.7.1 Mediation: Perceived Interactivity → Attitude towards Blogs → Avoidance of Sponsored Posts

The results show that both the indirect (mediated) effect between perceived Interactivity and avoidance of sponsored posts on blogs via the attitude towards blogs construct as well as the direct effects between perceived interactivity and avoidance of sponsored posts on blogs were significant at the 0.01 level and point in opposite directions (opposite signs). This mediating effect of attitude towards blogs between perceived Interactivity and attitude towards sponsored posts on blogs is classed as *competitive mediation* according to the typology of mediations and non-mediations as given by Zhao *et al.* (2010).

This is in contrast to Baron and Kenny (1986) who categorised this pattern of mediation as 'no mediation'. Other authors have used the terms 'inconsistent models' or 'negative confounding' (Collins *et al.*, 1998, Shrout and Bolger, 2002). Besides proving that there is evidence of the mediating effect of attitude towards blogs between perceived Interactivity and attitude towards sponsored posts on blogs, this may also indicate the likelihood of another omitted mediator in the direct path (Zhao *et al.*, 2010).

Ko *et al.*'s (2005) landmark study showed that different types of perceived interactivity had a positive effect on attitude towards the website, which in turn leads to a positive attitude towards brand and ultimately towards purchase intention. Furthermore, they identified the two facets of perceived interactivity as mediating variables between motivations for using the Internet (i.e., antecedent variables) and advertising effectiveness measurements (i.e., consequent variables). However, the mediation was not examined empirically. Thus the findings of this study are an important contribution in this area.

7.7.2 Mediation: Perceived Credibility → Attitude towards blogs → Avoidance of Sponsored Posts

H_{11} examines the second possible mediating effects in the SEM. It was found that the indirect (mediated) effect between perceived credibility and attitude towards sponsored posts on blogs via attitude towards blogs was significant (p= 0.003) at the 0.01 level. However, the direct effect between perceived credibility and attitude towards sponsored posts on blogs was not significant. According to the typology of mediations and non-mediations as given by Zhao *et al.* (2010), this indicates *indirect-only mediation* of the attitude towards blogs between perceived credibility and the avoidance of sponsored posts on blogs. This overlaps with full mediation as given by Baron and Kenny (1986). In other words, attitude towards blogs acts as a full mediator between perceived credibility and the avoidance of sponsored posts on blogs. This indicates the importance of attitude towards blogs in the relationship.

Both tests of mediation indicate the importance of the attitude towards blogs construct which had been derived from the attitude towards websites construct as an important factor that influences the avoidance of sponsored posts on blogs. In both cases, it was interesting to note that the direct effects were negative whereas the indirect mediating effect is positive. This means that both perceived interactivity and perceived credibility of the blogs have an indirect positive relationship with avoidance of blogs due to the mediating effect of the attitude towards blogs. Future studies could possibly look at whether the attitude towards blogs construct can be adapted to look at various other online media including social networks, etc.

7.8 The Advertising Hierarchy of Effects

The model conceptualised and tested in this research has its foundation in the traditional hierarchy of effects model. Looking at the traditional advertising hierarchy of effects models, it appears that bloggers play an important role, not only by creating awareness about products though posts on their blogs but may actually be helping their readers make up their minds. The present study also shows that the hierarchy of effects exists in different attitude concepts, namely attitude towards blogs and avoidance of sponsored posts of blogs and follows in a sequential manner. This is also in line with the findings of Barry and Howard (1990) and Castañeda *et al.* (2009). Moreover, this study also assumes that it is the online interactivity and electronic word-of-mouth, which drives the hierarchy of effects in case of online social networks and in this study, blogs.

The study further examines whether the individual characteristics of the blog users would affect the perceived interactivity. However, the study departs from the traditional advertising hierarchy of effects model and presents some interesting findings. Looking at traditional advertising hierarchy of effects, the attitude toward the website should influence the attitude toward the ad shown from individual websites. That is, if a viewer likes the website, they should be more receptive to advertisements carried on the site.

The difference in the model presented in this study is that positive attitude towards the blog does not result in positive response towards advertisements on the blogs but rather that blog users have a higher avoidance of sponsored posts. This may be explained as the result of the fact that blog users in general have a negative perception of advertising on blogs plus they were directed to choose a blog they liked. This is expected to involve a deeper internal processing of the advertisements on the part of the blog users as compared to a blog they are not really familiar with. Having said that, an interesting observation was that several of the blog users listed blogs that carried sponsored posts as the one they visit regularly (and assumed to be their favourite personal blogs).

It should be noted that overall, the results indicate that blog users do not like sponsored posts. Does this mean that the attitudes of the blog users are in general against sponsored posts? Or are they even aware that these blogs carried sponsored posts? The latter may be a valid reason due to the fact that some bloggers do not even label their sponsored posts as such. It could also point towards pre-formed negative feelings about advertising in general which was not examined in the study. However as indicated earlier, the negative perceptions and attitudes towards sponsored posts may be overcome if the blog is perceived as more interactive.

