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Gender and Internet Advertising:

Differences in the Ways

Males and Females Engage with and Perceive Internet Advertising

A Dissertation

Presented for the

Doctor of Philosophy Degree

The University of Tennessee, Knoxville

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December 2005

Abstract

This paper discusses an examination of the differences in the ways males' and females' engage with and perceive Internet advertising. Specifically, commercial Web sites were analyzed to better understand the role of gender within online consumer behavior, its effect on interactivity and advertising effectiveness and the implications for online marketing communications. Gender differences in Internet advertising are first explored by analyzing gender in relation to interactivity. This exploration will be based upon dimensions of consumers' online behavior, referred to as user processes, and consumers' beliefs about the interactive communication environment, or user perceptions, in relation to three types of features, which are human-to-human, human-to-computer and human-to-content (McMillan, 2002). Further, gender differences in advertising effectiveness are examined by analyzing attitudes towards the site, attitudes towards the brand and purchase intention. Past research in exploring gender differences online is limited, especially for corporate Web sites, and research exploring gender and its influence on interactivity is almost non-existent. This study examines gender differences in Internet advertising by conducting both computer observation with screen capturing software and by administering a survey. The users examined are traditional college age students, 18-23, which fall into the category of Generation Y, a group of consumers, which are online in great numbers, have considerable spending power and are classified as "computer savvy" (Pew Internet and American Life Project, 2005).

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CHAPTER I.

INTRODUCTION

The revolutionary nature of the Internet has dramatically impacted the computer and communications' world like nothing before. Almost instantaneously, the Internet with its world wide transmission capability, has become a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for space, time and location (Leiner, 2003). Within only a decade since its explosion in 1994 with the advent of Web browsers, the Internet has "reshaped just about every important realm of modern day life" (Pew Internet and American Life Project (2005, p. 57). The Internet revolution has changed the way individuals work, shop, search and collect information, and how they entertain and educate themselves. The technology has allowed for greater user capabilities, such as two-way communication, control of navigation and creation of content, while the pervasiveness of this medium has created new challenges and opportunities for businesses' competing in today's dynamic environment, such as understanding consumer needs and expectations in online communication and interaction. Its pervasiveness, along with enhanced users' capabilities has contributed to a lack of understanding of the different ways male and female consumers interact with and perceive Internet advertising.

From its inception, it is clear that the Internet has always been highly associated with the term, interactive. The ease of manipulating and customizing content, and the ability for transfer of information instantaneously has placed control in the hands of the user and enabled two-way communication that is not an option with traditional media. Companies can now communicate more effectively with consumers on an individual basis and tailor the message to better fit with the interests and expectations of the consumer due to the interactive nature of this medium (Liu, 2003). However, in order for advertisers to effectively communicate with consumers, it is essential to understand what males and females are doing online, and how they perceive interactive features on a site.

Problem Background and Importance

Clearly, there are differences in what males and females choose to do on the Internet and how they perceive the Web experience; therefore, the challenge is for advertisers and marketers to understand those differences and adapt their online communication efforts. The key attribute of this medium provides marketers with the ability to customize the interactive features to meet the differing needs and expectations of the consumer, which allows for more personalized online communication. Understanding consumer behavior is key to successful marketing communications, but it is evident that companies are not fully exploring online consumer differences in order to better position themselves in the minds of the consumer (Dittmar, Long and Meek, 2004; Palanisamy, 2005).

Further, research indicates that marketers are not taking full advantage of effectively segmenting and analyzing the Web population (Palanisamy, 2005).

The study of gender and Internet advertising is important for several reasons. First, it is essential to expand the knowledge of the role of gender in online consumer behavior because demographically, the Web audience has evolved and become more main stream (Pew Internet and American Life Project, 2005). The Internet has become the "new normal" in the American way of life and the number of individuals who are not online continue to diminish. Due to the growth in the online population, the composition of online users has also changed dramatically. At its inception, "the Internet's user population was dominated by young, white men who had high incomes and plenty of education." Then in 1999 and 2000, the population went main stream and women reached parity and then overtook men online (Pew Internet and American Life Project, 2004, p. 59). In 2004, the percentage of men and women online varied by only one percentage point with 66% of men online compared to 65% of women online (Pew Internet and American Life Project, 2005). This change in demographic composition of online users is closing the gender gap; however, the gap in marketers' understanding of males' and females' behavior and perceptions on the Internet appears to be widening (Dittmar, Long and Meek, 2004).

Second, because the impact of the Internet on every day life is dramatic and constantly increasing with approximately 66% of American adults, 133 million people currently online, understanding what males and females are doing online as well as their perceptions of the interactive experience becomes critical

for marketers due to the pervasiveness of this medium in consumers' lives (The Pew Internet and American Life Project, 2005). On a normal day in 2004, more than 70 million American adults logged onto the Internet daily to use e-mail, get news, conduct searches for information, participate in e-commerce and numerous other online activities. According to The Pew Internet and American Life Project (2004), 88% of Americans say the Internet plays a role in their daily routines. Yet despite the greater numbers of consumers online, and e-commerce sales for 2004 of $69.2 billion, an increase of 23.5% over 2003, marketers are not taking advantage of the Internet's potential to reach consumers (Lear-Olimpi, 2005). This is evident by the fact that in 2004, marketers only spent approximately 2 percent of their advertising budgets on Internet advertising compared to almost 25 percent spent on television. However, analysts have indicated that a trend towards increasing Internet advertising budgets is beginning to occur in that some marketers are planning to decrease spending in traditional advertising channels to fund an increase in online ad spending (Forrester Research, 2005). The capability to reach mass numbers of consumers online, along with the trend in increased online spending, further justifies the need to understand the effect of gender in Internet advertising.

Lastly, it is important to examine gender differences and Internet advertising because this medium has dramatically changed the way advertisers communicate with consumers and the way consumers interact with advertising. "Ultimately, it is the consumer's choice to interact, thus interactivity is a characteristic of the consumer, and not a characteristic of the medium. The

medium simply serves to facilitate the interaction" (Schumann, Artis and Rivera, 2001, p. 45). Interactivity is a dimension of Internet advertising that creates the potential for companies to distinguish themselves from the competition through the creation of more engaging Web sites, while also allowing consumers to have the control and choice of how to interact with Internet advertising. Companies are apparently trying to employ gender segmentation strategies because Web sites tend to be targeted to one or both genders, with separate hyperlink headings for men and women's products. However, companies are not successfully implementing gender strategies within the aspect of online marketing communication, such as designing distinctive Web site features that cater to women's and men's unique needs and expectations (Palanisamy, 2005: Rodgers and Harris, 2003). Further, research has indicated that there are differences in what contributes to males and females' engagement and satisfaction with Internet advertising (Dittmar, Long, and Meek, 2004; Rodgers and Harris, 2003). As more and more women continue to go online, the sheer numbers will force companies to think of women as well as men when designing Web site content and online marketing strategies (Murrow, 2005). Therefore, it is even more critical that advertisers and marketers understand the differences in males and females' behavior and perceptions online in order to tailor the Web site experience to better satisfy their needs.

Purpose of the Study

Gender differences have not been fully explored in the research on Internet advertising (Dittmar, Long and Meek, 2004; Rodgers and Harris, 2003: Jackson et al, 2001). Further if gender is mentioned in an empirical study on Internet advertising, it is normally just as a categorical factor and not the primary focus of the study (Wolin, 2001). Because the Internet audience has become main stream, and has almost reached gender parity, and due to the growing number of consumers online, along with the pervasiveness of the Internet medium in consumers' lives, marketers must fully explore gender differences in relation to how Internet advertising is used and perceived.

The purpose of this study is to explore gender in Internet advertising to better understand the differences in males and females' behavior and perceptions online as well as the differences in advertising effectiveness. The study's outcome can provide benefits to both practitioners and academic researchers. For the practitioner, including advertisers and marketers, this study will serve as a practical guide for companies attempting to customize and personalize Web sites based upon gender segmentation strategies. For the academic researchers, this study will expand upon the limited research on gender and its effects on Internet advertising with the intent of providing a platform for future research in this area.

The primary questions guiding this study are:

1) What are the differences in the ways males and females engage with Internet advertising?

2) What are the differences in males and females' perceptions of Internet advertising?

3) What are the differences in males and females' attitudes towards Internet advertising?

4) Do needs, such as cognitive and affective, differ by gender and purchase intention?

Organization of Study

The dissertation is organized into several chapters, as follows. Chapter I presents background information from the literature on gender and Internet advertising and establishes the importance of analyzing the differences in the ways males and females engage with and perceive Internet advertising. In addition, Chapter I provides the purpose of the study and the main questions to be explored within gender and Internet advertising.

Chapter II discusses the relevant literature and research related to gender and Internet advertising. The topics explored include gender differences in relation to the Internet, Internet advertising and consumer behavior, Internet advertising, interactivity on the Internet and the marketing implications, advertising processing and effectiveness, and consumer analysis. This literature review provides further justification for the present study. Chapter II concludes with an analysis of the theoretical basis for the study.

Chapter III explicates the research methods used to address and test the research questions, while also providing the rationale behind the selection of

methods. The research design and procedures are discussed, along with the sampling technique.

Chapter IV contains a discussion of the analysis of the data and interpretation of the results. Statistical processing software is utilized to analyze the data. Tables and reports detail and summarize the findings.

Chapter V presents the discussion section of the study. This section includes the summary of findings detailed by each research question, and conclusions, which addresses the implications of the research, and concluding remarks. This section connects the literature review with the findings of the present study to provide insight into how this study contributes to the literature on Internet advertising.

Chapter VI details the limitations of the study and the implications for future research. These six chapters represent a piece of work that expands upon the current literature and make significant progress towards understanding gender differences in Internet advertising.

CHAPTER II

LITERATURE REVIEW

This chapter reviews the relevant literature and forms the basis for the research questions and methodology. This section begins with literature pertaining to gender differences in relation to the Internet, Internet advertising and consumer behavior, followed by an exploration of Internet advertising, interactivity on the Internet and the marketing implications, advertising processing and effectiveness, and consumer analysis. The chapter concludes with a discussion of the theoretical basis for the study.

Early Gender Gap in Internet Use

Before exploring gender, it is necessary to define it and to make the distinction between the terms, gender and sex, which have been used interchangeably by researchers (Pryzgoda and Chrisler, 2000). Sex refers to the biological aspects of being male and female, and from birth, is a central classification of one's identity. The term, gender, derived from psychological research, is multifaceted and refers to the behavioral, social and psychological characteristics of males and females (Pryzgoda and Chrisler, 2000). The exploration of gender related differences can be attributed to early research in psychology in which gender was found to shape and influence an individual's experiences (Smiler, 2004). For this study, gender is defined as the behavioral,

psychological, social and cultural meanings associated with the maleness and femaleness imposed and expected by society (Alvesson and Billings, 1997).

It is evident in the early days of the Internet that one gender dominated the medium. During its inception, the Internet was referred to by many as a "technological boy, an electronic pathway to riches of information and entertainment that was developed exclusively by men for men" (Weiser, 2000, p. 168). This is further substantiated by one of the first statistical studies on usability by Georgia Tech (1994) in which findings indicated that males comprised approximately 95% of all Internet users. One explanation for these dramatic gender differences on the Internet could be attributed to the socialization of young females, who have been dissuaded from pursuing math and science in their academic career (Weiser, 2000). This gender bias socialization led to a gender divide in which women had less of a need for computers than males, and males were more confident in their use compared to females, resulting in the male domination of the Internet. Thus, researchers concluded that "technological competence is becoming a gendered attribute", one that is perceived as essential for males to possess so as to define their societal identity, but one that is viewed as unimportant and even as unflattering for females to possess in society (White and Kinnick, 2000. p.392).

In addition, lifestyle factors can also be attributed to the reason women used the Internet less. For example, women have been subjected to the double standard of having a career, but still being responsible for the home, leaving little free time for surfing the Internet. Financially, women earned less than men;

therefore, single working women may have been unable to pay for Internet access (Wolf, 1998). Further women's overall attitudes towards the Internet were less positive which contributed to Internet avoidance. Results from the Graphics, Visualization and Usability Center survey (1994) found that women typically reported greater difficulty finding information on the Internet than men, resulting in frustration; whereas men felt more comfortable and at ease using the Internet. Men also reported using the Internet for more reasons, such as chat groups, newsgroups and research and also indicated having more sophisticated Internet skill (Georgia Tech's Graphics, Visualization, and Usability Center (GVU) Center, 1994). Thus, a stereotypically masculine culture developed around computer use, which marketers initially capitalized upon in their online advertisers efforts, such as in the marketing efforts of computer based games (Morahan-Martin, 1998).

However beginning in 1998, the Internet population was becoming more main stream and women were extensively narrowing the gender divide on the Internet. Also for the first time, women surpassed men as new Internet users. The 1999 GVU survey found that females were using the Internet for education, communication, and obtaining personal information more so than males. Further in 1999 and 2000, the population went main stream and women reached parity and then overtook men online for the first time (Pew Internet and American Life Project, 2004, p. 59).

This online gender shift could be attributed to the accelerated growth of technology, which made the Internet easier to use, and more affordable, allowing

women greater accessibility to the Internet. Further, computers were taking on a new role in society and were increasingly becoming an integral part of the home and work environment (Weiser, 2000). Married non-working women were also gaining access as men purchased home computers and obtained Internet access for work (Wasserman and Richmond-Abbott, 2005). Regarding working women, the narrowing of the online gender gap could also be a result of women's increased responsibility in office administrative activities, such as spreadsheets and word-processing, which has led to increased computer competency and self-efficacy (Wasserman and Richmond-Abbott, 2005). Further, more women were embarking upon science and engineering professions as well as attending medical and law school, resulting in increased technological confidence and capability, which could further explain the online gender shift (Wasserman and Richmond-Abbott, 2005).

However in 2004, males took the lead over women in usage, but the statistics varied by only one percentage point with 66% of men online compared to 65% of women online (Pew Internet and American Life Project, 2005). As previously mentioned, this change in demographics of online users is closing the gender gap; however, the gap in marketers' understanding of males' and females' behavior and perceptions on the Internet appears to be widening (Dittmar, Long and Meek, 2004).

Gender Differences Online

The dramatic increase in the number of users and the increase in broadband technology use has created a population that is diverse with respect its experiences, attitudes and overall usage (The Pew Internet and American Life Project, 2005). As previously stated, researchers have found that males and females use the Internet differently, resulting in differences in online usage behavior and processing of advertising and product information (Schlosser et al, 1999;Weiser 2000). According to The Pew Internet and American Life (2005), men are more likely than women to use the Internet more for information gathering and entertainment; while women are more likely to use the Internet to communicate. This could be due to women's greater need for interpersonal relationships which is one of the reasons why women are more likely than men to view community and socialization as an important reason to go online and foster that relationship building (Phillip and Suri, 2004). Further gender differences can be found in online activities, such as creation of content, in which males are more likely (59%) than females to create Web content, such as Web logging (Pew Internet and American Life Project, 2005).

Prior studies exploring gender and online behavior have also discovered some significant differences in males and females (e.g., Jackson et al, 2001; Phillip and Suri 2004; Schlosser et al, 1999; Weiser, 2000). For example, Weiser (2000) conducted an online survey to analyze what specific Internet applications females prefer and whether those differ from males. The study's findings indicated significant differences between males' and females' usage of the

Internet. Males were found to use the Internet primarily for entertainment reasons, such as listening to audio broadcasts, building Web pages, searching for products, and participating in online games. In contrast, women used the Internet mainly for interpersonal communication and educational needs through features such as e-mail and online chatting. Further, males indicated that they shopped more online compared to females (Weiser, 2000). Interestingly, Weiser attributed the difference in gender usage patterns to Internet experience, namely females were less sophisticated in their use of the Internet which led to the choices of simpler Internet features. This conclusion implies that males use more complex types of features in comparison to women, which warrants further exploration.

A study by Jackson et al (2001) surveying college students found that male and female college students do use the Internet on a equal basis, but how they use it is considerably different. The researchers found that females reported using e-mail more than males, which is consistent with females' need for more interpersonal communication. Males used the Internet more for informational searches and reported greater success in their searching compared to females, which the authors related to their tendency towards information and task orientation. Gender differences based upon cognitive and affective factors were also reported in the study, based on factors such as self-efficacy and feelings about the computer experience. Specifically, females reported more computer anxiety and less computer self-efficacy in comparison to males. Consistent with studies on gender socialization and computers (White and Kinnick, 2000; Wolf, 1998), females reported more computer anxiety than did males, and males

indicated more computer self-efficacy. Females reported greater depression in comparison to males, but males were lonelier than females. The researchers also explored trust and privacy, but found no significant differences between males and females.

In a study by Phillip and Suri (2004) examining promotional e-mails, women were found to evaluate the presence of links to additional sources of information more favorably than men. Further, women also showed a higher preference towards the option of forwarding e-mail than men, which is consistent with prior research on women's need for social connections and to communicate on the Internet.

Gender and Internet Advertising

As previously mentioned, within only a decade since its explosion in 1994, the Internet has reached into and in certain instances "reshaped just about every important realm of modern day life", changing the way individuals work, shop, search and collect information, and how they entertain and educate themselves (Pew Internet and American Life Project (2005, p. 57). Further, the adoption rate of the Internet has "surpassed that of earlier mass communication technologies by several magnitudes, making it an irreversible innovation" (Hannemyr, 2003, p.112). Also, the change in the demographic composition of online users with 66% of men online compared to 65% of women, is closing the gender gap (The Pew Internet and American Life Project, 2005). This rapid expansion of the Internet and change in demographic composition, along with the

technological advancements enhancing users' capabilities has resulted in a lack of understanding of the different ways male and female consumers interact with and perceive Internet advertising.

Because males and females are online in almost equal numbers and due to the availability of greater interactive capabilities, it becomes critical for advertisers to examine the differences in gender within Internet advertising in order to design gender specific Web features. Gender is a "critical factor in developing marketing strategies via advertising messages emphasizing information that is thought to persuade the male or female target audience" (Wolin, 2003, p.111). Gender differences in marketing and advertising have always been of significant interest, particularly due to earlier research indicating that gender differences in ad processing and ad effectiveness do exist (Cantor, 1987; Hirschmann and Thompson, 1997; Knufer, 1998). For example, Hirschmann and Thompson (1997) found significant differences between men and women's interpretations of advertising. Women were found to be more emotionally charged and intertwined personal feelings into their interpretations; whereas men were more detached in their perceptual interpretation. The researchers emphasized the importance of analyzing the effects of advertising in relation to gender differences.

One of the primary goals of marketing is to divide up the marketplace into meaningful and unique segments of consumers to better tailor the product, price, promotion and distribution to meet their needs (Kotler and Armstrong, 1996). Among the segmentation strategies, gender is one that is frequently utilized in

traditional marketing environments because it is easily identifiable, accessible, measurable and responsive to marketing mix elements, and mostly importantly, gender segments are large and profitable (Wolin, 2003). Therefore, analyzing gendered advertising effectiveness differences should be of considerable importance to advertisers, particularly on the Internet due to the statistics indicating the online population has almost reached gender parity. However, it is apparent that the effect of gender in an online marketing environment is limited in scope and needs to be examined (Palanisamy, 2005). Crucial to the success of businesses utilizing the Internet as a strategic marketing tool is understanding the characteristics of the online consumer, such as gender and how those differences affect online consumer behavior (Weiser, 2000). Further, knowing how males and females use Internet advertising and what needs motivate their use would facilitate appropriate and effective online gender segmentation strategies.

Gender Differences and Consumer Behavior

Research on overall consumer behavior has shown that men and women differ in their patterns of consumer behavior (Dittmar, Beattie and Friese, 1995; Hayhoe et al, 2000; Wood, 1998). Women have been shown to enjoy the emotional psychological experience of shopping and spend more time shopping in comparison to men and women are more likely than men to comparison shop (Wood, 1998). Women are also more likely than men to participate in impulse buying. Also, when purchasing on impulse, women tend to buy symbolic and self-expressive goods related to appearance and self- emotional aspects; whereas men

tend to buy impulsively instrumental and leisure items to express their independence and active lifestyle (Dittmar, Beattie and Friese, 1995). Men have the tendency to buy more electronics and entertainment products, whereas women tend to purchase more clothing. Further, women have the tendency to spend more of their disposable income on consumer products in comparison to men (Hayhoe et al, 2000).

In regards to gender representation and e-commerce, the beginning years of the Internet during the 1990s, were characterized as a male dominated medium, with males dramatically outnumbering females online. Logically, men also dominated online shopping because men were the early adopters of the Internet and felt more comfortable and at ease providing information online, and overall had more positive feelings towards shopping online. However, in 2002, with the population of online users becoming more main stream, women for the first time outnumbered men in online holiday shopping, representing 58% of total online shoppers (The Gale Group, 2002). This surge in online female shopping is continuing into 2005 in which women, who initially were trailing men in embracing the Internet, are now increasingly relying on this interactive medium to buy products. This surge in the number of online female shoppers indicates that marketers should consider gender an important factor in Internet advertising strategies. Some innovative marketers, such as Land's End, are beginning to capitalize on this dramatic increase in online female shoppers and realize that to effectively segment the Web site according to gender, Web site features and the overall experience must be customized to meet both males' and females' differing

needs. Land's End is developing new features and services targeted to women, such as a 3-D changing room (Tedeschi, 2005). However, most marketers are still lagging behind in effective online gender segmentation.

In examining the role of gender in e-commerce, significant differences in consumer behavior have also been discovered (Dittmar, Long and Meek, 2004; Hoffman, Kalsbeek and Novak, 1996; Korgaonkar and Wolin, 1999; Kwak, Fox and Zinkhan, 2000; Rodgers and Harris, 2003; Rodgers and Sheldon, 1999). In a study by Hoffman, Kalsbeek and Novak (1996), males were considered the dominant online shopper even though females dominated as shoppers within the traditional brick and mortar establishments and men were more likely than women to search for product information, which is part of the consumer decision making process. Kwak, Fox and Zinkhan (2000) discovered that male users are more focused on transactional uses of the Internet and found that males were more than twice as likely as women to shop online. Further, Rodgers and Sheldon (1999) found that male students reported better overall attitudes toward online shopping than female students. In a study conducted by Korgaonkar and Wolin (1999), the factor of gender was explored as a secondary dimension within the study of Web site usage. Gender correlated significantly and positively with Web purchases within the past year. The findings indicated that males were slightly more inclined to make purchases on the Internet.

Rodgers and Harris (2003) found that women were less satisfied than men with the online shopping experience due to gender differences in perceived emotion. Specifically, the researchers found that women expressed lower

emotional gratification with e-shopping and attributed it to their "inclination toward left-hemisphere processing in which women prefer details and intricacies in a Web site" (p. 326). Traditionally, women have been considered right dominant. Whereas, men were very satisfied with their online experience due to their propensity for right hemisphere processing, void of emotional needs. This is consistent with traditional shopping patterns of women who view shopping as a psychological experience. The implications of this study are that advertisers and marketers need to target males and females differently by tailoring and communicating content within their Web sites based upon their differing gratification needs for using Internet advertising. Dittmar, Long and Meek (2004) found that women are more motivated by emotional and social factors in shopping online; whereas men are more motivated with the functional factors of making a purchase quickly and efficiently.

The research on gender has indicated that males and females differ on a number of consumer behavior dimensions, such as attitudes, perceptions, needs, purchase patterns and activities in relation to Internet advertising and e-commerce. Examining these dimensions may provide the means to understanding the underutilized potential of the Internet, which this study will attempt to explore. Web sites tend to be targeted to one or both genders, but companies are not effectively employing gender segmentation strategies. An awareness of how males and females are using the Internet and what they expect and want in features is essential if businesses are going to communicate effectively online. Just as issues of access have been at the forefront during the initial stages of the

Internet, the issue of use is the next important dimension to be fully researched and explored (Jackson et al, 2001). Weiser's (2000) profound statement in his study is even more relevant today, and provides further justification for this study's exploration of gender and Internet advertising.

> Clearly, the increased presence of women on the Internet has made gender relevant for e-business. Hence, recognizing women's increased Internet presence, investigating specifically what it is they want from the Internet and why they use it, and promptly responding will become a crucial key to success in Internet advertising and e-commerce (p. 170).

Definition and Dimensions of Internet Advertising

Researchers have used the terms Internet advertising, interactive advertising and Web advertising interchangeably, all to refer to advertising on the Internet medium. However, the term interactive advertising extends beyond the Internet and includes all forms of online, wireless and interactive advertising, while Internet advertising and Web advertising are restricted to the medium. According to Wolin (2001) Internet advertising is utilized more broadly across advertising, marketing and communication disciplines compared to Web advertising; therefore, this study has adopted the terminology of Internet advertising.

Because Internet advertising is evolving and changing, a definitive conceptualization within researchers and practitioners does not presently exist Therefore, in order to examine the evolving definition of Internet advertising, it is first necessary to dissect its components. The Internet is "a worldwide system of computer networks providing reliable and redundant connectivity between disparate computers and systems by using common transport and data

protocols"(IAB, 2005). Subsequently, the Internet is a distinctive advertising medium due to its interactive capabilities and limitless content capacity. Advertising from a broad marketing perspective is defined as "any paid form of nonpersonal presentation and promotion of ideas, goods or services by an identified sponsor" (Kotler and Armstrong, 1996, p. 461). More current and specific definitions have evolved, such as advertising is "a paid, mass mediated attempt to persuade" (O'Guinn et al, 2003, p. 8) and advertising is a paid form of mediated communication from an identifiable source, designed to persuade the receiver to take some action now or in the future" (Richards and Curran, 2002, p. 74). Just combining definitions of the Internet and advertising does not fully conceptualize the complex and dynamic phenomenon of Internet advertising; therefore, it is necessary to define it in a multidimensional perspective by exploring its distinctive elements.

Internet advertising is an evolving and multi-faceted form of advertising that is not constricted by space or time and that has the capability to communicate and interact with the consumer in a different capacity that is both involving and engaging (McMillan, 2004; McMillan, Hwang and Lee, 2003). Internet advertising's real potential lies in its interactive properties, such as the ability to use video, animation, sounds, picture and graphics to communicate, while allowing for two-way communication, control, manipulation and responsiveness in the communication process.

Five key differences have been identified that set this type of advertising apart from the others (McMillan, 2004:Wolin, 2001). The first critical component

that differentiates Internet advertising from other types is its interactive capability. Interactivity, which is still an elusive and evolving concept, includes the ability to have two-way communication, control and engagement over content, and responsiveness and timeliness (Liu and Schrum, McMillan and Hwang, 2002, Wu, 2000). This capability gives Internet advertising a considerable advantage in the communication process over the other forms of advertising by allowing for both synchronous and asynchronous two–way communication with the consumer, better responsiveness to consumer needs in a timely manner and more connection with the consumer through better engagement and involvement.

Second, Internet advertising allows for constant and unlimited message delivery without regard for space and time. This distinction frees marketers from the time and space constraints of traditional media where pricing is structured around time and placement of the ad message. With Internet advertising, marketers have the capability to communicate and customize as much content as they want and deliver it constantly because they have the potential to be always connected with the consumer.

Another key difference is the relative lack of intrusiveness in Internet advertising. While traditional media advertising has to intrude on the consumers' use of certain media, such as commercials during the break of a television show, Internet advertising gives that control to the consumer as to whether they want the interact with the ad message or not. This creates a relative lack of intrusiveness in advertising when the consumer is using the Internet medium, which is a considerable advantage. However, with the advent of different types of

sophisticated Internet advertising, such as the interstitial that consumes the computer screen, taking away consumer control, intrusiveness may lead to consumer frustration and irritation. Further, research has discovered that certain types, such as interstitial ads, are more intrusive forms of Internet advertising that can lead to ad avoidance (Edwards, Li and Lee, 2002). This means that advertisers must be selective in their use of certain types of Internet advertising so as to capitalize on the distinguishing characteristic of the lack of intrusiveness.

Another major distinguishing feature is that Internet advertising has the ability to create highly personalized communication. Internet advertising has the capability to build consumer relationships through one-on-one communication and personalization (Hoffman and Novak, 1996, Loun and You, 2003, Macias 2003, McMillan, 2004). High personalization in advertising can increase the effects of Internet advertising, resulting in more favorable attitudes towards the site and increased purchase intention (Chen and Wells, 1999; Chakraborty, Lala and Warren, 2003).

