Analysis of Clothing Websites for Young Customer Retention based on A Model of Customer Relationship Management via the Internet

by

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(Abstract)

In today's era of intense competition for acquiring and retaining customers, customer retention has become a major issue and a key objective in modern retailing. With the emergence of new information technologies, the Internet offers new possibilities for customer retention through the management of relationships between marketers and consumers. Little empirical research has addressed the role of Internet websites in retaining customers for particular brands or at particular stores. The purpose of this research was to determine the effects of the attitudes of a sample of young consumers aged 18 to 22 toward their favorite websites on intentions to purchase through the Internet and channels other than Internet clothing websites. The data were collected using an online survey with a structured questionnaire. The subjects of the study were 414 male and female undergraduate and graduate students at Virginia Tech and The Ohio State University, who were aged 18 to 22 and non-married.

Several hypotheses were put forward and results except for one hypothesis were supported. Factor analysis, cluster analysis, factorial MANOVA, canonical correlation analysis, multiple regression, path analysis, and t-tests were employed to test the research hypotheses on the relationships among the variables. The factorial MANOVA results showed that shopping orientation and previous online shopping experience affected the evaluation of general clothing website characteristics, as well as the evaluation of favorite clothing websites. The canonical correlation results revealed that the product information, customer service, and navigation factors represented the favorite clothing website characteristics and were well predicted by the same constructs of the general clothing website characteristics. The path analysis revealed that attitudes toward favorite

clothing websites were positively related to intentions to search for information at favorite clothing websites, and that intentions to search for information at those websites were positively related to intentions to purchase from those websites as well as from channels other than Internet clothing websites. Attitudes toward favorite clothing websites were directly and positively related to intentions to purchase clothing items from favorite clothing websites, and were not directly related to intentions to purchase clothing items from channels other than Internet clothing websites. The results also showed that shopping orientation affected intentions to search for information on one hand, and intentions to purchase clothing items from favorite clothing websites on the other. The online information search and purchase groups were significantly different in their intentions to purchase clothing items from their favorite clothing websites.

From the results of the present research, it is concluded that Internet websites play a pivotal role in forming consumers' attitude toward the websites, which eventually lead to their information search and purchase intention from the websites. In addition, consumers' online information search intentions influence their purchase intention at channels other than Internet. Thus, by establishing effective websites, marketers can retain their customers through multiple channels including the Internet, brick-and-mortar stores, and catalogs.

Table of Contents

List of Tables

List of Figures

CHAPTER I

INTRODUCTION

As consumers' demands for products and services become more diversified, and their shopping and purchasing behavior changes with the expanded number of vendors available to them via the Internet and other means (Korner & Zimmermann, 2000), marketers will find it increasingly challenging to acquire and keep customers. In today's era of intense competition for acquiring and retaining customers, one of the main marketing issues facing many companies is the need to focus business activities on the consumer; however, customer acquisition is expensive. According to Rosenberg and Crepiel (1984), the cost to attract a new customer can be as much as six times the cost to keep a current one. A number of researchers indicate that customer loyalty is a key ingredient of firms' profitability due to the high cost of acquiring new customers (Reichheld & Sasser, 1990; Srinivasan, Anderson, & Ponnavolu, 2002). It is not surprising, therefore, that customer retention and the management of relationships with customers have become a major issue and a key objective in modern retailing.

Since the emergence of new information technologies, such as the World Wide Web, customer-focused business activities have attracted researchers' and marketers' attention, along with the application of traditional marketing concepts to e-commerce. The Internet provides new types of intermediaries between businesses and consumers, such as the interface through web sites. Through the Internet, consumers can access information to help them find the services and products they want. Consumers can access data, products and services from around the world in their homes or offices (Korner & Zimmermann, 2000). They either browse the Internet to retrieve the latest information about products and services, or they buy or trade goods. By also allowing distantly separated consumers to interact directly with each other, the Internet provides a feasible way for individuals and companies to buy, sell or trade products and services

through electronic market places (Ramaswami, Strader, & Brett, 2000-2001) and offers new possibilities for customer retention through the management of relationships between marketers and consumers.

Background

Over recent decades in the United States, a growing percentage of consumer shopping and buying activity has been taking place in the home through the use of direct mail, catalogs and other means, while direct marketing by companies to reach consumers in their homes has been growing rapidly as well (Engel, Blackwell, & Miniard, 1995). These patterns have occurred as consumers' disposable time for shopping has dwindled and their need for in-home shopping has increased, due in part to the expanding amounts of time spent in paid employment. A book by Schor (1992) showed that, in 1990, Americans worked an average of nearly one month more per year than in 1970, suggesting a significant decline in leisure activities. According to a Bureau of Labor Statistics report released in 2000, more than 25 million Americans - 20.5 percent of the total workforce in paid jobs - worked at least 49 hours a week in 1999 (as cited in abcnews.com). Half of them reported that they worked more than 59 hours a week.

According to Sroge (1991), during the 1980s, direct mail and other non-store retailing captured a substantial share of the retail market and grew one-third faster than average retail sales. Shim and Drake (1990) report that, in 1980, mail order sales grew at twice the rate of sales in retail stores. Shim and Mahoney (1992) noted that sales of catalog retailers outnumbered annual store sales by 10 percent.

A report by the Direct Marketing Association (1990, 1992) indicated that clothing was one of the most frequently purchased products from catalogs between 1988 and 1991. Direct marketing sales of clothing more than doubled between 1982 and 1987 (U.S. Bureau of the Census, 1985; 1990). In 1992, companies that used catalogs and mail order houses reported that orders for clothing products totaled more than 9,000 and accounted for $5.6 million in sales (Shim & Mahoney, 1992).

More recently, purchasing via the Internet has become one of the most rapidly growing forms of in-home buying, with sales growth rates outpacing those in traditional retail settings (Levy & Weitz, 2001). Business-to-consumer Internet sales in the United States grew by 120 percent between 1998 and 1999 to approximately $33.1 billion (Shop.org & Boston Consulting Group, 2000). Forrester Research (2001) reports that, in 2000, Internet sales to consumers totaled $48.3 billion, representing an annual growth rate of 46 percent since 1999. According to the Monthly Retail Trade Survey of the U.S. Census Bureau (as cited in Srinivasan, Anderson, & Ponnavolu, 2002), Internet retail sales for 2000 were $25.8 billion, which was 49 percent higher than the sales of $17.3 billion for 1999.

The use of e-tailing, as retailing via the Internet is often called, is also growing in the U.S. textile and clothing sector (J. W. Jones, personal communication, March 13, 2000). The National Purchase Diary (NPD) reports that, although in-store clothing retail sales dominated the overall clothing market by far in 1999, online clothing sales totaled about $1.0 billion, with a sharp increase occurring in the fourth quarter of that year when on-line sales tripled between September and November (J. W. Jones, personal communication). The Greenfield Online survey (2000) reports that clothing was one of the three main product categories that web users were likely to purchase online, the other two categories being computer software and books. A Greenfield Online Eye on Clothing study also showed that specific clothing retailer sites were among the most popular of all websites, followed by online department stores and search engines (J. W. Jones, personal communication).

Although the general trend is toward the use of the Internet as an important shopping method, young consumers, particularly those aged 16 to 22, are becoming the Internet's "hottest" market, according to Silverman (2000). They spend an average of 10 hours a week online, which is three hours more per week than adults. During 1999, 24 percent of all shoppers in the 16-22 age group bought items online, and they spent 13 percent of their disposable income for online purchases, versus just 3 percent for adults (Silverman, 2000).

A study by Forrester Research Inc. (as cited in Silverman, 2000) revealed that consumers aged 16 to 22 had already purchased many products online, while seeking out

deals and conveniences of shopping. The findings indicate that this group enjoys buying clothing items online, helping to make clothing the third most popular category for Internet sales to this group. The most popular category was music CDs, which topped the charts in this group's online purchases, with half of all young shoppers spending an average of $208 a year for CDs online. Books were second, with 45 percent of young buyers spending an average of $256 a year online. Clothing acquisitions were third, with 29 percent of these consumers spending an average of $400 per year for clothing sold through the Internet. The study also showed that Gap.com, Jcrew.com, and LandsEnd.com were the most popular clothing websites for young consumers.

The rapid growth of e-tailing may reflect certain compelling advantages of shopping on the Internet over conventional brick-and-mortar stores. With a few clicks of the mouse, consumers are able to save time and effort by comparing and purchasing companies' products and services offered on the web 24 hours a day. The Internet also can benefit retailers by reducing real estate costs and by helping them maintain low inventories. Some retailers have found it an easy way to access customers. Moreover, with consumers increasingly using the Internet as a shopping method, the Internet can be a powerful medium for marketers to build and maintain a customer base, and a website storefront can materially influence a company's success in attracting and retaining customers (Geissler, 2001; Korner & Zimmermann, 2000; Selz, 1998).

The Problem

Despite the significant growth and optimistic outlook in Internet shopping, many companies still face challenges in e-tailing. Although it is reported that approximately 72 percent of Internet users search for products online at least once per month (Shop.org, 2001), such a high level of search activity does not translate into similarly high purchase levels. Conversion rates, the proportion of consumers who buy out of all those who visit a website, remain low and range between 2.8 percent and 3.2 percent (Shop.org, & Boston Consulting Group, 2000).

A recent survey of 9,500 online shoppers conducted by BizRate.com reveals that as many as 55 percent of online shoppers abandon their "shopping carts" prior to checkout, and 32 percent abandon them at the point of sale (Shop.org, 2001). According to Blank (2000), businesses worldwide lost approximately $6.1 billion due to failed purchase attempts in 2000. Among the reasons commonly cited for consumers' aborting search and purchase attempts are a reluctance to provide personal and credit card information, technical problems with websites, and problems in locating products (Shim, Eastlick, Lotz, & Warrington, 2001). These reasons suggest that consumers' decisions not to buy while shopping on the web are largely the consequence of unfavorable reactions to websites rather than lack of interest in this distribution channel.

Clothing e-tailing comes with its own set of challenges. Because the purchase of clothing products is a complicated process, many consumers show a reluctance to shop online for such reasons as inability to see and try on products, delivery charges, and difficulty in returning items (J. W. Jones, personal communication, March 13, 2000; McKinney, 1999). An effective website that includes product information through such means as photos, textual descriptions, product demonstrations and customer services may therefore play a key role for companies in attracting customers to shop online.

Given the increasing competition in the U.S. clothing market, including on the Internet, and considering the increasing number of websites and consumers' usage of the Internet for shopping, a retailer's success in e-tailing and overall may be directly tied to the effectiveness of its website in eliciting consumers' positive attitudes toward the website and toward the company and its products. As a consumer's attitude toward an object can be recognized by the individual's positive or negative evaluation of that object, consumers' positive attitudes toward clothing websites can be drawn from their favorable or unfavorable evaluations of those websites; thus, an effective clothing website can elicit consumers' positive attitudes toward that website.

The attainment of a positive attitude is crucial in retaining customers because, in the long run, it can influence future shopping behavior. Arrondo, Berne, Mugica, and Rivera (2002) suggest that attitude is one of the two basic components of customer loyalty, the other being behavior and its effects on future behavior. Engel, Blackwell, and Miniard (1995) noted that attitude, along with intention, is a good predictor of future

behavior. The Theory of Planned Behavior and Reasoned Action postulates that attitude is one of the immediate determinants of the intention to perform a behavior (Ajzen & Fishbein, 1980). The more positive the attitudes that consumers have toward a store or brand, the higher the consumers' intentions to purchase will be. By the same token, the more positive the attitudes that consumers have toward clothing websites, the higher the consumers' intentions to purchase from those websites will be.

As behavioral intention is believed to predict future behavior (Ajzen & Fishbein, 1980), it is assumed that the stronger the intentions of consumers to purchase clothing items at a certain store, the more likely they would actually purchase at the store. In this vein, the need exists to investigate both consumers' attitudes toward clothing websites and their intentions to purchase clothing items appearing on the websites from those websites or brick-and-mortar stores in order to predict consumers' future online shopping behavior as to remaining with particular stores or brands.

According to Klein (1998), information search processes are critical predictors of Internet consumer behavior, and information search facilities on the Internet are particularly useful for search goods due to the low perceived costs of assessing objective data. Klein suggests that the economics of information search explain the relationship between consumers' channel choices in relation to search and purchase processes. Because searching via one channel and purchasing via another channel may be perceived as more costly than searching and purchasing through a single channel, consumers may tend to use a single channel for information search and purchasing. Shim et al. (2001) report that, for search goods, an intention to search the Internet for product information leads to an intention to purchase through the same medium, so that the information search and the selected shopping channels should be considered crucial elements leading to consumers' choice in purchase formats.

It is argued, however, that consumers tend to use different channels in their search and purchase activities. The popular press has suggested that consumers shop in multiple channel combinations, including brick-and-mortar stores, catalogs and the Internet (as cited in Shim et al, 2001). Accordingly, retailers have been encouraged to employ multi-channel strategies to retain their customers (Olafson, 2001). Because purchases of clothing products, in particular, rely on sensory experiences such as touch, feel and the

trying on of certain items, clothing companies may find it difficult to persuade consumers to buy through website storefronts. Consumers may not use the same medium, that is, the Internet, for both information search and purchase as they can through other channels. They may browse websites only to obtain product information, and then go to brick-and-mortar stores to buy the products discovered on the websites because they cannot experience the products themselves through the websites, particularly in the case of clothing shopping. It would be of great interest to marketers to have information resulting from an investigation of the relationship between consumers' use of the Internet for information search and their choice of channels in conjunction with future purchase intentions.

This research examines the influence of clothing website storefronts on consumers' Internet shopping behavior. The study particularly focuses on the effect of consumers' attitudes toward their favorite clothing websites on their use of those websites for information search and on their intentions to purchase clothing items through those websites and channels other than the Internet websites.

Specifically, this study addresses the following questions concerning the influence of consumers' evaluations of different clothing website characteristics and their perceptions of favorite clothing websites on their Internet clothing shopping behavior. What are consumers' evaluations of the relative importance of different clothing website characteristics? What characteristics do consumers believe that their favorite clothing websites have? What aspects of the relative importance of different clothing website characteristics are associated with what aspects of consumers' perceptions of the characteristics of their favorite clothing websites? How do consumers' attitudes toward their favorite clothing websites influence their intentions to search for information at their favorite clothing websites and intentions to purchase through those websites and other channels? How do consumers' intentions to search for information at their favorite clothing websites influence their intentions to purchase through different channels? How do consumers' clothing shopping orientation and previous experience with online clothing shopping and/or purchasing influence their evaluation of the relative importance of different clothing website attributes and perceptions of their favorite clothing websites? How do consumers' clothing shopping orientation and previous experience

with online clothing shopping and/or purchasing influence their intention to search for information and to purchase clothing items from their favorite websites?

Such questions as those above may puzzle marketers who seek to attract and maintain their customers through the Internet. This research attempts to answer these questions through a survey of a sample of young Internet shoppers aged 18 to 22. Such shoppers are major Internet users and show great potential for future growth in purchasing products online (Silverman, 2000). This research includes Internet clothing websites and channels other than Internet websites such as brick-and-mortar stores and catalogs.

Justification

Despite the potential usefulness of the Internet as a medium for marketers to acquire and retain customers, little empirical research has addressed the role of Internet websites in forming consumers' intentions to purchase particular brands or at particular stores. Because many consumers use the Internet as a shopping method, building an effective website may ultimately contribute to marketers' ability to retain customers for their stores or brands. Research focused on the influence of website storefronts on consumers' Internet shopping behavior could provide clothing companies with helpful information concerning the problems and possible solutions in establishing websites. By establishing effective websites, clothing companies could retain customers through the Internet and build long-term relationships with them.