7.9 Summary

This chapter has presented further discussion on the findings of this study. The discussion covered the issues with some of the constructs. This chapter has provided some valuable insights towards the link between personal characteristics, the characteristics of the blogs, attitude towards blogs and ultimately towards avoidance of sponsored posts on blogs. The findings have confirmed the hypothesised relationships between the innovativeness dimension of technology readiness and perceived interactivity. The findings have also confirmed the hypothesised relationships between the three constructs, namely, the need for cognition; perceived interactivity and perceived credibility, and the attitude towards blogs. Finally it was also confirmed that there was a positive relationship between attitude towards blogs and avoidance of sponsored posts on blogs. These results are expected to offer useful managerial insights. Moreover, the results also revealed the important mediating effects of attitude towards the blog in the relationships between perceived interactivity and avoidance of sponsored posts on blogs as well on the relationships between perceived credibility and avoidance of sponsored posts on blogs. Both the perceived interactivity and perceived credibility of the blogs have an indirect positive relationship with avoidance of blogs due to the mediating effect of the attitude towards blogs.

Theoretically, the results of this study show that the hierarchy of effects exists in the various relationships in the conceptual model, including the characteristics of the blog users and their perceptions about the blogs. This in line with the findings of Castañeda *et al.* (2009) who also identified that the hierarchy of effects existed among different attitude concepts, including attitude towards the web site and attitude towards the brand.

Chapter 8 which is the final chapter will highlight the main contributions along with the theoretical as well as managerial implications. This will be followed by the limitations of this study and recommendations for future research.

Chapter 8: Conclusion

8.1 Introduction

The previous chapter discussed the results of the empirical analysis. This chapter starts off with a general overview of the study and goes on in section 2 to discuss the contributions of the study from three different perspectives, namely, theoretical, methodological, and managerial. Next, section 4 discusses the limitations and also some suggestions for future research.

8.2 Overview of the Study

The unique defining feature of blogs that differentiate them from ordinary static websites is the interactivity that occurs between the blog readers and also between blog users and with the blogger. They have also several other unique features which make them different from other social media as well. In view of this, the study presents a new definition of blogs which incorporates the interactivity construct.

The study was considered important in view of the fast growing importance of social media including blogs, to marketers. Advertisers are slowly but steadily entering this new media in various ways, and as a result *consumer generated media,* has entered marketing terminology. Related to this are the growing commercialisation of blogs especially personal blogs, and the growth of advertising on blogs including sponsored posts. However, as pointed out in the introduction chapter, marketing research has not addressed several of the issues relating to the factors that drive consumers to visit blogs nor linked it to the consumer attitudes towards blogs. Thus, this study represents one of the first attempts to take an empirical look at the relationship between perceived interactivity, attitude towards blogs and avoidance of sponsored posts on personal blogs. It expands on previous studies on the concept of perceived interactivity. It has also successfully examined the constructs of attitudes towards blogs and avoidance of sponsored posts on blogs which were adapted from previous studies on other media, for validity and reliability.

Furthermore, assessment of the model using confirmatory factor analysis and various fit indices indicates good model fit. All the three criteria for convergent validity are met by the model. The measures in the study also exhibit sufficient evidence of reliability and discriminant validity.

8.3 Research Contributions

This research has made several contributions to the theory, research methodology and practice as highlighted in the following sections:

8.3.1 Theoretical Contributions

This study has addressed the gaps which were identified in Chapter 3 and makes three main theoretical contributions.

8.3.1.1 Conceptualisation of Perceived Interactivity, Antecedents and Link with Attitudes

Given the important implications of blogs for marketing communications and consumers, it was felt earlier definitions and conceptualisations of interactivity were too narrow. Theoretically, this study expands on previous studies on perceived interactivity while looking at blogs including Cho and Leckenby (1999), Liu (2003) and Wu (1999). A clear and valid conceptual framework of understanding perceived online interactivity was lacking. Existing definitions and empirical studies have failed to accommodate the increasing social interactions taking place online due to the popularity of social media and specifically, blogs. Thus perceived interactivity is not restricted to interactions between the computer and the user, and the present conceptualisation encompasses online interactions between blog users and the blogger, and between blog users themselves.

This study represents another attempt to operationalise and empirically test the perceived interactivity construct. The conceptualisation of perceived interactivity presented in this study not only expands on the work done by previous authors but also seeks to redefine and present a new conceptual framework in view of the increasing popularity of consumer generated media, more specifically blogs. The study has made important contributions, particularly in redefining and empirically testing the perceived interactivity construct in the context of online media. The scale which was adapted and used in the study exhibits sufficient evidence of reliability, convergent validity and discriminant validity.

The study also empirically tested the conceptual and empirical links of perceived interactivity with the antecedents, i.e., technology readiness index and need for cognition, which represent the personal characteristics of the blog users. It was found that the innovativeness dimension of technology readiness had a positive link with perceived interactivity. However, contrary to expectations the direct relationship between the need of cognition and perceived interactivity was not found to be statistically significant.

Furthermore, the study has also empirically tested the relationship between perceived interactivity and attitude towards blogs and the transferability of the attitude to avoidance of sponsored posts on blogs.

It was revealed that perceived interactivity had a strong positive effect on attitude towards blogs. Perceived online interactivity was also found to be a highly significant and important predictor of the avoidance of sponsored posts on blogs with a negative relationship. This means that blog users who perceive the blogs as more interactive would be most likely to have a more favourable perception of sponsored posts on the blogs, in other words have a higher non avoidance of sponsored posts.