Lastly, Internet advertising changes and also compresses the hierarchy of effects**,** such as in the linear AIDA model of attention, interest, desire and action (Huey, 1999; McMillan, 2004). The advertising process is no longer linear in Internet advertising, but multidimensional as consumers have greater control over messages and do not necessarily process advertising in a step by step manner as this model suggests. For example, consumers can skip the other stages in the model and go directly to action, such as purchasing a product with just a click of the mouse, which shortens the distance from message to action (McMillan, 2004).

The Internet advertising process involves a level of complexity due to dimensions of two-way communication, limitless space and time, user control and engagement and potential content creation context (Huey,1999; Hoffman and Novak, 1996; McMillan 2004), which further justifies the need to examine not only effects of Internet advertising, but also how consumers interact with and perceive Internet advertising.

Growth of Internet Advertising

Internet advertising is expanding and growing at a rapid pace with revenue growth rising to almost 33 percent as 2004 totals $9.6 billion (See Table 2. 1). The revenue results reported for 2004 indicate a very prosperous climate for online advertising, for both direct marketers and brand advertisers attempting to create or foster an image, product or service (IAB, 2005). However despite the growth, statistics still indicate that marketers are not effectively utilizing the Internet medium within advertising campaigns. Analysts at Forrester Research (2005) indicate a large disparity between the amount of time consumers are spending online and the amount of money marketers are allocating in an attempt to reach consumers online. U.S. marketers only allocated 2% of their media budgets to Internet advertising (Donald and Normand, 2005) even though the Internet medium consumption rate in terms of time spent is continuously growing representing almost 20% of total media consumption (Chen et al, 2005; Oser, 2005). This lack of utilization could be attributed to the limited research on online consumer's interactive behavior and how that influences attitudes and

Table 2.1: Ad Formats - Internet ad revenues broken down by ad formats for 2004

	2004 (Total = $9,626M)		2003 (Total = $7,267M)	
Type of Advertising	$	% share of market	$	% share of market
Display Advertising	1,829	19%	1,526	21%
Sponsorship	770	8%	727	10%
Slotting Fees	193	2%	218	3%
Rich Media	963	10%	727	10%
All Display	**$3,754**	**39%**	**$3,197**	**44%**
Search	3,850	40%	2,543	35%
Classifieds	1,733	18%	1,235	17%
E-mail	96	1%	218	3%
Referrals	193	2%	73	1%
TOTALS:	**9,626**	**100%**	**7,267**	**100%**

buying intentions (Chen et al., 2005). According to Greg Stuart, president and CEO of the IAB, "Interactive Advertising has clearly become a main stream medium and one that can no longer be ignored as a critical piece of any marketing mix" (IAB, 2005, p. 1). Further analysts indicate,

> With the considerable increase of broadband in homes, more consumers are spending more time online accessing content and affecting transactions and this increased adoption of broadband will continue to evolve the face of interactive advertising as more compelling media ads and video formats are created. More and more, brand marketers will look to interactive as an integral platform to deliver rich experiences for brand building and enhancement. (IAB, 2005, p.1)

Internet advertising has been in a constant state of evolution since its debut in the early 1990's (Li and Leckenby, 2004). Internet advertising will continue to evolve and expand as technology increases and as the Web experience of both advertisers and consumers increases. Therefore, in order to keep up with the changes in Internet advertising, advertisers in the future will need to be more efficient and personalized in online advertising and selective targeting. Further, advertisers will need to be more sophisticated and savvy in their approach to

Internet advertising so as to attract and gain the attention of the ever-increasing computer savvy consumers without being intrusive. Especially when targeting the younger consumers who have higher expectations because they practically grew up using a computer and the Internet, such as teens and college age students that form Generation Y, advertisers will need to utilize more interactive features to effectively engage and involve the consumer, without being irritating or intrusive. Therefore, the type of Internet advertising employed will be a more critical selection for advertisers (Li and Leckenby, 2004; Stewart, 2004).

Types of Internet Advertising

There are many types of Internet advertising available to advertisers, such as sponsorships, keyword search, banner ads, rich media, interstitial and Corporate Web sites (IAB, 2005). Table 2.2 details and defines the top nine types of Internet advertising in terms of utilization according to the Internet Advertising Bureau (2005), along with two additional types that are also being used, interstitial and corporate Web sites. According to the Internet Advertising Bureau (2005), "search remains the largest revenue format, accounting for 40% of fourth quarter revenues consistent with the 40% reported for the same period in 2003" (p. 9). See Table 2.1 for detailed figures. However, increased attention has been given to corporate Web sites in the research literature (e.g., Jee and Lee, 2002; Macias, 2003; McMillan and Hwang, 2002; McMillan, Hwang and Lee, 2003).

Table 2.2: Internet Advertising Typology

Internet Advertising Type	Description
Banner Ads (Also called display ads)	Text and graphic bars in various sizes that are either static or animated used primarily for direct effects (Lee and Leckenby, 2004).
Sponsorships	"Placement of the sponsor's identity in the form of a corporate logo or brand name in sponsored Web sites" to effect goodwill (Lee and Leckenby, 2004, p. 15).
Interstitials	Pop-up and pop-under ads that appear between two content pages, referred to also as transition ads, intermercial ads, splash pages and flash pages (IAB, 2005).
Slotting Fees	A fee charged to advertisers by media companies to get premium positioning on their site, category exclusivity or some other special treatment (IAB, 2005).
Rich Media	Format that incorporates animation, sound, video, and/or interactivity which can be used either singularly or in combination with the following technologies: streaming media, sound, Flash, and with programming It is delivered via standard Web and wireless applications including e-mail, Web design, banners, buttons, and interstitials (IAB, 2005).
Keyword Search	"Specific word(s) entered into a search engine by the user that result(s) in a list of Web sites related to the key word. The key word can be purchased by advertisers in order to direct the hyperlink opportunity to the advertiser's site or to serve an ad related to the user's search" (IAB, 2005).
Classifieds	Placement of descriptive wording about product, company in an online classified Web site.

Table 2.2: Continued

Internet Advertising Type	Description
E-mails	Text files that are sent from one person to another over the Internet (IAB, 2005).
Referrals	Referring page, or referral link is a place from which the user clicked to get to the current page, or "since a hyperlink connects one URL to another, in clicking on a link the browser moves from the referring URL to the destination URL" (IAB, 2005).
Corporate Web sites	Internet presence sites that contains multiple interactive features and normally also includes an online shopping function.

Corporate Web sites had not been considered as a type of Internet advertising until Singh and Dalal's (1999) study that made a strong case in conceptualizing the Web site as a recognized form and Chen and Well's (1999) research on attitude toward the Web site. Since 1999, there have been a number of other studies that have examined Web sites as a significant form of Internet advertising (Bruner II and Kumar, 2000; Doran et al, 2000 Liu, 2002; Macias, 2003; McMillan, Lee and Hwang, 2003). The distinctive characteristic about Web sites is that they have a greater number of features than any other online ad format (Rodgers and Thorson, 1999), which creates the potential for greater interaction opportunities with the consumer. Therefore, this study will focus on corporate Web sites as the type of Internet advertising to be examined.

McMillan (2004) concluded that "the future of Internet advertising will demand an increase in interactivity" in all types of advertising from brand-building messages, corporate communications, direct-response and electronic transactions" (p. 17). It is clear that Internet advertising will continue to grow and evolve and research must keep up with analysis of its impact on consumers. This research is an important addition in the exploration of the effects of this growing phenomenon.

Interactivity

The Internet has always been associated with the term, interactive. The ease of manipulating content and the ability for transfer of information has placed control in the hands of the user and enabled two-way communication that is not an option with traditional media (Liu, 2003). As previously mentioned, the defining characteristic of Internet advertising is its interactive capability, which allows for user engagement and control over how the communication process occurs. The consumer is pulling the message on the Internet instead of the advertiser pushing the message through to the consumer, thus controlling the advertising experience.

As technological advancements in communication methods have expanded dramatically within the past 10 to 15 years, Internet advertising and interactivity have also evolved and changed. As more consumers are taking advantage of the technology available to them via the Internet, interactivity has developed into the buzzword within the online community, which is frequently used, but little understood. Interactivity is a moving, complex target that is

constantly changing. The concept holds differing meanings based upon a number of varying dimensions in the academic research.

In previous studies, numerous definitions, categorizations and classifications have been presented to address the question of what is interactivity. The concept appears to be changing and evolving with time and technological advancements, but still no clear conceptualization has emerged. McMillan, Kim and Hwang (2004) appropriately refer to "interactivity as a bit of a riddle, like searching for the proverbial needle in the haystack" (p. 1). The perplexing issue in the research is that many researchers have their own idea of interactivity, but ideas are not consistently organized and presented. Further due to the rapid changes in technology leading to advancements in the communication process, researchers are continuously developing and enhancing the elusive definition of interactivity.

Early attempts to define interactivity were basic and technical, focusing on process aspect and responsiveness, such as Rafaeli's (1988) definition referring to "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 transmission" (p. 111). Rafaeli's perspective of interactivity, which is frequently cited in the literature, was the first applied to Internet research in a study conducted by Ogan (1993) examining postings to an electronic bulletin board. Heeter (1989) adopted Rafaeli's (1988) one-dimensional perspective of interactivity and developed a six-dimension construct that included the extent of

responsiveness to the consumer, along with complexity of choice available, amount of effort users must exert, capacity of monitoring information use, ease of adding information, and the potential to facilitate interpersonal communication. Newhagen, along with Rafaeli (1996) took the earlier technical definition and further refined it by concluding that interactivity is the "extent in which communication reflects on itself, feeds on and responds to the past" (p.5). Rafaeli and Sudweeks (1997) further expanded on this definition by making the differentiation that "interactivity is not a characteristic of the medium, but rather it is a process-related construct about communication" (p. 3). However, the researchers concluded that the perspective was too narrow in defining a concept so complex and dynamic (Rafaeli and Sudweeks, 1997).

McMillan and Downes (2000) took Rafaeli's definitions of interactivity and developed a more comprehensive approach. They conceptualized interactivity into six dimensions, three are message based: nature and direction of communication; timing and retrieval, sense of place; and three are user based: control, responsiveness, and perceived goals. This working definition focused on computer mediated communication. In their study, the question of user perceptions was raised as a potential aspect for future research into interactivity (McMillan and Downes, 2000). Also relating to user perceptions, Heeter (2000) proposed a participant-centered definition of interactivity in which the user's experiences, along with the technology define the concept.

McMillan (2002) expanded upon the evolving definition by categorizing interactivity into three broad areas of features, process, and perceptions. Features

were defined as the actual characteristics or functions within the communication environment that identify the Web site as interactive. The category of process referred to actually using the feature, and perceptions are how the user mentally views the level of interactivity. Further, McMillan and Hwang's study (2002) took prior definitions of interactivity from 29 articles and classified them into these three broad categories of features, processes, and perceptions. Their classifications have been adopted and expanded upon to reflect current studies on interactivity in Tables 2.3, 2.4, 2.5 and 2.6.

The research defining interactivity according to features, which are the characteristics of the site that make it engaging, (Ahren et al; Carey, 1989; Ha & James, 1998; Jensen, 1998; Lombard & Snyder-Dutch, 2001; McMillian, 2000; Novak et al, 2000: Straubhaar & LaRose, 1996) emphasized the actual features, such as e-mail options, navigational tools and transaction capabilities, customization of content, and the elements of user control and timeliness. For example, Ha and James (1998) analyzed business Web sites and identified five dimensions of interactivity: playfulness, choice, connectedness, information collections and reciprocal communication.

These five dimensions are furthered detailed in a typology with feature examples (See Table 2.7). While this typology expands the dimensions of interactivity, it is still limited in depth and conceptualization.

Table 2.3: Definitions that Focus on Features

Author(s)	Key Elements/Summarized Definition
Ahren, Stromer-Galley, and Neuman 2000	Multimedia, features for two-way communication: "Media interactivity was defined in terms of features such as audio and video, while human interaction was defined in terms of features such as bulletin boards and chat rooms" (McMillan and Hwang, 2002).
Carey 1989	Channels for human-to- human or human-to-computer: Interactive media are "technologies that provide person-to-person communications and person-to-machine interactions" (p.328).
Ha and James 1998	Key dimensions: Five characteristics of interactivity: playfulness, choice, connectedness, information collection, and reciprocal communication.
Jensen 1998	Features enabling user control: "Measure of a media's potential ability to let the user exert an influence on the content and/or form of the mediated communication" (p.201).
Lombard and Snyder-Dutch 2001	Features enabling user control: "Characteristic of a medium in which the user can influence the form and/or content of the mediated experience."
McMillan 2000	Features that facilitate two-way communication and control: Thirteen features were identified that suggest a Web site is interactive, including e-mail links, registration forms, comment forms, chat rooms, search engines, and games.
Novak, Hoffman, and Yung 2000	Time: Interactive speed based on measures such as waiting time, loading time, and degree to which interacting with the Web is "slow and tedious" (p.29).
Straubhaar and LaRose 1996	Functions that enable customized and timely feedback: "Situations where real-time feedback is collected from the receivers of a communications channel and is used by the source to continually modify the message as it is being delivered to the receiver" (p. 12).

Source: McMillan and Hwang (2002) with modifications and additions

Table 2.4: Definitions that Focus on Processes

Author (s)	Key Elements/Summarized Definition
Bezjian-Avery, Calder, and Iacobucci 1998	User control and dialogue between consumer and manufacturer: "In interactive systems, a customer controls the content of the interaction requesting or giving information"(p.23).
Cho and Leckenby 1999	Interchange between individuals and advertisers: "Degree to which a person actively engages in advertising processing by interacting with advertising messages and advertisers" (p.163)
Guedj et al. 1980	User control: "A style of control" (p.69).
Ha and James 1998	Responsiveness: "Extent to which the communicator and audience respond to, or are willing to facilitate, each other's communication needs" (p.461).
Haeckel 1998	Exchange: "The essence of interactivity is exchange" (p.63).
Heeter 2000	Action and reaction: "An interaction is an episode or series of episodes of physical actions and reactions of an embodied human with the world, including the environment and objects and beings in the world."
Miles 1992	Responsiveness: "An interactive communication involves responsiveness of the displayed message to the message receiver" (p. 150).
Pavlik 1998	Two-way communication: "Interactivity means multidirectional communication between any number of sources and receivers" (p.137).
Rafaeli 1988	Responsiveness: "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" (p.111).
Steuer 1992	Real-time participation: "Interactivity is the extent to which users can participate in modifying the form and content of a mediated environment in real time" (p.84).

Source: McMillan and Hwang (2002) with modifications and additions

Table 2.5: Definitions that Focus on Perceptions

Author(s)	Key Elements/Summarized Definition
Bucy	Experience of interactivity is paramount: "Locating interactivity as a perceptual or even personality variable rather than an exhibited behavior or communication exchange is that it routinizes the concept and makes it a part of everyday media experience" (p. 379).
Day 1998	Consumer involvement: "Interactive marketing is the use of information from the customer rather than about the customer" (p.47).
Kiousis 1999	Interpersonal communication: "Ability of users to perceive the experience to be a simulation of interpersonal communication and an increase their awareness of telepresence" (p.18).
Lee and Shrum, 2002	(3) Perceptual dimensions: "Degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and degree to which such influences are synchronized" (p. 54).
McMillan 2000	Perceptual dimensions: Identified perceptions of two-way communication, level of control, user activity, sense of place, and time sensitivity.
Newhagen, Cordes, and Levy 1996	Interaction perception: "Psychological sense message senders have of their own and the receivers' interactivity" (p. 165).
Schumann, Artis, and Rivera 2001	Consumer choice: "Ultimately it is the consumer's choice to interact, thus interactivity is a characteristic of the consumer, and not a characteristic of the medium.
Song and Lee 2005	Meta- concept: Adopted Wu's (2000) (3) component construct of perceived control, perceived responsiveness, perceived personalization and expanded it to include effects of social and psychological factors. "Perceptions of interactivity consists of multiple dimensions, consider it as a meta-concept that can be indirectly inferred from unidimensional indicators"
Wu 1999	(2) Perceptual dimensions: "Two-component construct: navigation and responsiveness" (p.6)
Wu 2000	(3) Perceptual dimensions: Three component construct consisting of perceived control, perceived responsiveness, perceived personalization

Source: McMillan and Hwang (2002) with modifications and additions

Table 2.6: Definitions that Combine Processes, Features, and/or Perceptions

Author(s)	Key Elements/Summarized Definition
Chen, Griffith and Shen 2005	User centered perspective, along with system centered: Adopts Lee's (2004) perspective in definition. "User centered approach is crucial and complements the system centered approach by reflecting the corresponding levels of objective/functional interactivity in users' minds"
Coyle and Thorson 2001	Mapping, speed, user control: "A Web site described as interactive should have good mapping, quick transitions between a user's input, resulting actions, and a range of ways to manipulate content" (p.67).
Hanssen, Jankowski, and Etienne 1996	Equality, responsiveness, and functional environment: "Aspects of interactivity were clustered around three terms: equality, responsiveness and functional communicative environment" (p.71).
Heeter 1989	Multidimensional facets: Multi-dimensional concept of complexity of choice available, effort users must exert, responsiveness to the user, monitoring information use, ease of adding information, and facilitation of interpersonal communication.
Lee at al, 2004	User centered and system centered: System interactivity is based upon "objective characteristics or formal features of the site and user centered is based upon user response to the Web site".
Lieb 1998	User control, interpersonal communication: (2) primary definitions, that of personalization and that of community building.
Macias (2000, 2003)	Exchange and responsiveness: "Process of communicating, exchanging, obtaining and/or modifying content through a medium which responds to both the communicator's and audience's communication needs and the respondents' perception of the Web site based upon control, responsiveness and personalization" (p. 57).
McMillan 2002	(4) types of interactivity "Based on intersection of user control and direction of communication: monologue, feedback, responsive dialogue, and mutual discourse
Sundar and Kim 2005	Hyperlinked features and (3) perceptual dimensions: Based on number of hierchical hyperlinked layers and Liu and Shrum's (2002) perceptual dimensions of two-way communication, synchronocity, and active control.

Table: 2.6: Continued

Author(s)	Key Elements/Summarized Definition
Wu 2005	Actual and perceptual: Actual interactivity is defined as "the features of the medium or capabilities of creating interactive content or messages". Perceived interactivity is defined as a "psychological state experienced by a site visitor during the interaction process" within three dimensions: "perceived control, responsiveness and personalization"
Zack 1993	Key factors from the literature: The simultaneous and continuous exchange of information; the use of multiple nonverbal cues; the potentially spontaneous, unpredictable, and emergent progression of remarks; the ability to interrupt or preempt; mutuality; patterns of turn-taking; and the use of adjacency pairs. Exchange, non-verbal cues, spontaneity, unpredictability, progression of remarks, ability to interrupt, mutuality turn-taking, adjacency

Source: McMillan and Hwang (2002) with modifications and additions

Table 2.7: Five Dimensions of Interactivity (Ha and James, 1998)

Dimension	**Examples**
Playfulness	Games, curiosity arousal devices, such as Q & A sessions
Choice	Presence of choice of background color, graphics
Connectedness	Hypertext links, video and audio clips, which provide information connecting the user with the company and others
Information Collection	Monitoring mechanisms such as visitor registration and cookies
Reciprocal Communication	The presence of e-mail, chat rooms, phone numbers and comment forms

Source: Ha and James, 1998 and Macias, 2000

Literature defining interactivity as a process (Benjian et al, 1998; Cho & Leckenby, 1999: Guedj at al, 1980; Ha & James, 1998; Haeckel, 1998; Heeter, 2000; Macias, 2003; Miles, 1992; Pavlik, 1998; Rafaeli, 1998; Steuer, 1992) emphasized aspects of user control, responsiveness, exchange, two-way communication, and real-time participation. For example, Steuer (1992) emphasized the user engaging in modifications of content, while Pavlik (1998) focused on two-way communication. Cho and Leckenby (1999) defined interactivity more broadly as "the degree to which a person actively engages in the advertising process by interacting with advertising messages and advertisers" (p. 163). In their study on effectiveness of banner ads, the researchers used an indirect method of a self-reported measure of intention to interact, rather than direct measurement of user interactions with advertising content (Tremayne, 2005). The self-reported measure of user intention is limited in that it indirectly measures consumer behavior by relying on the users to accurately report what they intend to do online, rather than directly measuring online behavior by tracking consumers' actual interaction with Web site features. The present study will overcome this limitation in analyzing processes by utilizing screen capture software that will record user activity.

Lastly interactivity has been defined in research based upon user perceptions or how the individual views the aspect of interactivity of a site (Day, 1998; Jee and Lee, 2002; Kiousis, 1999; McMillan, 2000; McMillan and Hwang, 2002; Newhagen, Cordes, & Levy, 1996; Schumann, Artis, & Rivera, 2001; Wu,

1999; Wu, 2000). Schumann, Artis and Rivera (2001) broadly conceptualized interactivity as a characteristic of the consumer, not the medium, emphasizing the consumer's choice to interact. More specific conceptualizations of dimensions of perceived interactivity are found in McMillan and Hwang's (2002) study identifying direction of communication, user control, and time, as important elements of perceived interactivity. In a study by Wu (1999), perceived interactivity was defined as a "two-component construct consisting of navigation and responsiveness" (p.6). Wu (2000) furthered the construct of perceived interactivity developing a scale based upon three dimensions of perceived control, perceived responsiveness and perceived personalization (See Table 2.8).

Perceived control is defined as one's power over the communication environment, such as how the user chooses to engage with the Web site. Perceived responsiveness addresses the aspects of efficiency, speed and real time in the computer mediated environment. Lastly, perceived personalization analyzes the one-to-one dimension within online communication, such a how users feel the Web site is addressing their needs through customization capabilities (Wu, 2000). Researchers have adopted Wu's (2000) scale with slight modifications in studies exploring perceived interactivity (Jee and Lee, 2002, Macias, 2000; Sohn and Lee, 2005). Because this scale has been applied and tested in previous studies on interactivity, this study will adopt Wu's (2000) measurement in operationalizing perceived interactivity.

Table 2.8: Wu's (2000) Scale of Perceived Interactivity

Perceived Control	1. I was in control of my navigation through this Web site. 2. I had some control over the content of this Web site that I wanted to see. 3. I was in total control over the pace of my visit to this Web site.
Perceived Responsiveness	4. I could communicate with the company directly for further questions about the company or its products if I wanted to. 5. The site had the ability to respond to my specific questions quickly and efficiently. 6. I could communicate in real time with other customers who shared my interest in this product category.
Perceived Personalization	7. I just had a personal conversation with a sociable, knowledgeable and warm representative from the company. 8. The Web site was like talking back to me while I clicked through the Web site. 9. The information in the Web site was personally interesting and relevant to me.

Note: The 5-point Likert scale ranged from Strongly Agree to Strongly Disagree. Source: Wu (2000)

Definitions in the research have focused on only one-dimensional aspects of interactivity, which does not sufficiently define and comprehend the complexity of this dynamic concept in a multidimensional conceptualization. Some of the earlier researchers have attempted to combine some of the three elements of features, processes and perceptions (Coyle and Thorson, 2001; Hansen, Jankowski and Ettienne, 1996; Heeter, 1989; Lieb, 1998; Macias, 2000,

Macias 2003; McMillan. 2002; Zack, 1993). For example, Macias (2000) combined Ha and James's (1998) process definition and Wu's (2000) perceptual definition in conceptualizing interactivity as "the process of communicating, exchanging, obtaining and/or modifying content through a medium which responds to both the communicator and audiences' communication needs and the respondents' perception of the Web site based upon control, responsiveness and personalization" (p. 57).

Coyle and Thorson (2001) explored interactivity and vividness in commercial Web sites by combining definitions from Ha and James' (1998) feature based definition and Streuer's (1992) process related definition. The researchers conceptualized interactivity as a function of three things:

> (1) the speed with which content can be manipulated; (2) the range of ways in which content can be manipulated; and (3) mapping, or how similar the controls and manipulation in the mediated environment are to controls and manipulation in a real environment (p. 67).

Further, some of the more current researchers are exploring aspects of interactivity based upon two dimensions of features and perceptions (e.g., Chen, Griffith and Shen, 2005; Lee et al, 2004; Song and Lee, 2005: Sundar and Kim, 2005; Wu, 2005); but the aspect of user processes is still missing from this conceptualization. For example Lee et al (2004) focused on user centered (perceptions) along with system centered (features) by exploring key characteristics of the computer manufacturer Web sites through a content analysis and then analyzed perceptions through Web based interviews.

It is evident that a more complex and multidimensional discussion of interactivity is emerging, but a universally accepted definition of interactivity has

not been adopted. However, McMillan (2002) further expanded these three broad dimensions to develop a multifaceted definition of interactivity based upon features, processes, and perceptions and then categorized into three unique types of interactivity: human-to-human, human-to-computer and human-to-content. Human-to-human interaction involves two-way communication between users and other users and between users and the company; human-to-computer is interaction with the computer through navigational tools, transactions, downloading and customization features; and human-to-content is interaction with the computer through the addition of content to the site, such as Web logging. See Table 2.9 for representative examples of each dimension and type and Table 2.10 for further feature examples.

This multifaceted definition is definite progress towards a better conceptualization of interactivity; however, past research has not fully applied this definition, nor have researchers analyzed all three dimensions and types

Table 2.9: McMillan's (2002) Multidimensional Definition of Interactivity

	Human-to-Human	Human-to-Computer	Human-to-Content
Features	Instant messaging	Navigational tools such as menus	Tools that facilitate personalized content
Processes	Participating in an IM chat	Navigating a Web site	Creating a personalized home page
Perceptions	Believing that IM facilitates communication	Finding a Web site easy to control and engaging	Believing that customized content is interactive

Source: McMillan (2002)

Table 2.10: Types of Features and Examples

Type of Feature	Examples
Human-to-Human: Features that allow two way communication between organizations and individuals and other users	E-mail links, such as contact us and send an e card, online chats, instant messaging
Human-to-Computer: Features that allow for navigational control, customization and manipulation of content and transaction capabilities	Hyperlinks, search functions, e-commerce functions, downloading videos, listening to music, playing games, manipulating products, such as creating a product through customizing of colors and features, registering
Human-to-Content: Features that allow for addition of content to the Web site to be viewed by others	Web logging, Web debating, online discussion board, posting photos, Wish lists of products

together to create a theoretical framework for understanding and measuring interactivity (e.g., Macias 2003; Tremayne, 2005). Further, the academic research is lacking on exploration of actual online behavior, user processes, and what types are utilized more frequently.

It is evident that interactivity as a characteristic of the Internet is not well understood or defined. However, it is widely used by researchers, practitioners and consumers in discussing Web sites. It is a dynamic concept that is constantly being redefined as marketers continue to determine how to effectively utilize the Internet for communication efforts. This study will attempt to address the need for a better conceptualization of interactivity through the adoption of McMillan's (2002) multidimensional conceptualization and through the exploration of males and females' online behavior (processes) based upon a direct computer observation method to capture actual user activity, which will overcome the

limitation within the research of analysis of only reported user activity. Further, this study will explore interactivity and the factor of gender, an important user dimension that has been overlooked within the research.

Marketing Implications of Interactivity

As stated previously, technology has enabled two-way communication that is not an option with traditional media; therefore, the advantages of this medium as a strategic communication tool are numerous. First, the corporate Web site can provide a substantial opportunity for brand building and relationship marketing. The Web site can provide the linkage between consumer interaction and the brand to a much greater degree than traditional advertising media (Dahlen, Rasch, and Rosengren, 2003). The Internet dictates "that advertisers adjust to a new medium that is not bound by either space or time and that has the capability to involve and engage the consumer" (McMillan, Hwang and Lee, 2003, p. 400). According to Arnott and Bridewater (2002) research has indicated that "marketers are making limited use of the interactive potential of the Internet" (p. 86).

In addition, research has indicated that expressive product Web sites provide tremendous opportunities for companies and their advertising efforts because "consumers want to interact with the brand and enjoy the feeling of it"(Dahlen, Rasch and Rosengren, 2003, p. 32). The site can serve as a strategic communication tool for creating and sustaining a relationship and a positive feeling towards the brand. And the researchers conclude that there is a positive

correlation between brand attitude and the time spent on the Web site. This indicates that companies should recognize the importance of having interactive elements on the site offering a variety of interaction opportunities to engage and involve the user (Dahlen, Rasch and Rosengren, 2003).