Research Objectives

The overall purpose of this research is to determine the effects of consumers' attitudes toward particular websites on their intentions to purchase through the Internet and some channels other than the Internet websites such as brick-and-mortar stores and catalogs. The study particularly focuses on consumers aged 18 to 22. To accomplish the

research purpose, the following objectives have been formulated. The objectives are to determine, for a sample of consumers aged 18 to 22:

1. the relationship of consumers' clothing shopping orientation and previous online shopping and/or purchasing experience to their evaluation of the relative importance of different clothing website attributes.
2. the relationship of consumers' clothing shopping orientation and previous online shopping and/or purchasing experience to their perceptions of the attributes of their favorite clothing websites.
3. the relationship between consumers' evaluation of the relative importance of different clothing website attributes and their perceptions of the attributes of their favorite clothing websites.
4. the relationship between consumers' attitudes toward their favorite clothing websites and consumers' intentions to search for information about clothing items on those websites.
5. the relationship between consumers' intentions to search for information about clothing items on their favorite websites and their intentions to purchase clothing items offered through their favorite clothing websites.
6. the relationship between consumers' attitudes toward their favorite clothing websites and their intentions to purchase clothing products from their favorite clothing websites.
7. the relationship between consumers' intentions to search for information about clothing items on their favorite clothing websites and their intentions to purchase clothing items located on their favorite websites from channels other than Internet clothing websites.
8. the relationship between consumers' attitudes toward their favorite clothing websites and their intentions to purchase clothing items located on their favorite websites from channels other than Internet clothing websites.
9. the relationship between consumers' clothing shopping orientation and their intentions to search for information about clothing products on their favorite clothing websites.

10. the relationship between consumers' clothing shopping orientation and their intentions to purchase clothing items from their favorite clothing websites.
11. the relationships between consumers' online clothing shopping and/or purchasing experience and their intentions to purchase clothing items from their favorite clothing websites.

CHAPTER II

REVIEW OF LITERATURE

Overview of In-home Shopping and Related Research

Over recent decades in the United States, as consumers' disposable time for shopping has decreased, due in part to the expanding amount of time spent in paid employment, a growing percentage of consumer shopping and purchasing activity has been taking place in the home through the use of direct mail, catalogs and other means (Engel, Blackwell, & Miniard, 1995). Along with consumers' increasing in-home shopping activity, direct marketing by companies to reach consumers in their homes has been growing rapidly as well. Today, direct marketing involves direct communication with targeted customers to obtain immediate responses from them, often on a one-to-one interactive basis (Kotler & Armstrong, 1999), and it plays a broader role than simply selling products and services. Direct marketing is an effective tool for interacting with customers in building long-term relationships.

Direct marketing methods offer many ways to reach consumers: direct selling, direct-mail ads, direct-mail catalogs, telemarketing, direct-response ads and interactive electronic media (e.g. the Internet) (Engel, Blackwell, & Miniard, 1995). Among these direct marketing methods, direct marketing through catalogs has experienced dramatic growth in recent years (Engel, Blackwell, & Miniard, 1995). According to Lumpkin and Hawes (1985), the importance of catalog sales increased during the 1970s, and retail distribution through catalog sales has provided great potential since then. Recent research by Impact Resources (as cited in Engel, Blackwell, & Miniard, 1995) shows that about 20 percent of surveyed consumers use catalogs to regularly purchase products.

Mayer (1982) estimated that mail order sales, as a subset of the in-home shopping domain, exceeded $40 billion in the United States during 1980, and mail order marketing

grew at an annual rate of 15 percent, which was twice the growth rate of in-store retail sales during the same period of time. Gulbrandson and Beck (1990) reported that catalog shopping had increased at a faster annual rate (14%) than in-store sales (4%).

Since 1964, marketers and consumer science scholars have conducted many studies of catalog shopping and other types of in-home shopping (Jasper & Ouellette, 1994). The studies have addressed various issues: a range of consumers' demographic and psychographic characteristics (Cox & Rich, 1964; Cunningham & Cunningham, 1973; Gillet, 1970; Lumpkin & Hawes, 1985); motivation (Gillet); self-esteem (Cox & Rich; Cunningham & Cunningham; Gillet; Locander & Hermann, 1979; Reynolds, 1974); perceived risks (Locander & Hermann; Reynolds); information search to reduce perceived risks associated with catalog shopping (Gillet; Locander & Hermann; Roseliu, 1974; Seitz, 1988); and information sources in making purchase decisions (Davis, 1987; Martin, 1971; Seitz; Shim & Drake, 1988). The research on in-home shopping has made important contributions to the development of direct marketing strategies (Lumpkin & Hawes).

Gillett (1970) analyzed the relationship among demographic, socioeconomic and attitudinal characteristics of urban female shoppers in relation to telephone and mail order shopping behavior with respect to general types of merchandise. The findings indicate that in-home buying frequency is related to family income, education and frequency of in-home shopping. Gillett found that experienced in-home shoppers rated in-home shopping more favorably than in-store shopping because of convenience, service, merchandise and price factors. He also found that a major deterrent to in-home purchasing was the perceived risk in buying merchandise without being able to physically inspect it.

Cunningham and Cunningham (1973) examined the socioeconomic and attitudinal differences between active and inactive in-home shoppers. Findings revealed that frequent in-home shoppers tended to come from a higher social class, with higher family income, than infrequent in-home shoppers. The head of the household generally had a high educational level and occupational status. Active shoppers were found to be less conservative, to have more positive attitudes toward the use of credit, and to be more cosmopolitan than inactive in-home shoppers.

Reynolds (1974) investigated psychographic characteristics of catalog shoppers. The results revealed that the strength of catalog offerings, not convenience, was the primary benefit sought by frequent catalog shoppers. Other findings were that catalog shoppers were risk takers and tended to have higher family incomes and self-confidence than consumers who did not shop by catalog. He concluded that psychographic analysis provided additional insight over demographic analysis in profiling the catalog-prone shopper.

Berkowitz, Walton and Walker (1979) tested several attitudinal variables to determine if users and nonusers of an in-home food distribution system displayed significant differences. They concluded that the users of the system placed a higher value on convenience, had more negative attitudes toward in-store shopping, were less price-conscious, and were more flexible and venturesome than the nonusers.

To determine how nonusers, infrequent users and frequent users of catalog shopping differed with respect to products purchased and demographic and psychographic profiles, Lumpkin and Hawes (1985) examined the relationships between catalog usage and other variables, such as the product categories purchased from catalogs and the subjects' demographic and psychographic profiles. A random sample of 1,898 households from 14 communities located in a southwestern state was contacted and, with a response rate of 30.6 percent, the responses from 581 of them were analyzed. Eight of the 13 demographic variables were found to be significantly related to the frequency of catalog usage. The analysis of marital status revealed that respondents who were married indicated greater use of catalogs. In addition, the type of residence was a significant predictor of catalog usage: home owners tended to be more frequent catalog shoppers than non-owners. The number of children living at home was also positively related to catalog usage. Given the result that frequent purchase of children's clothing was associated with frequent catalog usage, households with a large number of children living at home would be expected to purchase children's clothing more often than would households with fewer children.

Lumpkin and Hawes (1985) also found that the education and income of male household heads were related to the frequency of catalog shopping: the more frequent users had household heads with more education and higher incomes than did infrequent

users or nonusers. In addition, the findings of the study revealed that a higher proportion of women than men were frequent catalog users. Older respondents reported more frequent shopping by catalog, which is interesting because, to the extent that catalog shopping represents an innovative method of procurement, innovation theory predicts that younger consumers would be among the first to use this shopping mode, a relatively new mode at the time of the study. The other demographic variable found to be significantly associated with catalog usage was the employment status of female heads of household. Nonusers of catalogs were more likely to be employed full-time outside the home, which although disagreeing with Reynold's (1974) results, suggested that time constraints increase consumers' propensity to shop by catalog.

Of the 16 psychographic variables in Lumpkin and Hawes' (1985) study, only careful shopping and credit usage were found to be significantly related to the frequency of catalog usage. The careful shoppers tended to be frequent users of catalog shopping. Nonusers reported that they devoted less attention to the comparison and selection of available products. The use of credit was also positively associated with the frequency of catalog shopping: frequent users of catalog shopping were also frequent users of credit cards or charge accounts.

In their study, Lumpkin and Hawes (1985) also identified the overall product purchase frequency for various general merchandise product categories and catalog usage. In general, respondents who reported frequent purchase of children's clothing, men's clothing, household appliances and housewares also reported frequent shopping by catalog.

Using a random sample of 348, Shim and Drake (1990) assessed consumers' beliefs about, and attitudes toward, mail order purchasing of clothing in relation to purchase intention through mail order. The results revealed that those with high intentions to purchase clothing through mail order had significantly higher belief scores on all of the nine attributes of shopping and had more favorable attitudes toward mail-order purchasing of clothing than those with low purchase intentions. In the study, the nine belief items included convenience, assortment, up-to-date fashionable items, quality, value for the price, variety of brands, ease of credit use for guaranteed or defective merchandise, adequate sales information, and variety of services. Respondents who had

high intentions to purchase clothing by mail order evaluated "convenience" the highest, which supports the finding of Berkowitz et al. (1979) that in-home shoppers placed a higher value on shopping convenience than did store shoppers.

Shim and Drake (1990) also compared the groups with high and low intentions to purchase clothing by mail order in terms of individual characteristics, social influences and situational influences. They found that all three variables were significantly related to intention to purchase clothing by mail order. The individual characteristics included demographics (gender, age, income, number of preschool children, education and marital status), fashion interest, self-confidence/venturesomeness, shopping center interest, and mail order purchase experience. Situational influences included time pressure, local shopping facilities, and an impulsive buying factor. Mail-order purchase experience was the most important variable in differentiating the two groups. Results showed that those who had previous experience with mail order shopping tended to have higher intentions to purchase clothing items through mail order than those who had no experience with mail order shopping. This finding is similar to one in the study by Berkowitz et al. (1979) that telephone order users tended to be mail order shoppers. Social influence was the second most important variable in differentiating the two groups. This is consistent with the statement of Engel et al. (1995) that interpersonal communications play a critical role in the adoption of innovative products or ideas and that word-of-mouth is most important when the product is perceived to have social, psychological or economic risk involved in its purchase. Findings also indicate that those who had high intentions to purchase clothing through mail tended to be married and have more preschool children, higher incomes and more time pressure for shopping than those with low intentions. In addition, shoppers in the high intention group tended to be younger and more self-confident and venturesome, which is inconsistent with Lumpkin and Hawes's (1985) result that older consumers tended to shop more frequently by catalog.

Jasper and Ouellette (1994) conducted an exploratory study, using a convenience sample of 236 college students, to investigate the relationships between the frequency of purchasing clothing from catalogs and other variables, such as inability to physically inspect, attitude about brand names, self-esteem, propensity to seek information, and ability to visualize oneself in a garment. Findings showed a significant negative

relationship between physical inspection and attitude about brand names, and both frequency of and amount spent in catalog shopping. In addition, self-esteem and frequency of purchasing clothing from catalogs were positively related.

E-Commerce and Internet Shopping

Technological advances have contributed to the development of in-home shopping by making it easier for consumers to procure goods through the Internet (Lumpkin & Hawes, 1985). McQuade (1980) reported that, during 1980, Sears initiated the distribution of its catalogs on video discs and other in-home equipment, and consumers were purchasing cameras, furniture and appliances by submitting orders through in-home computers connected over telephone lines to the Sears information bank. In addition, consumers in Canada were ordering catalog items from Simpson-Sears by using Touch-Tone telephones to communicate with a "talking computer." These were the first stage of shopping through the computer.

From consumers' perspective, a significant benefit of Internet shopping compared to other retail formats is the vast number of alternatives that become available to them; in other words, through the Internet, a person living in Florida can shop at Harrod's in London in less time than it takes to visit a local department store (Alba et al., 1997). The interactive nature of the Internet offers consumers many opportunities to increase the efficiency of online shopping by improving the availability of product information, enabling direct multiattribute comparisons, and reducing prospective buyers' information search costs (Alba et al., 1997).

The concept of business-to-consumer electronic commerce (B2C) via the Internet has been associated with providing information, advertising, enabling sales transactions and product distribution, as well as providing customer service (Ruyter, Wetsels, & Kleijnen, 2001). E-tailing using the Internet has grown dramatically since 1997 (Otto & Chung, 2000). According to the U.S. International Trade Commission (1999), electronic commerce offers online retailers the potential to reduce or eliminate the need to maintain physical store infrastructure (rent, utilities, store personnel, etc.). It may also reduce sales and marketing costs, as well as distribution costs. Electronic commerce enables

companies to provide customized products and services, which can improve customer satisfaction (U.S. Department of Commerce, 1998a), and help in retaining customers.

E-commerce also includes business-to-business (B2B) electronic connections that make purchasing easier for big corporations (CNET, Inc., 2000). B2B e-commerce has existed in the form of electronic data interchange since the 1970s, allowing companies to reduce transmission costs (Shetty, 1999). Through the adoption of Internet technology, companies may communicate better with their partners, saving procurement and labor costs and reducing the time for processing (Hoy & Margolin, 1996; Lundstrom, 1997; U.S. Department of Commerce, 1998a). By improving communication, e-commerce technologies enable businesses to reduce inventory they keep in stock and to manage it better, which in turn lowers operating costs. By reducing the time it takes for companies to transmit, receive and process routine business communications, such as purchase orders, invoices and shipping notifications, e-commerce through the Internet reduces the length of the production cycle (Shetty). Connecting electronically allows companies to reduce the time that information takes to reach the bottom of the supply chain.

The Internet can benefit both consumers and companies in many ways. Consumers are increasingly using the Internet as a shopping method, and companies are using the Internet as a medium to attract and maintain customers. Thus, an Internet website storefront can influence a company's success in attracting and retaining customers. In this vein, retailers must understand consumers' perceptions of website characteristics and their online shopping behavior. Despite the importance of the Internet for both consumers and marketers, little research has addressed Internet shopping, and none has been devoted to clothing items and consumers' online clothing shopping behavior. The present research focuses on the analysis of clothing website characteristics and consumers' online clothing shopping behavior.

Theoretical Background on Relationship Marketing

Relationship marketing involves companies' creation, maintenance and enhancement of strong relationships with their customers by delivering superior customer

satisfaction (Berry, 1983; Kotler & Armstrong, 1999). Some researchers suggest that the main function of relationship marketing is building long-term relationships with customers through mutual collaboration and trust (Gordon, 1998; Gronroos, 1997; Shani & Chalasani, 1992), which encompasses every activity from manufacturing through retail, as well as consumer behavior (Endo, 2000). The main purpose of relationship marketing is customer retention and loyalty (Bitner, 1995; Kotler & Armstrong, 1999). A company that engages in effective relationship marketing has an established network for delivering the appropriate goods and services between trading partners and consumers (Kotler, 1991).

In the face of capricious consumer demand and increasing competition, today's companies must develop new strategies beyond traditional marketing techniques that focus on retaining current customers and building relationships with them (Kotler & Armstrong, 1999) because the cost to attract a new customer is as much as six times the cost to keep a current one (Rosenberg & Crepiel, 1984) and the loss of a customer means losing more than a single sale. Recently, companies have been moving their marketing strategies away from focusing on individual transactions toward building relationships with customers. More and more companies are developing customer retention and loyalty programs (Kotler & Armstrong, 1999) and transforming their approach to customer management by shifting their focus from customer acquisition to customer retention (Payne, 2000).