8.3.1.2 Advertising Hierarchy of Effects as a Theoretical Framework

It was found that attitude toward the blog does influence the *advertising hierarchy of effects*, most notably the avoidance of sponsored posts on individual blogs. This follows Bruner and Kumar's (2000) findings that advertising hierarchy-of-effects as seen in the traditional media can be transferred to websites and in this case into blogs as well.

The findings of this study also help to further our understanding of the relationships between the antecedents of attitude towards blogs (which was adapted from the attitude towards websites) and avoidance of sponsored posts in blogs as a consequence. This study has revealed that the need for cognition of blog users; the perceived interactivity and perceived credibility of the blog (and the blogger) are positively related to the attitude towards blogs. However, no direct relationship between innovativeness dimension of technology readiness and attitude towards blogs was found. As mentioned in the previous section, structural equation modelling indicates that there is a strong positive relationship between perceived interactivity and attitude toward blogs.

The findings are also in line with Castañeda *et al.* (2009) who identified that the hierarchy of effects exists among different attitude concepts. However, these relationships have not been examined previously in the context of blogs and never together. The study departs from the traditional advertising hierarchy of effects model and assumes that interactivity is an important part of the overall model and also examines the role of personal characteristics on the overall hierarchy of effects.

The present study shows that the hierarchy of effects exists in different attitude concepts, namely attitude towards blogs and avoidance of sponsored posts of blogs and follows in a sequential manner. This study thus makes an important contribution to the theoretical understanding of link between perception and attitudes.

8.3.1.3 Link between Interactivity, Attitudes and Avoidance of Sponsored Posts

The biggest theoretical contribution of this research is the results which showed that positive attitude towards the blog results in higher avoidance of sponsored posts. The fact that blog users in general have a negative perception of advertising on blogs plus that they were directed to choose a blog they liked were possible reasons for this. Blog users are expected to have a deeper internal processing of the advertisements on blogs they frequent regularly and which they like.

An interesting finding was that perceived interactivity was found to be a highly significant and important negative predictor of the avoidance of sponsored posts on blogs. In other words, the higher the interactivity of blogs, the more likely it was for blog users to have a more favourable perception of sponsored posts on the blogs (non avoidance of sponsored posts).

The importance of the attitude towards blogs construct was also highlighted as it was found to have a mediating effect between perceived interactivity and avoidance of sponsored posts on blogs as well as between perceived credibility and avoidance of sponsored posts on blogs constructs. The former mediating effect was found to indicate competitive mediation, which overlaps with non mediation whereas the latter, i.e., between perceived credibility and avoidance of sponsored posts on blogs, indicated indirect-only mediation, which overlaps with full mediation as given by Baron and Kenny (1986).

8.3.1.4 The Importance of Credibility in Online Interactions

The results clearly indicate the importance of credibility in online relationships and specifically in the context of blogs. The results indicate a positive relationship between the perceived credibility of blogs and the attitude towards blogs. Thus higher the perceived credibility of a blog, the stronger will be the positive attitude towards the blog. Surprisingly, the results indicate that perceived credibility of a blog (and of the blogger) does not determine the avoidance of sponsored posts on blogs. This may be explained by the fact that attitude towards blogs was found to act as a full mediator between the two constructs, namely, perceived credibility and the avoidance of sponsored posts on blogs, which again indicates the importance of the attitude towards blogs in the relationship.

8.3.2 Methodological Contributions

While reviewing the literature, it was noted that most empirical studies involving the constructs used in the study were experimental in nature where the respondents were asked to report their immediate feelings. For example, Ko *et al.* (2005) who looked at interactive advertising also listed the experimental situation in their study as a limitation and recommended that future research should be carried out with less artificial experimental settings. In contrast, the respondents of this study were directed to choose a blog they visit regularly unlike the previous experimental studies where the subjects were asked to answer questions based on their perception, attitude or experience of a single or few websites. The respondents of this study based their answers on existing beliefs and perceptions and thus, the responses are considered more natural as compared to artificial experimental settings. This is expected to contribute to the generalisability of this study.

Moreover, most of the studies were conducted on college or university students, for example, Cho and Cheon's (2004) study on ad-avoidance. In contrast this study was open to anyone who read blogs and not limited to students and is thus considered more generalisable.

Outliers were detected and not included in the final analysis as the presence of outliers can seriously distort statistical tests (Hair *et al.*, 2010). However, as noted by Baumgartner and Homburg (1996), the detection and removal of outliers is not described in most papers and in fact, the idea of outlier detection in SEM is relatively new.

This study is also among the few to use the SEM bootstrap method (Efron, 1979, Efron *et al.*, 1993, Preacher and Hayes, 2004) to examine for indirect (mediating) effects. As mentioned in the methodology chapter, this procedure has been found to be a more robust method as compared to the Sobel test to produce unbiased estimates of mediating effect (Cheung and Lau, 2008, Kenny, 2008). The new typology of mediations and non-mediations as given by Zhao *et al.* (2010) was also adopted as opposed to Baron and Kenny's (1986) well accepted criteria used for establishing mediation. As pointed out by Zhao *et al.* (2010), their new typology overcomes a few flaws in Baron and Kenny's criteria and allows for more flexibility in interpreting results.