Secondly, the economic implications are considerable. Analysts have predicted that only those companies that adopt a strong lifestyle branding strategy will survive in the competitive retail marketplace. Further, the online retail industry represents an untapped potential, accounting for only 4.6% of the retail business in 2004; however, projected sales in 2005 are expected to reach $109.6 billion, a 23% increase over 2004 figures (Yerak, 2005).

Lastly, it is important to recognize the implications of interactivity in terms of reaching and connecting with one's target audience, both males and females. For the retailers in this study, the target audience is Generation Y male and female college age consumers. Generation Y represents 25% of the population and this segment has considerable buying power. They are spending a considerable amount of time online and can be categorized as savvy, computer users whose interactive activities include downloading, creating content and chatting online (McMillan, 2004). The expectations for interactivity within this consumer group are very high in terms of interactive elements that will engage, entertain or speed up the process, but also allow for the user to be in control. This indicates how important it is for marketers to understand how these consumer prefer to interact and how gender influences their online consumer behavior in order to reach this savvy, young consumer.

Internet Advertising Processing and Effectiveness

Marketers have differentiated the advertising process within Internet advertising because the Internet can be characterized as both a pull and a push medium. The interactive capabilities of the Internet giving control to the individual distinguishes it primarily as a "pull" medium in that consumers are also pulling the advertising message instead of advertisers only pushing the message through to the consumer (Kumar and Shah, 2004). Hoffman and Novak (1996) developed a model of consumer behavior in a computer-mediated environment (CME) and compared it to the traditional model of mass communication (See Figures 2.1 and 2.2). The traditional model of one-to-many mass communication (Figure 2.1) depicts the flow of information within the medium in only direction, from the advertiser to consumers. In contrast, the CME "many-to-many" communication model (Figure 2.2) expands upon the traditional model by showing two-way interaction between the advertiser and consumers. Consumers

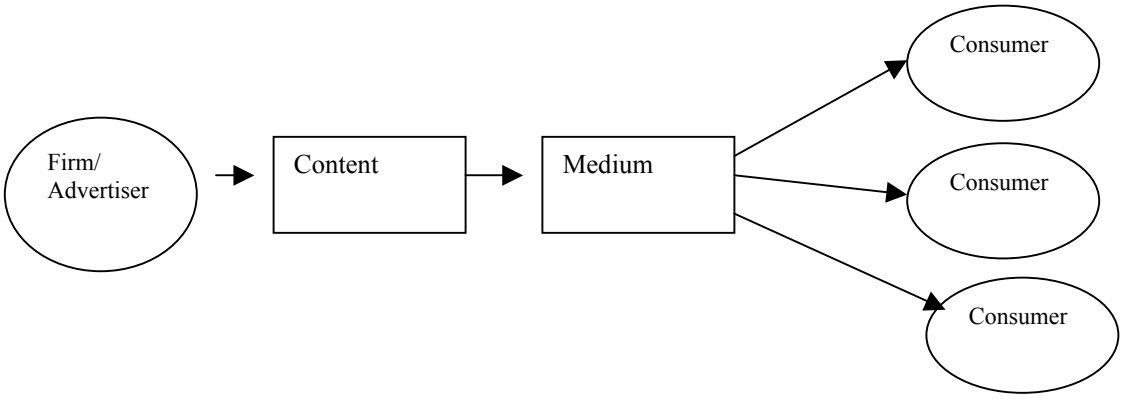


Figure 2.1: Traditional Model of One-to-Many Mass Communication (Hoffman and Novak, 1996)

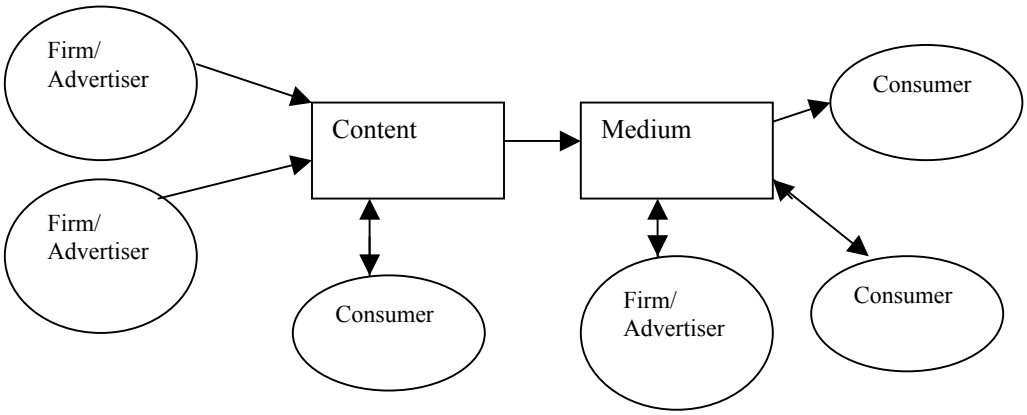


Figure 2.2: New Model of Communication for Hypermediated CME (Hoffman and Novak, 1996)

in this hypertext environment are not passive as they are assumed to be in traditional advertising models, rather consumers are active participants in managing the content with which they interact. The model shows the firm/advertiser providing content to the medium (e.g., company Web sites), consumers can also provide content to the medium (e.g., Web logging), and both firms and consumers can interact with the medium, such as through navigation of a Web site (Hoffman and Novak, 1996). This active nature of the consumer causes traditional models to be ineffective in analyzing effectiveness of Internet advertising.

The study of consumer attitudes is central in understanding advertising effectiveness through various media. Previous research has shown that attitude toward the ad (Aad) is a noteworthy indicator of advertising effectiveness (e.g., Mackenzie, Lutz and Belch, 1986; Bruner and Kumar, 2000). Attitude toward

towards the ad is defined as a "predisposition to respond in a favorable or unfavorable manner to a particular stimulus during a particular exposure occasion" (Mackenzie, Lutz and Belch, 1986, p. 130). Based upon the attitude towards the ad measure, Chen and Wells (1999) developed a seminal scale to assess Web users' attitude towards the Web site (Ast). Research exploring advertising effectiveness on Web sites has primarily focused on attitude toward the site (e.g., Chen and Wells, 1999; McMillan, Hwang and Lee, 2003;Toncar and Munch, 2001) and attitude towards the brand (e.g., Bruner and Kumar, 2000; Macias, 2000). Further, researchers, such as Bruner and Kumar (2000) have discovered that attitude towards the site and brand can be determinants of purchase intention.

Therefore, this study will adopt three measures when analyzing gender differences and its impact on advertising effectiveness: attitude towards the site, defined as the users' "predispositions to respond favorably or unfavorably to Web content" (Chen and Wells, 1999, p. 29); attitude towards the brand, defined as the users' overall evaluation of the brand (Macias, 2000); and purchase intention, which is the users' likelihood to purchase the brand if they were planning to buy that particular type of product (Phillips, 1996).

Theories of Advertising Processing

Consumer attitudes play a key role in persuasion through advertisements. A dual process persuasion model, The Elaboration Likelihood Model, predicts that ad exposure will result in individuals following either a central or peripheral

route to persuasion depending on ability and motivation. Persuasion can occur along the central route, characterized by high involvement and relevant message thoughts, or peripherally, when involvement is low and thoughts lack message relevance (Petty, Cacioppi and Schumann, 1983). The underlying assumption is the central route produces more enduring judgments that are based on extensive and critical elaboration of message claims, or cognitive responses; whereas the peripheral route results in simple and intuitive inferences that emerge from exposure to readily processed cues and involve little elaboration (Meyers-Levy and Maheswaran, 1991). Regarding gender and ad processing, females have been shown to exert more effortful elaboration of message content in media, whereas males tend to "heuristically" process advertising information by focusing on cues. Further females have been found to spend more time on a Web site in comparison to males, indicating more extensive ad processing (Meyers-Levy and Maheswaran, 1991). This model focuses on cognition in the advertising process, but is lacking in the emotional aspect of advertising.

Most advertising process models are linear and assume that individuals exposed to advertising messages move sequentially through hierarchical steps in adoption of a desired behavior or in the purchase process. These models, such as AIDA, Attention, Interest, Desire and Action; or DAGMAR, Awareness, Comprehension, Conviction and Action, or the Think-Feel-Do, Awareness, Knowledge, Liking, Preference, Conviction and Purchase, do not take into account the changing nature of the consumer within Internet advertising. Traditional models are based upon the premise that "advertising is something

done to consumers rather than something consumers interact with" (Huey, 1999. p.44).

The traditional hierarchy of effects model, AIDA, has been furthered classified into three broader categories of "Cognition", "Affection", and "Conation" (CAB) (Li and Leckenby, 2004). Cognition refers to knowing and it concerns an individual's knowledge and how that is obtained, which contains the attention and interest aspect of the AIDA model. Affection refers to both emotional and attitudinal of meaning, which contains the desire aspect. Conation refers to behavior or the observable acts of the individual, which is the action part of the AIDA model (Li and Leckenby, 2004). The traditional perspective of this model according to Lavidge and Steiner (1961) was a linear step by step progression from cognition to affection to behavior (See Figure 2.3).

However, Robertson (1971), revised this model based upon three assumptions: (1) individual may not be rational in behavior and therefore may not process or carefully evaluate all the available information; (2) there is not a linear,

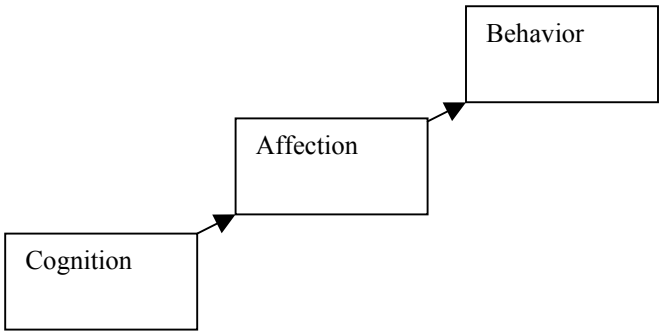


Figure 2.3: Traditional CAB Hierarchy of Effects Model (Lavidge and Steiner, 1961)

nor a specified sequence of stages in which the process occurs within the individual; (3) the model is not one-dimensional, but multidimensional and must allow for feedback loops in the process (Li and Leckenby, 2004). See Figure 2.4 for revised model.

Advertising research has indicated that males and females differ based upon cognitive and affective needs (Meyers-Levy and Maheswaran, 1991; Myers-Levy and Sternthal, 1991;Brunel and Nelson, 2003; Phillip and Suri, 2004; Raman, Chattapadhyay, and Hoyer, 1995; Weiser, 2000).

Need for cognition has been linked to males, while need for emotion has been associated with females (Raman, Chattapadhyay, and Hoyer, 1995); however, these needs have not been fully explored in relation to gender and Internet advertising. Need for cognition (NFC) resulted from research conducted on the Elaboration Likelihood Model, as a variable exploring what motivation and thinking (Macias, 2000).

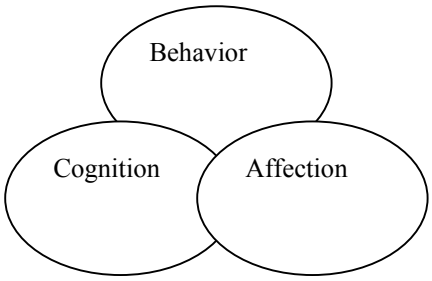


Figure 2.4: Revised CAB Model (Robertson, 1971)

Need for cognition (NFC) is conceptualized as an "individual's tendency to engage in and enjoy effortful cognitive endeavors" (Cacioppo and Petty, 1983, p. 306). Cognition includes elements of awareness and judgment and consumers have different levels of need for cognition (NFC). NFC corresponds to an individual's use of the Internet for information and can have an effect on interactivity (Jee and Lee, 2002). The Internet requires a certain amount of cognitive effort, awareness and judgment, and research has shown that individuals with a higher need for cognition have greater enjoyment of complicated tasks (Haugtvedt, Petty and Cacioppo, 1992).

Meyers-Levy and Maheswaran (1991) in their study on gender and cognition in advertising have discovered that women responded to nonverbal stimuli by evoking more associative, imagery-laced interpretations and more elaborate descriptions than males did (e.g., Myers-Levy and Sternthal, 1991;). Further males and females were found to differ in how deeply they process information in that females were shown to exhibit greater sensitivity and ask more questions leading to a more in-depth processing of information (Meyers-Levy and Maheswaran, 1991; Myers-Levy and Sternthal, 1991). The authors recommend further research to explore how various attention-getting properties of message content or structure can affect males and females' responses. Women have been found to be more dependent on the left hemisphere of the brain, which in regard to information processing indicates better adaptability in performing verbal functions, differentiating configured elements and performing detailed analysis. In contrast, men are more dependent on the right hemisphere, which indicated a

propensity for comprehending pictures and other nonverbal material and for executing visual spatial activities (Myers-Levy, 1994).

In contrast, need for emotion (NFE), also referred to as affect or feelings, is defined as "the tendency or propensity for individuals to seek out emotional situations, enjoy emotional stimuli and exhibit a preference to use emotion in interacting with the world" (Raman, Chattopadhyay and Hoyer, 1995, p. 537). Need for emotion is a separate and distinct factor from need for cognition and represents affect, which can influence consumers' interactions, and could result in more time spent engaging with features and higher opinions of that site (Hoffman and Novak, 1996; Coyle and Thorson, 2001). Hoffman and Novak (1996) concluded that positive subjective experiences are a critical indicator of how involved individuals will be online based upon emotions felt during the interaction process.

Individuals can differ in their tendencies to process affective or emotional stimuli. Research has shown that women have been found to be more emotionally oriented compared to men (Booth-Butterfield and Booth-Butterfield, 1990; Dittmar, Long and Meek, 2004; Raman, Chattopadhyay and Hoyer, 1995). In a study by Raman, Chattopadhyay and Hoyer (1995) regarding consumer behavior and emotion, females were found to have significantly higher mean scores on the need for emotion scale, with female means of 46.62 compared to male means of 43.83. The researchers conclude that this scale should help to explain stable patterns of consumer behavior (Raman, Chattopadhyay and Hoyer, 1995). Dittmar, Long and Meek (2004) in a qualitative study on offline and online

consumer buying motivations, the researchers discovered that females were much higher in their emotional involvement with the overall shopping experience, referring to shopping as a "ritual, a buzz, a thrill or a form of escapism" (p. 433). Further, women expressed the experiential need to see, feel and try the products before buying and expressed concern that the Internet shopping experience was lacking in the emotional and experiential dimensions. Rodgers and Harris (2003) in exploring gender and e-commerce found that women were lower in emotional gratification with online shopping compared to men. The researchers attribute this result to the need for women to emotionally experience the product through more intricate details and dimensions not available on the Web site.

The implications from the research is that advertisers and marketers must not just consider thoughts and perceptions, but also but also emotions as a factor in influencing consumer behavior (Rodgers and Harris, 2003). Marketers need to target males and females differently by communicating content in differing ways so as to customize and tailor the Web experience to better meet the needs of the male and female consumer.

This study will adopt Robertsons' (1971) revised CAB model depicted in Figure 4 and his three assumptions previously discussed: (1) individual may not be rational; (2) process is not linear; (3) model is multidimensional, with slight modifications. The first assumption can be adopted and modified to relate to Internet advertising and the differences in males and females. First, the premise that individuals may not always be rational in behavior, but could be emotional instead correlates with the research on gender and the Internet advertising process.

Research has shown that males and females are different in the ways they interact with content on the Internet and what needs motivate them to behave in that particular way (e.g., Phillips and Suri, 2004; Rodgers and Harris, 2004; Weiser, 2000). Based upon the prior discussion on gender differences and needs, this study proposes that affective and cognitive needs differ in males and females and this difference will have an impact on behavior, such as purchase intention. The second and third assumptions are appropriate for this study in that the model is nonlinear and multidimensional.

Consumer Analysis

The consumer group to be researched can be classified as Generation Y, a group born between 1977 and 1994, and according to the U.S. Census Bureau, representing about 25% of the U.S. population or 71 million (Yogessh, 2004). Generation Y encompasses both the college market and the teen market. According to Pew Internet and American Life (2005), 77% of Americans 18-29 go online, representing the largest group, which includes college age students, and further justifies utilization of this online consumer group.

College students can be classified as a highly wired group. College students represent the heaviest users and consider the Internet to be an integral part of their lives (The Pew Internet and American Life (2005). They are considered PC-oriented and Internet dependent, as they use the Internet for both their academic and social life. The Internet has become so pervasive in their lives that it is like an extension of themselves (Hoffman, Novak and Venkatesh, 2004).

The pervasiveness of the Internet indicates a tremendous strategic opportunity for marketers to capitalize on utilizing this medium as a strategic tool to reach this large online shopping population.

According to the Gale Group (2004), the college market is a very lucrative and desirable consumer segment comprising 15.6 million who spend more than $200 billion annually; however, these young people still remain elusive and finicky in their buying. Today's college students are more affluent and are avid consumers who have a taste for the good life and the ability to afford it due to their parents ("Gale Group", 2004). Eighty percent of college freshmen are not loyal to the brands purchased in high school, which represents a tremendous opportunity to build and create brand loyalty. College students also possess the drive and the purchasing power to try innovative products, which classifies them as early adopters and innovators. In addition, more than 95% of the college market use the Internet frequently and projections are that this market will spend approximately $7.4 billion annually online by 2006, which is more than double the $3.4 billion spent in 2003" ("Gale Group", 2004).

This generation has extraordinary access to the Internet with statistics indicating that more than 95% of the college market uses the Internet regularly compared with 59% of the overall U.S. These college students have a considerably high level of comfort and capability with the Internet. According to Internet and Pew, those who are 18-29 have been among the most wired demographic groups from the onset of Internet growth. As previously mentioned, due to the large disparity between the amount of time consumers are spending

online and marketers' Internet advertising expenditures, analysts are predicting that brick and mortar retailers will need to spend more time and money on online efforts in order to reach online consumers (Forrester Research, 2005). And by 2010, online sales are projected to reach $316 billion with e-commerce predicted to total 12% of retail revenues, according to a recent report by Forrester research (in Driscoll, 2004). In 1994 when the Internet exploded due to the advent of Web browsers, college age students were very young, thus representing the first generation to have been raised on the Internet.

Thus having grown up with the technology, college students are always connected in that they never turn the computer off (Fiely, 2005). Further, college students are more likely than the general population to use a wide variety of interactive features on the Internet, such as checking e-mail, instant messaging, downloading music files and Web logging (Fiely, 2005; McMillan, 2004; The Pew Internet and American Life, 2005).

The Pew Internet and American Life Project (2002) conducted a survey of college age students and the Internet and discovered regarding Internet features, e-mail was used the most, representing 62% followed by instant messaging, representing 29%. Further, 42% of college students used the Internet most often to communicate socially. See Table 2.11 for detailed percentages.

Because college students grew up utilizing the Internet and are labeled as computer savvy consumers, there is the expectation for more sophisticated and customized interactive elements within advertising. Due to this expectation, advertising must understand college students' needs in relation to Internet

Table 2.11: Snapshot of Internet use among College students

Q: For what do you use the Internet most often?	Percentage
Communicate socially	42%
Engage in class work	38%
Be entertained	10%
Communicate professionally	7%
Not sure/don't know	2%
Q: With whom do you communicate most while using the Internet?	Percentage
Friends	72%
Family	10%
Professors	7%
Romantic partners	6%
Work colleagues	5%
What Internet communication tools do you use most?	Percentage
E-mail	62%
Instant messaging	29%
Web boards	5%
Chat rooms	2%
News groups	1%

Source: "The Internet Goes to College**,**" Pew Internet & American Life Project survey, 2002

advertising and become more sophisticated and interactive to gain and hold the attention of this lucrative target audience (Fiely, 2005; “The Gale Group”, 2004)

Theoretical Background: Uses and Gratifications

Due to the revolutionary nature and expansion of the Internet and its pervasiveness within society, and due to technological advancements and increasing experience with the Internet, consumers, particularly Generation Y, have become more sophisticated in their use of advertising, which has dramatically increased the complexity of the relationship between advertisers and their audiences. Therefore, it is even more critical that research should be focused

on what consumers do with advertising and how they perceive it. While it is widely recognized that the Internet as a marketing tool and a medium offers marketers tremendous advantages and great potential over traditional media, what is limited is information regarding perceptions and online consumer behavior, especially with regard to gender (Luo, 2002, Rodger and Harris, 2003). Because this study is exploring the Internet medium in examining the ways men and women interact with and perceive Internet advertising and its effects, the theory most relevant and applicable is uses and gratifications (U& G).

Uses and gratifications theory is a psychological communication perspective that focuses on individual use and choice by examining why and how individuals utilize the media and the satisfactions obtained from the media usage (Baran and Davis, 2003: Katz, Gurevitch and Haas, 1973). Within this theoretical perspective, the emphasis is on the ways individuals' interact with media. This theory is based upon four basic assumptions: (1) the audience is active in their media use and goal oriented (2) users are cognizant of their needs and chose media to satisfy those needs (3) media compete with other sources of need satisfaction and (4) gratifications sought from media, such as diversion, entertainment and information will vary based upon the individual audience member (Katz, Blumer and Gurevitch, 1974).

The first tenet states that online consumers, which represent the audience members, are recognized as active and purposive participants in the communication process and use media to both satisfy needs and receive gratification (Wolburg and Pokrywxzynski, 2001). The underlying theme from

this assumption is that uses and gratifications emphasize the initiative and activity of the media user, which directly correlates with one of the characteristics of the Internet, user control. Due to its interactive nature, the Internet allows the user control and choice over his/her online behavior and thus provides justification as to why this theory is a good fit when examining Internet advertising. As previously mentioned, control is a key dimension of perceived interactivity. Thus it is precisely the interactive component of the Internet that warrants the adoption of uses and gratifications in order to improve understanding of online consumer behavior.

The second assumption emphasizes that the audience member is the initiator of linking need gratification with media choice. This relates to the concept of motivation within the active audience member. Within this theory, motivation is conceptualized as that which gives impetus to action or a basis of common ground between needs, such as cognition and emotion (Reeve, 1997; Beaudoin and Thorson, 2004) The audience member is motivated by needs to actively seek out certain gratifications from media choices.

The third assumption is that media and audiences do not operate in a vacuum, but are impacted by other influences and factors, both intrinsically and extrinsically. Audience members have choices as to how they will satisfy their needs. The last assumption is based upon the recognition that audience members are unique and will differ on needs sought and gratifications obtained from their media choice. Individual audience characteristics, such as demographic factors of

gender, could have an impact on audience needs and gratifications (Korgaonkar and Wolin, 1999).

This theory provides several advantages, which justifies its applicability for the present study. The first advantage of this theory in exploring consumer behavior and Internet advertising is that it places emphasis on the individual in the communication process as an active participant, rather than the communicator and the message. This is relevant to the role of the consumer within Internet advertising, where the consumer is in control and pulls the message rather than the advertiser pushing the message. A second advantage is this theory focuses on recognizing and respecting the ability and intellect of the media consumer as an active participant, which is critical because within Internet advertising, the consumer is in control of the communication process and chooses how to use and interact with the advertising message. Within Internet advertising, the consumer has a plethora of choices as to which features satisfies his/her needs and how to interact with those features. Lastly, an advantage of this theory is that it emphasizes the differences and uniqueness of the individual audience member, which is consistent with the goals of this study in exploring the differences within online consumer behavior and perceptions based upon gender.

Origins and applications of the theory

The uses and gratifications theory began with the exploration of the functions of radio programming and the satisfaction users received from that medium in a study conducted by Herta Herzog (1944), a colleague of Paul

Lazarsfeld. Herta Herzog, who is credited with originating the theory, applied uses and gratifications to study the reasons and experiences of women who listened to radio soap operas (Baran and Davis, 2003). Further even before Herzog's (1944) study, Lazarsfeld (1940) discovered user gratifications of competitive self-esteem and educational functions in his research concerning radio quiz programs.

Subsequently, researchers have expanded the theory and applied it to other types of media, specifically television and programming, which has been shown to be related to a number of uses and gratifications, such as the need for information, the need to escape and obtain companionship (Rubin, 1994). The original theory has been criticized as being too simplistic; therefore, researchers have broadened and expanded the theory to address the criticisms, which has led to two revivals.

The first revival occurred in the 1970's and until then, researchers employing uses and gratifications theory within traditional media was limited in focusing exclusively on gratifications sought, ignoring effects or outcomes (Baran and Davis, 2003; Ruggiero, 2000). Then in the 1970's to overcome these theoretical limitations, researchers expanded upon the theory's framework by developing a list of psychological needs that are satisfied by media exposure and by increased emphasis on the active user (Baran and Davis, 2003). Specifically, Katz, Gurevitch and Haas (1973) compiled a list of social and psychological needs of all media users, which has been applied in more current research to Web users and whether or not the Web has content to satisfy those needs (Hunter,

1996). The social and psychological needs that can be applied to the Web user are: (1) Cognitive Needs-- needs related to strengthening of information knowledge and understanding of the environment; (2) Affective Needs-- needs related to strengthening aesthetic, pleasurable and emotional experiences; (3) Personal Integrative Needs --needs related to strengthening credibility, confidence and status of the individual; (4) Social Integrative Needs --needs related to strengthening contact with family, friends and the world; and (5) Escapist Need-- needs related to escape, tension release and desire for diversionary activities. The majority of uses and gratification researchers recognizes the concept of needs as the central psychological component (Ruggiero, 2000).

Within this framework of five needs, cognitive and affective needs are the most relevant to the Internet medium because cognition relates to the main gratification of information seeking on the Web and affective or emotional needs directly correspond to the entertainment gratification. Therefore, because cognitive and affective needs are the most relevant on the Internet, this study will address those needs in relation to gender and corporate Web sites. While uses and gratifications theory has been applied in prior communications research exploring traditional media, such as television, radio and newspapers, "the emergence of computer-mediated communication has revived the significance of uses and gratifications (Ruggiero, 2000, p. 3). This second revival of the theory of uses and gratifications in academic research can be attributed to the evolution of Internet advertising due to the revoluntionary nature of the Internet medium and its key characteristic, that of interactivity (Baran and Davis, 2003; Ruggiero, 2000),).

Specifically, researchers applying the theory to the Internet took the list of gratifications derived from earlier studies on traditional media and expanded to analyze the distinct features of the Internet medium. Rafeali (1986) conducted one of the earlier studies in computer-mediated communication research employing uses and gratifications in which he discovered individuals utilizing college computer bulletin boards are satisfying the primary needs of recreation, entertainment and diversion, along with the need for learning what others think and a need for communicating with a selective few (Roberts and Ko, 2001).

Further, this theory has been tested in exploring consumer experience in regards to the type of Internet advertising utilized in this study, Web sites (Chen and Wells, 1999; Eighmeny and McCord, 1998; Korgaonkar and Wolin, 1999; Papacharissi and Rubin, 2000). Eighmey and McCord (1998) applied uses and gratifications to examine audience experiences within five commercial Web sites. Their findings discovered some similarities in the types of uses and gratification behavior found in traditional media, such as entertainment value, and information involvement. The study also discovered two new dimensions of personal involvement and continuing relationship that were found to be important factors within the audience's reactions to the Web sites. Chen and Wells (1999) developed a scale and explored attitude toward the site and gratification dimensions of entertainment, informativeness and organization.

In a study by Korgaonkar and Wolin (1999), gratifications of information, social escapism, interactive control and economic control were uncovered from undergraduate and graduate college students in both focus groups and surveys.

The underlying message uncovered in the study was that "Consumers are looking for more than information when they go on the Web. Consumers look at the Web as a place in which they can interact and socialize with others with similar interests" (Korgaonkar and Wolin, 1999, p. 56). Further, Papacharissi and Rubin (2000) applied uses and gratifications to discover interpersonal communication gratifications through the use of interactive features such as e-mail and chatrooms.