Management of Customer Relationships through the Internet

A new approach to the management of customer relationships has become necessary with the emergence of the Internet. Because consumers can obtain information and services they need from their homes or offices by just browsing the Internet, a value-added website has become a crucial factor in persuading customers to visit a company's store and learn about its products and services and in convincing them to stay with the company. A website plays a pivotal role in gaining and holding customers by luring them to the site.

A number of researchers suggest that the quality of the product information and services that companies offer on the web has a major impact on customer-supplier relationships (Berthon et al., 1996; Geissler, 2001; Korner & Zimmermann, 2000; Selz, 1998). Some experts indicate that the web is more conducive to relationship marketing than such media as direct mail and catalogs (Geissler, 2001; Krol, 1999) because, through websites, companies can present new opportunities to establish, build and manage relationships with their customers.

In this vein, Korner and Zimmermann (2000) propose a new model called the Management of Customer Relationships in the Business Media (MCR-BM). Figure 1 shows the building blocks of the management of customer relationships in new business media of the Internet. Within this model, they identify seven different measuring blocks for a value website to help develop and maintain relationships between customers and suppliers successfully. The measuring blocks include customer interaction, added value for the customer, customer profiling, trust, virtual communities, processes and controlling.

The "interaction with the customer" block has two components: the content of communication; and the offered communication channels. "The content of communication" refers to the information provided on the web in push or pull mechanisms. Pull mechanisms include information on the web that customers can retrieve according to their interests. Push mechanisms include user-specific information that companies send through e-mail. Another component of the interaction with the customer covers the selection and organization of the offered communication channels because it is crucial for managing a relationship that customers can interact with a company through the channel of their choice, such as by letter, fax, telephone, e-mail or a call-me-button on the website. Berthon et al. (1996) and Geissler (2001) suggest that gathering and responding to customer feedback are critical communication activities when attempting to convert a purchaser to a repeat customer, thus establishing a relationship between the customer and supplier.

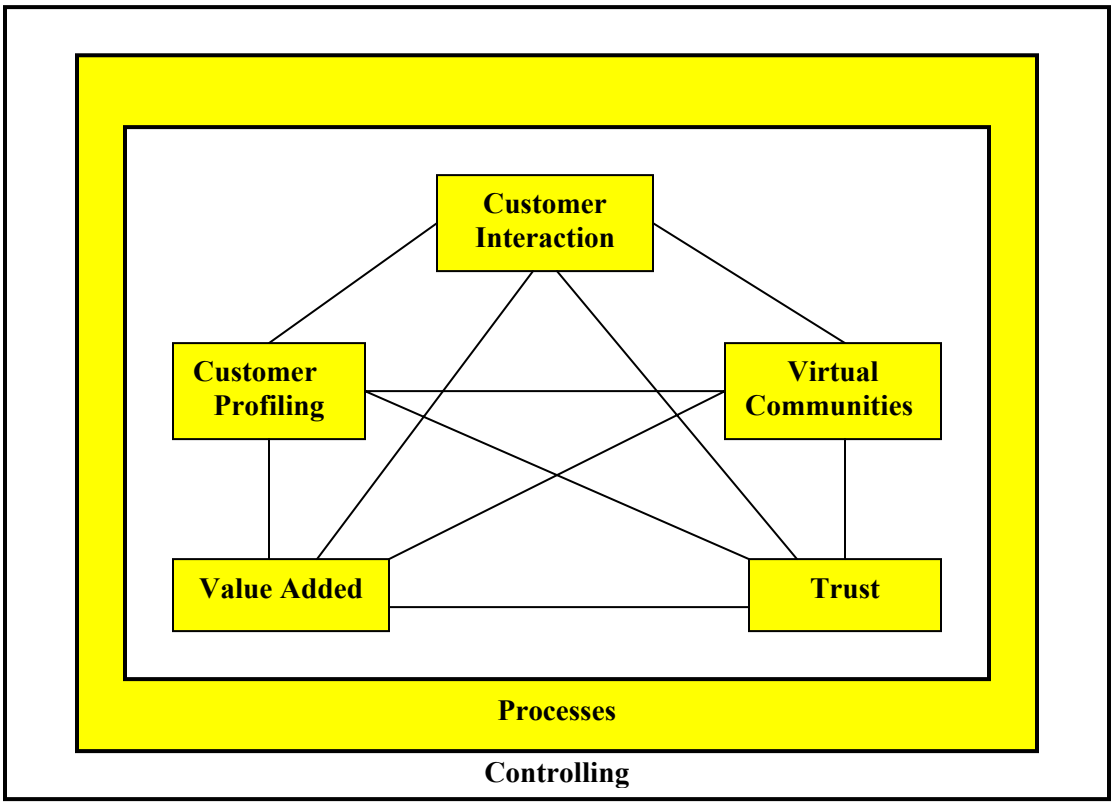

Figure 1. Building Blocks of the "Management of Customer Relationships in Business Media" Approach (Korner & Zimmermann, 2000, p. 165, reprinted with the publisher's permission)

The "added value for the customer" block consists of two parts: quality of the product information and services; and economic incentives. Economic incentives refer to convincing price-performance ratios for customers by offering them a number of different attractive products and by providing relevant information, discount systems and loyalty programs.

The "customer profiling" block includes systems for the collection and analysis of customer data and the development of appropriate activities. One of the steps needed to profile customers is to ask them to answer specific questions provided through a registration form. At this point, it is also crucial to provide benefits to the customers who

give their data. Another way to collect customer data is through the use of cookies and website tracking, which lead to privacy issues. Geissler's (2001) findings indicate that consumer information is quite valuable to companies, as it provides a way to track current and potential customers. Through the process of customer profiling, follow-up information, such as notices of specials, coupons and discounts, can be sent to customers via e-mail.

The "trust" block covers three different aspects of creating trust: maintenance of a strong brand and the association of a brand with positive characteristics; a privacy policy; and security. Korner and Zimmermann (2000), as well as Aaker (1996), suggest that in the new business medium of the Internet, confidence in the business partner is crucial for conducting business transactions. Companies that maintain reputations with positive characteristics can readily create this type of confidence. With respect to privacy policies concerning customer data, companies must clearly communicate the purpose of collecting consumer profile data. In addition, it is important to emphasize to customers that they will be able to gain value-added product information and services from the websites through better customer profiles. For the security aspect, Bartmann and Kreuzer (1996) note that secure handling of business transactions is critical for building trust (as cited in Korner & Zimmermann, 2000).

"Virtual community," which involves establishing and maintaining a community with common interests, is regarded as another block for the management of customer relationships. Joining the community (e.g., via chatrooms) allows potential customers to obtain valuable information on products from existing customers. According to Aaker (1996), with a virtual community, a company can build up loyalty toward the company and its products, or even establish an emotional relationship with its customers. In addition, the company can create a good impression by intensively following comments within the community.

Korner and Zimmermann (2000) also suggest that the development of appropriate processes is relevant for all blocks in order to make them operational. The processes can be divided into internal and external processes. Internal processes refer to the processes within a company and are tied into satisfying customers' requests. These processes cover such things as the interface between the back office and the customer communication

center, order processing procedures, organization of service processes, and the procedures for handling complaints. External processes involve interactions between suppliers and customers, which include ease of use, easy navigation and ease of contact access. In Geissler's study (2001), website designers agreed that providing consumers with an easy navigation system through a website was critical for facilitating interactivity. Because consumers are often impatient, they should be able to move quickly and efficiently within a site.

The "controlling" block involves all the other blocks mentioned above. In order to create a customer profile, for example, interaction with the customer can serve as a source for the necessary information. Then, using the profile, a company can provide a value-added website. In addition, information obtained from the virtual community may be useful in further developing the customer profiles. Together, these could lead to customers' increased trust in the company and its website because their needs are better understood and addressed.

All the blocks for a value website described above are directly connected with characteristics of a website offered by a company, implying that website design plays an important role in the management of customer relationships.

Geissler (2001) proposes a model, from the perspective of website designers, for designing and maintaining an effective website to facilitate online customer relationships. In-depth interviews with website designers were used to gather information. According to the interview respondents, website designs directly influence the customer conversion activity from browsing to purchasing. The website designers mentioned that a website should include enough essential information to capture consumers' attention and that periodic updating of the site could encourage repeat visits and purchases. They noted that providing customers with e-mail addresses, toll-free phone numbers or other ways to contact the company promotes interactivity and helps initiate and facilitate customer relations. The designers agreed that the notion of gathering customer feedback implied a desire to satisfy customers' needs and promote long-term relationships with customers. Others of their comments were the following. Controlling the navigation process helps expose consumers to an entire website and may increase consumer involvement and comfort levels on the website, thereby increasing the likelihood that they would purchase

products online. The findings in this study are consistent with Korner and Zimmermann's (2000) model for the Management of Customer Relationships in the Business Media, suggesting that website storefront characteristics are critical for establishing and maintaining customer relationships through the Internet.

Internet Website Storefront Attributes

Store attributes are the characteristics that draw consumers into the store and affect them to purchase and that are important to consumers in deciding where to shop (Dailey, 1978; Scott, 1985). Retailers present different store attributes based on their functional strategies to satisfy target customers (Ko, 1995). In addition, consumers may use different criteria to select one type of store among various types (Hansen & Deutscher, 1977-1978; Schiffman, Dash, & Dillon, 1977). According to Schiffman, Dash and Dillon, for example, specialty store customers and department store customers use different store selection criteria. They found that specialty store customers rated the expertise of the salespersons and the assortment of brands and models as important store attributes, whereas department store customers were more concerned with store location and warranty policies. These findings imply that consumers may have different expectations, thus different store selection criteria, when they select different store types. Particular store attributes that are important to consumers in selecting one type of store may be less important to them when choosing another type of store (Chen-Yu & Seock, 2002). Retailers may, therefore, need to use different store attributes to attract and satisfy customers, depending on the types of stores they operate.

As consumers can obtain information, products and services from their homes or offices through the Internet, and as consumers' use of the Internet for shopping is increasing, the attributes of a website storefront become important in attracting customers and keeping them in the electronic marketplace, which is similar to the way retail stores lure customers in traditional retail settings. Internet websites provide companies new opportunities and challenges to establish and manage relationships with their customers (Geissler, 2001). To establish relationships with online customers, retailers must

understand customers' experience with websites and how they interact with and evaluate the websites (Nielsen, 1999). Existing evidence from research shows a close relationship between Internet website characteristics and consumers' online shopping behavior.

Zellweger (1997) maintains that, because many consumers recognize the web as both an information resource and a means to purchase products, information and services offered on the web can create demand for the web itself as an alternative to traditional sales channels. Many researchers indicate that the number of online shoppers and total sales through the Internet are still marginal compared to those in traditional retailing, in part because of website interfaces and lack of ease in navigating (Baty & Lee, 1995; Hoffman, Novak, & Chatterjee, 1995; Jarvenpaa & Todd, 1997; Lohse & Spiller, 1998; Ridgon, 1996). Swaminathan, Lepkowska-White and Rao (1999) mention that consumers evaluate websites when they make purchase decisions and, therefore, a website's characteristics or attributes play an important role in determining online transactions through a site. Some researchers suggest that online shopping experiences at certain sites, which are influenced by website characteristics, help form consumers' attitudes toward the sites and the likelihood of future purchases from them (Ahola et al., 2000; Jarvenpaa & Todd; Turban, Lee, & Chung, 2000; White & Manning, 1997). Krol (1999), Korner and Zimmermann (2000), and Geissler (2001) also point out that a website store front is a critical factor in creating and maintaining a relationship between a customer and a supplier in the Internet medium.

Zellweger (1997) used a qualitative method to study web-based sales and proposed a dynamic buyer decision process model in the electronic marketplace. He suggests that buyers' perceptions of their shopping experiences, which are influenced by such website characteristics as convenience, product information, search capabilities and price comparisons, have a major role in creating demand for online purchasing. If, for example, a consumer came across some pertinent information at a website as new product information is constantly released from the site, that consumer might reconsider his or her needs and revisit the website and thereby find information that could allow a better evaluation of the site. Such a process could eventually lead to a purchase decision.

Using a sample of Internet shoppers, Lohse and Spiller (1999) examined the relationship between website design features and Internet store traffic and monthly sales.

The study focuses on Internet super stores that have large product selections. Super stores include L.L. Bean, Land's End, Spiegel, Online Sports and J.C. Penny. A random sample of 42 stores was used for analysis, and 36 website interface features were measured and categorized into four groups: service, promotion, navigation, and inclusion of product categories. The service features included a Frequently Asked Questions (FAQ) section, email address, a phone number of a customer service center, mailing address, a customer feedback section, the collection of personal customer data, extra product information and help on product size selection (e.g., size charts). The promotion features included whether the store offered products at discounts compared to physical retail stores. The navigation features included the number of hyperlinks to other website store fronts as well as links between products, the number of products on the end product pages, the number of buttons used to browse the store, and the type of checkout and order process. Lohse and Spiller identified a set of interface design features that significantly affected Internet store transactions and sales. Among the features that significantly affected monthly sales were product lists, the number of hyperlinks to other websites, hours of promotion, and customer service feedback. The features that significantly affected monthly traffic were FAQ or customer service feedback, numbers of products and hyperlinks to other websites, hours of promotion, and number of shopping modes. The study indicated that poor website features adversely influenced store traffic and sales.

Swaminathan, Lepkowska-White and Rao (1999) investigated factors that influenced the likelihood of electronic exchange, using a sample of Internet users who were likely to exhibit a great propensity to shop online. They defined electronic exchange as past purchasing behavior and measured it in two ways: the number of occasions an Internet user made an electronic purchase; and the total amount of money such a user spent online in the last six months. They identified four website characteristics as important in the context of electronic transactions: reliability; convenience in terms of services offered (ease of placing and canceling orders and contacting vendors); perceived price competitiveness; and ease of access to useful information offered by the website. In the study, the frequency of consumer shopping on the Internet was positively affected by the summed score on these four attributes, which

called the perceived quality of website characteristics. In addition, each of four website attributes was significant in explaining the frequency of shopping on the web. These findings support those of Zellweger (1997) in that useful information on a website is likely to increase electronic transactions. The results are also consistent with those of Gillet(1976) and Reynolds (1974), who studied in-home shopping via mail order and telephone, in showing shopping convenience to be a significant predictor of in-home shopping behavior.

Szymanski and Hise (2000) examined the role of online shopping convenience, merchandising, site design and transaction security in consumers' "e-satisfaction," using a sample of 1,007 previous online purchasers. In the qualitative phase of the research using focus group interviews, they identified ease of browsing and saving of time as important components of online shopping convenience. The breadth of offerings and the availability of high quality information were key components of the merchandising advantages of Internet stores. Elements of site design included an uncluttered screen, easy navigation and fast loading. The analysis showed that, of the four factors, convenience had the greatest impact on e-satisfaction, followed by a positive site design which tied into perceptions of financial security. Although merchandising (e.g., product information) had a statistically significant impact on e-satisfaction, it was less important to e-satisfaction than the other three factors. The results accord with other research in showing a close relationship between the navigational features of websites and consumers' shopping experiences (Ahola et al., 2000; Jarvenpaa & Todd, 1997; White & Manning, 1997).