8.3.3 Managerial Contributions

The findings of this study have several managerial implications. Advertising spending on the top social network and blogging sites has been increasing (Neilsen, 2009) despite the fact that there have been insufficient studies concerning their advertising effectiveness of different social media.

The results highlight the important role of perceived interactivity in online communication especially in the context of blogs. It was found that overall perceived interactivity of the blog is positively related to attitudes toward the blog. This means that as a blog is perceived to be more interactive, attitude of blog users toward the blog improves.

Another important and significant finding of this study was that the perceived interactivity of the blog was negatively related to the avoidance of sponsored posts on the blog. In other words higher *perceived interactivity* of blogs would lead to favourable perception of sponsored posts on the blogs (non-avoidance of sponsored posts). This indicates that blog users would tend to avoid sponsored posts less as the interactivity of the blog increases. Thus, improving the interactivity of the blogs and allowing other blog users to say what they felt about the posts, is expected to lead to increase in acceptance of sponsored posts on the blogs. Bloggers and marketers can therefore benefit by improving the perceived interactivity of a blog. They can facilitate this by providing more incentives for their visitors to communicate and interact on their blogs. It would be interesting to see whether other social media such as Facebook and Twitter show similar results.

Another important and surprising finding was that increase in attitude towards blogs was not negatively related to avoidance of sponsored posts on the blog. From a business perspective, the results do seem to indicate opposition of the consumers towards the commercialisation of blogs they like and more specifically towards sponsored posts on blogs. Marketers and bloggers should therefore think carefully before carrying sponsored posts on blogs as they risk alienating the regular users of the blogs. However, that does not mean that marketers or companies should stop thinking of sponsored posts altogether. In fact there are a few implications of this study, which may in fact help marketers in successfully utilising this new and potentially attractive marketing medium.

Even though the results indicate that blog users which like a blog will tend to avoid sponsored posts on those blogs. Several of the blogs listed by the respondents do indeed carry sponsored posts. This does raise some questions including the possibility that consumers are not aware that the posts are sponsored. However, this does not mean that bloggers or advertisers should hide the fact that the posts are sponsored as this may affect the overall credibility of the blogger as well as the blog in the long run. In the US, new legislation actually makes it mandatory for bloggers to reveal whenever they carry sponsored posts or have any material connections (payments or free products) with advertisers (FTC, 2009). Brown *et al.* (2007) highlighted the risk involved in attempting to influence online word of mouth. They emphasised the need for open, honest, and authentic communication failing which they might be a possible backlash against marketers. Not revealing that blogs are carrying commercial content can lead bloggers into trouble. This means that a number of bloggers, especially the popular ones who have a lot to lose, should be concerned about their readers' reactions to their carrying sponsored content on the blogs.

Though the perceived credibility was not found to be related to avoidance of the sponsored posts on the blogs there are other underlying factors and these are bound to have an effect on the blog users' (readers) perception of blogs carrying sponsored posts. Marketers should pay heed to Bernoff (2009, p. 1) from Forrester Research who thinks it is ethical and acceptable for bloggers to accept payments to write sponsored posts or sponsored conversation as he terms it. He gives a very valid suggestion, namely, that bloggers *"must be able to write whatever they want, positive or negative"*. This might change the perception of blog users towards sponsored posts if they are seen as honest reviews rather than paid advertorials.

Bloggers should ultimately get to decide what to post, and most of them are keenly aware that whatever they post will affect their credibility and ultimately their popularity. Therefore they must act as the guardian for the type of posts put on their blogs to ensure that their own credibility is not adversely affected.

8.4 Limitations of the Study and Directions for Future Research

Like every study, the present study also has some limitations which are discussed below. First of all, the sample size of 399 respondents was considered just adequate but a larger sample would have been better. It should be noted that the study utilises the bootstrap method to overcome this weakness.

Moreover, the study was restricted to blogs written in the English language. Though English is the most popular language used on blogs, this study missed out on the blog users who frequent blogs written exclusively in other languages such as Chinese (the most widely spoken language in the world).

Another limitation is that the data is self-reported obtained via the questionnaire with no means to verify the representative sample. The questionnaire asked the respondents to choose a blog they regularly visited and as a result, this study has not examined their response to blogs they have not visited or do not visit regularly. As a result, consumers who do not read blogs regularly and those with a low involvement may be underrepresented in this study. It is recommended that future studies could replicate this study but with a more diverse sample.

Even though the blog users were directed to choose only personal blogs and not corporate blogs, the wide variety topics covered by bloggers could also have had an impact on the findings. Personal blogs cover topics on practically everything under the sun from their comments on politics to what they had for dinner.