Wolburg and Pokrywczynski (2001) applied uses and gratification to examine the use of advertising both in traditional and interactive media by surveying college age students. This study expanded upon the theory by exploring how gratification takes place and what factors, such as demographics and pyschographics, might impact the gratifications obtained. The findings in the study indicated that gender and self-identity were significant factors influencing evaluations of media, which provides support for further exploration of gender differences within media. The researchers also justified adopting uses and gratifications theory in analyzing advertising as opposed to editorial content by stating that advertising is a part of the mass media, its information content has utility value and it provides gratifications (Wolburg and Pokrywczynski, 2001).

Ruggiero (2000) expanded uses and gratifications by identifying three characteristics of "computer-mediated mass communication that offer a vast continuum of communication behaviors for researchers to examine" (p. 3). These characteristics relate to the multidimensional conceptualization of interactivity to be examined in this study. The first characteristic is the concept that "interactivity significantly strengthens the concept of the active user" (Ruggiero, 2000, p.15).

The user is in control of the advertising experience and chooses what types of features, whether it be human-to-human, human-to-computer or human-to-content, that he /she wants to engage with in order to satisfy needs. Second, the concept of "demassification", which is the ability of the user to select from a wide menu and customize the Web experience to meet individual user needs, correlates with the three types. The Internet provides this selectivity feature which allows consumer to personalize their experience within the Web site, which is the type of Internet advertising that provides the potential for the greatest number of features. Further, the gratification involved with computer mediated communication is highly personalized due to the one-to-one communication between the consumer and the Web site. For example, consumers have the option to chose from features, such as live chat or e-mail, which is human-to-human, or downloading music or playing games, which is human to computer or creating a Web log, which is human to content. And lastly, the concept of asynchroneity versus synchroneity in that communication can transcend time by occurring instantaneously or can be delayed or staggered in time directly corresponds with the human-to-human interactivity, such as e-mails or instant messaging. (pp 15-16) .

While previous research employing uses and gratification on the Internet has advanced the theory by applying it to Internet advertising, the research lacks exploration in observing and recording consumer behavior during actual usage instead of just reporting activity through survey methods. Therefore, this study will add a new dimension to the previous research exploring Web sites and uses and gratifications through actual analysis of gender and online behavior patterns,

which will expand the depth and application of the theory. This recording of actual online activity will be accomplished by using computer software technology, which will unobtrusively capture consumer activity. The theory will be applied in this study to provide insight into online consumer behavior and gender differences in Internet advertising. Specifically, the theory will be tested based upon males and females 'beliefs about the interactive communication environment, attitudes towards the site and brand, cognitive and affective needs and usage patterns of corporate Web sites. With the growth of the Internet and the increasing number of individuals online, understanding males and females' behavior and perceptions of Internet advertising is critical.

CHAPTER III.

METHODOLOGY

Research Questions

Based upon the literature, four research questions have been identified along with a rationale for each. As previously mentioned, earlier research has indicated that gender can influence or even moderate the extent and pattern of participation in Web activities (Hoffman, Kalbeek and Novak, 1996, Tracy, 1998, Well and Chen, 1999). However, due to the fact that males and females are online in almost equal numbers and due to the availability of greater interactive capabilities and a trend in increased online ad spending, it becomes critical to examine the differences in gender within Internet advertising. Further, past research on interactivity, a key dimension in Internet advertising, is limited in exploring what users are actually doing and thinking about online and how gender influences consumers' online behavior.

Therefore, it is necessary to explore and analyze the different ways that males and females engage with and perceive Internet advertising and their online experience because Web sites tend to be targeted to one or both genders (Rodgers and Harris, 2003). This provides support for the first two research questions.

RQ1: What are the differences in the ways males and females engage with Internet advertising?

Gender is conceptualized as the behavioral, psychological, social and cultural meanings associated with the maleness and femaleness imposed and expected by society (Alvesson and Billings, 1997; Pryzgoda and Chrisler, 2000). Gender is operationalized as a dichotomous variable by asking the participants to indicate if they are (1) male or (2) female. Internet advertising is conceptualized as the Corporate Web site and explored through the use of three competitive athletic product Web sites: Nike, New Balance and Reebok. Engagement is conceptualized as how the individual uses the features on the site and based upon the defining dimension of Internet advertising, that of interactivity. For this study, interactivity is conceptualized according to McMillan's (2002) multidimensional construct. This multidimensional definition is further divided for this study into two distinct categories: user based interactivity, which includes (1) the processes, actually using an interactive feature, and (2) the perceptions, which are the mental constructions of beliefs about the interactive communication environment; and system based interactivity, which includes (3) the features, which are the actual interactive structural components of the communication site. The three distinct dimensions (features, processes, and perceptions) can be further classified into three unique types, which are human-to-human, interaction involving two-way communication between users and other users and between users and the company; human- to-computer, interacting with the computer through navigational tools, transactions, downloading and customization features; and human-to-content, interaction with the computer through the addition of content to the site, such as Web blogging. To operationalize engagement, the activities

and the amount of time spent with each of the three types of interactive features, human- to-human, human-to-computer and human-to-content, are analyzed utilizing the Camtasia software, which will video record online user activity and track time spent. Analyses of activities are addressed using descriptive statistics, such as frequency distribution. Analysis of time spent includes repeated measures analysis of variance (ANOVA) comparing gender and time spent on each of the three types of interactive features.

RQ2: What are the differences in males and females' perceptions of interactivity in Internet advertising?

Perceptions are defined as user beliefs about the interactive features on the Web site. Perceptions of interactivity will be operationalized based upon Wu's (2000) scale of perceived control, perceived responsiveness and perceived personalization (Table 3.1). Perceived control questions address aspects of McMillan's (2002) human-to-computer and human- to-content type. Perceived responsiveness questions pertain to McMillan's (2002) human-to-human type, while perceived personalization questions relate to human-to-human and human-to-content. In addition to the scale, an overall rating question was added as to how the respondents would rate the site in terms of interactivity with a 5-point Likert scale ranging from low to high. To address perceptions as multidimensional by determining differences in the three aspects of perceptions for males and females, analysis includes performing single analysis of variance (ANOVA) for each perception comparing Web sites and gender.

Table 3.1: Nine-item Likert Scale for Measuring Perceived Interactivity of Web sites (Wu 2000):

Perceived Control	1. I was in control of my navigation through this Web site. 2. I was in control over the content of this Web site that I wanted to see. 3. I was in control over the pace of my visit to this Web site.
Perceived Responsiveness	4. I could communicate with the company directly for further questions about the company or its products if I wanted to. 5. The site had the ability to respond to my specific questions quickly and efficiently. 6. I could communicate in real time with other customers who shared my interest in this product category.
Perceived Personalization	7. I just had a personal conversation with a sociable, knowledgeable and warm representative from the company. 8. The Web site was like talking back to me while I clicked through the Web site. 9. The information in the Web site was personally interesting and relevant to me.

Note: Measured with a 5-point Likert-type scale from Strongly Disagree to Strongly Agree

Prior research has also indicated that males have more positive attitudes toward advertising overall and prefer Internet advertising to traditional media due to its interactivity (O'Donohue, 1995; Rodgers and Sheldon, 1999). For example Rodgers and Sheldon (1999) discovered that males overall had better attitudes towards online shopping than did females (Rodgers and Sheldon, 1999). However, these differences have not been fully explored now that the gender gap in online usage is almost non-existent and now that advertisers have access to greater interactive capabilities. This led to the development of research question three.

RQ3: What are the differences in males and females' attitudes towards Internet advertising?

Attitudes towards Internet advertising are further categorized into two dimensions: attitude toward the site, attitude towards the brand, which are determinants of purchase intentions. As previously mentioned, attitude towards the site is defined as the users' "predisposition to respond favorably or unfavorably to Web content" (Chen and Wells, 1999, p. 29). This will be operationalized by utilizing Chen and Wells (1999) 6-item, 5-point Likert scale. See Table 3.2 for scale items. Attitude towards the brand is defined as the users' overall evaluation of the brand and is operationalized by using Macias' (2000) three item 7-point differential scale, consisting of bad/good, likeable/not likable, and not enjoyable/enjoyable. Lastly, attitude toward the site and brand should be a determinant of purchase intention, which is the users' likelihood to purchase the brand if they were planning to buy that particular type of product (Phillips, 1996).

Table 3.2: Attitude toward the Web site Scale (Chen and Wells, 1999)

Item Number	Question
1	This Web site makes it easy for me to build a relationship with this company.
2	I would like to visit the Web site again in the future.
3	I am satisfied with the service provided by this Web site.
4	I feel comfortable in surfing this Web site.
5	I feel surfing this Web site is a good way to spend my time.
6	Compared with other Web sites, I would rate this one as (One of the worst / One of the best)
	Measured with a 5-point Likert-type scale from Strongly Disagree to Strongly Agree

Purchase intention is operationalized by asking which of the three brands the user would most likely purchase if they were planning to buy. Also, purchase consideration is measured within the three Web sites by asking how likely they would be to purchase from the site utilizing a 7-point differential of not at all likely to highly likely. Analysis includes repeated measure ANOVA for all three Web sites and attitude toward the brand, attitude toward the site, purchase consideration and gender. Chi-square analysis is performed for purchase intention and gender. It has also been concluded in prior studies on advertising that males and females differ in certain factors, such as need for cognition and need for emotion. For example, research has indicated that females tend to spend more time and effort processing the advertising message, whereas males spend less time and thought in processing the message with the focal point on peripheral cues (Brunel and Nelson, 2003). This could also be due to the emotional level in that women could be more emotionally attached to products than males, which could lead to more cognitive elaboration (Barone, Palan and Miniard, 2004). Further,

women tend to buy symbolic and self-expressive products related to self-emotional aspects, while men tend to buy impulsively with less consideration and product evaluation (Dittmar, Beattie and Friese, 1995). However, these differences in males and females have not been fully explored in Internet advertising as to how they could significantly impact online consumer behavior, such as purchase intention. Because if males and females differ in their need for cognition and need for emotion when shopping online, it becomes important to understand whether these differences in needs affect their purchase decision making. This provides support for research question four.

RQ4: Do needs, such as cognitive and affective, differ by gender and purchase intention?

As previously defined, need for cognition (NFC) is conceptualized as an "individual's tendency to engage in and enjoy effortful cognitive endeavors" (Cacioppo and Petty, 1983, p. 306). Cognition includes elements of awareness and judgment and consumers have different levels of need for cognition (NFC). Cognition is operationalized using an 18- item, 5-point Likert scale developed by Cacioppi, Petty and Kao (1984). See Table 3.3 for scale items.

Need for emotion (NFE), also referred to as feelings, is defined as "the tendency or propensity for individuals to seek out emotional situations, enjoy emotional stimuli and exhibit a preference to use emotion in interacting with the world" (Raman, Chattopadhyay and Hoyer, 1995, p. 537). Need for emotion is a separate and distinct factor from need for cognition and represents affect, which can influence consumers' interactions, and could result in more time spent

Table 3.3: Need for Cognition Scale (Cacioppo, Petty and Kao 1984)

Item Number	Question
1	I really enjoy a task that involves coming up with solutions to problems.
2	2. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
3	3. Learning new ways to think doesn't excite me very much. (R)
4	4. I usually end up deliberating about issues even when they do affect me personally.
5	5. The idea of relying on thought to get my way to the top does not appeal to me. (R)
6	6. The notion of thinking abstractly is not appealing to me. (R)
7	7. I only think as hard as I have to. (R)
8	8. I like tasks that require little thought once I've learned them. (R)
9	9. I prefer to think about small daily projects to long-term ones. (R)
10	10. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities. (R)
11	11. I find little satisfaction in deliberating hard and for long hours. (R)
12	12. I don't like to have the responsibility of handling a situation that requires a lot of thinking. (R)
13	13. I feel relief rather than satisfaction after completing a task that required a lot of mental effort. (R)
14	14. Thinking is not my idea of fun. (R)
15	15. I try to anticipate and avoid situations where there is a likely chance I'll have to think in depth about something. (R)
16	16. I prefer my life to be filled with puzzles that I must solve.
17	17. I would prefer complex to simple problems.
18	18. It's enough for me that something gets the job done, I don't care how or why it works. (R) (R) = reverse coded Measured with a 5-point scale from Strongly Agree to Strongly Disagree.

engaging with features and higher opinions of that site (Hoffman and Novak, 1996; Coyle and Thorson, 2001).

Need for emotion is operationalized based upon a 7-item, 5-point Likert scale developed by Raman, Chattopadhyay and Hoyer, 1995. See Table 3.4 for scale items. Analysis to address this question includes analysis of variance (ANOVA) for cognitive and affective needs based on gender and purchase intention.

To control for product involvement, which can be a factor in attitudes, needs and purchase consideration and intention, a product involvement scale developed by Zaichkowsky (1994) will be included in the questionnaire and used as a control variable in the analysis (See Table 3.5).

Table 3.4: Need for Emotion Scale (Raman, Chattapadhyay and Hoyer, 1995)

Item Number	Question
1	I would prefer a task that is more emotional in nature than one that is not.
2	I especially find it satisfying to complete a task that required a lot of emotionally sensitive handling.
3	I really don't enjoy a task that is emotional in nature. (R)
4	I appreciate opportunities that help me discover my emotional strengths and weaknesses.
5	I don't feel comfortable in emotionally involving situations. (R)
6	I prefer my life to be filled with emotional experiences.
7	I enjoy experiencing strong emotions.
	(R) = reverse coded Measured with a 5-point Likert-type scale from Strongly Disagree to Strongly Agree

Table 3.5: Product Involvement Scale (Zaichkowsky 1994)

Question	Differential Scale
To me athletic shoes are:	Important/Unimportant. Boring/Interesting Relevant/Irrelevant Exciting/Unexciting Means nothing/Means a lot to me Appealing/Unappealing Fascinating/Mundane Worthless/Valuable Involving/Uninvolving Not needed/Needed Measured with a 7-point semantic differential scale

Research Design

To examine differences in males and females in relation to Internet advertising, this study proposes a two-step methodological approach. A computer observation method will be employed utilizing software to track activity, along with a survey exploring perceptions, attitudes, purchase intention and cognitive and affective needs. Both methods will occur in a computer laboratory setting with the researcher present to address issues of validity and reliability.

The first method will include the use of online observation utilizing the computer software program, Camtasia, to track user activities, along with researcher observation in the form of gender recording of participant and random group note taking to further record users' activities and behavior. This computer observation method was chosen to overcome limitations in research methods exploring online behavior by reporting activity via a survey instead of an actual

recording of user's activity. Camtasia, which is an on-screen recorder and video production software allows for the capturing of every movement the user is making from menu selections and downloading to video and game playing. The advantage of this software is that it allows for the unobtrusive tracking of user activity without disrupting the user's interaction with the Web site. This allows for a much more realistic monitoring of online consumer behavior compared to one-to-one talk-aloud procedures, in which the user would say what they are doing online as they are doing it while the researcher observes and also audio records the session. Further, this method allows the user to feel more comfortable during the process without having a researcher sitting directly next to him/her and watching every movement. The researcher's role in this method will be more of a facilitator, starting the Camtasia software and then remaining in the lab to answer questions and address any technical issues that may arise, while also taking notes of overall group behavior.

The researcher will not be a formal part of the data collection environment and will assume an "observer as participant role" or distant role in this observation method with minimal interaction between the respondents and the researcher. An advantage of this role is that the highest possible degree of objectivity is obtained. (Denzin, 1978, p. 339). Further in keeping with Denzin's (1978) observer as participant role, the nature of the contact will be brief and limited to welcoming the respondents, starting Camtasia and being available to address any issues or concerns that may arise; the contact is highly formalized

through the use of a questionnaire as opposed to interview techniques; and no attempt will be made to develop any type of relationship with the respondents.

A cross sectional survey will be administered prior to interaction with the three sites for completion during interaction with the Web sites to assess attitudes, purchase intention, perceptions of interactivity and cognitive and affective needs.

The survey method was selected for this study based upon several advantages. First, the data obtained is from actual Web sites, reflecting a realistic situation as opposed to a manipulated Web site in an experimental method. Second, the cost to develop and administer survey is quite reasonable when compared to other methodologies, such as experiments and field observation methods (Stewart, 2002). The technique utilized will be self-administered in a small group setting in a computer lab. The advantages of this survey method technique are that the response rate is high, and the respondents can ask for question clarification if needed.

Sampling Design

A convenience sample of approximately 80 college students from a large southeastern university will serve as the study's participants. The sample size was calculated based upon previous research analyzing gender and the Internet (Rodgers and Harris, 2003; Jackson et al, 2001;Weiser, 2000) and an unpublished study conducted by the researcher on retail Web sites and interactivity. First, it was necessary to look at previous studies to develop estimates of what results might be discovered in analyzing attitudes, perceptions, needs and gender. Next,

power analysis, based upon estimates with the largest variability, was computed to calculate sample size. The reasoning behind choosing estimates with the largest variability is the smaller the variability, the smaller the sample size. If estimates are made using larger variability, there is enough power to detect differences if variability is the same or smaller (Springer, 2005). The results indicated that 38 males and 38 females were needed to achieve 80% power, which was rounded to 40 males and 40 females, or 80 total participants. For the computer observation method using Camtasia, a sub-sample of this group of participants will be chosen due to the complexity of collecting the data. From our 80 college students, a random sampling of approximately 30 participants consisting of 15 males and 15 females will be selected to track activity via the Camtasia computer software. College students were selected because they use the Internet regularly, are computer savvy and represent a very lucrative and desirable consumer segment for marketers with their considerable buying power ("Gale Group", 2004).

Procedures

A total of 80 college students, 40 males and 40 females, from a large southeastern university were recruited for participation in the study, which took place in a computer laboratory setting. Students were given extra credit from their professors for participation and scheduled lab times were set up by the researcher to accommodate the student's schedules. Upon entering the lab, students were given the survey and instructed to read the informed consent statement before starting and asked if they have any questions. The informed consent statement

indicated that their participation was voluntary and they could opt out at any time. Also, it informed the participants that their screen and mouse activity might be captured via Camtasia computer software for aggregate analysis only. It also addressed privacy, and stated that survey responses and screen and mouse activities will be strictly anonymous and confidential. See Appendix A for Human Subjects Form. Next, participants were instructed to complete Part I of the survey, which included the cognitive and affective scales along with product involvement and demographic information and then inform the researcher when they were ready to begin Part II. This allowed the researcher to begin the Camtasia recording for those selected prior to viewing the three Web sites. Fifteen male and fifteen female students were randomly selected to participate in the Camtasia recording. Once the participant indicated to the researcher that they had completed Part I, the researcher started the Camtasia recording by clicking on the recorder icon, which started the screen recording. The Camtasia recording device did not affect the participants' surfing capability in any way. Once students completed the survey and turned it in, the researcher stopped the recording, saved it to an external hard drive and converted it to a video format for viewing in real player.

For Part II, which included the computer section of the survey with questions about perceptions of interactivity, attitude towards the site, attitude towards the brand, purchase choice and intention, participants were instructed to go to each site, Nike, New Balance and Reebok, and simulate a purchase of any type of athletic shoe, spending as much time as they wanted on each site. Students

were instructed to surf the three Web sites to shop for a product, athletic shoes, with the intent to evaluate the three sites and to purchase from only one of the three sites. See Appendix B for survey instrument. In order to control for participant biases during survey administration, the surveys handed out to participants were randomly ordered in terms of questions for the three athletic companies so that respondents were not analyzing the same site in the same order or at the same time. These athletic shoe company sites were selected based upon college students' feedback gained from conducting pilot focus groups and based upon industry research, identifying these three companies as major competitors (Yahoo Finance, 2005).

Upon initial content evaluation, Nike is the only site that contains the human-to-human feature of a live synchronous chat along with an e-mail option; Reebok is the only site of the three that contains the human-to-computer features of sports, music and games; and the New Balance Web site is the only site that contains human-to-content features in several forms under the Club NB. The first form of human-to-content includes telling your story and submitting a photo to share with other athletes, and the second form is called vote and debate in which the user can answer a yes/no question and then debate it with other users by posting a debate blog. In describing the three Web sites overall, Nike's site and the opening page is very sleek, using gray color tones and moving product images that change into active athletes. Nike's initial shopping page contains the navigational links on the left side, top and bottom with images in the middle featuring specific products. New Balance's site and opening page is more

standardized using gray and red color tones with a white background and one image that changes to other images with more informational links to features such as its Club NB vote and debate option. The images of individuals in the New Balance site are active within a real world setting. The initial shopping page contains navigational links on the left side, top and bottom with changing product images in the middle that also change sizes. Reebok's site and the opening page is more simplified, using colors that coordinate with changing images of professional athletes. Reebok's initial shopping page contains navigational links at the top only. News links, what's new product links and images, corporate informational links, social responsibility links and a sports, music and games link are featured in the middle of the screen. See Appendix C for screen depictions of each Web site's opening page and initial online shopping page.

Pretest

Prior to full administration of the survey, a pretest was conducted online for two purposes: (1) evaluate the survey instrument's content validity, and (2) solicit feedback about the survey instrument to detect any changes that need to be made. College students were purposively selected from a beginning level advertising class and were offered extra credit. An e-mail message along with the survey attachment was sent to a randomly selected number of male and female students. Students were asked to follow the instructions on the survey and highlight indicated answers. Students were also asked to give feedback on the survey instrument and indicate whether they used a Broadband or dial-up

connection. Ten percent of the total sample size or 4 males and 4 females were utilized in the pretest.

Overall feedback from the participants indicated that the survey was interesting and the format was good. Several responses from the females indicated that they actually enjoyed looking at the Web sites and answering the questions. One female actually designed her own shoe on the Nike Web site and purchased it. None of the participants indicated difficulty or confusion in answering the questions. Two of the participants did have trouble saving their answers and submitted a blank survey, which the researcher had to contact and provide further instructions on how to highlight answers and save them in a Word format and resend. Most participants used Broadband connections; however, there were a few that used dial-up.

Based upon the pretest, several changes were made to the survey instrument. First, because some of the participants had difficulty in highlighting, saving and sending the survey, it was determined that Web experience questions needed to be added to address this dimension. Two questions were formulated based upon previous studies analyzing Web experience (Jee and Lee, 2002; Macias, 2000; Macias 2003). The first question asked participants to indicated how comfortable they felt surfing the Web based upon a 5-point Likert scale on not very comfortable to very comfortable. The second question added asked participants to rate themselves on the statement, "I am extremely skilled at using the Internet" on a 5-point Likert scale ranging from strongly disagree to strongly agree. In addition, two more questions were added, one to address time spent on

the Web with a range of hours per week from 0 to 13 and question as to whether or not the participants had ever created a Web site in a yes/no format. These questions were inserted to Part I, following the cognitive and emotion scales

Second, the pretest indicated the need to change the sequential numbering of the questions for each of the three Web sites to a consistent numbering pattern in order to randomly arrange the order in which participants viewed and answered questions about each site and avoid participant's confusion. Regarding administration, the online pretest confirmed the need to control for variability in Internet connections by administering the survey in a laboratory environment.

CHAPTER IV.

ANALYSIS AND RESULTS

Sample Characteristics

A convenience sample of 80 college students, 40 males and 40 females participated in the survey. Students' average age was 22 years with 71% classified as seniors. The majors of the student population were diverse ranging from business, science, engineering, psychology, liberal arts and communication with the majority of students (49%) majoring in communications. Twenty-seven percent of students were spending an average of 4-6 hours per week on the Internet, followed closely by 24% of students spending one to three hours on the Internet, 21% spending 7-9 hours per week, and 19% spending 13 hours or more. Forty-nine percent of the students had created a Web site and 64% indicated they were very comfortable using the Internet and 72% said they were moderately skilled (See Table 4.1 for detailed sample characteristics). From the sample population of 80 students, 15 males and 15 females were randomly selected to track user activity utilizing Camtasia software.

Reliability Scale

To measure internal consistency of the instrument scales, Cronbach alphas were performed to assess the reliability of the measurement scales of Need for

Table 4.1: Sample Population Characteristics

Characteristic	**Percent**
Gender	
Male	50%
Female	50%
Age	
17-19	9%
20-22	63%
24-26	26%
26 and above	2%
Academic Status	
Freshman	5%
Sophomore	9%
Junior	15%
Senior	71%
Majors	
Communication	49%
Business	16%
Science	13%
Psychology	8%
Engineering	7%
Liberal Arts	7%
Hours Spent on the Internet per week	
0	9%
1-3	24%
4-6	27%
7-9	21%
10-12	0%
13 and over	19%
Creation of a Web site	
Yes	49%
No	51%
Comfort Level on the Internet	
Very Comfortable	64%
Moderately Comfortable	36%
Skill Level on the Internet	
Extremely Skilled	22%
Moderately Skilled	72%
Not Very Skilled	6%

Cognition, Need for Emotion, Product Involvement, Perceptions of Interactivity, Attitude towards the Site and Attitude towards the Brand. Cronbach alphas are based upon the average correlation among the items on a scale and expressed in a range of 0 to 1. Reliability tends to increase with longer scales and heterogeneous groups and a good estimate of scale reliability is a Cronbach alpha of .70 or higher.

Table 4.2 details the Cronbach alphas for each scale. All Cronbach alphas were in the range of .85 to .91 with the exception of the Attitude towards the Brand scale, which ranged from .35 to .75. Due to its low reliability, analysis will be performed on individual scale items instead of composite scores.

Reliability Procedures

The survey and Camtasia analysis were performed in a laboratory environment utilizing Dell computers with high speed Internet connections in

Table 4.2: Scale Reliability

Measurement Scale	Cronbach Alphas
Need for Cognition	.852
Need for Emotion	.851
Product Involvement	.913
Perceptions of Interactivity	.724
Attitude Towards the Site for Nike	.891
Attitude Towards the Site for New Balance	.807
Attitude Towards the Site for Reebok	.831
Attitude Towards the Brand for Nike	.486
Attitude Towards the Brand for New Balance	.355
Attitude Towards the Brand for Reebok	.756

order to control for differences in Internet connections. Camtasia analyses for two male students had to be replaced because of loading difficulties experienced with the New Balance site to load and due to a lack of exploration of two of the three Web sites.

Analysis Tests

Tests utilized to analyze the data include descriptive statistics, independent sample t-tests, repeated measures analysis of variance, cross tabulations and chi-square. Descriptive statistical analysis was utilized to test for frequencies and means. Cross tabulation was utilized for categorical data because it was important to examine how two variables were related or associated. Cross tabulation, which examines relationships between and among categorical, addressed the question of whether certain values of one variable tend to occur more frequently with certain values of another (Norusis, 2000). To test the hypothesis of association within categorical data, chi-squared tests were utilized.

Independent sample t-tests and repeated measure analysis of variance were used to test for differences in means. Independent sample t-tests were utilized to test whether the mean of a single variable for subjects in one group differs from that in another group, such as males and females (SPSS Application Guide, 1999). Analysis of variance, labeled the acronym, ANOVA, was used to compare averages for two groups in order to examines the variability of sample values, and analyze how much the observations within each group vary as well as how much the group means vary. Based upon these two estimates of variability, one can

draw conclusions about the population means (Norusis, 2000, p. 262). Analysis of variance is the most straightforward way to examine the association between a categorical variable, such as gender, and numerical measurements, such as scales. Repeated measures analysis of variance tests was used because all members of the sample were measured under a number of different conditions, such as different Web sites. As the sample was exposed to each condition, the Web site, the measurement of the dependent variable was repeated. Within repeated measures ANOVA, there was an interaction effect and a main effect. The interaction effect measured the interaction between two factors, while the main effects measured the effects of the individual factors, ignoring the other factors. The default value of .05 was used to test for significance.

Analysis of Research Question One

Research question one examined the differences in the ways males and females engage with Internet advertising. To explore research question one, Camtasia software recordings were analyzed for the sample of 15 males and 15 females only. The software recordings of screen activity for the 30 participants were converted to a video format and viewed in real player. Analysis of the content of the video was performed by coding time spent for each of the three types of interactivity, human-to-human, human-to-computer, and human-to-content, and overall time spent on each Web site. Features on the three Web sites that allowed for two-way communication between the organization and individuals were coded as human-to-human interactivity and included e-mail

links, contact-us links, online chats and instant messaging. Features on the Web sites that allowed for customization and manipulation of content and transaction capabilities were coded as human-to-computer and included activities such as downloading videos and music, playing games, manipulating colors and size of products, searching for information, customizing products, and viewing informational links for corporate news and events and sponsorships. Features on the Web site that allowed for addition of content or changing of content were coded as human-to-content and included voting and debating, submit your story or change the language on the site.