Koivumaki (2001) studied the effects of two alternative website designs on customer satisfaction. He found that website characteristics, such as clarity of the interface, usefulness of the website, interactivity, ease of navigation, selection availability, product presentation, ease of use and convenience of shopping, had significant positive effects on the satisfaction. Similarly, Swaminathan, Lepkowska-White and Rao (1999) found that certain website characteristics, ease of placing and canceling orders as well as useful information provided on the website, significantly increased customer satisfaction and were strongly related to the likelihood of a repeat purchase.

Koivumaki (2001) also focused on the effects of website design on customers' shopping experience and the relationship between the shopping experience and purchasing behavior. Website design was positively related to shopping experience, measured as customers' degree of satisfaction while shopping online. Despite this, website design did not directly affect consumers' purchasing behavior. It did, however, have a significant indirect effect via the shopping experience, which is consistent with Zellweger's (1997) finding that website characteristics influenced consumers' online purchasing behavior. These results imply that an efficient and value-added website may provide reason for consumers to return to a site and may lead to purchasing by encouraging browsers to make repeat visits to the website.

Shim et al. (2001) investigated Internet store attributes as determinants of the structure of attitude. Using principal components factor analysis, they identified four attribute factors, including transaction services, convenience, sensory experience and merchandise. Transaction services included six items related to payment security, product guarantees, safety, privacy, minimal cost and time for returns, and return policy. Convenience consisted of five items, such as freedom from hassles and the overall speed of Internet shopping. Sensory experience included items pertaining to the social, personalizing and recreational experiences of shopping. Merchandise was characterized by updated product information, comparative shopping opportunities and variety of merchandise choices. Of the four factors, "transaction services" was the only one of the four factors that was a significant predictor of overall attitude toward Internet shopping. This finding is consistent with the study by Ernst and Young LLP (1991), which reported that the perceived risk of service failure due to fulfillment, privacy and security issues ranked among the 10 most important barriers to Internet adoption. The findings imply that online retailers must establish "risk-free" website storefronts to attract consumers to the Internet shopping format.

Previous studies of website storefronts reveal that website characteristics have a great influence on consumers' online shopping behavior, in terms of satisfaction, attitude and likelihood of online transactions. Particularly, consumers' evaluation of website attributes and their perceptions of websites elicit positive or negative attitudes toward the websites and influence future online shopping behavior. Thus, this research analyzes

Internet website characteristics. Despite many previous studies on the impact of website characteristics on online shopping behavior with general products, none has investigated the relationship between clothing website characteristics and consumers' clothing shopping behavior. This study focuses on the analysis of clothing website characteristics.

Attitude Theory and Related Research

Consumers' attitudes are among the good predictors of future shopping behavior (Engel, Blackwell, & Miniard, 1995). Attitude plays a major role in shaping consumer behavior, which includes information search behavior (Duncan & Olshavsky, 1982; Engel et al.; Klein, 1998; Martineau, 1958), behavioral intention (Evans, Christiansen, & Gill, 1996; Fishbein & Ajzen, 1975; Shim & Drake, 1990; Shim et al., 2001) and the selection of a brand or store (Arrondo et al., 2002; Dick & Basu, 1994; Engel et al.; Summers & Wozniak, 1991). Because a consumer's attitude can influence future shopping behavior, the attainment of a positive attitude toward products, brands or stores is crucial in retaining customers; thus, it is important to understand consumers' attitudes toward particular brands or stores in predicting their future shopping behavior.

Allport (1935, p. 810) defines an attitude as "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related." Fishbein and Ajzen (1975), whose definition of attitude has been widely used for the past few decades, define attitude as "a learned predisposition needed to respond in a consistently favorable or unfavorable manner with respect to a given object." Zanna and Fazio (1982) and Ajzen (1989) point out that an evaluative dimension is a common feature of all the definitions of attitude. Shim et al. (2001) indicate that an attitude toward a behavior can be recognized by an individual's positive or negative evaluation of a relevant behavior, which comprises a person's beliefs regarding the perceived outcomes of performing the behavior. From this perspective, knowledge of consumers' attitudes can help explain the reasons behind their favorable and unfavorable evaluations of an object or a behavior; for

example, why consumers do or do not buy products of particular brand names or shop at certain stores.

Many studies have addressed the role of attitudes in consumers' purchase behavior. Using a national random sample of 1,500, Shim and Drake (1990) analyzed the factors that distinguished individuals who had a high level of intention to purchase clothing items through mail order from those who had a low intention. Shim and Drake used the Fishbein Behavioral Intention Model, composed of three major components: beliefs, attitudes and intentions. They found significant relationships among beliefs, attitudes and behavioral intention. The results revealed that individuals with high intentions had more favorable beliefs about purchasing clothing through mail order than did those with low intentions. In addition, respondents with high intentions to purchase clothing through mail order had more favorable attitudes toward purchasing through mail order than did those with low intentions.

Jarvenpaa and Tractinsky (1999) examined the relationship between consumers' attitudes toward a particular Internet store and their willingness to purchase from that store. They found that consumers' attitudes toward that Internet store had a positive influence on their willingness to purchase from the store. The results support those of Shim and Drake (1990) in that purchase intention is strongly related to attitude toward a store.

Shim et al. (2001) used an online purchase intention model based on the theory of Planned Behavior to examine the relationships among consumers' attitudes toward online shopping, the moderating variable of intentions to use the Internet for information search, and intentions to use the Internet for purchasing. Three product categories, books, videos and computer software, were included in the study, and the sample was 2,000 households with personal computer owners. Consumers' attitudes toward Internet shopping were measured according to Fishbein and Ajzen's (1967) multiattribute model. The study revealed that the respondents' attitudes toward Internet shopping had a significant positive influence on their intentions to purchase via the Internet, both directly and indirectly through intentions to use the Internet for information search. The direct effect of attitudes toward Internet shopping on intentions to use the Internet for purchasing is consistent with the Reasoned Action and Planned Behavior theories, which predict that

attitude is a determinant of behavioral intentions. Shim et al. also found that attitudes influenced information search behavior, which supports the findings of Martineau (1958), Duncan and Olshavsky (1982) and Klein (1998).

Information Search through the Internet in Interactive Consumer Behavior

Information search behavior is an important part of most purchase decision-making processes, as consumers must often collect information before making purchase decisions in order to reduce risks associated with product performance. Many different channels of information are available to consumers, which include the opinions of friends, neighbors and relatives, professional information provided in articles and books, and marketer-generated information such as advertisements and displays (Jasper & Ouellette, 1994). These different channels can be seen as more or less appropriate for reducing uncertainties.

The interactive nature of the Internet offers many opportunities to increase the efficiency of online shopping by improving the availability of product information, enabling direct multiattribute comparisons, and reducing information search costs (Alba et al., 1997). Klein (1998) mentions that the Internet, as an interactive medium, can serve as an advertising, communication, merchandising and distribution channel.

Considering its information intensive nature (Fortune, 1998), the Internet is a powerful tool for consumers' information search (Maignan & Lukas, 1997; McGaughey & Mason, 1998; Rowley, 2000). Dickson (2000) indicates that information search through the Internet is a major vehicle for comparison shopping as technologies advance. Due to the importance of information search in online shopping behavior, Klein (1998) suggests that the information search process via the Internet can be a part of interactive consumer shopping behavior models.

Some researchers suggest that the Internet can potentially alter consumers' shopping behavior through a direct impact on both prepurchase and ongoing information acquisition processes (Bloch, Sherrell, & Ridgeway, 1986; Klein, 1998; Shim et al., 2001). In using the Internet, as appose to traditional retail setting, consumers change

their prepurchase information search behavior, including the total amount of search, the number and types of sources consulted, and the distribution and weighting of information gathered from various sources (Moore & Lehman, 1980; Newman, 1977; Punj & Staelin, 1983; Srinivasan, 1990).

Klein (1998) and Shim et al. (2001) agree that information search facilities on the Internet are particularly useful for search goods due to the low perceived costs of assessing information. Klein suggests that information search costs can explain the relationship between consumers' channel choices with respect to search and purchase processes. Because searching via one channel and purchasing via another channel may be perceived as more costly than search and purchase through a single channel, consumers may want to use a single channel for information search and purchase (Shim et al.).

Shim et al. (2001) examined an online prepurchase intention model, particularly focusing on the role of consumers' intentions to search for information via the Internet. They utilized a sample of 706 personal computer owners who had the potential to access the Internet and shop online in 15 U.S. metropolitan areas. They restricted the category of products to search products, as Klein (1998) noted that the online search and purchase procedure could differ for search and experience goods. Based on responses from the subjects, three products, that is, computer software, books and videos, represented the search product category. The subjects selected these out of five categories of shopping goods presented to them, which also included clothing and clothing accessories. Results of the analysis revealed that the consumers' intentions to search for information via the Internet was the key predictor of their intentions to purchase through the Internet. That is, intentions to search for information via the Internet contributed a substantial portion of the explained variance in intentions to purchase through the Internet. In addition, intention to search for information via the Internet mediated the relationships between intention to purchase through the Internet and several antecedent variables, including consumers' attitudes toward Internet shopping, perceived behavioral control and past Internet purchase experience. These findings imply that, in the context of search goods, consumers' information search and selected channel for that search should be considered crucial elements leading to a choice of purchase format, so that retailers should not

consider search via the Internet and a decision to purchase through the Internet as independent processes.

The findings of Shim et al. (2001) contradict the argument that consumers use different channel formats in their search and purchase patterns. Theoretically, consumers' intentions to use the same channel for both information search and purchase reflect efforts to reduce costs (e.g., time, effort) for the entire shopping process. In some cases, consumers' initial intentions may not be realized because unexpected events arise that increase the perceived transaction costs; for example, in the context of Internet shopping, consumers may have difficulty downloading a website in a timely manner or submitting credit card information. These types of problems may prompt consumers to revise their initial intentions, resulting in alternative choices of channel formats to purchase (e.g., purchasing a product at a brick-and-mortar store). In this sense, it is necessary to investigate the relationship between consumers' use of the Internet for information search and their choice of purchase channels, especially given the emergence of new channels such as the Internet.

According to Nelson's theory (1974, 1976, 1981), information search for experience goods can be characterized by a reliance on word-of-mouth that reflects direct or indirect experience with products. Consumers, therefore, undertake less information search for experience goods because of the inability to obtain the most valuable product information prior to use, and they rely heavily on their own or others' product experience. Technology, however, now makes it possible for consumers to experience products prior to purchase, through what is often called "virtual experience;" for example, consumers can download from the Internet sound and video clips that interest them. Through the provision of this experiential product information, consumers obtain critical product information prior to purchase. By allowing consumers to experience product performance prior to purchase, a marketer can virtually turn an experience good into a search good. In doing so, marketers can alter consumers' weighting of evaluative criteria by reducing perceived risks and the relative costs for obtaining information through Internet websites. Thus, the appropriateness or efficiency of the website as a new medium for a given product can be assessed on the basis of the information content of the

products and services (Calfee & Ford, 1988; Ford, Smith, & Swasy, 1988; Nelson, 1970, 1974).

This research examines the influence the new medium of the Internet exerts on consumers' online information search behavior by analyzing consumers' evaluations and perceptions of clothing websites and by exploring the effect of consumers' attitudes toward particular clothing websites on their information search intentions through the web. In addition, the present research examines the influence of consumers' intentions to use the Internet for information search on their intentions to purchase clothing items through multiple channels, the Internet and channels other than Internet websites.

Consumer Characteristics

Researchers have identified consumer characteristics that are important predictors of clothing shopping behavior (Cassill & Darke, 1987; Shim & Drake, 1988). Much research reveals that consumers' demographic and psychographic characteristics (Berkowitz, Walton, & Walker, 1979; Cox & Rich, 1964; Cunningham & Cunningham, 1973; Gillet, 1970; Lumpkin & Hawes, 1985; Shim & Drake, 1990) and previous shopping experience (Jasper & Ouellette, 1994; Shim & Drake; Shim et al., 2001) are important in predicting purchase decisions in the context of in-home shopping. The analysis of consumer characteristics has provided valuable information for retailers to understand target customers, to determine the needs of consumers, and to identify effective ways of reaching target markets (Bickle & Shim, 1994). Despite the importance of consumer characteristics, little research has addressed consumer characteristics in the context of Internet shopping. Thus, the present research includes consumers' shopping orientation and previous online shopping and purchasing experience as two important consumer characteristics in the context of Internet shopping. In addition, considering the fact that young consumers are major Internet users and have great potential for shopping online, analysis of consumers aged 18 to 22 is important. This research focuses on young consumers aged 18 to 22 as the subjects for that reason.

Shopping Orientation

Shopping orientation can be defined as a shopping-specific lifestyle that encompasses consumer activities, interests and opinions about the shopping process (Hawkins, Best, & Coney, 1989; Howell, 1979; Moschis, 1992). Shim and Kotsiopulos (1993) define shopping orientations as categories of shopper styles with particular emphasis on certain activities. They note that shopping orientation also represents consumers' needs for products and services. According to Darden and Dorsch (1990), shopping orientation is based on consumers' past shopping experiences and their personal-value systems. Many researchers suggest that shopping orientation reflects a consumer's view of shopping as a social, recreational or economic phenomenon, as well as an individual's motivations for shopping (Hawkins, Best, & Coney; Howell; Lumpkin, Hawes, & Darden, 1986; Shim & Mahoney, 1992). Consumers' shopping orientations, therefore, may change with continual changes in social, cultural and economic values and the environment in society. Although consumers' shopping orientation of today may differ from that of previous times with the change of values and the environment in society, relationships between consumers' shopping orientation and their shopping behavior still exist. In the face of the emergence of various retail venues and increasing competition in the market, retailers must understand consumers' shopping orientations in order to maximize consumer satisfaction and retail sales.

Researchers have developed shopper typologies with respect to various products (Bellenger & Korgaonkar, 1980; Darden & Reynolds, 1971; Gutman & Mills, 1982; Lumpkin, 1985; Lumpkin, Hawes, & Darden, 1986; Moye, 1998; Shim & Kotsiopulos, 1993; Stone, 1954; Tatzel, 1982) that suggest a relationship between consumers' shopping orientations and their shopping behavior. Consumers with different shopping orientations have shown different shopping behaviors, such as preferences for store choice (Gutman & Mills; Hawkins et al. 1989), perceived importance of store attributes (Bellenger, Robertson, & Greenberg, 1977; Lumpkin; Shim & Kotsiopulos, 1992), and use of information sources (Hawkins et al.; Lumpkin; Moschis, 1976), as well as different psychographics and demographics (Darden & Howell, 1987).

With the viewpoint that shopping behavior had social-psychological origins, Stone (1954) pioneered the research on the shopping orientation concept. Using a sample of 150 Chicago housewives, he classified shoppers into four types: economic, personalizing, ethical, and apathetic. Economic shoppers are described as having a major concern for the prices of goods so they would shop for the best choice of quality and price. Personalizing shoppers enjoy developing a close relationship with store personnel and tend to shop close to home, whereas ethical shoppers feel an obligation to shop at specific local or neighborhood stores rather than chain stores so as to give smaller merchants a chance for success. Apathetic shoppers have little or no interest in shopping or in store type and try to minimize buying effort. Several researchers have tested and confirmed Stone's assertions (Darden & Raynolds,1971; Hawes & Lumpkin, 1984; Lumpkin et al., 1986).