Though the results of the study indicate that the overall perception of the blog users towards avoidance of sponsored posts is quite high, the study did not examine whether this was the result of pre-formed attitudes about advertising in general. Future studies can see whether attitude towards advertising in general has an effect on the avoidance of ads on blogs. This study has also focused on sponsored posts on blogs which is a relatively recent development. Other studies could look at the consumer attitude towards banner ads, text link ads and contextual ads on blogs which is more widespread. The study can also be extended to studies on advertising on other online social networks including Facebook and Twitter and to see whether the findings obtained in this study can be replicated on these fast growing online social networks. It is suggested that future studies should look at whether the perceived interactivity as well as the attitude towards blogs constructs can be adapted to look at various other online media including social networks, etc.

As mentioned in the discussion chapter, this study did not look at 'emotions' or 'involvement' because the blog users selected blogs they frequented regularly (their favourites). The assumption was that involvement on the blogs was already high and instead the study looked at the need for cognition, which is assumed to be prerequisite in order to interact. Future studies could look at the effect of different involvement levels of blog users on attitudes and on behavioural intentions.

This study used an online survey method to study the relationships between the various constructs. It has been acknowledged that empirical studies do have some limitations. Qualitative research including the use of more longitudinal research designs could probably help to better understand the relationship between interactivity and attitudes and take a deeper look at how individual blog users feel about sponsored posts.

8.5 Summary

Overall, despite some limitations this study does provides a better understanding of how the personal characteristics of blog users and characteristics of blogs affect attitude towards blogs and ultimately towards avoidance of sponsored posts on blogs. The finding of the study departs from the traditional advertising hierarchy of effects model and presents some interesting results. This study makes an important contribution to the theoretical understanding of link between perception and attitudes especially with regards to the relationships between perceived interactivity, attitude towards blogs and avoidance of sponsored posts on personal blogs. It also revealed some serious issues with old and widely accepted constructs, namely the technology readiness index (Parasuraman, 2000, Parasuraman and Colby, 2001) and the need for cognition (Cacioppo and Petty, 1982, Cacioppo *et al.*, 1996).

The findings of this study have several managerial implications. By providing bloggers and marketers c more incentives for their visitors to communicate and interact on their blogs, which is expected to lead to increase in acceptance of sponsored posts on the blogs. Furthermore, bloggers should be concerned about their readers' reactions to sponsored content on the blogs.

This study has contributed to our theoretical knowledge about the concept of perceived interactivity. Perceived interactivity has been shown to be an important variable with regards to communication on blogs and is closely linked to attitudes towards the medium – blogs as well as towards sponsored posts on the bogs. Improving the perceived interactivity on blogs could lead to increased positive attitudes towards blogs as well as acceptance of sponsored posts on blogs.

Moreover, the results also highlight the importance of the attitude towards blogs construct, which was found to mediate between perceived interactivity and avoidance of sponsored posts and also between perceived credibility and avoidance of sponsored posts. The results also show that the need for cognition of blog users; the perceived interactivity and perceived credibility of the blog (and the blogger) are positively related to the attitude towards blogs.

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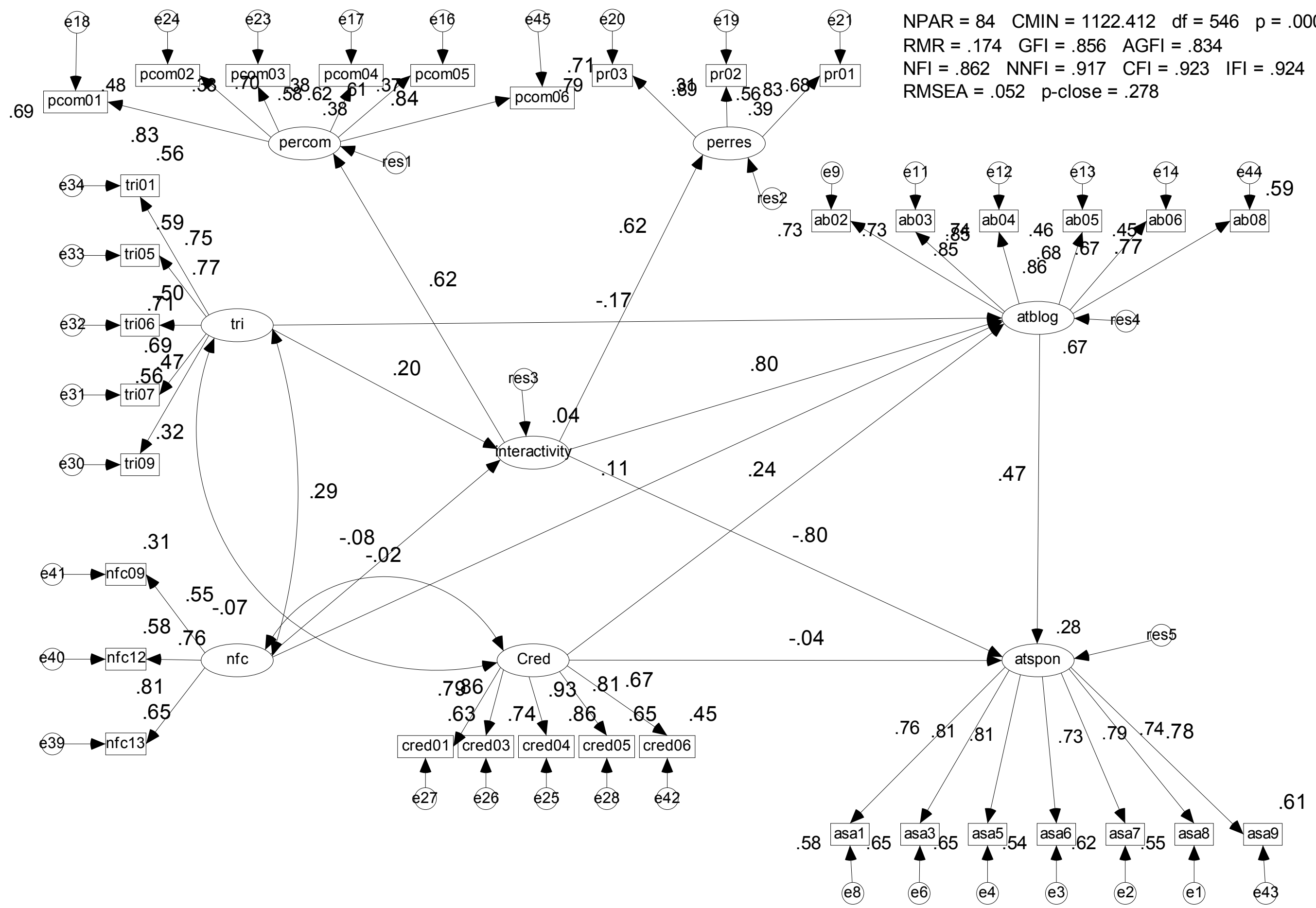
Appendices