To initially address research question one, descriptive analyses of males' and females' online activities within the three types of interactivity, human-to-human, human-to-computer and human-to-content, is discussed prior to statistical analysis. For each type of interactivity, a list of the specific activities coded from the Camtasia recordings for all 30 participants for each Web site was generated by gender to represent an overall depiction of the male and female activities. In these overall initial descriptive analyses of the Camtasia recordings, each activity is only represented once by gender.

In analyzing overall activities for human-to-human interactivity and gender, the only slight difference found was that females were communicating with the organization on all three Web sites using e-mail and/or live chat links. However, males were only communicating with the organization on Nike and New Balance's sites, but not on Reebok's Web site (See Table 4.3 for summary of activities by gender and Web site).

Table 4.3: Summary of Human-to-Human Interactivity by Gender and Web site

Males	Females
Nike's Web site: • Live Chat link • Got a question link • Ask the shopping assistant e-mail link **New Balance's Web site:** • Talk to us e-mail link	**Nike's Web site:** • Live Chat Option **New Balance's Web site:** • Talk to Us **Reebok's Web site:** • Contact Us link

In analyzing overall activities for human-to-computer interactivity and gender, several gender differences emerged from the data. Males played games on the New Balance site, such as stickball, whereas females did not engage in any types of games. Males also watched streaming videos of products on the Nike site and commercials on the New Balance site, while females only watched running videos on Reebok. Females did participate in downloading songs and wallpaper on Nike, while males only participated in downloading wallpaper. Males were engaged with professional athletes' links, such as Jordan and Summer of Lebron, athletes' training room and statistics links on the Nike site; whereas females did not visit any of those links. In contrast, females visited corporate communication links on all three sites, searching for jobs, viewing news and promotional information while males did not visit any corporate communication links. Females engaged in activities that provided additional technical information about the product, such as Nike's Pro Fit links and Tech Centers, while males did not (See Table 4.4 for summary of activities by gender and Web site).

Table 4.4: Summary of Human-to-Computer Interactivity by Gender and Web site

Males	Females
Nike Web site: • Customized shoe • Manipulated angles of shoe • Visited athlete's training room • Watched streaming videos of product, such as the Nike Impax, Free and Zoom in the featured product link, and Nike's, "What kind of player are you and the "I promise" clips • Downloaded wallpaper • Went to Nike's Baller of the Year: Current Week's Matchup • Went to Summer of Lebron • Went to Nike's Jordan link • Visited the Nike Lab • Clicked on a particular athlete to view the shoe that was paired with the athlete • Viewed statistics of athletes **New Balance's Web site:** • Played games: G Unit Stickball Slam game • Went to the Technical Center • Used Map quest to find a retailer • Searched function by size • Manipulated angles of shoes • Went to Events and Sponsorship • Viewed commercials in the Advertising Showroom **Reebok's Web site:** • Visited Rbk.com sports, music and games link • Clicked on the Help Desk List link • Manipulated angles of shoes	**Nike's Web site:** • Downloaded workout song mix • Downloaded wallpaper • Visited Nike Corporate and engaged in a job search • Visited Nike's Runners Library • Downloaded wallpaper on Shox Cog • Manipulated view of product • Clicked on workout schedules • Customized a shoe **New Balance's site:** • Visited Events and Sponsorship • Used Comparison Chart option • Visited Pro Fit Link • Used Color Scroll Option • Used New Balance's choose a benefit option • Manipulated view of product • Manipulated color of product • Used Compare products link • Visited Tech Center • Conducted a Retailers Search • Visited Corporate: About Us link • Visited Properly fit link **Reebok's Web site:** • Visited Careers link • Visited Rbk running downloads and flash capabilities • Visited Reebok's commercials link • Watched running videos • Visited News and Promotion •

In analyzing overall activities for human-to-content interactivity and gender, the only difference found was that males changed the content of both New Balance and Reebok by clicking on the China option for both sites, whereas females only utilized the U.S. link and did not customize or change content based on language (See Table 4.5 for summary of activities by gender and Web site).

To further analyze differences in the ways males and females engage with Internet advertising, time spent within each of the three types of interactive features, human-to-human, human-to-computer and human-to-content, was analyzed as well as overall time spent on each site, which was tracked through the

Table 4.5: Summary of Human-to-Content Interactivity by Gender and Web site

Males	Females
New Balance's Web site: • Club NB: Submitted posts for debate. Voted and debated on: -Would you accept less money to play on a championship team? - If a player is caught using steroids, should he be banned for life? - Would you rather be a sub on a working team or a starter on a losing team? - Would you accept less money to play on a championship winning team? • Went to the China link and changed the language of the site **Reebok's Web site:** • Went to the China link and changed the language of the site	**New Balance's Web site:** • Club NB: Voted and debated on: - Which teaches a player more, winning or losing? - If a Player is caught using steroids, should he be banned for life? - If no one was watching you play, would you play as hard?

Camtasia software. Within the human-to-computer category, navigational functions facilitating shopping within the sites were not included in time spent, as that is a basic function required to maneuver through each Web site. Statistical tests to analyze time spent included repeated measures analysis of variance (ANOVA) comparing gender and time spent within each of the three types of interactive features and overall time spent on each of the three Web sites.

A repeated measures analysis of variance (ANOVA) was used to analyze time spent for males' and females' human-to-human interactivity within the three Web sites. The ANOVA test resulted in no significant interaction between gender and human to-human interactivity within each Web site ($F_{2, 27}$ = 1.385 p-value = .267). This indicates there are no significant differences in the ways males and females interact with human-to-human types of interactivity for the three Web sites.

However, the main effects of human-to-human interactivity within the three Web sites were significant ($F_{2, 27}$ = 10.870, p-value = < .001), indicating that there are significant differences in human-to-human interactivity for Nike, New Balance and Reebok. To further examine and compare the main effects, pairwise comparisons were performed for time spent within human-to-human interactivity for the three Web sites. Pairwise comparisons in Table 4.6 indicated Nike and New Balance were significantly different from Reebok in terms of time spent in human-to-human interactivity.

Table 4.6: Pairwise Comparisons for the three Web sites for Human-to-Human Interactivity

Web Sites	**P-Value**
Nike- New Balance	.354
Nike- Reebok	.001*
New Balance- Reebok	.003*

* denotes p-value < .05

In analyzing means in Table 4.7, overall, males and females were spending more time using human-to-human interactive features on Nike and New Balance than on Reebok.

A repeated measures ANOVA was performed analyzing time spent for males' and females' human- to-computer interactivity within the three Web sites. Results from the test showed significant interaction between gender and Web sites comparing human-to-computer interactivity ($F_{2, 27} = 6.126$, p-value = .006). This indicates the way males interact across the three Web sites within human-to-computer interactivity is significantly different from the way females interact. The graph in Figure 4.1, with males represented as a solid line and females represented as a dotted line, visually depicts the gender interaction effect by showing the differences in the means for time spent using human-to-computer interactive features for males and females across the three Web sites. The graph appears to show a large difference in time spent for males on human-computer interactivity for Nike in comparison to females.

Table 4.7: Mean Comparisons of Time Spent on Human-to-Human Interactivity

Web Site	Mean: Males	Mean: Females	Overall Mean
Nike	6.0	11.33	8.67
New Balance	5.67	6.87	6.27
Reebok	1.67	.467	1.07

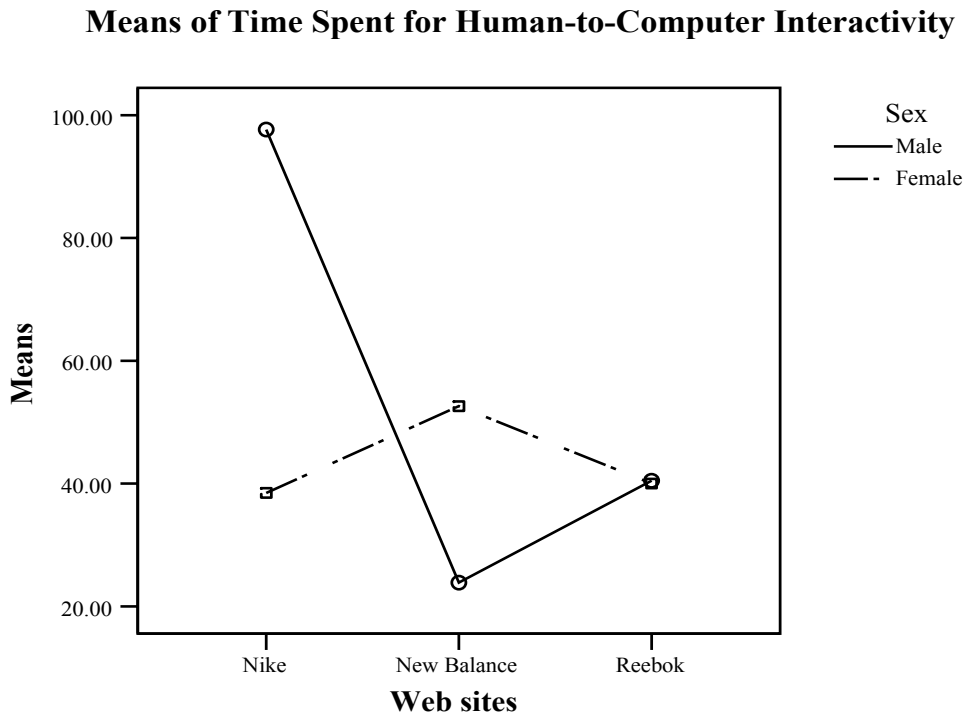


Figure 4.1: Graph of Means for Gender and Human-to-Computer Interactivity

To further explore this significant gender and Web site interaction within human-to-computer interactivity, it is necessary to examine gender separately by performing repeated measures ANOVA for males comparing the three Web sites and for females comparing the three Web sites. In analyzing the repeated measures ANOVA for males, there are significant differences for human-to-computer interactivity for all three Web sites ($F_{2, 13} = 4.718$, p-value = .029). In analyzing pairwise comparisons in Table 4.8 for average time spent within the three Web sites, males are spending significantly more time on human-to-computer activities in Nike compared to New Balance and marginally more time in Nike compared to Reebok. The graph in Figure 4.1 also provides a visual representation of this significance.

In analyzing mean times for males and the three Web sites, males' average time spent on human-to-computer interactivity within Nike is 97.67 seconds, followed by Reebok with an average time spent of 40.47 seconds and lastly, New Balance with an average time spent of 23.87 seconds. See Table 4.9 for mean values.

In analyzing repeated measures ANOVA for females, no significant differences in human-to-computer interactivity between the three sites were found ($F_{2, 13} = 1.402$, p-value = .281). The graph in Figure 4.1 also provides a visual depiction support this finding of no significant differences.

Table 4.8: Pairwise Comparisons for the three Web sites for Males and Human-to-Computer Interactivity

Web Sites	P-Value
Nike- New Balance	.008*
Nike- Reebok	.062
New Balance- Reebok	.328

* denotes p-value < .05

Table 4.9: Mean Comparisons of Time Spent on Human-to-Computer Interactivity

Web Site	Mean: Males	Mean: Females	Overall Mean
Nike	97.67	38.47	68.07
New Balance	23.87	52.60	38.23
Reebok	40.47	40.00	40.23

A repeated measures ANOVA test was utilized to analyze time spent for males' and females' human-to-content interactivity within the three Web sites. The ANOVA test resulted in no significant interaction between gender and Web sites for human to-content interactivity ($F_{2, 27} = .899$, p-value = .419). This indicates there are no significant differences in the ways males and females interact with human-to-content types of interactivity for the three Web sites.

However, the main effects of human-to-content interactivity within the three Web sites were significant ($F_{2, 27} = 6.073$, p-value = .007), indicating that there are significant differences in human-to-content interactivity for Nike, New Balance and Reebok. To further examine and compare the main effects and analyze pairwise comparisons, repeated measures ANOVA was performed for

time spent within human-to-content interactivity for the three Web sites. Pairwise comparisons in Table 4.10 indicated Nike and New Balance were significantly different from Reebok in terms of amount of time spent on human-to-content interactivity and New Balance and Reebok were significantly different from Nike. In analyzing means in Table 4.11, males and females overall were spending the most time using human-to-content interactive features on New Balance, followed by Reebok, and no time was spent on Nike due to its lack of human-to-content interactivity.

In analyzing the repeated measures ANOVA test for overall time spent on Nike, New Balance and Reebok's Web site and gender, no significant gender interaction by Web site was found ($F_{2, 27} = .404$, p-value = .671). Further, no significant main effects of Web sites were found ($F_{2, 27} = .2.108$, p-value = .141). Overall, time spent shopping on all three Web sites ranged from approximately 9 minutes to 29 minutes. While statistically, gender differences are not significant

Table 4.10: Pairwise Comparisons for the three Web sites and Human-to-Content Interactivity

Web Sites	**P-Value**
Nike- New Balance	.001
Nike- Reebok	.326
New Balance- Reebok	.002

Table 4.11: Mean Comparisons of Time Spent on Human-to-Content Interactivity

Web Site	**Mean: Males**	**Mean: Females**	**Overall Mean**
Nike	.000	.000	.000
New Balance	58.73	31.40	45.07
Reebok	4.67	2.33	2.33

for the three Web sites, there is an indication of a gender trend of males spending more time on average on each of the three Web sites in comparison to females. For the Nike site, males on average spent 5 minutes in comparison to females' average time of 4 minutes. For the New Balance site, males spent on average 4 ½ minutes, whiles females spent on average 3 ½ minutes. For the Reebok site, males spent on average 4 minutes in comparison to females' time spent of 3 ½ minutes. See Table 4.12 for mean times by gender.

To further analyze engagement within specific activities for human-to-human, human-to-computer and human-to-content, cross tabulations and Pearson's chi-square analysis were utilized to test whether significant differences exist between males and females and individual activities. Activities selected represented all three types of interactivity and analysis from the Camtasia recordings was based on whether or not the 30 students clicked on the link and participated in that activity.

For human-to-human interactivity, the live chat feature on Nike's Web site was analyzed and results indicated that 53% of females went to the live chat link compared to only 20% of males. However, chi-square analysis indicated this difference was just above the default value of .05 and therefore, not significant

Table 4.12 Mean Times by Gender for each Web site (In Seconds)

Web Site Time	**Mean: Males**	**Mean: Females**
Nike	320.07	255.53
New Balance	283.33	226.87
Reebok	243. 60	223.13

(χ^2 = 3.589, p-value = .058). Contact Us through e-mail links for all three sites was analyzed and results indicated that 73% of females clicked on the e-mail link compared to only 53% for males. Chi-square analysis indicated no significant gender difference (χ^2 = 1.292, p-value = .256).

In analyzing gender differences for human-to-computer interactivity, the customization feature on Nike's Web site was analyzed and indicated that 40% of males actually designed and customized an athletic shoe compared to only 6% of females. Chi-square analysis indicated this difference between males and females and the customization feature was significant (χ^2 = 4.658, p-value = .031). The events and sponsorship link within New Balance was analyzed for gender differences and indicated that 53% of females clicked on and spent time within the events link compared to only 6% of men. Chi-square analysis indicated that this difference in males and females interacting with events and sponsorships was significant (χ^2 = 7.778, p-value = .005).

In analyzing whether or not males and females differed on downloading activities, such as downloading wallpaper, music or videos, features available on both the Nike and Reebok sites, results indicated 40% of females clicked on the downloading features compared to only 6% of males. Chi-square analysis indicated this difference was significant for males and females (χ^2 = 4.658, p-value = .031). The activities of viewing streaming videos and playing games were analyzed for differences and findings indicated that only 20% of males clicked on and viewed streaming videos or played games found in both the Nike and Reebok

sites, while females did not participate at all in either of those activities. Chi-square analysis reported that this difference was not significant for males and females (χ^2 = 3.333, p-value = .068). Lastly, the manipulation of the content through changing angle views, colors and size of products on all three sites was analyzed and the findings showed that 80% of females engaged in some type of product manipulation compared to only 53% of males. Chi-square analysis indicated that this difference was not significant between males and females (χ^2 = 2.400, p-value = .121).

In exploring gender differences for specific activities within human-to-content interactivity, the Club NB on the New Balance was analyzed, which featured a vote and debate link, along with a tell your athletic story link. While 73% of females and 67% of males actually clicked on the Club NB link, only 33% of males and 26% of females actually participated in the vote and debate questions or tell your story option. Chi-square analysis indicated that these differences were not significant for males and females (χ^2 = .159, p-value = .659). See Table 4.13 for results.

In summary, statistically, the data provides some support for differences in the ways males and females engage in Internet advertising; such as in the time spent using human-to-computer types of interactivity. However, the data also provides evidence that males and females do not differ statistically in time spent using human-to-human and human-to-content interactivity.

In performing analysis of variance tests for all three types of interactivity and gender, the only type of interactivity that was statistically significant was

Table 4.13: Percentages and P-Values for Specific Interactive Activities

Interactive Activity	Males	Females	P-Value
Nike's Live Chat	20%	53%	.058
E-mail Links for all sites	53%	73%	.256
Nike's Customize	40%	6%	.031*
New Balance Events	6%	53%	.005*
Nike and Reebok's Downloading	6%	40%	.031*
Nike and Reebok's videos and games	20%	0%	.068
Manipulation of product for all sites	53%	80%	.121
New Balance's Club NB	33%	26%	.659

* denotes p-values < .05

human-to-computer. Further, the descriptive discussion analyses also provides support for differences primarily in human-to-computer interactivity.

In analyzing overall time spent shopping on the sites and gender, no significant differences were found between males and females and the three Web sites, but there was a trend that males on average were spending more time shopping than females. Overall in analyzing specific online activities with the three types of interactivity and gender differences, activities within human-to-computer interactivity were significantly different for males and females. Males used Nike's customization feature to design their own athletic shoe more often than females, while the downloading features on Nike's site was used more often by females than males. Further, females were significantly different from males in their participation in events and sponsorship links as females were using the link much more heavily than males.

Analysis of Research Question Two

Research question two examines the differences in males' and females' perceptions of interactivity in Internet advertising. In analyzing research question two, repeated measures analysis of variance (ANOVA) were performed for each of the three categories of perceptions, which are perceived control, perceived responsiveness and perceived personalization comparing gender and the three Web sites, controlling for product involvement and Web experience. In addition, independent sample t-tests were performed for Web experience and product involvement comparing gender.

Independent sample t-tests were performed for Web experience and gender. Web experience consisted of two questions rated on 5-point Likert scales ranging from strongly disagree to strongly agree. The first question asked participants to rate how comfortable they felt surfing the Internet. The second question asked participant to rate the statement, " I am extremely skilled at using the Internet". Results indicated no significant difference between males and females and Web experience ($t = 1.050$, p-value = .297). Overall for males and females, the average score for Web experience was very high, 4.13.

Independent sample t-tests were performed for product involvement and gender. Product involvement consisted of a 10-item, 7-point differential scale rating athletic shoes. Results indicated no significant difference between males and females and their involvement with athletic shoes ($t = .511$, p-value = .611). Overall for males and females, the average composite score for product involvement was in the middle range of 4.83.

For perceived control, ANOVA tests were run with control variables of product involvement and Web experience and findings showed no significant interaction between gender and Web sites for perceptions of control ($F_{2,75}$= .838, p-value = .437). However, the main effects of the three Web sites and perceptions of control were significant ($F_{2,75}$= .4.196, p-value = .019), indicating significant differences in perceptions of control for Nike, New Balance and Reebok. See Table 4.14 for ANOVA results.

To further examine and compare the main effects and analyze pairwise comparisons, repeated measures ANOVA was performed for perceptions of control for the three Web sites. Pairwise comparisons in Table 4.15 indicated Nike differs significantly from New Balance and Reebok in perceptions of control, while there is no significant difference between New Balance and Reebok.

Table 4.16 summarizes the means for perceptions of control and the three Web sites overall and by gender. In analyzing the means by gender and Web site, the similarity of the means and gender is apparent. However, the overall means provide further support that Nike is significantly different from New Balance and Reebok.

Table 4.14: ANOVA Table for Perceptions of Control

Effect	Wilks' Lambda	F	Hypothesis df	Error df	Sig.
Web site	.899	4.196	2.00	75.00	.019*
Web site * involve	.844	6.908	2.00	75.00	.002*
Web site * WebExp	.993	.263	2.00	75.00	.769
Web site * Sex	.978	.838	2.00	75.00	.437

Table 4.15: Pairwise Comparisons for Perceptions of Control and Web sites

Web Sites	P-Value
Nike- New Balance	.014*
Nike- Reebok	.025*
New Balance- Reebok	.533

* denotes p< .05

Table 4.16 Means for Perceptions of Control and Web sites

Web Site	Mean: Males	Mean: Females	Overall Mean
Nike	3.992	4.058	4.025
New Balance	4.330	4.237	4.283
Reebok	4.189	4.286	4.238

For perceived responsiveness, ANOVA tests were performed, controlling for product involvement and Web experience. The findings in Table 4.17 showed significant interaction between gender and Web sites for perceptions of responsiveness ($F_{2,75}$= 3,266, p-value = .044). This indicates that there are differences in males' and females' perceptions of responsiveness for each of the three Web sites.

In analyzing the graph in Figure 4.2, the interaction effect seems to indicate males perceive Nike and New Balance to be much higher in terms of responsiveness, in comparison to Reebok. Females appear to perceive Nike to be the highest in terms of responsiveness, followed by New Balance and then Reebok.

Table 4.17 ANOVA for Perceptions of Responsiveness

Effect	Wilks' Lambda	F	Hypothesis df	Error df	Sig.
Web site	.999	.042	2.00	75.00	.959
Web site * involve	.984	.601	2.00	75.00	.551
Web site * WebExp	.965	1.341	2.00	75.00	.268
Web site * Sex	.920	3.266	2.00	75.00	.044*

* denotes p<.05

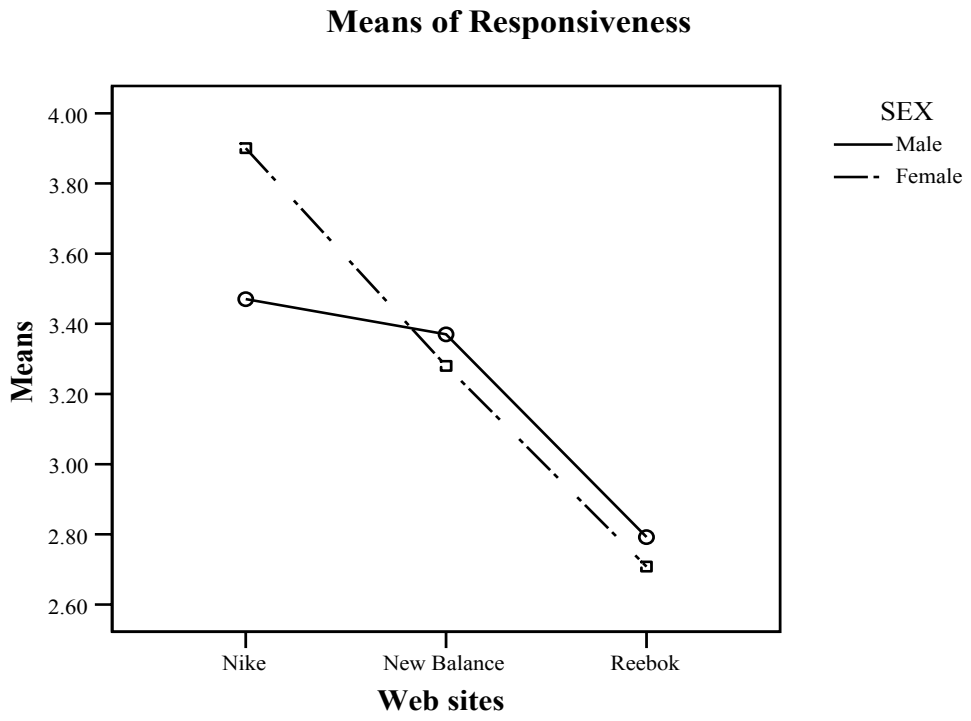


Figure 4.2: Graph for Responsiveness

Table 4.18 depicting the mean values by Web site and gender, also appears to provide support for these differences.

To further explore this significant gender interaction with perceptions of responsiveness and the three Web sites, it is necessary to examine gender separately by performing repeated measures ANOVA for males and the three Web sites and then for females and the three Web sites. In analyzing the repeated measures ANOVA for males and for females, both tests indicated no significant differences within each gender (See Table 4.19 for results). This result is not surprising due to the closeness of the p-value to the default level of .05.

Lastly, for perceived personalization, ANOVA tests were run with the control variables of product involvement and Web experience and the findings

Table 4.18 Means for Responsiveness and Gender

Web Site	Mean: Males	Mean: Females	Overall Mean
Nike	3.470	3.901	3.685
New Balance	3.370	3.280	3.325
Reebok	2.792	2.708	2.780

Table 4.19: ANOVA Results by Gender

SEX	Effect	Wilks' Lambda	F	Hypothesis df	Error df	Sig.
Male	Web site	.991	.167	2.000	36.000	.847
	Web site * involve	.958	.794	2.000	36.000	.460
	Web site * Webexp	.943	1.098	2.000	36.000	.344
Fem	Web site	.997	.051	2.000	36.000	.950
	Web site* involve	.986	.257	2.000	36.000	.775
	Web site* webexp2	.963	.690	2.000	36.000	.508

showed no significant interaction between gender and Web site for perceptions of personalization ($F_{2,75}$= .247, p-value = .782).

Further, in analyzing main effects for the three Web sites, no significance was found ($F_{2,75}$ = .067, p-value = .936). See Table 4.20 for ANOVA results. In analyzing the means in Table 4.21, there is not much difference between males' and females' perceptions of personalization.

In summary, when controlling for product involvement and Web experience, males and females did not statistically differ in their perceptions of interactivity based upon perceived control, and perceived personalization. However, males and females did differ in their perceptions of responsiveness for all three Web sites.

Table 4.20: ANOVA for Personalization

Effect	Wilks' Lambda	F	Hypothesis df	Error df	Sig.
Web site	.998	.067	2.00	75.00	.936
Web site * involve	.972	1.086	2.00	75.00	.343
Web site * WebExp	.975	.974	2.00	75.00	.382
Web site * Sex	.993	.247	2.00	75.00	.782

Table 4.21: Means for Personalization Overall and By Gender

Web Site	Mean: Males	Mean: Females	Overall Mean
Nike	3.025	2.950	2.988
New Balance	2.500	2.417	2.458
Reebok	2.704	2.508	2.606

Analysis of Research Question Three

Research question three explores the differences in males' and females' attitudes towards Internet advertising. In analyzing research question three, repeated measures ANOVA was performed for all three Web sites comparing attitude towards the site, attitude towards the brand, and gender, controlling for product involvement and Web experience. To analyze purchase intention and gender, cross tabulations and chi-square analysis were performed.

In analyzing the ANOVA test for attitude towards the site, controlling for product involvement and Web experience, results showed no significant interaction between gender and the Web sites comparing attitude towards the site ($F_{2,75} = .158$, p-value = .854). Main effects for attitude toward the site indicated no significance differences in attitudes for the three Web sites ($F_{2,75} = 2.462$, p-value = .092). See Table 4.22 for ANOVA results.

In analyzing attitude towards the brand and gender, controlling for product involvement and Web experience, ANOVA tests were performed on each item for all three Web sites due to low scale reliability. ANOVA tests results for the item rating the brand as good/bad on a 7-point differential scale, controlling for

Table 4.22: ANOVA for Attitude Towards the Site

Effect	Wilks' Lambda	F	Hypothesis df	Error df	Sig.
Attitude: Site	.938	2.462	2.00	75.00	.092
Att.site * involve	.935	2.586	2.00	75.00	.082
Att.site * WebExp	.976	.931	2.00	75.00	.399
Att.site * Sex	.996	.158	2.00	75.00	.854

product involvement and gender, indicated no significant interaction between gender and attitude ($F_{2,75} = .297$, p- value = .744). Main effects also indicated no significant difference in attitude towards the brand for the three Web sites ($F_{2,75} = .233$, p-value = .793). See Table 4.23 for ANOVA results.