Through an investigation of shopper typology with general products in Atlanta, Georgia, Bellenger and Korgaonkar (1980) obtained a profile of recreational shoppers. They intercepted a total of 600 female shoppers at malls and non-mall locations and asked them to complete a questionnaire. With a response rate of 54 percent, the responses of 324 shoppers were analyzed to identify a shopper typology. The resulting typology comprises two groups: recreational shoppers who enjoy shopping; and economic shoppers who either are neutral toward shopping or dislike it. Results revealed that 69 percent of the respondents were categorized as recreational shoppers (i.e., enjoyed shopping as a use of their leisure time). Also, shoppers who had different shopping orientations showed different shopping behaviors. Recreational shoppers tended to consider quality and variety of merchandise and pleasant store atmosphere, such as the décor of malls, as important factors when choosing stores. In contrast with economic shoppers, the recreational shoppers tended to buy things they liked, regardless of urgency or needs, and spent less time deliberating before making purchases. Recreational shoppers engaged in more information-seeking than the economic shoppers and spent time shopping even after making purchases.

Gutman and Mills (1982) studied clothing shopping orientation with respect to the shopping habits of 6,261 female consumers in Los Angeles. They described different groups of consumers: leaders, followers, independents, neutrals, uninvolved, negatives

and rejecters. Findings indicated that leaders, who scored high on fashion leadership, enjoyed shopping and were not cost-conscious. Followers were similar, but scored lower on the fashion leadership dimension. Independents were aware of fashion, but had higher scores than leaders and followers on the antifashion attitude dimension and cost consciousness. The neutrals, uninvolved, negatives and rejectors had little or no interest in shopping, a trait in kind with Stone's (1954) apathetic shoppers.

Lumpkin's (1985) research dealt with the clothing shopping orientations of elderly consumers 65 years or older and the relationship between shopping orientation and preference for store attributes. The elderly respondents were categorized into three shopper types: uninvolved or apathetic, economic, and active clothing shoppers. Those who were uninvolved shopped less often than the other groups, regardless of store type. The economic shoppers were similar to those in Stone's (1954) study in having concerns about prices. The active clothing shoppers enjoyed shopping and were interested in fashion. The active shoppers were also described as fashion innovators and opinion leaders, much like "the leaders" in Gutman and Mills' study (1982). Lumpkin (1985) also found that shopping orientation was significantly related to consumers' preference for store attributes, information sources, and store patronage; for instance, credit availability and store reputation, rather than label or brand name, were the most important attributes to active clothing shoppers, whereas high quality and low prices were major concerns to economic shoppers. Store reputation was a more important attribute than brands or labels among all three groups, implying local retailers' ability to compete effectively, regardless of the clothing brands carried. The uninvolved shoppers utilized all forms of information sources (e.g., newspapers, friends, sales persons) less than the other two groups, which coincided with their shopping inactivity. The dominant information sources for the active elderly consumers were newspapers, followed by friends and salespersons, but in line with their role as opinion leaders, they tended to utilize friends to a greater extent than salespersons.

Based on the clothing shopping orientation concept, Shim and Kotsiopulos (1993) developed a clothing shopper typology using a random sample of 482 female shoppers. Clothing shopping orientation included nine factors: fashion conscious, brand loyal, time/convenience oriented, shopping mall oriented, local store oriented, apathetic, catalog

oriented, economic/price conscious, and credit oriented. With these nine factors, clothing shoppers were clustered into three types: convenience-oriented catalog shoppers, highly involved shoppers, and apathetic shoppers. The convenience-oriented catalog shoppers preferred to shop by catalog rather than in retail stores. They were concerned with the convenience/time required for clothing shopping, were moderately confident in what they were going to buy, and were interested in appearance, fashion and brands. Highly involved clothing shoppers were described as fashion leaders who had a great interest in clothing and were very conscious of the shopping process. Shoppers in this group were concerned with appearance, liked to be considered well-groomed, believed that dressing well was an important part of their lives, and kept their wardrobes up to date with fashion trends. Unlike the highly involved shoppers, the apathetic shoppers were not interested in clothing and the shopping process. They were neither interested in fashion and brand, nor concerned with success-oriented dressing. They were the least confident in clothing shopping for themselves and were the least likely of all the groups to engage in catalog shopping.

Shim and Kotsiopulos (1993) reported significant differences across the groups in using information sources, the perceived importance of store attributes, and lifestyles. Highly involved clothing shoppers, for example, tended to place importance on such store attributes as the personnel, visual image of store, customer service, ease of access and brand/fashion, and they shopped more at specialty stores and department stores than the other types of shoppers. The convenience-oriented catalog shoppers put primary importance on easy access and were more likely to shop at specialty stores and through catalogs. The apathetic shoppers were least likely to place importance on store attributes and tended to shop at discount stores.

In a study with a sample of 208 elderly consumers, Moye (1998) examined two sets of relationships: that between shopping orientation and the importance of store attributes, and that between shopping orientation and store patronage behavior. Moye identified three types of shopping orientation among these consumers: brand conscious/loyal, economic/price conscious, and convenience/time conscious. The brand conscious elderly shoppers placed importance on lighting, temperature, quality products, store reputation and well-known labels/brands. This type of shoppers resembles

Bellenger and Korgaonkar's (1980) recreational shopper and Shim and Kotsiopulos' (1993) highly involved clothing shopper with respect to the evaluation of the importance of store attributes. For the convenience/time conscious shoppers, quality products, store reputation and well-known labels and brands were important. The major concerns of the economic shoppers were sales, credit availability and discounts, which proved similar to the economic shoppers studied by Lumpkin (1985) and Stone (1954).

With regard to the relationship between shopping orientation and store patronage behavior, no significant differences were apparent among the respondents with the three different shopping orientations in patronizing department stores; however, significant relationships were found between economic/price consciousness and patronizing mass merchandisers and catalog shopping. In addition, significant relationships were found between brand consciousness and patronizing specialty stores.

As shown above, many researches have investigated shopping orientation and its relationship to other aspects of shopping behavior in traditional retail settings. With the emergence of different shopping venues such as the Internet, consumers' shopping behavior may be different in terms of their shopping orientation. Despite the importance of consumers' shopping orientation with respect to Internet shopping, few researchers have addressed shopping orientation in the context of the Internet. The literature on retailing suggests that consumer characteristics, such as shopping orientation, are important indicators of the probability of making purchases on the Internet and through other retail settings, such as brick-and-mortar stores or catalogs (Swaminathan, Lepkowska-White, & Rao, 1999). The literature on relationship marketing also suggests that consumers' shopping orientation figures importantly in their propensity to engage in Internet transactions (Sheth & Parvatiyar, 1995). It is essential, therefore, to identify consumers' shopping orientations and to examine the relationship between shopping orientation and shopping behavior in the context of the new business medium of the Internet.

Vijayasarathy and Jones (2000) explored the relationship between shopping orientation and intention to shop using Internet catalogues. They identified seven types of shopping orientation: in-home shoppers who liked to shop from home; economic shoppers who shopped around before making purchase decisions; mall shoppers who

preferred to shop at malls; personalized shoppers who liked to shop where they knew the salespeople; ethical shoppers who also liked to shop in local stores to promote the community; convenience shoppers who placed a premium on convenience when shopping; and enthusiastic shoppers who enjoyed shopping. Two of these seven, in-home shopping orientation and mall shopping preference, emerged as significant discriminators between low and high intention toward online shopping. Consumers with an affinity for traditional in-home shopping, such as by mail order via catalogs, tended to show high intentions toward online shopping, whereas individuals with a preference for mall shopping tended to have low intentions toward online shopping. These findings imply that, unless Internet retailers successfully establish virtual communities on the web for attracting and keeping customers, mall-preferred shoppers may be reluctant to embrace online shopping.

Swaminathan, Lepkowska-White and Rao (1999) investigated factors that influenced business to consumer Internet transactions. They found that consumers' shopping orientations significantly influenced the frequency with which they shopped and the amount of money they spent on the Internet. Two types of shopping orientation were identified in the study: the convenience shopper and consumers who sought social interaction when they shopped. According to the results, the convenience shoppers tended to use the Internet more frequently to purchase goods and spend more money in their Internet purchases. On the other hand, consumers' need for social interaction when shopping negatively affected the propensity to engage in Internet shopping because shoppers who sought such interaction treated shopping as a social experience. Those consumers were less interested in using the Internet for shopping, as shown by their shopping less frequently and spending less money for purchases on the Internet. These findings support those of Alba et al. (1997) in showing that the Internet is less attractive to consumers who value social interaction because of the more limited social contact relative to that in such retail formats as brick-and-mortar stores.

Previous research on shopping orientation in the context of Internet shopping indicates that consumers who have distinct shopping orientations have different perceptions of online shopping, implying that website storefronts may play a major role in influencing consumers' perceptions of online shopping. Despite the importance of

shopping orientation in the context of Internet shopping, limited research has addressed this issue, and no study has examined the relationship between consumers' shopping orientation and, on the one hand, their evaluations of the relative importance of website storefront attributes and, on the other, their perceptions of websites they like to visit to obtain information about products or stores or to purchase products.

Previous Online Shopping Experience

Many researchers indicate that consumers' previous shopping experience influences their future shopping behavior (Berkowitz et al., 1979; Eastlick, 1996; Eastlick & Lotz, 1999; Shim & Drake, 1990; Shim et al., 2001). According to the study by Shim and Drake, previous mail order purchase experience is the most important predictor of consumers' intentions to purchase clothing items by mail order. The study revealed that those who had previous experience with mail order shopping tended to have higher intentions to purchase clothing items through mail order than those who had no experience with mail order shopping. Berkowitz et al. also suggest that telephone order users tend to be mail order shoppers.

In the context of Internet shopping, Shim et al. (2001) examined the relationship between consumers' previous online purchase experience, and on the one hand, their intentions to use the Internet for information search and, on the other, their intentions to use the Internet for purchasing. The results show that previous Internet purchase experience is a significant predictor of intention to search for information via the Internet. Previous online purchase experience also exhibited significant direct and indirect effects on intention to use the Internet for purchasing. The findings support other researchers' (Bentler & Speckart, 1979, 1981; Sutton & Hallet, 1989) assertion that past behavior is a predictor of future behavior. These findings also confirm those of other studies demonstrating the impact of previous similar shopping experiences on future shopping behavior toward nonstore retail formats (Berkowitz et al., 1979; Eastlick, 1996; Eastlick & Lotz, 1999; Shim & Drake, 1990)

The research mentioned above suggests that previous shopping experience may influence existing customers' becoming repeat customers by providing them with

satisfying experiences. Such past experience may directly or indirectly influence consumers' perceived risk levels associated with online shopping, potentially leading to future use of the Internet for shopping (Shim et al., 2001).

Age

Among consumer characteristics, age has been identified in many studies as an important element in shaping consumers' shopping behavior (Ko, 1995; Rabolt & Drake, 1984-85; Solomon, 1987). Because age groups tend to have homogeneous and distinctive norms and values, each age group constitutes its own subculture (Assael, 1995). Members of a group may share similar shopping, purchasing and consumption orientations. Thus, marketers must identify differences between age groups in shaping their behavior in order to develop marketing strategies for their target markets.

Over recent decades, the teenage group has become an important market segment to marketers. Teens have been playing an increasingly important part in family decision making (Assael, 1995), and their buying power has been increasing more rapidly than that of any other age segment of the population (Shim & Koh, 1997). According to Tootelian and Gaedeke (1992), the number of adolescents declined 15.5 percent during the 1980s, but their spending increased nearly 43 percent, growing from $1,422 to $2,409 per capita. As the children of dual-income or single-parent families with time scarcity take over more responsibilities from their working parents for shopping and other chores, many young consumers actively participate in shopping for their own and their families' needs (Kim, 1993; Peters, 1989; Sproles & Kendall, 1986; Stipp, 1993). In this changing pattern of influence on shopping and purchasing processes, teenage consumers spent a staggering $96 billion in 1994 (Sanders, 1995), which is a 35 percent increase from a decade ago, without even including items bought for them by adults (Ossorio, 1995).

Keeping step with these trends, merchants are scurrying to attract the influential young consumers by designing merchandise and creating flashy advertising to suit their lifestyle (Sanders, 1995). Today's children are growing up in an era of choice with respect to merchandise and preferred media for obtaining product information and store formats for purchasing (Mammarella, 1995). With increasing buying power and the

variety of choice in products as well as media for shopping, teenage consumers have become an important segment in the electronic market place.

According to Silverman (2000), young consumers, particularly those aged 16 to 22, are becoming the Internet's "hottest" market. They spend an average of 10 hours a week online and spend 13 percent of their disposable income for online purchases (Silverman, 2000), which are greater than for adults. In addition, a study by Forrest Research Inc. (as cited in Silverman, 2000) shows that clothing is among this group's most popular categories for Internet shopping. Almost 50 percent of young consumers in this age group have experience with purchasing music CDs online, 45 percent of young consumers with purchasing books online, and 29 percent with purchasing clothing items online. Statistics by Forrest Research Inc. reveal that the amount of money spent online for clothing tops the list with an average spending of $400 per year, followed by books at $256 and music CDs at $208 a year online. These statistics are consistent with other studies showing that clothing is among the top product categories that teenage consumers buy online (Assael, 1995; Gunter & Furnham, 1998; Ossorio, 1995; Stoneman, 1998). These findings also support previous research that suggests clothing and other aspects of appearance play a critical role during adolescence (Elkind, 1978; Goffman, 1959; MacGillivray & Wilson, 1997).

Some researchers have examined adolescents' shopping related behaviors. Sproles and Kendall (1986) developed an inventory of adolescents' decision-making styles in purchasing such products as clothes, hair dryers and cosmetics. In the study, consumer decision-making style refers to a consumer's mental orientation toward making choices among products in the marketplace. Sproles and Kendall identified eight consumer decision-making styles: Perfectionism/High-Quality Consciousness, Brand-Consciousness/Price-Equals-Quality, Novelty/Fashion Consciousness, Recreational/Hedonic Shopping Consciousness, Price/Value-for-Money Consciousness, Impulsiveness/Carelessness, Confusion-by-Overchoice, and Habitual/Brand-Loyal Consciousness. In addition, they provide a verbal interpretation of each consumer style. Perfectionistic/High-Quality Conscious adolescents, for example, usually seek better quality products, and Novelty-Fashion conscious consumers are average to below average in novelty and fashion consciousness. Recreational shoppers receive great

pleasure from shopping, and Habitual/Brand Loyal consumers have several favorite brands and purchase products due to habit. Sproles and Kendall speculate, however, that consumers may have more than one dominant characteristic, and they may have different consumer styles for different product categories.

Using a sample of 1,954 high school students, Shim and Koh (1997) investigated the effects of socialization agents and social structure variables on adolescents' decision making styles. The socialization agent variables include parents, friends, printed media, TV commercials and consumer education from teachers; and the social structural variables include gender, ethnicity, social class, job, income, main reason for working and the amount of monthly allowance from parents. Shim and Koh used Sproles and Kendall's (1986) consumer decision making styles inventory and identified three groups displaying different patterns of consumer decision-making styles: Value-Maximizing Recreational shoppers, Brand-Maximizing Non-Utilitarian shoppers, and Apathetic shoppers. Results revealed that the three groups were significantly different in their interaction with socialization agents. "Value-Maximizing Recreational Shoppers," who sought high quality, novelty and fashion in products, value for the money they pay, and excitement and pleasure from shopping, were most associated with interaction with parents, as well as reading printed materials regarding purchasing. They tended to ask their parents for advice while purchasing goods and also enjoyed reading newspapers or magazine articles, so that printed advertisements influenced their purchase decisions. These findings support previous research on adolescents' consumption behavior in that parental involvement and exposure to printed media facilitate the development of utilitarian or rational consumption behavior among adolescents (Moore & Moschis, 1981, 1983; Moschis & Churchill, 1978; Moschis & Moore, 1984).