APPENDIX 1: ITEMS IN THE ENJOYMENT OF COGNITIVE STIMULATION (Lord and Putrevu, 2006)

- I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.
- I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.
- I feel relief rather than satisfaction after completing a task that required a lot of mental effort.
- I prefer to think about small daily projects to long-term ones.

APPENDIX 2: STRUCTURAL EQUATION MODEL



APPENDIX 3: SURVEY QUESIONNAIRE

Note: The layout and look presented in the following pages differs from the actual look on the online survey.

THE UNIVERSITY OF
WARWICK

Perception of Blogs

A Warwick Business School Research Project

IMPORTANT NOTE

Thanks for your interest in taking part in the survey.

Please note that if you have not visited any blogs during the past 12 months, you should not participate in this survey.

We thank you for your cooperation and interest in this study.

Hello! Welcome to the online version of the survey.

Dear Survey Participant,

Thanks for your interest in taking part in the survey.
We assure you that this will take no longer than 15 minutes.
As a thank-you to all respondents, a 50p donation will be made to Cancer Research UK for each completed survey.

Prize Draw
There is also an opportunity for you to suggest a donation of £100.00 to a charity of your choice or take the cash prize for yourself (your choice);

Besides that 10 other respondents will win Amazon vouchers worth £10 each.
The winner will be announced on my blog. He or she will also be contacted by email if provided.

Instructions:
Although many of the questions may sound similar, it is important that you answer them ALL please. If you miss any of them a reminder will appear immediately.

As there is no right or wrong answer, do not worry or puzzle over individual items, it is your first impressions and immediate feelings about the questions that we want.

Your input is very valuable for the success of this study. Your answers are completely confidential.

PRELIMINARY QUESTIONS

Please think of ONE blog which you have visited most frequently during the past 1 year (12 months).

For bloggers, this must NOT be your personal blog or one that you contribute to. Most of the questions contained in this survey relate to your thoughts and opinions about this blog.

It is recommended that you open the blog in a separate window or tab as you may need to refer to it for some of the questions.

If you have not visited blogs during the past 1 year, you should not participate in this survey.

Thank you.

1. ***What is the name of this blog?***

2. ***Please indicate the Web address (URL) of the blog: (if you can remember it)***

BLOG VISIT

3. When did you **first begin** visiting this blog**?**

- ☐ **Within the last month**
- ☐ **Within the last 3 months**
- ☐ **Within the last 6 months**
- ☐ **Within the last year**
- ☐ **Within the last 2 years**
- ☐ **Within the last 3 years**
- ☐ **More than 3 years ago**

4. How frequently do you **visit** the blog?

- ☐ **More than once a week**
- ☐ **About once a week**
- ☐ **About once or twice a month**
- ☐ **About once every 2 months**
- ☐ **About once a quarter (every 3 months)**
- ☐ **About 1 – 3 times per year**

YOUR OPINION ABOUT THE BLOGGER

Please indicate your level of agreement with the following regarding the blogger
It is recommended that you open the blog in a separate window or tab as you may need to refer to it for some of the questions.