ANOVA tests results for the item rating the brand as likeable/not likeable on a 7-point differential scale, controlling for product involvement and gender, indicated no significant interaction between gender and attitude ($F_{2,75} = .1.135$, p-value = .327). Main effects also indicated no significant difference in attitude towards the brand for the three Web sites ($F_{2,75} = 2.324$, p-value = .105). See Table 4.24 for ANOVA results.

Table 4.23: ANOVA for Attitude Towards the Brand: Good/Bad Item

Effect	Wilks' Lambda	F	Hypothesis df	Error df	Sig.
Attitude: Brand	.994	.233	2.00	75.00	.793
Att.brand * involve	.996	.134	2.00	75.00	.875
Att.brand* WebExp	.957	1.701	2.00	75.00	.189
Att.brand* Sex	.992	.297	2.00	75.00	.744

Table 4.24: ANOVA for Attitude Towards the Brand: Likeable/Not Likeable

Effect	Wilks' Lambda	F	Hypothesis df	Error df	Sig.
Attitude: Brand	.942	2.324	2.00	75.00	.105
Att.brand * involve	.987	.508	2.00	75.00	.604
Att.brand* WebExp	.934	2.638	2.00	75.00	.078
Att.brand* Sex	.971	1.135	2.00	75.00	.327

ANOVA tests results for the item rating the brand as enjoyable/not enjoyable on a 7-point differential scale, controlling for product involvement and gender, indicated no significant interaction between gender and attitude ($F_{2,75}$ = .747, p-value = .477). Main effects also indicated no significant difference in attitude towards the brand for the three Web sites ($F_{2,75}$ = 3.053, p-value = .053). See Table 4.25 for ANOVA results.

In analyzing purchase intention and gender, cross tabulations and chi-square analysis indicated no significant differences between males and females and their intention to purchase from the three Web sites. In fact, males and females were perfectly correlated in their purchase choice for each of the three sites with 50% choosing New Balance, 47.5% choosing Nike and 2.5% choosing Reebok (χ^2 = .000, p-value = 1.00). See Table 4.26 for results.

In analyzing gender differences and purchase consideration or how likely they would purchase from the Web site based upon a 7-point Likert scale of not at all likely to highly likely, independent sample t-tests were performed for each Web site and indicated no significant differences between males and females and their purchase consideration.

Table 4.25: ANOVA for Attitude Towards the Brand: Enjoyable/Not Enjoyable

Effect	Wilks' Lambda	F	Hypothesis df	Error df	Sig.
Attitude: Brand	.925	3.053	2.00	75.00	.053
Att.brand * involve	.917	3.384	2.00	75.00	.039
Att.brand* WebExp	.938	2.487	2.00	75.00	.090
Att.brand* Sex	.980	.747	2.00	75.00	.477

Table 4.26: Cross Tabulation for Purchase Intention and Gender

			SEX		Total
			Male	Female	
Purchase	Nike	Count	19	19	38
		% within SEX	47.5%	47.5%	47.5%
	New Balance	Count	20	20	40
		% within SEX	50.0%	50.0%	50.0%
	Reebok	Count	1	1	2
		% within SEX	2.5%	2.5%	2.5%
Total		Count	40	40	80
		% within SEX	100.0%	100.0%	100.0%

$\chi^2 = .000$ df = 2 p = 1.000

However, there was the appearance of a gender trend for all three Web sites in that females' purchase consideration for all three Web sites on average were slightly higher than males. Specifically, for Nike (t = 1.491, p-value = .140), results indicated on average, females were slightly higher in their purchase consideration for Nike (5.0) compared to males (4.4). For New Balance (t = .508, p-value = .606), females were slightly higher in their purchase consideration (4.35) than males (4.15). For Reebok (t = 1.130, p-value = .262), females were slightly higher in their purchase consideration (3.55) than males (3.10). See Table 4.27 for results.

In summary, for Nike, New Balance and Reebok Web sites, surprisingly no significant gender differences were found for attitudes towards the site, attitude towards the brand, purchase intention or purchase consideration.

Table 4.27: Means for Purchase Consideration by Gender and Web Site

Web Site	Males	Females
Nike	4.40	5.0
New Balance	4.15	4.35
Reebok	3.10	3.55

Additional analysis for each site was performed based upon survey questions about specific features unique for each Web site to determine whether the feature would affect purchase decision making. Two questions based on 5-point Likert scales were added ranging from strongly disagree to strongly agree. The first question asked if participants would use this feature in the future when shopping on the site. The second question asked whether this feature would affect purchase decision making. Cross tabulations and Chi-square were performed for question one and ANOVA tests were performed for question two.

For Nike, the Live Chat feature, which allowed for synchronous communication between the individual and the organization, was analyzed. Cross tabulations and chi-square analysis indicated no significant difference by gender (χ^2 = 058, p-value = .809). Specifically, only 30% of males and females indicated this Live Chat feature was something they would use when shopping on the site. Independent sample t-tests analyzing whether this feature would affect purchase decision making comparing gender resulted in no significant difference (t = .251. p-value = .802). Specifically, both male and females indicated this feature would not affect their purchase decision making with an average score of 1.74.

For New Balance, the Club NB feature, which allowed for adding content to the site through vote and debate and tell your story options, was analyzed.

Cross tabulations and chi-square analysis indicated no significant difference by gender (χ^2 = 1.526, p-value = .217). Specifically, only 29% of males and females indicated this Club NB feature was something they would use when shopping on the site. Independent sample t-tests analyzing whether this feature would affect purchase decision making comparing gender resulted in no significant difference (t = 1.172. p-value = .245). Specifically, both male and females indicated this feature would not affect their purchase decision making with an average score of 1.83.

For Reebok, the sports, music and games link, which allowed for playing games and listening to music, was analyzed. Cross tabulations and chi-square analysis indicated no significant difference by gender (χ^2 = .054, p-value = .816). Specifically, only 36% of males and females indicated this Club NB feature was something they would use when shopping on the site. Independent sample t-tests analyzing whether this feature would affect purchase decision making comparing gender resulted in no significant difference (t = 1.234. p-value = .221). Specifically, both male and females indicated this feature would not affect their purchase decision making with an average score of 1.98.

In summary, the unique interactive features for Nike, New Balance and Reebok would not affect future purchase decision-making.

Analysis of Research Question Four

Research question four examines whether cognitive and affective needs differ by gender and purchase intention. In analyzing research question four,

independent sample t-test were performed for cognitive and affective needs, and gender and analysis of variance (ANOVA) was performed for cognitive and affective needs comparing purchase intention and gender. Because only two participants chose Reebok when asked to indicate purchase intention, the purchase intention variable was recoded to only include Nike and New Balance.

First, independent samples t-tests for cognition and gender were performed, which indicated no significant difference in males' and females' need for cognition (t = 1.292, p-value = .200). However, independent samples t-tests for emotion and gender indicated significant differences in males' and females' need for emotion (t = .2.217 p-value = .030) with females having a significantly higher level of emotion than males. Table 4. 28 details the means for both need for cognition and need for emotion by gender.

In examining whether cognitive and affective needs differ by gender and purchase intention, analysis of variance (ANOVA) was performed for both cognition and emotion comparing gender and purchase intention. Results for need for cognition comparing gender and purchase intention indicated no significant interaction effect ($F_{2,75} = .151$, p-value = .699). However, main effect results did indicate a significant difference in need for cognition and purchase intention ($F_{2,75} = 7.157$, p-value = .009).

Table 4.28: Means for Cognition and Emotion by Gender

Need	**Males**	**Females**
Cognition	2.75	2.65
Emotion	3.21	3.41

Specifically, those participants who chose New Balance had a significantly higher level of cognition (2.8) compared to those who chose Nike (2.6). See Table 4.29 for ANOVA results and Table 4.30 for mean results by Web site.

In analyzing the ANOVA test for need for emotion comparing gender and purchase intention, results indicated no significant interaction effect ($F_{2,75} = .066$, p-value = .798), and no significant main effects interaction ($F_{2,75} = 2.199$, p-value = .142). See Table 4.31 for results.

Table 4.29: ANOVA Results for Need for Cognition

Tests of Between-Subjects Effects

Dependent Variable: cognition4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.086[a]	3	.362	3.290	.025
Intercept	568.914	1	568.914	5167.840	.000
SEX	.278	1	.278	2.528	.116
O2	.788	1	.788	7.157	.009
SEX * O2	.017	1	.017	.151	.699
Error	8.146	74	.110		
Total	579.608	78			
Corrected Total	9.233	77			

a. R Squared = .118 (Adjusted R Squared = .082)

Table 4.30: Mean Results for Cognition by Web site

Web Site	Mean	Std. Error
Nike	2.60	.054
New Balance	2.80	.052

Table 4.31: ANOVA Results for Need for Emotion

Tests of Between-Subjects Effects

Dependent Variable: emotion4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.869[a]	3	.290	1.933	.132
Intercept	860.311	1	860.311	5736.794	.000
SEX	.533	1	.533	3.556	.063
O2	.330	1	.330	2.199	.142
SEX * O2	.010	1	.010	.066	.798
Error	11.097	74	.150		
Total	871.980	78			
Corrected Total	11.967	77			

a. R Squared = .073 (Adjusted R Squared = .035)

In summary, significant gender differences were found for need for emotion, but were not found for need for cognition. Further, no significant differences were found for need for emotion and need for cognition comparing gender and purchase intention.

CHAPTER V.

DISCUSSION AND CONCLUSIONS

The previous chapter presented the data analysis and results of the four research questions explored in this study. This section provides a general analysis and summary of findings detailed by each research question, followed by conclusions about the research and practitioner implications.

This study examines the differences in the ways males' and females' engaged with and perceived Internet advertising by analyzing gender in relation to its defining characteristic, interactivity. Three commercial Web sites were utilized to analyze consumers' online behavior and perceptions in relation to gender. McMillan's (2002) multidimensional definition of interactivity was adopted based upon dimensions of consumers' online behavior, referred to as user processes, and consumers' beliefs about the interactive communication environment, or user perceptions, in relation to three types of features, which are human-to-human, human-to-computer and human-to-content. Further, gender differences in advertising effectiveness were examined, along with individual factors, such as cognitive and affective needs.

Summary of Findings

Research Question One

Research question one explored the differences in the ways males and females engaged with Internet advertising. Data obtained from Camtasia screen capture recordings on time spent within human-to-human, human-to-computer and human-to-content features to answer the first research question provided some interesting findings. In summarizing some of the different activities, males played games, watched streaming videos, engaged with athlete's informational links, customized products and changed content by language. Females visited corporate communication links looked at news and information about jobs, downloaded songs and wallpaper, visited event pages, viewed technical product information. Both males and females communicated with the company via e-mail links and instant messaging and added content through vote and debate questions.

Statistical results through repeated measures analysis of variance showed significant differences for males' and females' use of human-to-computer interactivity within the three Web sites. Specifically, males on average were spending the most time on human-to-computer activities on Nike's Web site, while females on average were spending the same amount of time in human-to-computer activities for all three sites. No statistically significant differences were found for the amount of time males and females engaged with human-to-human and human-to-content interactive features. This finding goes against prior research results that females spent more time than males using communication

features within a Web site, such as e-mail and instant messaging; while males spent more time than females entertaining themselves thorough playing games, manipulating and adding content to the site (Jackson et al, 2001; Weiser, 2000). This could be due to the differences in the data collection of online consumer behavior. This study used data from actual observations of online behavior compared to prior studies' data based upon self reported online activity.

The main effects of human-to-human interactivity within the three Web sites were significant and indicated that Nike and New Balance were significantly different from Reebok as males and females spent more time using human-to-human interactive features on Nike and New Balance than on Reebok. This could be due to the multiple features available on Nike, such as live chat, got a question, ask the shopping assistant, and the options on New Balance, such as talk to us. The main effects of human-to-content interactivity were also significant indicating that males and females overall were spending the most time using human-to-content interactive features on New Balance, which makes sense because New Balance was the only site with the option to add content through the Club NB link.

In analyzing overall time spent shopping on the sites and gender, no significant differences were found between males and females and the three Web sites. This indicates that if time spent on a Web site, or stickiness, is a measure of behavioral patterns, the results do not support Rogers and Harris' (2003) findings that males are considered to be the dominant online shopper and are more engaged in the online shopping experience than females.

Specific online activities within the three types of interactivity and gender differences were explored through cross tabulations and chi-square. Activities within human-to-computer interactivity were significantly different for males and females, which is consistent with the ANOVA results for time spent and human-to-computer interactivity. Males used Nike's customization feature to design their own athletic shoe more often than did females, while the downloading features on Nike's site was used more often by females than males. This goes against prior research indicating that males participated in downloading activities more than females (Pew Internet and American Life, 2005; Weiser, 2000). This finding could also be attributed to the use of observational data collection methods instead of self-reported collection methods. Lastly, females were significantly different from males in their participation in events and sponsorship links as females were using the link much more heavily than males.

Research Question Two

Research question two explored the differences in males' and females' perceptions of interactivity in Internet advertising. Data obtained through repeated measures ANOVA for analysis of research question two resulted in both significant and non-significant gender findings. Results indicated significant gender interaction for Web sites and perceptions of responsiveness, but no significant gender interaction for Web sites and perceptions of control or personalization. These three dimensions of perceived interactivity have been

explored in prior research, but not in relation to gender (e.g., Jee and Lee, 2002; McMillan and Hwang, 2002; Wu, 2000).

Perceptions of responsiveness corresponded with the dimension of human-to-human interactivity. Responsiveness questions pertained to dimensions of quickness and efficiency, directness and real time. This indicates that perceptions, such as believing the site communicates in a quick and efficient manner, believing communication is in real time and believing direct communication with the company can occur, differs in males and females for Nike, New Balance and Reebok. The visual depiction in the graph indicated males perceived Nike and New Balance to be much more responsive than Reebok, which is consistent with the Camtasia descriptive results that males did not communicate with Reebok via e-mail. Females appeared to perceive Nike to be the most responsive, followed by New Balance and Reebok. However, when males and females were split by groups and ANOVA tests were performed again, results indicated no significant differences for males' perceptions of responsiveness for the three Web sites and for females' perceptions of responsiveness for the three Web sites. This lack of significance within the groups could be attributed to the significance level of the interaction effect ($p = .044$), which was very close to the default value level of .05.

However, males and females did not statistically differ in their perceptions of interactivity based upon control and personalization. Perceived control corresponds to dimensions of both human-to-computer and human-to-content. Control questions addressed issues of controlling navigation, content and speed. Perceptions of personalization correspond to human-to-human and human-to-

content. Personalization questions addressed issues of personalized communication with the company, and interesting and relevant content. Interestingly, the main effects for Web sites and control were significant, which indicated that Nike differs significantly from New Balance and Reebok in terms of perceptions of control. So while male and female students did not differ significantly in perceptions of control, overall there were significant differences in how students perceived control within the three Web sites.

So while gender does not affect perceptions of control or personalization for college students, there could be other individual characteristics that do significantly affect those perceptions, such as motivational factors. Specifically, Sohn and Lee (2005) found that psychological characteristics, such as need for cognition, had an affect on perceptions of control.

Research Question Three

Research question three examined gender differences in relation to attitudes towards Internet advertising. Data results obtained through ANOVA and chi-square tests for exploration of question three, surprisingly found no significant gender differences for attitude toward the site, attitude towards the brand, purchase intention and purchase consideration for Nike, New Balance and Reebok. Main effects for each ANOVA tests were also not significant. In fact, chi-square results indicated perfect correlation for males and females and purchase intention for Nike, New Balance and Reebok. Specifically, New Balance was selected the most by both males and females, followed closely by Nike and

then Reebok, which was selected only once. This surprising result could be attributed to prior brand loyalty of college students for New Balance and Nike and lack of brand loyalty among college students for Reebok.

These results do not support earlier research which indicated males would have higher attitudes overall towards advertising and in particular, Internet advertising (O'Donohue, 1995; Rogers and Sheldon, 1999). The findings of lack of significance for attitude towards the site and attitude towards the brand could possibly be attributed to equally high brand loyalty for Nike and New Balance within college age students, which could explain why measures of effectiveness were not different for the three Web sites. Also, the lack of diversity in the sample could explain the lack of significant results in advertising effectiveness. Further, the scale for attitude towards the brand with its low reliability scores may not have been the best differential scale to use especially for the college age students. The differential scale, which directly followed the questions relating to attitude toward the site, may have been confusing for the students, especially because one of the scales was reverse coded, which could explain the low reliability of the scale. In addition, the scale only contained three items, which could have affected the reliability.

Findings from analysis exploring purchase decision making and the interactive types of features unique to each Web site (Nike's Live Chat, New Balance's Club NB and Reebok's sports, music and games), indicated that these features would not affect future purchase decision making. This indicates that

while participants engaged in these unique site features, the interactive features would not be a determining factor in purchase decision making.

Research Question Four

Research question four examined need for cognition and need for emotion and whether they differed by gender and purchase intention. Data results obtained through independent sample t-tests and ANOVA tests provided support for only one of the needs, the need for emotion. Independent sample t-tests indicated significant interaction between gender and emotion, but no significant interaction between gender and cognition. Specifically females were slightly higher in levels of emotion in comparison to males. This finding is consistent with results in prior studies on consumer behavior and need for emotion which indicated that females were more emotionally oriented than males (Booth-Butterfield and Booth-Butterfield, 1990; Dittmar, Long and Meek, 2004; Raman, Chattopadhyay and Hoyer, 1995). However, this finding goes against the result of the Rodgers and Harris (2003) study that found women to be lower in emotion towards online shopping compared to men. This could be due to the fact that women are now more comfortable and confident shopping online and because the number of online female shoppers is continuing to increase.

Interestingly, the lack of significance in males' and females' need for cognition does not support previous studies that found males to be higher in need for cognition in comparison to females (e.g., Brunel and Nelson, 2003; Meyers-Levy and Maheswaran, 1991; Raman, Chattapadhyay and Hoyer, 1995). This

finding is a step towards eliminating the stereotypical notion that women have less of a need for cognition because they are not engaging in complex activities on the Internet due to a lack of technological capability (Weiser, 2000).

The ANOVA results testing whether cognition and emotional needs differ by gender and purchase intention indicated no significant gender interaction for cognition or emotion. Thus, males' and females' emotional and cognitive needs do not affect whether they purchase from one site over another. So while females were significantly higher in need for emotion compared to males, when comparing purchase intention, no significant gender interaction was found. This finding provides evidence that when examining advertising effectiveness models in terms of Internet advertising, the think-feel-do sequential models do not apply to Web sites when comparing gender differences. This indicates gender is not a factor in Robertson's CAB (1971) multidimensional model because no significant gender differences were found when analyzing needs and purchase intention. Therefore, while need for cognition and need for emotion are overlapping with behavior in Robertson's (1971) advertising processing model, these needs do not significantly differ by gender when analyzing purchase intention. This lack of significance could be attributed to the homogenous nature of the sample of college students and their pre-existing brand loyalty. However, main effect results did indicate a difference in need for cognition and purchase intention. Specifically, those males and females that chose New Balance had a significantly higher level of cognition compared to those who chose Nike.

Conclusions

The conclusions are divided into three sections: theoretical implications, gender and Internet advertising and e-commerce, gender and interactivity and concluding remarks.

Theoretical Implications

Theoretically, this study makes several contributions. First, regarding uses and gratifications, this study served to advance the theory by adding a new dimension in the theoretical application within Internet advertising. This new dimension is the exploration of uses through actual observation and recording of online consumer behavior as opposed to self reported consumer behavior. This study utilized computer capabilities through screen capture software that recorded in a video format the actual screen and movement of the participants' cursor within each of the three Web sites, allowing for analysis of actual consumer usage online. Further, this study provided evidence of support for adoption of this theory to Internet advertising that male and female consumers do seek different gratifications, such as entertainment, socialization and personalization through the use of interactive features. Males and females while both seeking similar communication and content features through e-mail and vote and debate links, were significantly different in usage of human-to-computer interactive features. For example, females were using events and sponsorship links and downloading workouts, which could be linked to socialization and entertainment gratification, while males were customizing and designing their own products, which could be

linked to gratifications of personalization. This finding is consistent with Korgaonkar's and Wolin's (1999) study that consumers are looking for more than information when they go on the Web. Both males and females, while instructed to shop for an athletic shoe to purchase were also using other features on the sites for entertainment, communication, connections, and to add their comments and perspectives. Further, males and females were different in certain motivational needs, specifically the need for emotion from the Internet advertising experience. Females were higher in their need for emotional gratification from Internet advertising. Thus, the findings indicate that males and females differ in certain types of uses and gratifications within Internet advertising. This study makes a contribution by adding to the growing body of literature on uses and gratifications within Internet advertising.

Second, in applying Robertson's (1971) Cognition, Affection and Behavior (CAB) Model in relation to gender differences, this study serves to expand the applicability of the theory to Internet advertising. First, findings support the premise that affective needs differ in males and females, but these results did not find the difference to have an impact on purchase intention. This indicates that within the model, cognition, affection and behavior are overlapping, not linear. Thus, cognition does not lead to affection and then to behavior, such as purchase intention. Second, findings also support the premise that the individual may not be rational, but may be emotional towards Internet advertising. Specifically females were higher in their need for emotion in comparison to males. Further, regarding behavior through purchase intention, the main effect

results for purchase intention, indicated a significant difference in need for cognition and purchase intention, but no significance for emotion and purchase intention. This provides further support for this model in that the Internet advertising process is not sequential, but nonlinear and overlapping.

Gender and Internet Advertising and E-commerce

This study provides several contributions and implications for Internet advertising and e-commerce in regards to gender for both researchers and practitioners.

First, due to the change in demographic composition of Internet usage to that of almost gender parity, this study makes a contribution by adding to the limited body of research exploring males' and females' consumer behavior and perceptions of Internet advertising, specifically corporate Web sites. It is the intention that this research will serve as a basis for researchers to build upon for future exploration of gender and Internet advertising and e-commerce. Findings indicate males and females differ in their usage and time spent within the type of interactive features available on the Web site, specifically human-to-computer. This finding could open up the possibility for future research exploring gender differences and types of interactivity within different Internet advertising formats and within various consumer groups. Further, the findings indicate the concept of time spent on a Web site within types of features, referred to as stickiness, was different for males and females, while the overall time spent shopping on the Web site was not significantly different. This implies that future research should

consider exploring the concept of stickiness, but in relation to types of interactive features, not overall time.

For practitioners, such as advertisers and marketers, there are several implications. Advertising efforts have always been focused on the audience and due to the capabilities of the Internet, the connection between the audience and the advertiser is much more direct (McMillan, 2005). Companies can now communicate more effectively with consumers on an individual basis and tailor the message to better fit with the interests and expectations of the consumer due to the interactive nature of this medium (Liu, 2003). The Internet dictates "that advertisers adjust to a new medium that is not bound by either space or time and that has the capability to involve and engage the consumer" (McMillan, Hwang and Lee, 2003, p. 400).

However, the Internet as an advertising medium is extremely underutilized in advertising media budgets, but the trend is towards an increase, which is going to make individual factors, such a gender, even more critical to understand when tailoring and customizing advertising messages.

Therefore, the finding that males and females engage with Internet advertising differently in regards to specific activities within human-to-computer interactivity, such as downloading, event viewing, and customization of products, implies that marketers and advertisers need to tailor and customize Internet advertising and the online shopping experience based upon those differing activities preferred by males and females. Marketers must recognize that it is not the number of interactive features that is important on a Web site, but the types of

interactive features preferred by male and female consumer groups. For a Web site could have too many interactive features, which could negatively impact online communication efforts. For example during the survey administration in the laboratory, one comment by a male participant while viewing the Nike Web site was that it had too much "stuff " on its site. This study provided detailed lists of those online activities by gender and type, which could serve as a guide for marketers and advertisers to use when examining future customer groups based upon gender.

Regarding e-commerce, research is just beginning to explore the differences in males' and females' shopping patterns and purchase intentions on the Internet. Particularly with women bursting into the online shopping arena in large numbers, these gender behavioral patterns must be recognized and considered when designing the features on the Web site. In the offline world of retailing, women are said to influence more than two-thirds of the household expenditures and while that level of influence is not fully present online, it will be in the near future (Murrow, 2005). Contrary to previous research, the findings indicated that women are not shopping and just communicating on the Internet via e-mail and using simpler features compared to men due to the lack of technological competence (Weiser, 2000). Women are using more complex features, such as downloading and event viewing to enhance their shopping experience. The gender gap is closing in terms of numbers of women online, numbers of women shopping and overall technological competence and capability of women. Therefore, women cannot be ignored as a significant consumer group.

Marketers need to be ready and start customizing and personalizing the online shopping experience by gender. This can be accomplished by designing features on the Web site that cater to women's differing needs.

Weiser's (2000) statement is even more significant today.

> Clearly, the increased presence of women on the Internet has made gender relevant for e-business. Hence, recognizing women's increased Internet presence, investigating specifically what it is they want from the Internet and why they use it, and promptly responding will become a crucial key to success in Internet advertising and e-commerce (p. 170).

Methodologically, this study could serve as an impetus for future research for both academics and practitioners to utilize the capabilities of the Internet medium to record actual data of consumers' online behavior as opposed to collecting self recorded data from surveys. This study provides marketers and advertisers with an exploratory analysis of actual online consumer behavior through screen capture software, which could be replicated for future company research endeavors. Companies are starting to recognize the importance and value of alternative research methods that could complement survey results. Because the nature of the Internet medium allows for greater personalization and customization, this research methodology could be very helpful in consumer behavior research efforts. Research efforts in academia could also benefit by utilizing screen-capturing software in exploration of online consumer behavior.

Findings provide new evidence that contrary to prior research, women and men are not significantly different in their cognitive needs online. This lack of difference in need for cognition begins to dispel some of the preconceived stereotypical notions that women do not have the technological sophistication or

Internet experience; therefore, they would not have the need for as high a level of judgment or thinking capabilities compared to men (Weiser, 2000). This could be due to the fact that women have dramatically increased their technological capability and confidence and are online in great numbers, almost equal to men (Wasserman and Richmond-Abbott, 2005).

Findings indicated women were higher in need for emotions in Internet advertising, which imply that marketers and advertisers must not just consider thoughts and perceptions, but also emotions as a factor in influencing behavior (Rodgers and Harris, 2003). Shopping on Web sites can be an emotional experience and because women have a significantly higher need for emotion compared to males, marketers do need to target males and females differently. This online gender targeting can be accomplished by communicating and customizing content in different ways so as to tailor Internet advertising to better meet the needs of the male and female consumer.

However, while there were significant differences in how males and females engaged with Internet advertising and their perceptions of responsiveness towards interactivity, these differences were not affecting advertising effectiveness measures, such as attitude towards the site, attitude towards the brand and purchase intention. The lack of gender differences in advertising effectiveness could be due to the homogenous nature of the consumer group, Generation Y. This provides important implications regarding targeting and segmentation strategies. The finding of no significant gender differences in attitudes towards Internet advertising is surprising and could be attributed to the

consumer group of Generation Y college age students in which gender differences may not be as pronounced as other factors. The implication for this consumer group is that gender may need to be utilized in combination with other dimensions that are important to consider when segmenting and targeting this group, such as psychographics. Gender is used in market segmentation because it is easily identifiable, however with Generation Y, a group that practically grew up using the Internet, the factor of gender may not be as significant for this computer savvy group. It may be important to combine segmentation strategies and use gender initially, but also extend beyond demographic segmentation and try to analyze and understand differing psychographic dimensions of activities, interests and opinions, and segment this consumer group according to those identified dimensions as well as gender. This could be accomplished by identifying attitudes and interests of this group towards the product. For example, understanding how to segment this group based upon differing opinions towards athletic shoes could lead to the development of specific features on the Web site that address those differing perspectives.

Further, the main effects results indicated no significant difference overall for advertising effectiveness measures and the three Web sites, which could be attributed to Generation Y college students' almost equally split brand loyalty between Nike and New Balance. This implies that prior brand loyalty needs to be a factor to assess when analyzing advertising effectiveness measures as it could render the online measures ineffective. A further explanation could be that because college students are considered computer savvy and high in Web

experience, interactivity within Internet advertising might not be a factor in affecting college students' attitudes and purchase intentions.