In Shim and Koh's study, "Brand-Maximizing Non-Utilitarian shoppers," who were more likely to buy expensive, well-known brands and less likely to plan their shopping than other groups - therefore making for more impulsive and careless purchases - were most influenced by their peers in what they bought and enjoyed talking with them about purchasing things. They also were significantly influenced by TV commercials in making purchase decisions. The effects of peers and TV commercials on the carelessness aspect of shopping in this study is consistent with previous research, indicating that peer

and television influences are linked to undesirable outcomes, such as increased desire for material possessions, conspicuous consumption, and social motivation for consumption (Faber & O'Guinn, 1988; Moschis & Churchill, 1978). Shim and Koh, therefore, concluded that peer and television influences on adolescent consumption were likely to increase non-utilitarian consumer orientations. Finally, "Apathetic shoppers" had the least amount of exposure to, and interaction with, all socialization agent variables.

Although some studies have addressed adolescents' shopping related behavior, none has examined the behavior in online clothing shopping particularly focusing on teenage consumers. In addition, despite the greater access of college students ages 18 to 22 to the Internet than most other population segments, few studies have examined this age group with respect to Internet shopping; thus, the present research includes young consumers, ages 18 to 22, who are major Internet users and have great potential to shop online, to study online clothing shopping behavior.

CHAPTER III

SETTING OF THE RESEARCH PROBLEM

This chapter delineates the research problem by establishing the conceptual framework and definitions. The purpose statement and objectives are conveyed, and the research hypotheses are described. The chapter concludes with the assumptions and limitations of the study.

Purpose Statement

The research purpose is to determine the effects of the attitudes of a sample of young consumers aged 18 to 22 toward favorite websites on intentions to purchase through the Internet and channels other than Internet clothing websites, such as brick-and-mortar stores and catalogs.

Research Objectives

Each research objective pertains to the sample of consumers aged 18 to 22. The objectives are to determine:

1. the relationship of consumers' clothing shopping orientation and previous online shopping and/or purchasing experience to their evaluation of the relative importance of different clothing website attributes.

2. the relationship of consumers' clothing shopping orientation and previous online shopping and/or purchasing experience to their perceptions of the attributes of their favorite clothing websites.
3. the relationship between consumers' evaluation of the relative importance of different clothing website attributes and their perceptions of the attributes of their favorite clothing websites.
4. the relationship between consumers' attitudes toward their favorite clothing websites and consumers' intentions to search for information about clothing items on those websites.
5. the relationship between consumers' intentions to search for information about clothing items on their favorite websites and their intentions to purchase clothing items offered through their favorite clothing websites.
6. the relationship between consumers' attitudes toward their favorite clothing websites and their intentions to purchase clothing products from their favorite clothing websites.
7. the relationship between consumers' intentions to search for information about clothing items on their favorite clothing websites and their intentions to purchase clothing items located on their favorite websites from channels other than Internet clothing websites.
8. the relationship between consumers' attitudes toward their favorite clothing websites and their intentions to purchase clothing items located on their favorite websites from channels other than Internet clothing websites.
9. the relationship between consumers' clothing shopping orientation and their intentions to search for information about clothing products on their favorite clothing websites.
10. the relationship between consumers' clothing shopping orientation and their intentions to purchase clothing items from their favorite clothing websites.
11. the relationships between consumers' online clothing shopping and/or purchasing experience and their intentions to purchase clothing items from their favorite clothing websites.

Conceptual Framework

The conceptual framework for this study is derived from theories and postulates in previous research. Figure 2 outlines the framework and the hypothesized relationships. As conceptualized, the framework applies to one consumer, despite the use of a sample of multiple consumers in conducting the analysis to be described later. Each relationship shown in the figure corresponds with an objective of the study. These relationships are based on the premise that young consumers aged 18 to 22 are major Internet users and consumers, and they shop for clothing items through the Internet. In this research, "the past 12 months" is the reference time frame for a consumer's previous online shopping and purchasing experience because a year's time encompasses all four seasons in which clothing is purchased (Winakor, 1969) and could influence planning and the purchase and maintenance of clothing (Watson, 1998). "The next 6 months" is the reference time frame for the consumer's intention to purchase in the future.

Clothing Shopping Orientation and Related Variables

Relative Importance of Clothing Website Characteristics and Perceptions of Favorite Clothing Website (A and B in Figure 2)

Various researchers have examined the effect of shopping orientation on consumers' evaluation of the relative importance of store attributes and their perceptions of the attributes of certain type of stores. In 1992, Shim and Kotsiopulos reported that consumers' shopping orientation was significantly related to the relative importance they placed on store attributes. Monroe and Guiltinan (1975) and Moye (2000) found that shopping orientation was significantly related to consumers' evaluation of the relative importance of store attributes, as well as their perceptions of store attributes. Based on these studies, it is hypothesized in the present research that consumers' clothing shopping orientation will be significantly related to their evaluation of the relative importance of clothing website attributes and their perceptions of the attributes of their favorite clothing websites.

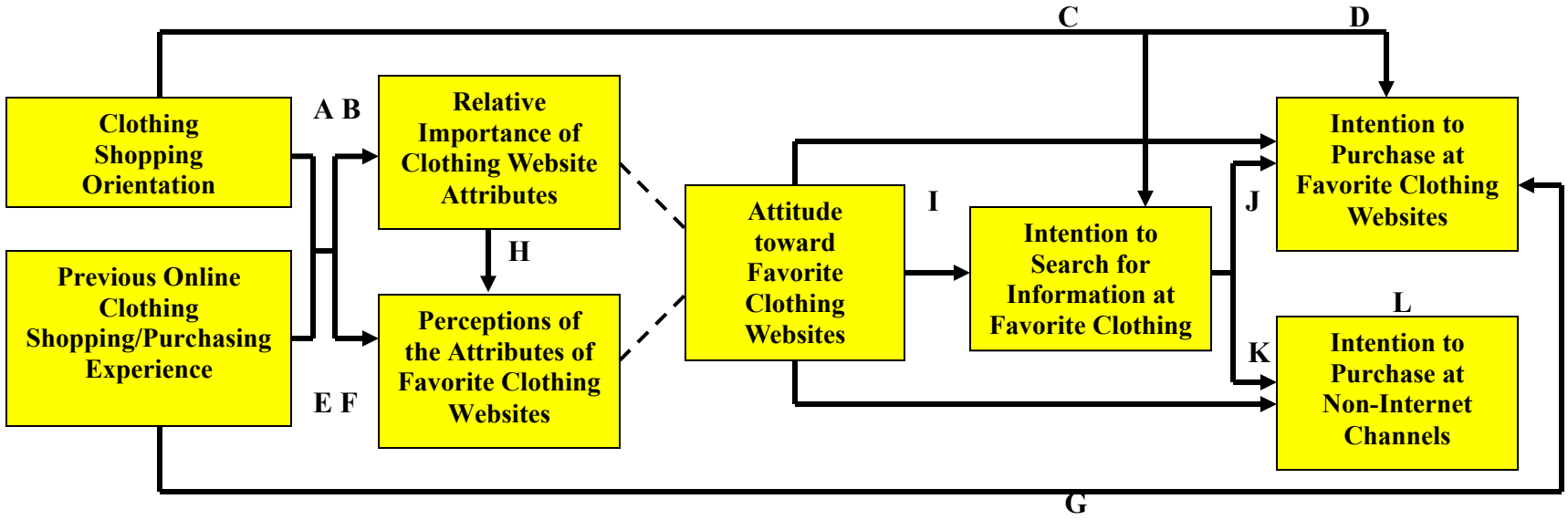

Figure 2. Conceptual Framework

Intention to Search for Information and to Purchase through the Internet (C and D in Figure 2)

Research has established that shopping orientation significantly related to consumers' purchase intentions. Korgaonkar (1984) found that consumers' shopping orientation influenced their intentions to purchase products from non-store retailers, such as catalogs, credit card companies and direct marketing outlets. He also found that, compared to brand-oriented consumers, convenience- and price-oriented consumers had stronger intentions to purchase products from non-store retailers. Vijayasarathy and Jones (2000) suggest that consumers who have an affinity for traditional in-home shopping, such as catalog shopping or mail order, strongly favor online shopping, whereas individuals who prefer mall shopping tend to have low inclinations toward online shopping. Thus, in the present study, the following relationship was hypothesized: consumers' shopping orientation will affect their intentions to purchase clothing items from their favorite clothing websites on the Internet.

It is also hypothesized that consumers' clothing shopping orientation will be significantly related to their intentions to search for information from their favorite clothing websites, based on the following reasoning. If consumers with different shopping orientations vary in their intentions to purchase clothing items from their favorite websites, they also may vary in their intentions to search for information about clothing products from those websites.

Previous Online Shopping/Purchasing Experience and Related Variables

Relative Importance of Clothing Website Attributes and Perceptions of Favorite Clothing Websites (E and F in Figure 2)

Shim et al. (2001) suggest that consumers' intentions to search for information and to purchase products through the Internet will increase with the amount of online purchasing experience they have. If so, consumers with different levels of online shopping experience may have different evaluative criteria for the importance of the store

attributes. In addition, if they have favorite websites for purchasing products, they may believe that those websites have certain characteristics they want. Thus, it is hypothesized that consumers with different degrees of online clothing shopping experience will vary in their evaluations of the importance of website attributes and in their perceptions of the attributes of their favorite clothing websites.

Intention to Search for Information and to Purchase through the Internet (G in Figure 2)

Shim and Drake (1990) found that consumers with strong intentions to shop online had previous experience with other non-store shopping formats, as well as prior experience with Internet usage. Similarly, Liang and Huang (1998) found that consumers' prior experience with non-store shopping formats had a moderating effect in predicting their acceptance of Internet shopping. Other researchers also assert that inclusion of a variable for previous shopping experience significantly improves the prediction of future shopping behavior (Bentler & Speckart, 1979, 1981; Sutton & Hallett, 1989).

Klein (1998) and Shim et al. (2001) indicate that past experience with Internet shopping is a significant predictor of Internet search behavior. Other researchers indicate that consumers' past online purchase experience has a direct impact on their online prepurchase intentions (Eastlick, 1996; Shim et al., 2001; Weber & Roehl, 1999). Thus, consumers' online clothing information search and purchasing experience is hypothesized to directly influence their intentions to purchase clothing items through the Internet.

Attitude (H in Figure 2)

Fishbein and Ajzen (1967) posit that a person's attitude toward a given object is a summation of beliefs about the object's attributes weighted by the evaluation of the importance of these attributes. They propose the following multiattribute model.

$$A_0 = \sum_{n=1}^{n} b_i e_i,$$

where A_0 = attitude toward the object

b_i = the strength of the belief that the object has attribute *i*

e_i = the evaluation of the importance of attribute *i*

n = number of salient attributes

(Fishbein & Ajzen, pp. 394)

Within the mutiattribute model, beliefs involve perceptions of the object's attributes. In addition to beliefs about an object's attributes, this model accounts for the importance assigned to an attribute. Thus, attitude can vary substantially by how important attributes are to a consumer. Monroe and Guiltinan (1975) and Moye (2000) utilized Fishbein and Ajzen's multiattribute model to measure consumers' attitudes in their study of retail patronage. In both cases, they indicate that a consumer's attitude toward stores is a function of the evaluation of the relative importance and the perceptions of store attributes. According to Moye, consumers engage in a comparison process in their minds to determine whether their evaluation of the relative importance of store attributes aligns with their perceptions of these attributes. If the two factors match, then the consumer chooses the store. Engel, Blackwell, and Miniard (1995) also suggest that the consumer compares the importance of store attributes with the store image (i.e., overall perception) to determine acceptable and unacceptable stores. If consumers' perceptions of the store attributes are positive, then they may decide to purchase from the store. On the other hand, if consumers' perceptions of the store attributes are negative, then they are unlikely to shop in the store.

Attitude-Information Search-Purchase Intention Relationship (I, J and K in Figure 2)

Consumer attitude is among the good predictors of future shopping behavior, such as information search (Duncan & Olshavsky, 1982; Engel et al., 1995; Klein, 1998; Martineau, 1958) and purchase intention (Evans, Christiansen, & Gill, 1996; Fishbein &

Ajzen, 1975; Shim & Drake, 1990; Shim et al., 2001). Martineau proposes that consumer beliefs regarding the benefits of store types are related to the extent of their search and the type of information pursued. Engel et al. argue that beliefs and attitudes have an influence on search behavior. Attitude is an outcome of beliefs. Thus, it is hypothesized that the more favorable the attitudes toward websites, the stronger the intention to search for information via the Internet, in this case favorite websites.

The reasoned action theory and planned behavior theory postulate that attitude is a determinant of behavioral intention. Researchers agree that attitude plays a major role in shaping behavioral intentions (Evans, Christiansen, & Gill, 1996; Fishbein & Ajzen, 1975; Shim & Drake, 1990; Shim et al., 2001). Evans, Christiansen, and Gill (1996) demonstrate that consumers' attitudes toward shopping have a significant effect on shopping center patronage intentions. In the context of Internet shopping, a study by Shim and Drake reveals that attitudinal components significantly influence consumers' intentions to purchase clothing through the Internet. Attitude, in the present study, is the individual's favorable or unfavorable feelings toward favorite clothing websites. Thus, it is hypothesized that the more favorable the attitudes toward those clothing websites, the stronger the intention to purchase clothing items via those websites.

Information search behavior, which involves reducing uncertainty about performance and other aspects of products, predicts consumers' purchase intentions by mediating the relationship between consumers' purchase intention and their attitudes toward a store or brand (Shim et al., 2001). Due to the information-intensive nature of the Internet (Fortune, 1998) and its power as an information search vehicle (Maignan & Lukas, 1997; McGaughey & Mason, 1998; Rowley, 2000), Klein (1998) suggests that information search processes via the Internet are an important part of consumer Internet shopping behavior. Shim et al. suggest that, particularly in the context of Internet shopping, information search via the Internet is the key predictor of intention to purchase through the Internet. Shim et al. also indicate that consumers' intentions to search for information via the Internet mediate the relationship between consumers' intentions to purchase through the Internet and their attitudes toward Internet shopping. In this vein, a person who has a favorable attitude toward a website may be inclined to search for information through the website; thus, the more positive consumers' attitudes are toward

clothing websites, the stronger their intentions to search for information through those websites. In addition, the more satisfied they are with the information provided on the web, the more often they will visit the website to search for product information, which will increase the chance of purchasing the products through the Internet.

Meanwhile, some consumers may use the Internet only as a tool for information search because they cannot experience a product itself through websites, particularly in the case of clothing shopping. Thus, they may browse websites only to obtain product information, and then go to brick-and-mortar stores or other channels to buy the products discovered on the websites. If consumers are satisfied with the information provided on the web, it will increase the chance of their purchasing the products searched on the websites through some retail venue, whether Internet or brick-and-mortar stores. Therefore, the greater the intention to search for information via the Internet, the stronger the intention to purchase clothing items via the Internet or elsewhere.