		Strongly Disagree			***Neither***			***Strongly Agree***
5.	Trustworthiness:	Untrustworthy ☐	☐	☐	☐	☐	☐	Trustworthy ☐
6.	Open- mindedness:	Not open minded ☐	☐	☐	☐	☐	☐	Open minded ☐
7.	Expertise:	Not expert ☐	☐	☐	☐	☐	☐	Expert ☐
8.	Experience:	Inexperienced ☐	☐	☐	☐	☐	☐	Experienced ☐
9.	Training:	Untrained ☐	☐	☐	☐	☐	☐	Trained ☐
10.	Sincerity:	Insincere ☐	☐	☐	☐	☐	☐	Sincere ☐

YOUR OPINION ABOUT THE BLOG

11. Please indicate your **level of agreement** with the following:

The blog …	***Strongly Disagree***			***Neither***			***Strongly Agree***
Compared with other blogs, I would rate it as one of the best.	☐	☐	☐	☐	☐	☐	☐
I am not happy with this blog.	☐	☐	☐	☐	☐	☐	☐
I am satisfied with this blog.	☐	☐	☐	☐	☐	☐	☐
I feel comfortable surfing this blog.	☐	☐	☐	☐	☐	☐	☐
I feel surfing this blog was a good way to spend my time.	☐	☐	☐	☐	☐	☐	☐
I would like to visit the blog again in the future.	☐	☐	☐	☐	☐	☐	☐
This blog makes it easy for me to build a relationship with the blogger.	☐	☐	☐	☐	☐	☐	☐
Visiting this blog was a satisfying experience.	☐	☐	☐	☐	☐	☐	☐

YOUR INTERACTION WITH THE BLOG

12. Please indicate your **level of agreement** with the following:

	Strongly Disagree			***Neither***			***Strongly Agree***
Clicking on the links gave me information quite fast.	☐	☐	☐	☐	☐	☐	☐
Getting information from the blog was very quick.	☐	☐	☐	☐	☐	☐	☐
I could choose freely what I wanted to see on the blog.	☐	☐	☐	☐	☐	☐	☐
I felt that I could communicate with other visitors to the blog.	☐	☐	☐	☐	☐	☐	☐
I felt that I could communicate with the blogger directly.	☐	☐	☐	☐	☐	☐	☐
I felt that I had a lot of control over my visiting experiences at this blog.	☐	☐	☐	☐	☐	☐	☐
I felt that it is difficult to offer feedback on the blog.	☐	☐	☐	☐	☐	☐	☐
I felt that the blog does not encourage visitors to give feedback.	☐	☐	☐	☐	☐	☐	☐
I felt that the blog wants to listen to its visitors.	☐	☐	☐	☐	☐	☐	☐
I had absolutely no control over what I can do on the blog.	☐	☐	☐	☐	☐	☐	☐
I was able to obtain the information I want without any delay.	☐	☐	☐	☐	☐	☐	☐
The blog gives visitors the opportunity to give feedback.	☐	☐	☐	☐	☐	☐	☐
The blog is effective in gathering visitors' feedback and comments.	☐	☐	☐	☐	☐	☐	☐
The blogger was very slow in responding to my requests.	☐	☐	☐	☐	☐	☐	☐
This blog facilitates two-way communication.	☐	☐	☐	☐	☐	☐	☐

YOUR OPINION ABOUT SPONSORED POSTS/ ADVERTORIALS

Sponsored Posts/ Advertorials refer to posts carried by blogs promoting a company, their products and/ or services, for which the blogger receives some form of compensation.

13. Please indicate your **level of agreement** with the following:

	Strongly Disagree			***Neither***			***Strongly Agree***
I would not click on any links on the sponsored posts/advertorials.	☐	☐	☐	☐	☐	☐	☐
I would click away if the blog displays sponsored posts/advertorials.	☐	☐	☐	☐	☐	☐	☐
It would be better if there were no sponsored posts/advertorials on the blog.	☐	☐	☐	☐	☐	☐	☐
I would close the browser to avoid sponsored posts/advertorials.	☐	☐	☐	☐	☐	☐	☐
I intentionally ignore any sponsored posts/advertorials on the blog.	☐	☐	☐	☐	☐	☐	☐
I like sponsored posts/advertorials.	☐	☐	☐	☐	☐	☐	☐
I hate sponsored posts.	☐	☐	☐	☐	☐	☐	☐
I would scroll down the blog to avoid sponsored posts/advertorials.	☐	☐	☐	☐	☐	☐	☐
I would prefer that there are no sponsored posts/advertorials on the blog.	☐	☐	☐	☐	☐	☐	☐

YOUR EXPERIENCE USING TECHNOLOGY

Please answer the following questions with respect to your general experience. These questions **DO NOT** relate to the specific blog you identified previously.

14. **How long** have **you** been using the Internet?

- ☐ **Less than 1 year**
- ☐ **1 to 3 year**
- ☐ **4 to 6 years**
- ☐ **7 to 9 years**
- ☐ **10 years and more**

15. How many **hours** do **you spend per week** browsing blogs?

- ☐ **Less than 1 hour per week**
- ☐ **1 to 3 hours**
- ☐ **4 to 10 hours**
- ☐ **11 to 20 hours**
- ☐ **More than 20 hours**

16. How long have you been visiting blogs?

- ☐ **Less than 1 year**
- ☐ **1 to 3 year**
- ☐ **4 to 6 years**
- ☐ **7 to 9 years**
- ☐ **10 years and more**

17. Do you have a blog

- ☐ **Yes**
- ☐ **No**

18. If yes, for how long?

- ☐ **Less than 1 year**
- ☐ **1 to 3 year**
- ☐ **4 to 6 years**
- ☐ **7 to 9 years**
- ☐ **10 years and more**