Gender and Interactivity

This study served to explore gender and interactivity and whether or not this demographic factor had an impact on interactivity, which was missing in the research. This study served to fill the gap in the literature on interactivity and gender with several implications for researchers and practitioners. First, results provided evidence of significant gender differences that affect what male and female consumers do online and how they perceive interactivity. This is evident in the findings that males and females significantly differ in human-to-computer processes, such as downloading and customization and perceptions of responsiveness, which addressed human-to-human interactivity aspects of efficient communication in real time. For researchers, this finding implies that the individual factor of gender should be considered as a significant antecedent to the evolving theoretical framework of interactivity. This study should provide a basis that future researchers can build upon when examining interactivity and gender.

For marketers and advertisers, interactive features are within the marketers' control, while perceptions are not. Research has indicated that marketers and advertisers are "making limited use of the interactive potential of the Internet (Arnott and Bridgewater, 2002). However, knowing what interactive features on a Web site males and females prefer, and understanding differences in beliefs towards interactivity can help marketers and advertisers in their online

communication efforts. This would allow marketers and advertisers to use interactivity to tailor the Web site experience to better meet males' and females' online needs and expectations.

Second, this study furthered the concept that interactivity should be examined as a multidimensional construct through significant findings based upon application of McMillan's (2002) multidimensional conceptualization of interactivity. In applying McMillan's (2002) conceptualization, analysis was based upon dimensions of consumers' online behavior, referred to as user processes, and consumers' beliefs about the interactive communication environment, or user perceptions, in relation to three types of features, which are human-to-human, human-to-computer and human-to-content. For features and processes, findings indicated significant gender differences within human-to-computer interactivity. Further, main effects were significant for the Web sites in terms of time spent using human-to-human and human-to-content interactivity. For perceptions, findings indicated significant gender interaction for perceptions of responsiveness, which addresses human-to-human interactivity and significant main effects for perceptions of control, which addresses the aspects of human-to-computer and human-to-content. These findings further the applicability of McMillan's (2002) conceptualization of interactivity and imply that interactivity must be explored as a complex and multidimensional construct.

Third, this study adds to the limited research on interactivity and processes and overcomes the methodological limitation of reported user activity by exploring actual online consumer behavior through screen capture software

that records actual screen movement in a video format. This allows for viewing the Web site screens and watching the movement of the cursor throughout the entire Web site experience, while also tracking time spent within each type of interactivity. Further this study analyzed the processes of interactivity based upon time spent using the features, which adds a new dimension for exploration of this aspect of interactivity. The research exploring processes was lacking in the literature and this study provides significant findings for gender and engagement with Internet advertising.

Concluding Remarks

As previously stated in the introduction, the revolutionary nature of the Internet has dramatically impacted the communications' world like nothing before, changing the way individuals shop, collect information and entertain themselves (Pew Internet and American Life Project (2005, p. 57). Clearly, the Internet has become much more than a medium delivering a message to individuals. The Internet, with its world wide transmission capability, has become a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for space, time and location (Leiner, 2003). "The medium is not the message in a digital world, it is the embodiment of it" (Negroponte, 1995, p. 11).

This revolutionary and multifaceted nature of the Internet medium along with the dramatic increase in the number of women online to that of almost gender parity puts gender at the forefront for Internet advertising and e-commerce

research. This study has moved us one step closer in understanding gender differences online.

CHAPTER VI.

LIMITATIONS AND FUTURE RESEARCH

The previous chapter summarized the findings of the analysis and discussed conclusions and implications for researchers and practitioners. This section discusses the limitations of the study and directions for future research.

Limitations

Like any other research, this study has limitations that must be addressed. First, the study used a convenience sample of college students, which due its homogenous nature based upon similar demographic factors such as age, and education limits the ability to generalize beyond this group. In addition, most of the students were classified as seniors, which also limits the representation of the sample and possibly could have affected the findings. Further, even though the student sample represented a diverse range of majors, the majority of the students were communication majors who could potentially possess more familiarity with advertising. This familiarity could have resulted in the lack of significant effects, especially for attitudes towards Internet advertising. Also, students' prior familiarity with the athletic Web sites, along with their high Web experience could have limited the results.

Second, this study was limited to one product category, athletic shoes, and only three brands, which limits the generalizability of results to other product

categories. Generalizability is limited because Nike, New Balance and Reebok athletic shoes could be categorized as a transformational products, while many other Web sites' products and services could be informational or fall between informational and transformational. Further, the ability to generalize is limited because gender differences may be more represented for some product categories than others, such as clothing and electronics.

In addition, the small sample size for the Camtasia analysis of only 30 participants could have contributed to some of the insignificant results, such as the lack of significant gender interaction effects for human-to-human and human-to-content interactivity in analyzing engagement with Internet advertising.

Another limitation identified is the measurement scale for attitude towards the brand. The reliability of the scale based upon Cronbach's alpha was extremely low ranging form .35 to .75. This could be attributed to only having three scale items, which can result in lower alpha reliability scores. However, due to its low reliability, analysis was performed on individual scale items instead of composite scores, which could have resulted in the lack of significant effects.

A further limitation is the administration of the survey in a laboratory setting. While control and internal validity are gained through administration in a laboratory setting, external validity is limited due to the lack of a natural, real world simulated setting. Results might have been different and students might have spent more time shopping on the sites if they were viewing and shopping on the three Web sites in their normal and comfortable "surfing" environments, such as on a home or dorm computer, instead of in a controlled artificial environment.

Lastly, gender was operationalized as a dichotomous variable, which could have potential limitations. Analyzing differences in gender based upon separating males and females according to biological differences to represent behavioral, psychological and sociological meanings associated with maleness and femaleness may not be a complete representation of the complexity of one's gender. Not all biological males (females) depict sociological beliefs, attitudes and behaviors according to societal expectations (Smiler, 2004). It might prove meaningful to analyze gender as a self-assessed continuous variable and employ some measurement of the level of masculinity and femininity an individual possesses to fully explore the variable of gender.

Future Research

This study served to provide additional evidence that gender differences should be further explored and analyzed in terms of interactivity in Internet advertising. Much more research is warranted in the area of gender differences in Internet advertising. Given the topical nature of this study, it is recommended for future research to explore conditions under which differences may or may not exist. This study explored only one product category, athletics, and just three competitive Web sites. Future research is needed that examines a broad range of product categories and Web sites due to the fact that gender differences may be more pronounced for some product categories than others.

This study analyzed one consumer group, college age students or Generation Y, considered computer savvy consumers. Future research could

explore different populations, such as Baby Boomers or Matures, who are not as experienced on the Internet to determine the effect in analyzing gender differences. Another possible consumer group to explore in future research on gender could be teens within Generation Y. Also, it might be interesting to explore a diverse population consisting of participants from various age groups, race classifications and cultural backgrounds. While this research focused on gender differences, future studies could examine uses and perceptions of Internet advertising by exploring differences in other demographic variables, such as age, income, race, ethnicity, and marital status. Further, these variables could be explored in combination with gender to examine patterns of online consumer behavior and explore what other variables affect gender and make differences significant. Also, future research could expand upon and examine other covariates that need to be controlled for when examining perceptions and attitudes of Internet advertising, such as situational and motivational factors and satisfaction levels. Further, even though Web sites have the greatest number of interactive features, and allow for e-commerce capabilities, future studies could analyze different types of Internet advertising to determine whether gender differences are more prevalent in certain types.

Further, as previously mentioned in the limitations, future research examining gender differences in Internet advertising could explore gender as a self-assessed continuous variable and employ a scale to measure the level of masculinity and femininity an individual possesses.

Lastly, future research could employ a longitudinal study in a natural environmental setting, such as in a home or office, and use a larger sample size. This would allow for the examination of gender differences in Internet advertising over time, within a real world environment.

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APPENDICES

Appendix A: Human Subjects Form A

FORM A

IRB #_____

Certification for Exemption from IRB Review for Research Involving Human Subjects

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A. PRINCIPAL INVESTIGATOR(s) and/or CO-PI(s):
B. DEPARTMENT:
C. COMPLETE MAILING ADDRESS AND PHONE NUMBER OF PI(s) and CO-PI(s):

Principal Investigator:
Carolynn McMahan, Doctoral student,
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Office location: Communication Building, Room 98
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Faculty Advisor/Committee Chair:
Dr. Roxanne Hovland, Professor
College of Communication and Information
Advertising and Public Relations
Office location: Communication Building, Room 476
Office number: 974-5099

D. TITLE OF PROJECT:

Gender and Internet Advertising: Differences in the Ways Males and Females interact online.

E. EXTERNAL FUNDING AGENCY AND ID NUMBER: Not applicable

F. GRANT SUBMISSION DEADLINE: Not applicable

G. STARTING DATE: Upon approval of Form A

H. ESTIMATED COMPLETION DATE: December 31, 2005

I. RESEARCH PROJECT:

Objective(s) of Project:

The purpose of this study is to explore gender in Internet advertising to better understand the differences in males and females' behavior and perceptions online as well as the differences in advertising effectiveness. This study will examine the differences in the ways males and females' engage

with and perceive Internet advertising, specifically company Web sites, to better understand the role of gender within online consumer behavior, its effect on interactivity and advertising effectiveness and the implications for online marketing communications. Gender differences in Internet advertising will be explored by analyzing its defining characteristic of interactivity based upon consumers' online behavior, referred to as user processes, and consumers' beliefs about the interactive communication environment, or user perceptions, in relation to three types of features, which are human-to-human, human-to-computer and human-to-content. Further, gender differences in advertising effectiveness will be examined by analyzing attitudes towards the site, attitudes towards the brand and purchase intention.

The four research questions for this study are:

RQ1: What are the differences in the ways males and females engage with Internet advertising?

RQ2: What are the differences in males and females' perceptions of Internet advertising?

RQ3: What are the differences in males and females' attitudes towards Internet advertising?

RQ4: Do cognitive and affective needs, differ by gender and purchase intention?

1. **Subjects** (Use additional page, if needed.):

A convenience sample of approximately 80 college students from a large southeastern university will serve as the study's participants for the survey. From the 80 college students, approximately 30 will be randomly selected to participate in the computer software observation. College student were selected because they use the Internet regularly, are computer savvy and represent a very lucrative and desirable consumer segment for marketers with their considerable buying power ("Gale Group", 2004). Students will be asked to view three existing competitive Web sites that vary in their types of interactivity, which are Nike, Reebok, and New Balance. Students' participation in the study is voluntary.

2. **Methods or Procedures** (Use additional page, if needed.):

To examine differences in males and females in relation to Internet advertising, this study will utilize a two-stage methodological approach. First, a computer observation method will be employed utilizing software capabilities to track computer activity anonymously for aggregate analysis only, followed by a survey exploring perceptions, attitudes, purchase intention and cognitive and affective needs. The first method will include the use of online observation utilizing the computer software program, Camtasia, to track user activities unobtrusively. This computer observation method will be conducted in a lab with the assistance of the researcher should any technical problems occur for the participants. Thirty students selected to participate in the Camtasia software observation will be randomly selected from the larger sample of 80 students.

The second method will include the administration of a survey during interaction with the three sites to assess attitudes, purchase intention, perceptions of interactivity and cognitive and affective needs. Participation in the study is completely voluntary and all data will be analyzed in the aggregate only and all user information and activity will be completely anonymous and confidential. An informed consent statement will be read to the students prior to participation in the study, which will serve to make the students aware of the study procedures and allow them to opt out at anytime before or during participation (See Appendix A for informed consent statement).

3. **CATEGORY(s) FOR EXEMPT RESEARCH PER 45 CFR 46** (see reverse side for categories):

The research would fall under Category 2, a survey and computer observation conducted with minimal risk to the participants and without means of identification of participants' responses and activities.

J. CERTIFICATION: The research described herein is in compliance with 45 CFR 46.101(b) and presents subjects with no more than minimal risk as defined by applicable regulations.

Principal Investigator_____ _____

_____ Name Signature
_____
Date
Student Advisor_____ _____
Name
_____
Signature Date
Dept. Review
Comm.Chair _____ _____
_____ Name Signature
_____
Date
APPROVED:
Dept. Head_____ _____
_____ Name Signature
_____
Date

Appendix A: Informed Consent:

The following survey focuses on gender and Internet advertising. Participation in the survey is completely voluntary, so you may opt out of the survey at anytime. Your screen and mouse activity may be captured via Camtasia computer software for aggregate analysis only. For your privacy, the survey responses and screen and mouse activities will be strictly anonymous and confidential. In addition, the surveys and computer activities will be analyzed in the aggregate, or as a whole, as opposed to individually. Participation indicates your informed consent regarding the voluntary, anonymous, confidential, and aggregate nature of the survey, as well as its general purpose. Thank you for your participation.

Appendix B:

Gender and Internet Advertising Survey

Informed Consent Statement:

The following survey focuses on gender and Internet advertising. Participation in the survey is completely voluntary, so you may opt out of the survey at anytime. Your screen and mouse activity may be captured via Camtasia computer software for aggregate analysis only. For your privacy, the survey responses and screen and mouse activities will be strictly anonymous and confidential. In addition, the surveys and computer activities will be analyzed in the aggregate, or as a whole, as opposed to individually. Participation indicates your informed consent regarding the voluntary, anonymous, confidential, and aggregate nature of the survey, as well as its general purpose. Thank you for your participation.

Part I:

Instructions: Please read each of the following statements and indicate how much you agree or disagree by circling only one number.

1. I really enjoy a task that involves coming up with solutions to problems.

Strongly disagree				Strongly agree
1	2	3	4	5

2. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.

Strongly disagree				Strongly agree
1	2	3	4	5

3. Learning new ways to think doesn't excite me very much.

Strongly agree				Strongly disagree
1	2	3	4	5

4. I usually end up deliberating about issues even when they do affect me personally.

Strongly disagree				Strongly agree
1	2	3	4	5

5. The idea of relying on thought to get my way to the top does not appeal to me.

Strongly agree				Strongly disagree
1	2	3	4	5

6. The notion of thinking abstractly is not appealing to me.

Strongly agree				Strongly disagree
1	2	3	4	5

7. I only think as hard as I have to.

Strongly agree				Strongly disagree
1	2	3	4	5

8. I like tasks that require little thought once I've learned them.

Strongly agree				Strongly disagree
1	2	3	4	5

9. I prefer to think about small daily projects to long-term ones.

Strongly agree				Strongly disagree
1	2	3	4	5

10. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.

Strongly agree				Strongly disagree
1	2	3	4	5

11. I find little satisfaction in deliberating hard and for long hours.

Strongly agree				Strongly disagree
1	2	3	4	5

12. I don't like to have the responsibility of handling a situation that requires a lot of thinking.

Strongly agree				Strongly disagree
1	2	3	4	5

13. I feel relief rather than satisfaction after completing a task that required a lot of mental effort.

Strongly agree				Strongly disagree
1	2	3	4	5

14. Thinking is not my idea of fun.

Strongly agree				Strongly disagree
1	2	3	4	5

15. I try to anticipate and avoid situations where there is a likely chance I'll have to think in depth about something.

Strongly agree				Strongly disagree
1	2	3	4	5

16. I prefer my life to be filled with puzzles that I must solve.

Strongly disagree				Strongly agree
1	2	3	4	5

17. I would prefer complex to simple problems.

Strongly disagree				Strongly agree
1	2	3	4	5

18. It's enough for me that something gets the job done, I don't care how or why it works.

Strongly agree				Strongly disagree
1	2	3	4	5

19. I would prefer a task that is more emotional in nature than one that is not.

Strongly disagree				Strongly agree
1	2	3	4	5

20. I especially find it satisfying to complete a task that required a lot of emotionally sensitive handling.

Strongly disagree				Strongly agree
1	2	3	4	5

21. I really don’t enjoy a task that is emotional in nature.

Strongly agree				Strongly disagree
1	2	3	4	5

22. I appreciate opportunities that help me discover my emotional strengths and weaknesses.

Strongly disagree				Strongly agree
1	2	3	4	5

23. I don’t feel comfortable in emotionally involving situations.

Strongly agree				Strongly disagree
1	2	3	4	5

24. I prefer my life to be filled with emotional experiences.

Strongly disagree				Strongly agree
1	2	3	4	5

25. I enjoy experiencing strong emotions.

Strongly disagree				Strongly agree
1	2	3	4	5

To me athletic shoes are:

26. Important	1	2	3	4	5	6	7	Unimportant
27. Boring	1	2	3	4	5	6	7	Interesting
28. Relevant	1	2	3	4	5	6	7	Irrelevant
29. Exciting	1	2	3	4	5	6	7	Unexciting

30. Means Nothing	1	2	3	4	5	6	7	Means a lot to me
31. Appealing	1	2	3	4	5	6	7	Unappealing
32. Fascinating	1	2	3	4	5	6	7	Mundane
33. Worthless	1	2	3	4	5	6	7	Valuable
34. Involving	1	2	3	4	5	6	7	Uninvolving
35. Not Needed	1	2	3	4	5	6	7	Needed

36. How many hours per week do you spend on the Internet?

____ 0 ____1-3 ____4-6 _____ 7-9 _____ 10 –12 _____ 13 and over

37. How comfortable do you feel surfing the Internet?

Not very Comfortable				Very Comfortable
1	2	3	4	5

38. Have you ever created a Web site? Yes _____ No_____

39. I am extremely skilled at using the Internet.

Strongly disagree				Strongly agree
1	2	3	4	5

Background Information: Circle one

40. Sex: 1. Male 2. Female
41. Class Rank: 1. Freshman 2. Sophmore 3. Junior 4. Senior
42. Age: please indicate _____
43. College major: please indicate _____

Part II.

There are three athletic shoes Web sites that you will be asked to visit: Nike, New Balance and Reebok. Each site offers unique characteristics, such as the Nike site offers a live synchronous chat and customization options; New Balance offers Club New Balance with a vote and debate blog and a share your story option; and also events and sponsorships that allow you to read featured athletes' stories and tell your story options; and Reebok has a sports, music and games option that allows you to download items, listen to music and play games.

Instructions: Please visit the Web site listed below, spend as much time as you need to make a decision about purchasing a pair of any type of athletic shoes from each site and then answer the following questions regarding each of the sites.

Web site address: www. nike.com

N1. I was in control of my navigation through the Web site.

Strongly disagree				Strongly agree
1	2	3	4	5

N2. I had some control over the content that I wanted to see in the Web site.

Strongly disagree				Strongly agree
1	2	3	4	5

N3. I had total control over the pace of my visit to the site.

Strongly disagree				Strongly agree
1	2	3	4	5

N4. I could communicate with the company directly for further questions about the company or its products.

Strongly disagree				Strongly agree
1	2	3	4	5

N5. The site had the ability to respond to my specific requests quickly and efficiently.

Strongly disagree				Strongly agree
1	2	3	4	5

N6. I could communicate in real-time with other customers who shared my interest in the product

Strongly disagree				Strongly agree
1	2	3	4	5

N7. I just had a personal conversation with a social, knowledgeable and warm representative from the company.

Strongly disagree				Strongly agree
1	2	3	4	5

N8. The Web site was like talking back to me while I clicked through it.

Strongly disagree				Strongly agree
1	2	3	4	5

N9. The information in the Web site was personally relevant and interesting to me.

Strongly disagree Strongly agree

1 2 3 4 5

N10. Overall, how would you rate this site in terms of interactivity?

Low Interactivity		Moderate Interactivity		High Interactivity
1	2	3	4	5

N11. The Web site makes it easy for me to build a relationship with this company.

Strongly disagree				Strongly agree
1	2	3	4	5

N12. I would like to visit this site again in the future.

Strongly disagree				Strongly agree
1	2	3	4	5

N13. I'm satisfied with the service provided by this site.

Strongly disagree				Strongly agree
1	2	3	4	5

N14. I feel comfortable in surfing this site.

Strongly disagree				Strongly agree
1	2	3	4	5

N15. I feel surfing this site is a good way for me to spend my time.

Strongly disagree				Strongly agree
1	2	3	4	5

N16. Compared with other Web sites, I would rate this one as one of the best.

Strongly disagree				Strongly agree
1	2	3	4	5

The brand is:

N17.

Bad						Good
1	2	3	4	5	6	7

N18.

Likeable						Not Likeable
1	2	3	4	5	6	7

N19.

Not Enjoyable						Enjoyable
1	2	3	4	5	6	7

N20. Did you visit the live synchronous chat? Yes _____ No_____

N21. Did you participate in the live synchronous chat? Yes ____ No_____

N22. Even if you did not visit this live chat feature, is this feature something you would use in the future when shopping on this site? Yes ____
No ____

N23. Would this live synchronous chat feature affect your purchase decision?
Strongly disagree Strongly agree
1 2 3 4 5

N24. What other features did you visit and find helpful?

N25. How likely would you be to purchase from this site?
Not at all likely Highly Likely
1 2 3 4 5 6 7

Instructions: Please visit the Web site listed below, spend as much time as you need to make a decision about purchasing a pair of any type of athletic shoes from each site and then answer the following questions regarding each of the sites.

Web site address: www. newbalance.com

NB1. I was in control of my navigation through the Web site.
Strongly disagree Strongly agree
1 2 3 4 5

NB2. I had some control over the content that I wanted to see in the Web site.
Strongly disagree Strongly agree
1 2 3 4 5

NB3. I had total control over the pace of my visit to the site.
Strongly disagree Strongly agree
1 2 3 4 5

NB4. I could communicate with the company directly for further questions about the company or its products.
Strongly disagree Strongly agree
1 2 3 4 5

NB5. The site had the ability to respond to my specific requests quickly and efficiently.
Strongly disagree Strongly agree

1 2 3 4 5

NB6. I could communicate in real-time with other customers who shared my interest in the product

Strongly disagree Strongly agree

1 2 3 4 5

NB7. I just had a personal conversation with a social, knowledgeable and warm representative from the company.

Strongly disagree Strongly agree

1 2 3 4 5

NB8. The Web site was like talking back to me while I clicked through it.

Strongly disagree Strongly agree

1 2 3 4 5

NB9. The information in the Web site was personally relevant and interesting to me.

Strongly disagree Strongly agree

1 2 3 4 5

NB10. Overall, how would you rate this site in terms of interactivity?

Low Interactivity Moderate Interactivity High Interactivity

1 2 3 4 5

NB11. The Web site makes it easy for me to build a relationship with this company.

Strongly disagree Strongly agree

1 2 3 4 5

NB12. I would like to visit this site again in the future.

Strongly disagree Strongly agree

1 2 3 4 5

NB13. I'm satisfied with the service provided by this site.

Strongly disagree Strongly agree

1 2 3 4 5

NB14. I feel comfortable in surfing this site.

Strongly disagree Strongly agree

1 2 3 4 5

NB15. I feel surfing this site is a good way for me to spend my time.

Strongly disagree Strongly agree

1 2 3 4 5

NB16. Compared with other Web sites, I would rate this one as one of the best.

Strongly disagree				Strongly agree
1	2	3	4	5

The brand is:

NB17.

Bad						Good
1	2	3	4	5	6	7

NB18.

Likeable						Not Likeable
1	2	3	4	5	6	7

NB19.

Not Enjoyable						Enjoyable
1	2	3	4	5	6	7

NB20. Did you visit the Club NB vote and debate? Yes _____ No_____

NB22. Did you participate in the Club NB vote and debate? Yes ____ No_____

NB23. Did you visit the Club NB tell your story? Yes _____ No_____

NB24. Did you participate in the Club NB tell your story? Yes ____ No_____

NB25. Even if you did not visit the Club NB vote and debate, is this feature something you would use in the future when shopping on this site?
Yes ____ No ____

NB26. Even if you did not visit the Club NB tell your story, is this feature something you would use in the future when shopping on this site?
Yes ____ No ____

NB27. Would this Club NB vote and debate and tell your story features affect your purchase decision?

Strongly disagree				Strongly agree
1	2	3	4	5

NB28. What other features on this site did you visit and find helpful?

NB29. How likely would you be to purchase from this site?

Not at all likely Highly Likely
1 2 3 4 5 6 7
Instructions: Please visit the Web site listed below, spend as much time as you need to make a decision about purchasing a pair of any type of athletic shoes from each site and then answer the following questions regarding each of the sites.

Web site address: www.reebok.com

R1. I was in control of my navigation through the Web site.
Strongly disagree Strongly agree
1 2 3 4 5

R2. I had some control over the content that I wanted to see in the Web site.
Strongly disagree Strongly agree
1 2 3 4 5

R3. I had total control over the pace of my visit to the site.
Strongly disagree Strongly agree
1 2 3 4 5

R4. I could communicate with the company directly for further questions about the company or its products.
Strongly disagree Strongly agree
1 2 3 4 5

R5. The site had the ability to respond to my specific requests quickly and efficiently.
Strongly disagree Strongly agree
1 2 3 4 5

R6. I could communicate in real-time with other customers who shared my interest in the product
Strongly disagree Strongly agree
1 2 3 4 5

R7. I just had a personal conversation with a social, knowledgeable and warm representative from the company.
Strongly disagree Strongly agree
1 2 3 4 5

R8. The Web site was like talking back to me while I clicked through it.
Strongly disagree Strongly agree
1 2 3 4 5

R9. The information in the Web site was personally relevant and interesting to me.

Strongly disagree				Strongly agree
1	2	3	4	5

R10. Overall, how would you rate this site in terms of interactivity?

Low Interactivity		Moderate Interactivity		High Interactivity
1	2	3	4	5

R11. The Web site makes it easy for me to build a relationship with this company.

Strongly disagree				Strongly agree
1	2	3	4	5

R12. I would like to visit this site again in the future.

Strongly disagree				Strongly agree
1	2	3	4	5

R13. I'm satisfied with the service provided by this site.

Strongly disagree				Strongly agree
1	2	3	4	5

R14. I feel comfortable in surfing this site.

Strongly disagree				Strongly agree
1	2	3	4	5

R15. I feel surfing this site is a good way for me to spend my time.

Strongly disagree				Strongly agree
1	2	3	4	5

R16. Compared with other Web sites, I would rate this one as one of the best.

Strongly disagree				Strongly agree
1	2	3	4	5

The brand is:

R17.

Bad						Good
1	2	3	4	5	6	7

R18.

Likeable						Not Likeable
1	2	3	4	5	6	7

R19.

Not Enjoyable						Enjoyable

1 2 3 4 5 6 7

R20. Did you visit the sports, music and games link? Yes _____ No_____

R21. Did you participate in any of the sports, music or games? Yes____No_____

R22. If yes, which ones did you participate in?

R23. Even if you did not visit the sports, music and games link, is this feature something you would use in the future when shopping on this site?
Yes ____ No ____

R24. Would this sports, music and game feature affect your purchase decision?
Strongly disagree Strongly agree
1 2 3 4 5

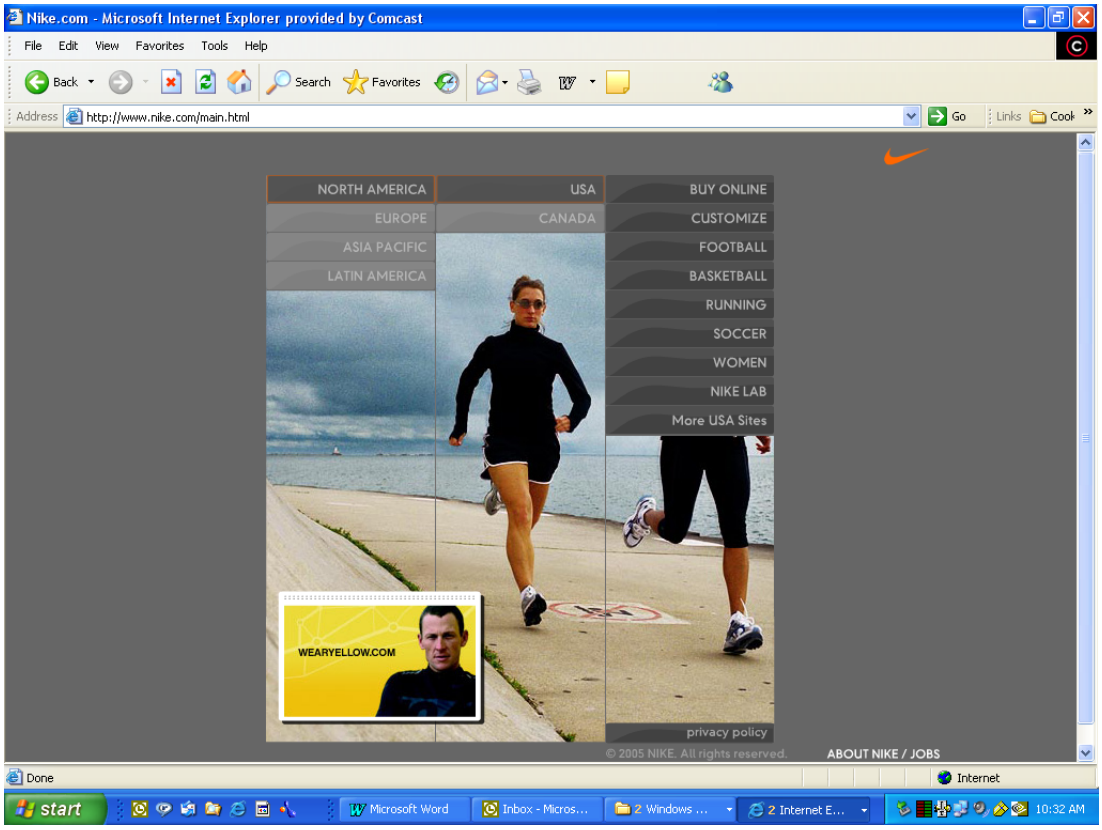
R25. What other features on this site did you visit and find helpful?