Purchase Intention (L in Figure 2)

Customer retention is the first step in the task of gaining loyalty and has been widely considered as one way in which consumers express their satisfaction with the performance of products or services received (Bloomer & Kasper, 1995). In the context of retaining customers at a store or for a brand, many studies have examined the relationship between loyalty and related variables, with the former approached as repurchase intention (Anderson & Sullivan, 1993: Cronin & Taylor, 1992; Fornell, 1992; LaBarbera & Marzusky, 1983; Oliver, 1980) because behavioral intention is a key predictor of future behavior. As behavioral intention is assumed to predict future behavior (Ajzen & Fishbein, 1980), it is assumed that the stronger the intentions of consumers to purchase clothing items at a certain store, the more likely they would actually exhibit purchasing behavior at the store.

In all, the more positive consumers' attitudes are toward clothing website store fronts, the more likely they will go to the websites to search for information and to purchase clothing items from those websites. Even if they are not willing to purchase clothing items through the websites, they may go to brick-and-mortar stores or other

channels to buy the products found on the web, which will increase the chance of retaining consumers for the store or brand.

Conceptual Definitions

1. **Clothing shopping behavior** is consumer behavior involving search for information and purchase processes for clothing items (Hwang, 1996).
2. **Intention to purchase clothing items** refers to an individual's inclination to purchase clothing items in the next six months.
3. **Intention to search for information** refers to an individual's inclination to search for information about clothing items in the next six months.
4. **Attitude** is an individual's favorable or unfavorable feelings toward performing a behavior or toward an object (Ajzen & Fishbein, 1980); in the present research, the attitude of interest is the individual's favorable or unfavorable feelings toward his or her favorite clothing websites for shopping for clothing items.
5. **Clothing website attributes** are attractive or unattractive website characteristics according to consumers' perceptions of the websites and may affect consumers' decisions on where to shop and purchase.
6. **Evaluation of the relative importance of different clothing website attributes** represents an individual's beliefs about the relative salience of clothing website characteristics.
7. **Perceptions of favorite clothing websites** represent an individual's strength of belief that his or her favorite clothing websites have certain characteristics.
8. **Favorite clothing websites** are clothing websites that a consumer especially likes to visit to obtain information about products or stores and/or to purchase products.
9. **Clothing shopping orientations** are categories of shopper styles with particular emphasis on clothing shopping activities, reflecting consumer needs or wants when shopping for and/or purchasing clothing products.
10. **Previous online clothing shopping and/or purchasing experience** represents the frequency of a consumer's online information search for, and/or purchase of,

clothing products and the numbers of clothing items purchased through the Internet in the past 12 months.

Research Hypotheses

The research hypotheses were formulated with respect to the specific relationships in the conceptual framework. These relationships between the variables are the major concern of the study. Figure 3 indicates the proposed research hypotheses. The rationale for each relationship stems from the results of previous studies, from theories and from reasoning.

H1: Consumers' clothing shopping orientation and their previous online clothing shopping and/or purchasing experience will be significantly related to their evaluation of the relative importance of clothing website attributes.

H2: Consumers' clothing shopping orientation and their previous online clothing shopping and/or purchasing experience will be significantly related to their perceptions of the attributes of their favorite clothing websites.

Previous research on consumers' shopping behavior in traditional retail settings, such as brick-and-mortar stores, indicates that shopping orientation directly influences consumers' evaluation of the relative importance of store attributes, as well as their perceptions of store attributes. These relationships may or may not be consistent in effecting the hypothesized relationships in the Internet shopping environment; however, research on consumers' online shopping behavior indicates that shopping orientation plays an important role in consumers' propensity to engage in online transaction activities. This implies that consumers may have certain criteria for evaluating websites and have perceptions about them. In this vein, this research tests the relationships between consumers' shopping orientations and, on one hand, their evaluation of the

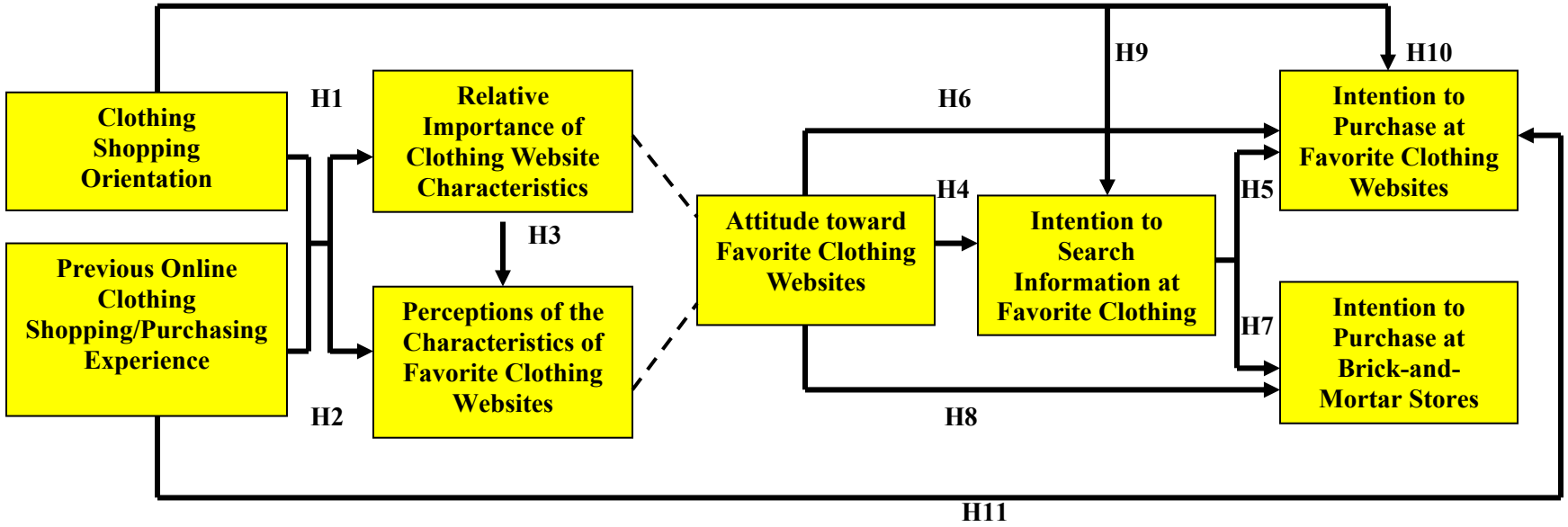

Figure 3. Proposed Research Hypotheses

relative importance of different website attributes and, on the other, their perceptions of the attributes of their favorite clothing websites.

Previous research indicates that consumers' previous online shopping experience influences their intentions to search for information on, and purchase, products through the Internet. Based on the literature review, it is assumed that consumers will evaluate their previous purchasing experience before developing intentions to search for information on, or purchase, products through the Internet in the future. If consumers already have had experience purchasing products online, they may have certain evaluative criteria for website attributes and also have certain websites they are willing to visit in the future. If they have positive perceptions of certain websites, they may revisit those websites to shop online. This leads to the hypothesis concerning the relationship between consumers' previous online purchasing experience and, on one hand, their evaluation of the relative importance of website characteristics and, on the other, their perceptions of the attributes of their favorite websites.

H3: Consumers' evaluation of the relative importance of clothing website attributes and their perceptions of the attributes of their favorite clothing websites will be significantly correlated.

In a study of the relationship between consumers' evaluation of the perceived importance of website attributes and their satisfaction with the attributes of the websites where they shopped, Kim and Lim (2001) found that some dimensions of evaluating the importance of website characteristics did not influence similar dimensions of the website characteristics in terms of consumers' satisfaction. They did find, however, that the "information quality" dimension was significantly related to the "entertainment" dimension in terms of consumers' satisfaction with the website attributes. This implies that a website should offer the entertainment element along with good quality information. It may also provide support for hypothesis 3, that consumers' evaluation of the relative importance of clothing website attributes will be related to their perceptions of their favorite clothing website attributes.

H4: ***Consumers' attitudes toward their favorite clothing websites will be positively related to their intentions to search for information about clothing items from those websites.***

H5: ***Consumers' intentions to search for information about clothing items at their favorite clothing websites will be positively related to their intentions to purchase clothing items from those websites.***

H6: ***Consumers' attitudes toward their favorite clothing websites will be positively and directly related to their intentions to purchase clothing items from their favorite clothing websites after finding the items at those websites.***

H7: ***Consumers' intentions to search for information about clothing items at their favorite clothing websites will be positively related to their intentions to purchase clothing items from channels other than Internet clothing websites after finding those items at their favorite websites.***

H8: ***Consumers' attitudes toward their favorite clothing websites will be positively and directly related to their intentions to purchase clothing items from channels other than Internet clothing websites after finding the items at their favorite websites.***

Previous research indicates that consumers' attitudes toward objects or toward performing a behavior determine their information search behavior (Duncan & Olshavsky, 1982; Engel, Blackwell, & Miniard, 1995; Klein, 1998; Martineau, 1958). In the context of Internet shopping, the studies by Klein (1998) and Shim et al. (2001) indicate that consumers' attitudes toward Internet shopping determine their intentions to search for information from Internet websites. This implies that the more positive consumers' attitudes are toward Internet websites, the more they will search for information about products from the websites. Thus, Hypothesis 4 suggests that

consumers' attitudes toward their favorite clothing websites will be positively related to their intentions to search for information from those websites.

Consumers' intentions to search for information from websites determine their intentions to purchase products from those websites. Klein's (1998) model indicates a hierarchical approach to shopping, in which media attributes directly influence information search behavior, which itself is an antecedent of the ultimate decision-making for an actual purchase. In addition, Shim et al. (2001) indicate that information search via the Internet is a key predictor of intention to purchase through the Internet. Shim et al. also indicate that consumers' intentions to search for information via the Internet mediate the relationships between consumers' intentions to purchase through the Internet and their attitudes toward Internet shopping. It is logical to assume that the relationship between intention to search for information and intention to purchase is hierarchical. Thus, hypothesis 5 proposes that consumers' intentions to search for information for clothing products from their favorite clothing websites are positively related to their intentions to purchase clothing items from those websites.

Some consumers, however, may use websites only as a tool to search for information because they cannot touch, feel or try on the products through the websites, which applies to the case of clothing shopping. They may browse websites only to obtain product information, then go to brick-and-mortar stores or elsewhere to buy the products located on the websites. In this vein, hypothesis 7 suggests that consumers' intentions to search for information at their favorite websites are positively related to their intentions to purchase clothing items located on those websites from channels other than Internet clothing websites.

Previous research and existing theories suggest that attitude determines behavioral intention. The reasoned action theory and planned behavior theory postulate that attitude is a determinant of behavioral intention. Many researchers agree that attitude plays a major role in shaping behavioral intentions (Evans, Christiansen, & Gill, 1996; Fishbein & Ajzen, 1975; Shim & Drake, 1990; Shim et al., 2001).

The study by Shim et al. (2001) revealed that consumers' attitude towards Internet shopping had a positive direct impact on their intentions to purchase from the Internet. That is, the more positive consumers' attitudes are towards Internet shopping, the more

they are willing to purchase products from Internet websites. In their study of the relationship between consumers' attitudes toward a particular Internet store and their willingness to purchase from that store, Jarvenpaa and Tractinsky (1999) indicate that consumers' attitudes toward an Internet store are positively related to their willingness to purchase from the store. In the present research, attitude refers to an individual's favorable or unfavorable feelings toward clothing websites. Based on previous research results, the more favorable the attitudes toward the clothing websites, the stronger the intention to search for information on, and to purchase, clothing items via those websites. In this vein, hypotheses 6 and 8 posit that consumers' attitudes toward their favorite clothing websites will positively influence their intentions to purchase clothing products from those websites or channels other than Internet clothing websites.

H9: Consumers' clothing shopping orientations will be significantly related to their intentions to search for information about clothing items at their favorite websites.

H10: Consumers' clothing shopping orientations will be significantly related to their intentions to purchase clothing items from their favorite websites.

Shopping orientation refers to categories of shopper styles with particular emphasis on certain activities (Shim & Kotsiopulos, 1993). Consumers with different shopping orientations show different shopping behaviors, such as information search and purchase intentions, in traditional retail settings and in Internet shopping. Klein's (1998) study, for example, suggests that consumer characteristics directly influence information search behavior. In Vijayasarathy and Jones' (2000) study of Internet shopping, consumers' shopping orientations directly influenced their intentions to use the Internet for shopping. Their findings indicate that consumers who had an affinity for traditional in-home shopping, such as catalog shopping or mail order, showed a strong preference for online shopping, whereas individuals who preferred mall shopping tended to have low intentions toward online shopping. Based on these previous studies, hypotheses 9 and 10 pose positive relationships between consumers' clothing shopping orientations and, on one hand, their intentions to search for information and, on the other, to purchase clothing

items through the Internet. The shopping orientations of interest in the present study focus on shopping for clothing items.

H11: Consumers' online clothing shopping and/or purchasing experience will be significantly related to their intentions to purchase clothing items from their favorite websites.

Many researchers assert that the inclusion of a variable for previous shopping experience significantly improves the prediction of future shopping behavior (Bentler & Speckart, 1979, 1981; Sutton & Hallett, 1989). Some analysts indicate that consumers' previous experience with non-store shopping formats, such as catalogs, influences their use of the Internet for shopping (Liang & Huang, 1998; Shim & Drake, 1990). Klein (1998) and Shim et al. (2001) also indicate that consumers' past experience with Internet shopping is a significant predictor of search behavior on the Internet. In addition, other researchers have found that consumers' past online purchasing experience had a direct impact on their online prepurchase intentions (Eastlick, 1996; Weber & Roehl, 1999). Thus, consumers' online clothing purchasing experience may influence their intentions to purchase clothing items through the Internet. For this reason, hypotheses 11 posits that consumers' past online clothing shopping and/or purchasing experience positively influence their intentions to purchase clothing items over the Internet.

Limitations

The following are limitations of this study.

1. Personal recall is a possible limitation because respondents may not accurately remember their previous online clothing shopping behavior.
2. Although the sample for this study is selected by systematic random sampling method, which is one of probability sampling techniques, it is possible to have "response bias," due to self-selection from respondents. In addition, the sample is restricted only to non-married students (undergraduate or graduate), aged 18 to

22. Thus, the interpretation of the findings cannot be generalized to the larger population of young consumers aged 18 to 22.

Assumptions

This research is undertaken with the following assumptions.

1. Intentions to search for information about and to purchase clothing items online in the next six months are assumed to lead to the actual purchase of the products in the next six months.
2. The subjects understood and responded to the questions correctly and honestly.

CHAPTER IV

RESEARCH PROCEDURE

This chapter describes the research design and the procedures for conducting the study. Specifically, this chapter delineates the instrument development including pilot testing and the sampling, data collection, and data analysis procedures. The discussion of the instrument shows the operationalization of the variables. The issues of the reliability and validity of the measurement scales are addressed.

Instrument Development

A structured questionnaire was developed to collect data on the variables in this study. The final version of the instrument is in Appendix D. The research variables are previous online information search and/or purchasing experience, clothing shopping orientation, the relative importance of general clothing website characteristics, perceptions of favorite clothing websites, attitude toward favorite clothing websites, intention to search for information through favorite clothing websites, and intention to purchase clothing items from favorite websites or channels other than Internet websites. Some questions in the questionnaire were adopted and compiled from previous studies of Internet shopping, clothing shopping orientation, consumer attitude and purchase intention, and others were developed or modified for the purposes of this study.

Demographics

The first section of the instrument consisted of forced-choice questions about demographic characteristics: age, gender, student status and marital status. The responses

were used to describe the sample and to screen out some that does not meet the sample criteria.