YOUR EXPERIENCE USING TECHNOLOGY

19. Your thoughts about using technologies in daily life and/or at work:

	Strongly Disagree			*Neither*			*Strongly Agree*
I keep up with the latest technological developments.	☐	☐	☐	☐	☐	☐	☐
If I buy a high-tech good or service, I prefer to have the basic model over one with a lot of extra features.	☐	☐	☐	☐	☐	☐	☐
I find I have fewer problems than other people in making technology work.	☐	☐	☐	☐	☐	☐	☐
Technology always seems to fail at the worst possible time.	☐	☐	☐	☐	☐	☐	☐
Other people come to me for advice on new technologies.	☐	☐	☐	☐	☐	☐	☐
In general, I am among the first in my circle of friends to acquire new technology when it appears.	☐	☐	☐	☐	☐	☐	☐
I enjoy the challenge of figuring out high-tech gadgets.	☐	☐	☐	☐	☐	☐	☐
It seems my friends are learning more about the newest technologies than I am.	☐	☐	☐	☐	☐	☐	☐
I can usually figure out new high-tech goods and services without help from others.	☐	☐	☐	☐	☐	☐	☐
It is embarrassing when I have trouble with a high-tech gadget while other people are watching me.	☐	☐	☐	☐	☐	☐	☐

Your Attitudes, Interests and Opinions

On the following 2 pages, there are statements describing people's behaviour. Please use the rating scale below to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you would wish to be in the future.

20. Please indicate how **accurately** each statement describes you.

	Very Inaccurate			***Neither***			***Very Accurate***
I feel relief rather than satisfaction after completing a task that required a lot of mental effort.	☐	☐	☐	☐	☐	☐	☐
I find satisfaction in deliberating hard and for long hours.	☐	☐	☐	☐	☐	☐	☐
I like tasks that require little thought once I've learned them.	☐	☐	☐	☐	☐	☐	☐
I like to have the responsibility of handling a situation that requires a lot of thinking.	☐	☐	☐	☐	☐	☐	☐
I prefer to think about small, daily projects than long-term ones.	☐	☐	☐	☐	☐	☐	☐
I really enjoy a task that involves coming up with new solutions to problems.	☐	☐	☐	☐	☐	☐	☐
I try to anticipate situations where there is a likely chance I will have to think in depth about something.	☐	☐	☐	☐	☐	☐	☐
I usually end up deliberating about issues even when they do not affect me personally.	☐	☐	☐	☐	☐	☐	☐
I would prefer complex to simple problems	☐	☐	☐	☐	☐	☐	☐
It's enough for me that something gets the job done; I don't care how or why it works.	☐	☐	☐	☐	☐	☐	☐
Learning new ways to think doesn't excite me very much.	☐	☐	☐	☐	☐	☐	☐
The idea of relying on thought appeals to me.	☐	☐	☐	☐	☐	☐	☐
The notion of thinking abstractly is appealing to me.	☐	☐	☐	☐	☐	☐	☐

About You

Please tell us a little bit about yourself:

[Rest assured that any personal information you provide will (i) remain confidential (ii) will ONLY be reported in aggregate (group) form. These questions are necessary for a more meaningful interpretation of our research results.]

Gender:

☐ **Male**
☐ **Female**

Age:

☐ **Younger than 16**
☐ **16 – 24**
☐ **25 – 34**
☐ **35 – 44**
☐ **45 – 54**
☐ **55 – 64**
☐ **65 and above**

Ethnicity:

☐ **White** (British / English / Irish / Scottish / Welsh / Others e.g. Italian, Greek etc.)
☐ **Black or Black British** (Caribbean / African / Other Black background / All Black groups)
☐ **Mixed** (White and Black Caribbean / White and Black African / White and Asian / Other mixed background)
☐ **Asian or Asian British** (Indian / Pakistani / Bangladeshi / Other Asian background / All Asian groups)
☐ **Other Ethnic groups** ________________________________(please specify)
☐ **I prefer not to say**

Highest level of formal education:

☐ Primary School
☐ Secondary School
☐ Further Education (e.g. College)
☐ University First Degree
☐ University First Degree
☐ Master's Degree
☐ Doctorate
☐ Other __________________(please specify)

Employment Status:

- ☐ Self-employed with employees; [Proprietors].
- ☐ Self-employed without employees; [Independent professionals, artisans, work-from-home mums].
- ☐ Employee with managerial status; [Managers].
- ☐ Employee with foreman or supervisory status; [Supervisors].
- ☐ Other employee; [Other workers].
- ☐ Self-employed with employees; [Proprietors].
- ☐ Other __________________(please specify)

Nationality?

Present Country of residence:

<u>END OF SURVEY AND PRIZE DRAW</u>

Thank you for completing this survey.

Your answers are highly valued and will be treated as strictly confidential.

If you would like to have a chance to win the prizes in my 'respondents' draw, please provide me with your name and email [note: this is, of course, strictly voluntary], so that I can notify you should you win.

[If you change your email or address before November 2009, please notify me via email: D.S.Mutum@warwick.ac.uk]

Please provide your name and your email address below:

Name:

Email Address:

If you win the £100 prize, which of the following would you prefer?

- ☐ I will have the cash myself
- ☐ Donate to a charity of my choice

Name of charity?