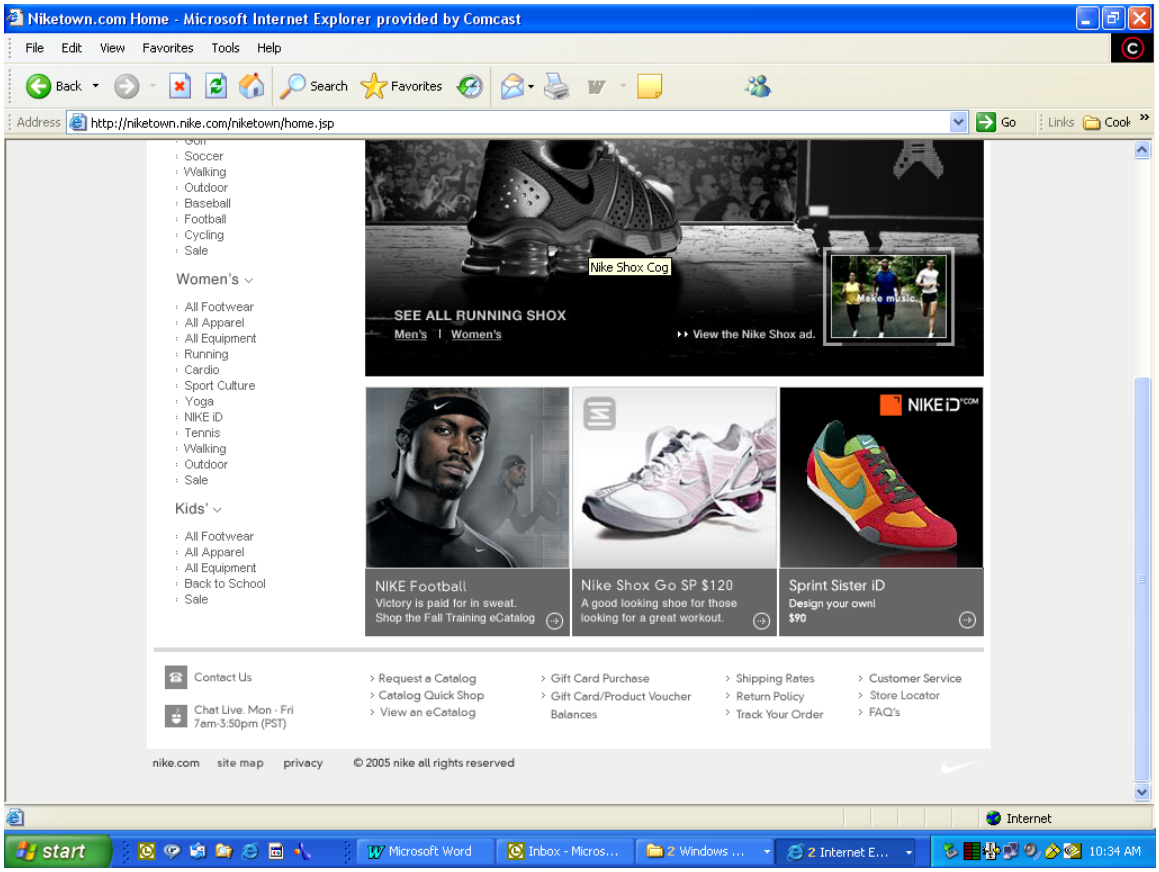
R26. How likely would you be to purchase from this site?
Not at all likely Highly Likely
1 2 3 4 5 6 7

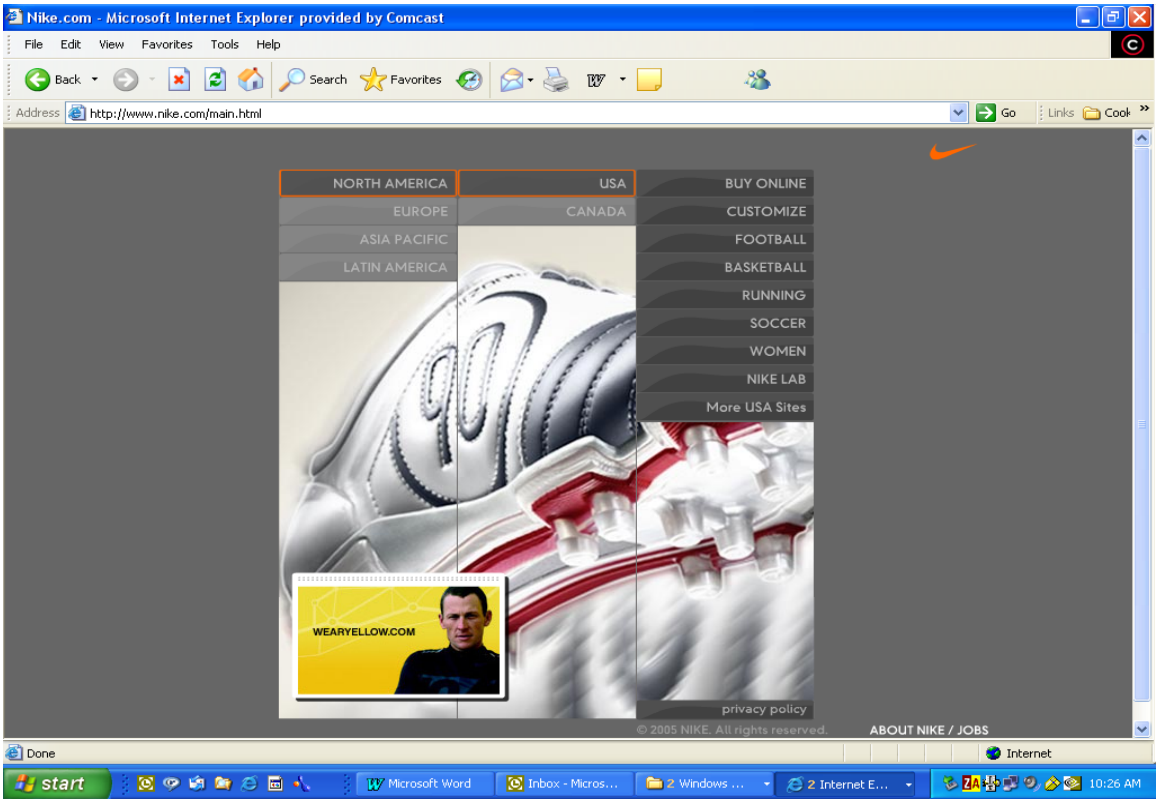
O1. How would you rate the three Web sites in terms of interactivity? Please rank on a scale of 1 to 3, with 1 being the most interactive and 3 representing the least interactive.
Nike _____
New Balance _____
Reebok _____

O2. If you were planning to purchase athletic shoes, which of the three brands would you most likely purchase and why? Please indicate only one.
Nike ____
New Balance ____
Reebok ____

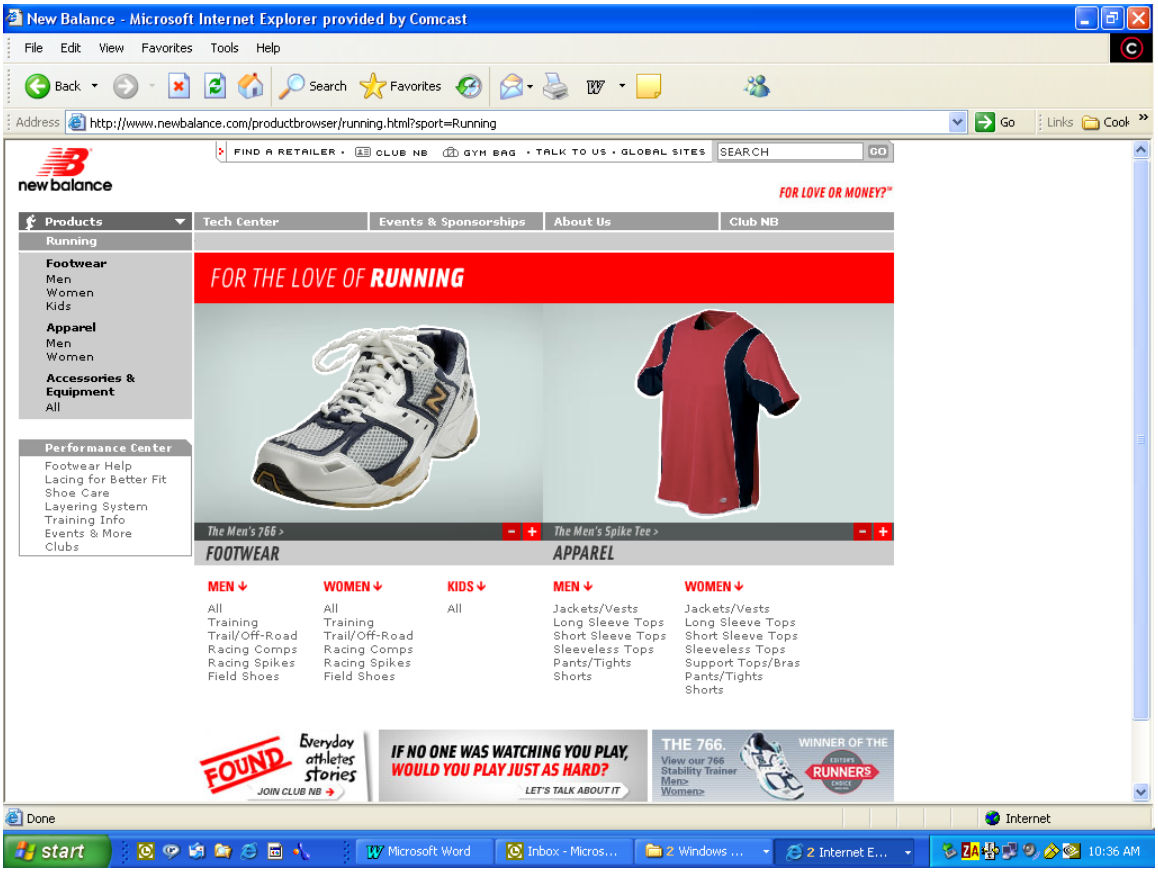
Appendix C: Web Site Screen Shots for Nike, New Balance and Reebok

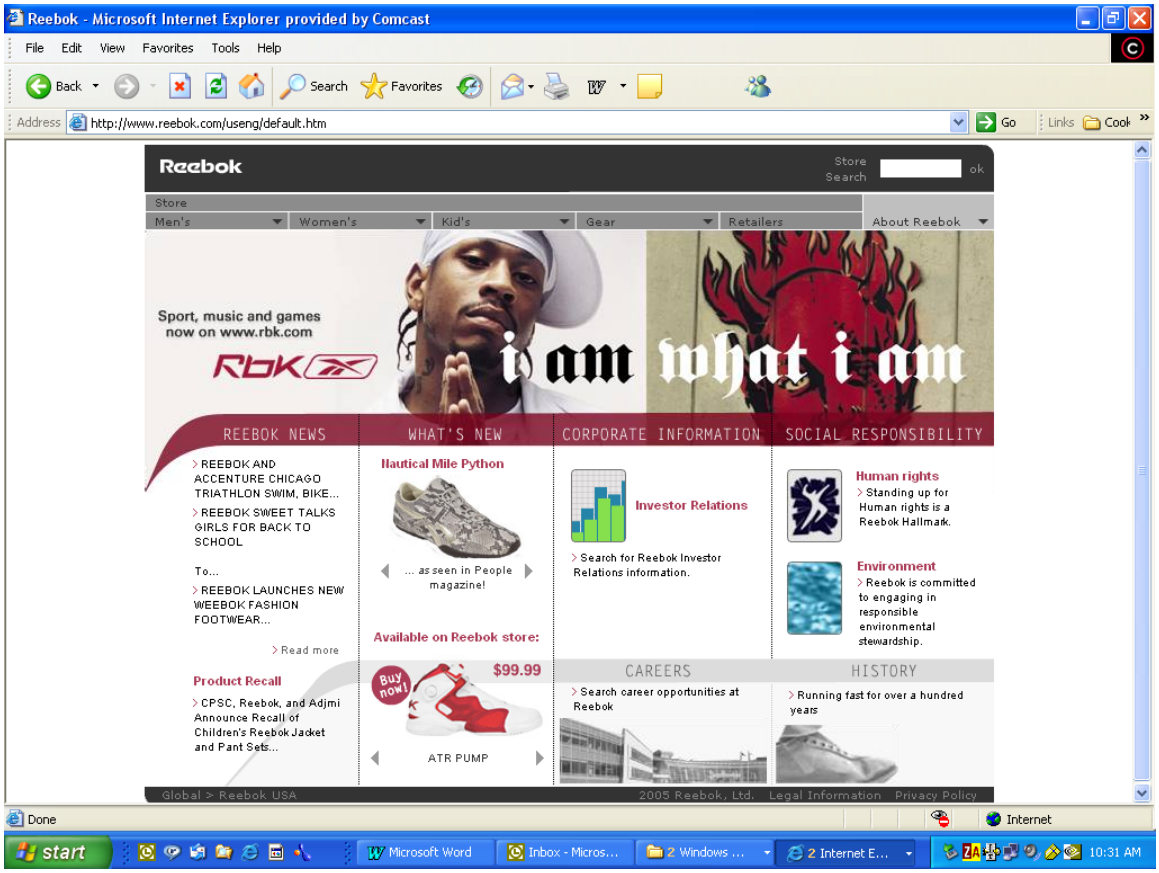


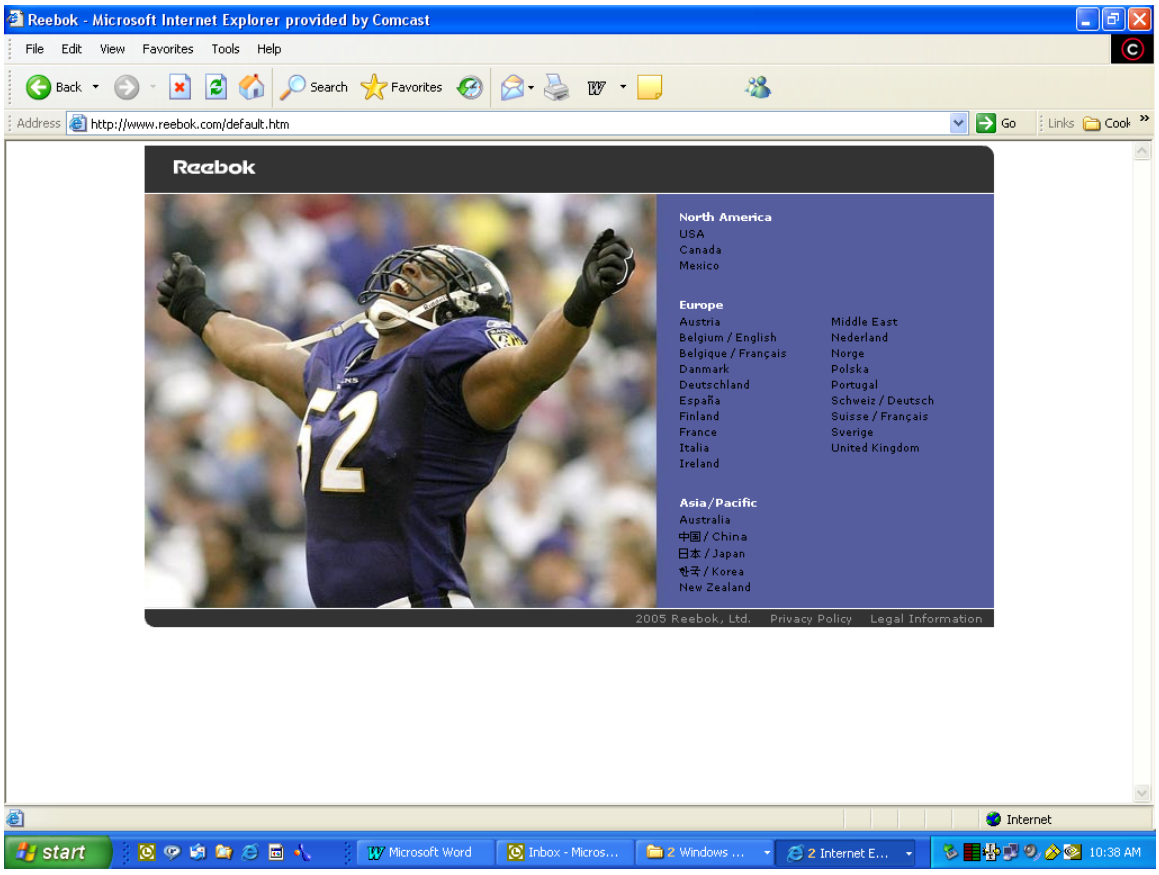

Niketown.com Home - Microsoft Internet Explorer provided by Comcast
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Address http://niketown.nike.com/niketown/home.jsp
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Soccer
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Baseball
Football
Cycling
Sale
Women's
All Footwear
All Apparel
All Equipment
Running
Cardio
Sport Culture
Yoga
NIKE iD
Tennis
Walking
Outdoor
Sale
Kids'
All Footwear
All Apparel
All Equipment
Back to School
Sale
Nike Shox Cog
SEE ALL RUNNING SHOX
Men's | Women's
View the Nike Shox ad.
NIKE Football
Victory is paid for in sweat.
Shop the Fall Training eCatalog
Nike Shox Go SP $120
A good looking shoe for those looking for a great workout.
Sprint Sister iD
Design your own!
$90
Contact Us
Chat Live. Mon - Fri
7am-3:50pm (PST)
Request a Catalog
Catalog Quick Shop
View an eCatalog
Gift Card Purchase
Gift Card/Product Voucher Balances
Shipping Rates
Return Policy
Track Your Order
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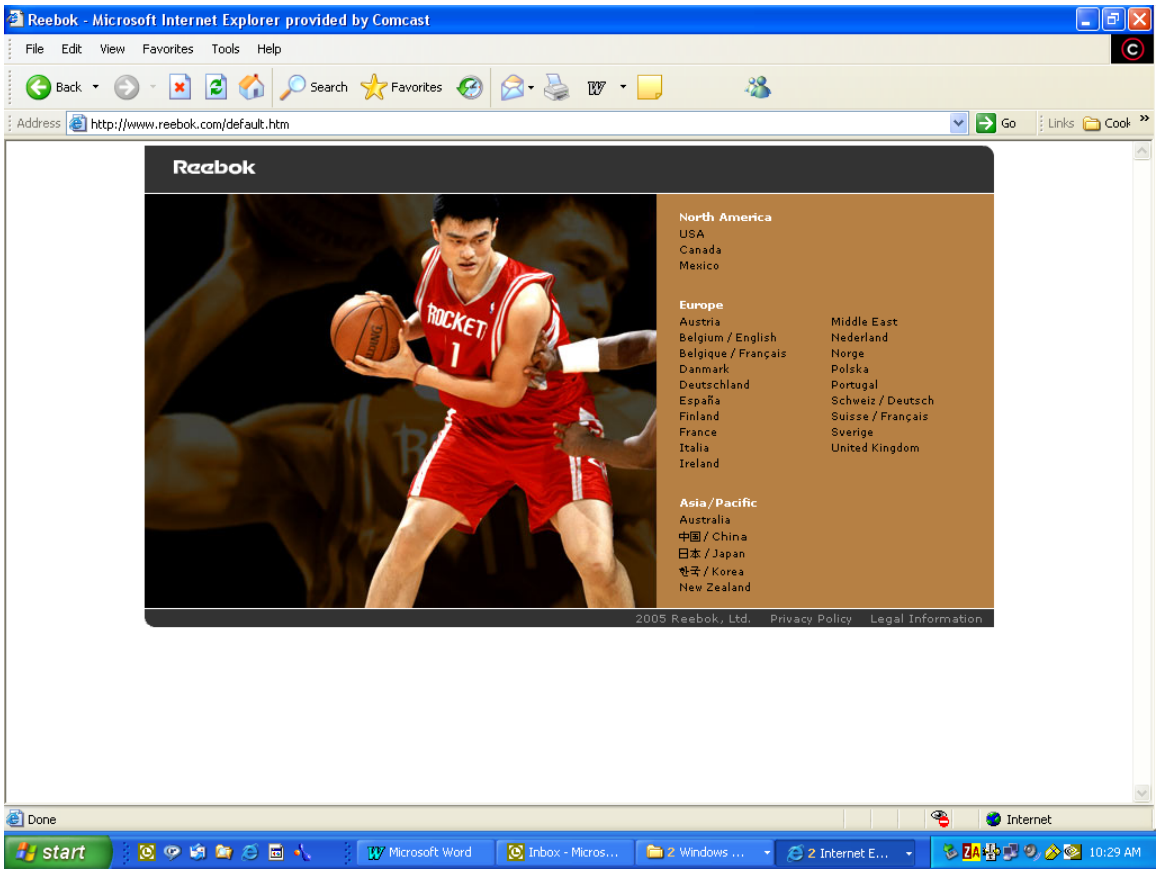

Nike.com - Microsoft Internet Explorer provided by Comcast
File Edit View Favorites Tools Help
Back Search Favorites
Address http://www.nike.com/main.html
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NORTH AMERICA
EUROPE
ASIA PACIFIC
LATIN AMERICA
USA
CANADA
BUY ONLINE
CUSTOMIZE
FOOTBALL
BASKETBALL
RUNNING
SOCCER
WOMEN
NIKE LAB
More USA Sites
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© 2005 NIKE. All rights reserved.
ABOUT NIKE / JOBS
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New Balance - Microsoft Internet Explorer provided by Comcast
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Address http://www.newbalance.com/aboutus/nbindex.html
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Pop-up blocked. To see this pop-up or additional options click here...
FIND A RETAILER · CLUB NB GYM BAG · TALK TO US · GLOBAL SITES SEARCH GO
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FOR LOVE OR MONEY?"
Products Tech Center Events & Sponsorships About Us Club NB
FOR THE LOVE OF...
RUNNING
WALKING
CROSS-TRAINING
TENNIS
BASKETBALL
KIDS SPORTS
Join New Balance Nation!
Learn more
WOULD YOU PLAY JUST AS HARD, IF NO ONE WERE WATCHING?
NO
YES
VOTE
The ALL NEW CROSSOVER COLLECTION
NB NEWS:
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©2005 New Balance Athletic Shoe, Inc. All Rights Reserved.
achieve new balance ©2005
Internet
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New Balance - Microsoft Internet Explorer provided by Comcast
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FIND A RETAILER · CLUB NB GYM BAG · TALK TO US · GLOBAL SITES SEARCH GO
new balance
FOR LOVE OR MONEY?™
Products
Tech Center
Events & Sponsorships
About Us
Club NB
Running
Footwear
Men
Women
Kids
Apparel
Men
Women
Accessories & Equipment
All
Performance Center
Footwear Help
Lacing for Better Fit
Shoe Care
Layering System
Training Info
Events & More
Clubs
FOR THE LOVE OF RUNNING
The Men's 766 >
The Men's Spike Tee >
FOOTWEAR
APPAREL
MEN
All
Training
Trail/Off-Road
Racing Comps
Racing Spikes
Field Shoes
WOMEN
All
Training
Trail/Off-Road
Racing Comps
Racing Spikes
Field Shoes
KIDS
All
MEN
Jackets/Vests
Long Sleeve Tops
Short Sleeve Tops
Sleeveless Tops
Pants/Tights
Shorts
WOMEN
Jackets/Vests
Long Sleeve Tops
Short Sleeve Tops
Sleeveless Tops
Support Tops/Bras
Pants/Tights
Shorts
FOUND
Everyday athletes stories
JOIN CLUB NB
IF NO ONE WAS WATCHING YOU PLAY, WOULD YOU PLAY JUST AS HARD?
LET'S TALK ABOUT IT
THE 766.
View our 766 Stability Trainer
Men>
Women>
WINNER OF THE
RUNNER'S
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Reebok - Microsoft Internet Explorer provided by Comcast
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Men's Women's Kid's Gear Retailers About Reebok
Sport, music and games now on www.rbk.com
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REEBOK NEWS
WHAT'S NEW
CORPORATE INFORMATION
SOCIAL RESPONSIBILITY
> REEBOK AND ACCENTURE CHICAGO TRIATHLON SWIM, BIKE...
> REEBOK SWEET TALKS GIRLS FOR BACK TO SCHOOL
To...
> REEBOK LAUNCHES NEW WEEBOK FASHION FOOTWEAR...
> Read more
Product Recall
> CPSC, Reebok, and Adjmi Announce Recall of Children's Reebok Jacket and Pant Sets...
Nautical Mile Python
... as seen in People magazine!
Available on Reebok store:
Buy now!
$99.99
ATR PUMP
Investor Relations
> Search for Reebok Investor Relations information.
Human rights
> Standing up for Human rights is a Reebok Hallmark.
Environment
> Reebok is committed to engaging in responsible environmental stewardship.
CAREERS
> Search career opportunities at Reebok
HISTORY
> Running fast for over a hundred years
Global > Reebok USA
2005 Reebok, Ltd. Legal Information Privacy Policy
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Address http://www.reebok.com/default.htm
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North America
USA
Canada
Mexico
Europe
Austria
Belgium / English
Belgique / Français
Danmark
Deutschland
España
Finland
France
Italia
Ireland
Middle East
Nederland
Norge
Polska
Portugal
Schweiz / Deutsch
Suisse / Français
Sverige
United Kingdom
Asia/Pacific
Australia
中国 / China
日本 / Japan
한국 / Korea
New Zealand
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North America
USA
Canada
Mexico
Europe
Austria
Belgium / English
Belgique / Français
Danmark
Deutschland
España
Finland
France
Italia
Ireland
Middle East
Nederland
Norge
Polska
Portugal
Schweiz / Deutsch
Suisse / Français
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United Kingdom
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Australia
中国 / China
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Appendix D: Camtasia Analysis Form

Web Site	**Activities**
Nike Total Time Spent: HTH Time: HTC Time: HTCO Time:	
New Balance Total Time Spent: HTH Time: HTC Time: HTCO Time:	

Reebok Total Time Spent: HTH Time: HTC Time: HTCO Time:	

VITA

Carolynn A. McMahan earned a bachelor degree in Finance from the University of Mississippi and a Masters of Business Administration from the University of Tennessee at Chattanooga. In December 2005, she completed the requirements for the Ph.D. degree in Communications and Information with a primary concentration in Advertising and a secondary concentration in Management. She is currently employed as an Assistant Professor of Advertising at the University of North Florida in Ponte Vedra, Florida.

She has ten years of university-level teaching experience in advertising, marketing, management and finance, both in traditional classroom settings and in distance learning and online environments. Her teaching is further enhanced by five years of professional work experience as an Account Executive for an agency in Atlanta, Georgia.

Her research concentration is on gender and interactivity in Internet advertising, gender portrayals in both domestic and international contexts, and advertising to the teen targeted market. She has presented at several conferences, such as the *Academy of International Business* and the *University of Tennessee Research Symposium*, and has published in journals, such as *Sex Roles* and *Journal of International Business and Economics*.