Clothing Shopping Orientation

To measure clothing shopping orientation, 27 statements, incorporating nine dimensions were used. The nine dimensions were brand consciousness, fashion consciousness, price consciousness, time consciousness, convenience consciousness, preference for mall shopping, shopping confidence, in-home shopping, and recreational shopping. The statements were adopted from previous research on shopping orientation (Korgaonkar, 1984; Moye, 2000; Shim & Kotsiopulous, 1993; Swaminathan, Lepkowska-White, & Rao, 1999; Vijayasarathy & Jones, 2000), and some of the statements were modified to fit the purposes of this study. The response format was a 4-point Likert type scale, with classifications from strongly disagree (1) to strongly agree (4). Each dimension of clothing shopping orientation was measured by an average score over the relevant items for that dimension.

Previous Online Shopping and/or Purchasing Experience at General Clothing Websites

To measure previous online shopping and purchasing experience at general clothing websites, three items were used: how much searching a respondent did on the Internet for information about clothing items he or she considered buying; how much purchasing of clothing items a respondent did through the Internet; and the number of clothing items he or she purchased on the Internet. The question asking how much purchasing of clothing items a respondent did through the Internet was adopted and modified from previous research (Shim et al., 2001) to fit the purposes of this study, and the other two questions were developed for this study. The time frame for each of the three items was "in the past 12 months." The response format for each item was a 4-point ordinal scale. Respondents were asked to indicate never, seldom, occasionally or a lot for the items on "how much searching a respondent did on the Internet for information about clothing items he or she considered buying" and "how much purchasing of clothing

items a respondent did through the Internet," and none, few, some or a lot for the item on the number of clothing items he or she purchased on the Internet. The question "how much did you search on the Internet for information about clothes" was intended to screen out respondents who were not actual Internet shoppers. Any respondent who answered "never" for that question was excluded from the analysis.

Clothing Website Characteristics

The measures involving clothing website characteristics were respondents' evaluation of the relative importance of general clothing website characteristics and their perceptions of their favorite clothing websites.

Evaluation of the Relative Importance of Clothing Website Characteristics

Thirty six items were used to elicit respondents' indication of the relative importance of general clothing website characteristics. The 36 items incorporated five dimensions: navigation, merchandise, transaction services, privacy and security, and sensory experience. The items were modified from ones used in previous studies on website characteristics (Childers, Carr, Peck, & Carson, 2001; Liu, Arnett, & Litecky, 2000; Shim et al., 2001; Szymanski & Hise, 2000). They were measured with a 4-point Likert type scale containing classifications ranging from not important at all (1) to very important (4).

Perception of favorite clothing websites

In order to focus on a sample of young consumers who had favorite websites that they liked to visit, respondents were asked whether they had favorite clothing websites. The respondents who did not have favorite clothing websites were asked to finish the questionnaire, and the respondents who had favorite clothing websites were asked to name them and go on to the next section.

The same 36 items used to measure the relative importance of clothing website attributes were used to measure the respondents' indication of their strength of beliefs about their favorite clothing website characteristics. The items were measured on a 4-point Likert type scale containing classifications from strongly disagree (1) to strongly agree (4).

Intentions and Previous Experience with Favorite Clothing Websites

Previous Experience with Favorite Clothing Websites

Prior to being asked about their future intentions, the respondents were asked about their previous shopping experience at their favorite clothing websites in order to make it easier for them to understand the questioning in the following section regarding their future intentions. Four items were used: how much searching a respondent did on favorite clothing websites for information about clothing items he or she considered buying; how much purchasing of clothing items through favorite clothing websites a respondent did; the number of clothing items he or she purchased on those favorite clothing websites; and how much purchasing of clothing items a respondent did from channels other than their favorite clothing websites after finding clothing items from those websites. The time frame for each of the four items was "in the past 12 months." The same response format as for previous online shopping experience at general clothing websites was used for the comparable items involving favorite clothing websites: a 4-point ordinal scale with never, seldom, occasionally or a lot as the alternatives for "how much searching a respondent did on favorite clothing websites for information about clothing items he or she considered buying," "how much purchasing of clothing items through favorite clothing websites a respondent did," and "how much purchasing of clothing items a respondent did from channels other than their favorite clothing websites after finding clothing items from those websites," and none, few, some or a lot as that for the number of clothing items he or she purchased on those favorite clothing websites.

Intentions

The three intentions measured were the respondents' intentions to use their favorite clothing websites to search for information and their intentions to purchase from these favorite clothing websites and/or some channels other than the Internet clothing websites. The time frame was within the next six months.

Intentions to Search for Information. For the measure of information search intentions, the likelihood that respondents would seek information about clothing items from their favorite clothing websites was assessed on a 4-point Likert scale (1 = very unlikely; 4 = very likely). The question was adopted and modified from previous research (Shim et al., 2001) to fit the purposes of this study. Each subject responded to a question on how likely she or he was to search for information about clothing items from her or his favorite clothing websites within the next six months.

Purchase Intentions. For the measure of purchase intentions, the likelihood that respondents would purchase clothing items from their favorite clothing websites or from channels other than Internet clothing websites, after finding clothing items on the Internet, within the next six month was assessed on a 4-point Likert scale (1 = extremely unlikely; 4 = extremely likely). The items were adopted and modified from previous research (Shim et al., 2001) to fit the purposes of this study.

Pilot Testing

Pilot testing of the measurement instrument was necessary to validate the items and the whole scale. This is because some of the measurement items were developed or modified for the purposes of this research and because the questions in the instrument were newly compiled to form a new questionnaire. The pilot testing was conducted in a series of steps. Before the final survey instrument was set up, a preliminary questionnaire was developed and tested to validate the scale items to be used in the study. The development of the measurement scales for this research followed the procedures

recommended by Churchill (1979) and DeVellis (1991) for developing a standardized survey instrument. The initial task in developing the scale was to devise the item pool from previous studies. Then, the preliminary survey questionnaire was distributed to five faculty members at Virginia Tech to gain their feedback regarding the content, layout, wording and ease of understanding the measurement items. They were also asked to offer suggestions for improving the proposed scale and to edit the items to enhance clarity, readability, and content adequacy. The feedback was taken into account in revising the questionnaire.

Eighteen undergraduate students in the Department of Apparel, Housing and Resource Management at Virginia Tech were interviewed about the revised questionnaire. The students were mainly asked clarity of the questionnaire. Changes were made based on the verbal feedback received. Then, the newly revised questionnaire was pilot tested using a convenience sample of 85 undergraduate students living in or near Blacksburg. The pilot test questionnaire is in Appendix C.

In the pilot test, respondents were particularly asked to indicate, in their review, the numbers implied by the words seldom, occasionally, few, some, and a lot in order to verify that the response format for the previous online information search and purchasing experience measures represented relative differences in the respondents' perception. The pilot test results indicated that each word represented relative differences in their perception. After the questionnaire was pilot tested, each question was examined for its clarity and relevance to the purpose of the research, which resulted in some modifications to the questions. One item among clothing website characteristics was eliminated because of the lack of clarity in its meaning. The item was "It uses animation or images to describe products."

Sampling Procedures and Questionnaire Administration

The population for this research was Internet shoppers aged 18 to 22, who had favorite clothing websites they especially like to visit to search for information and/or to purchase clothing items. A systematic sample of Virginia Tech and Ohio State University students, which was generated from the two universities' student directories,

was used for the survey. In systematic random sampling that is one of probability sampling techniques, the sample is chosen by selecting a random starting point and then picking every *i*th element in succession from the sampling frame (Malhotra, 1999). The sampling interval of this study, *i*, was 3 for Virginia Tech and 8 for The Ohio State University student sample, which was determined by dividing the population size N by the sample size n and rounding to the nearest integer. From Virginia Tech student sample of 25,000 and The Ohio State University student sample of 60,000, 7,500 students from each school were selected. In order to survey the students, permission for conducting research involving human subjects was sought and obtained from the Institutional Review Board at Virginia Tech. Human subject approval form is in Appendix B.

The data were collected using an online survey distributed by e-mail to the sample of Virginia Tech and The Ohio State University students. The initial e-mail to each student included an announcement about the research, the link to the online questionnaire itself and a request to complete the online survey. One week after this initial e-mail, a follow-up e-mail was sent reminding each person of the questionnaire, thanking those who had already returned it, and asking those who had not yet completed the survey to do so. An incentive for answering the questionnaire was offered. Each respondent who met certain criteria was eligible to win a drawing for answering the questionnaire. All students, who were sent the questionnaire, were informed that, to be eligible for the drawing, their questionnaires had to be received within two weeks of the initial e-mail; that is, a week after the second e-mail, and they had to provide their e-mail addresses. They were informed that the contact information would be used only for the purposes of the drawing and the follow-up contact to inform the winners. The responses from the students, who met the eligibility criteria, were marked with numbers for the random drawing.

A blind drawing was done by a graduate student in the Department of Apparel, Housing and Resource Management at Virginia Tech. The winner of the drawing was notified by e-mail, and permission was requested to release his name as the winner. He agreed to allow his name to be released announcing him as the winner of the Internet clothes shopping survey.

The minimum sample size required for this research was determined by the following factors: power, confidence level, effect size, model specification, model size, normality, and maximum likelihood estimation (Hair, Anderson, Tatham, & Black, 1998). In factorial MANOVA, the minimum requirement for sample in each group is to exceed the number of dependent variables and to provide practically significant statistical power to assess group differences. In path analysis, a sample size of 200 is recommended considering the model specification, model size and normality. A sample size exceeding 500 is considered to too large, however, because it makes the method too sensitive and results in detecting almost any difference.

Because at least 20 observations are recommended for a simple regression analysis with a single independent variable, this research required a minimum sample size of 180 for a multiple regression analysis using nine shopping orientation factors as the independent variables. The preferred sample size to utilize factor analysis was 100 or larger. As a general rule, the sample size should allow at least five cases for each variable and a more acceptable sample size would allow ten cases for each variable to be analyzed (Hair, Anderson, Tatham, & Black, 1998). With the 36 items for the clothing website characteristics, a minimum sample size of 180 was required and a more desirable sample size would have been 360. In all, it was concluded that a minimum sample size of 200 was needed for this research and the targeted sample size was 360.

Reliability and Validity of the Instrument

Measures of variables should have validity and reliability (Cronbach, 1971; Nunally, 1978) in order to draw valid inferences from the research. Reliability deals with how consistently similar measures produce similar results (Rosental & Rosnow, 1984), and it has the two dimensions of repeatability and internal consistency (Zigmund, 1995). Internal consistency refers to the ability of a scale item to correlate with other items in the scale that are intended to measure the same construct. Items measuring the same construct are expected to be positively correlated with each other. A common measure of the internal consistency of a measurement instrument is Cronbach's alpha. If the

reliability is not acceptably high, the scale can be revised by altering or deleting items that have scores lower than a pre-determined cut-off point. If a scale used to measure a construct has an alpha value greater than 0.70, the scale is considered reliable in measuring the construct (Hair, Anderson, Tatham, & Black, 1998; Nunnally, 1978; Leedy, 1997). According to Schuessler (1971), a scale is considered to have good reliability if it has an alpha value greater than 0.60. Hair et al. (1998) suggest that reliability estimates between 0.6 and 0.7 represent the lower limit of acceptability for reliability estimates. In this research, the multi-item scales measuring shopping orientation and clothing website characteristics were checked for reliability by determining Cronbach's alpha and an alpha value of 0.60 or greater was considered acceptable.

The validity of a measurement instrument refers to how well it captures what it is designed to measure (Rosental & Rosnow, 1984). Several different types of validity are of concern: content validity, the degree of correspondence between the items selected to constitute a summated scale and its conceptual definition; criterion validity, the degree of correspondence between a measure and a criterion variable, usually measured by their correlation; and construct validity, the ability of a measure to confirm a network of related hypotheses generated from a theory based on constructs.

In this research, the content validity of the measurement instrument was assessed by asking experts to examine it and provide feedback for revision. The expert panel included professors and graduate students in clothing and textiles and related disciplines at Virginia Tech. After they reviewed the questionnaire, changes were made to clarify and eliminate ambiguous statements in instructions and questions according to their recommendations. Also, in the pilot test, each question was examined for its clarity and relevance to the purpose of the research, which resulted in some modifications to the questions. After the data collection with the final questionnaire, the content validity of the shopping orientation and website attribute measures was assessed by factor analysis. Such analysis provides an empirical assessment of the interrelationships among items in a variable in forming the conceptual and empirical foundation of a summated scale (Hair, Anderson, Tatham, & Black, 1998).

Internal construct validity was also assessed by factor analysis. Previous research suggests that scales for measuring shopping orientation and website attributes comprise multiple sub-dimensions within the scales. Because factor analysis provides evidence of the dimensionality of a measure, factor analysis with a varimax rotation was used to determine the number of factors contained in the clothing shopping orientation and clothing website attributes scales. An eigenvalue greater than 1 is considered to indicate the presence of an interpretable factor so that factors with eigenvalues greater than 1 were taken into account for interpretation. Factor loading values indicated the strength of relationship between each item and each factor. Values greater than 0.3 are considered to be substantial or salient; however, factor loadings of 0.50 or greater are considered practically significant (Hair, Anderson, Tatham, & Black, 1998). Thus, a factor loading value of 0.50 was used for the cut-off point; any item with factor loading value less than 0.50 and any item loading on more than one factor, that is, with a loading score equal to or greater than 0.40 on each factor, was eliminated from the analysis (Chen & Hsu, 2001; Kim, 2002).

Data Analysis

The data gathered from the online questionnaire were entered into a computer database and then analyzed using the Statistical Package for the Social Sciences (SPSS). The data analysis consisted of factor analysis, cluster analysis, multivariate analysis of variance (MANOVA), canonical correlation analysis, multiple regression, path analysis, t-tests, and descriptive statistics including means, frequencies and percentiles.

Based on the research hypotheses, 11 corresponding null hypotheses for testing the relationships in the model are presented, followed by description of the statistical procedures used in testing. The null hypotheses, stating no relationship between variables, parallel the research hypotheses stated in the previous chapter. The established significance level for rejecting all null hypotheses was 0.05.

Before testing the null hypotheses, descriptive statistics were computed for all variables including the means, standard deviations, frequencies, percentages and

correlations of the response values to provide better understanding of the variables and to profile the respondents' demographic characteristics in terms of gender, age, student status and marital status. Also, after determining the clothing shopping orientation constructs and the clothing websites characteristics constructs by factor analysis, Pearson correlation coefficients among the constructs were calculated. It is important to know if the independent variables in a regression are correlated, because multicollinearity is a threat to the interpretation regarding the influence of independent variables on the dependent variable in the regression (Pedazur, 1982). If independent variables are highly correlated, the influence of each of the independent variables on the dependent variable may be misinterpreted. The examination of the correlation matrix among independent variables was the first diagnostic tool for the multicollinearity problem; however, multicollinearity among more than two independent variables will not be exhibited by simple correlations alone.

The second diagnostic tool was the variance inflation factor (VIF), which represents the inflation that each regression coefficient experiences above the ideal. The VIF for the *i*th regression coefficient is written $VIF = 1/1\text{-}R_i^2$, where the coefficient of the multiple determination of the regression is produced by regressing the variable X_i against the other independent variables. If this value is large, the *i*th independent variable has a strong linear association with the remaining independent variables. If VIF becomes larger than 10, severe multicollinearity is indicated (Myers, 1990).

The third diagnostic tool was the eigenvalues of the correlation matrix. If one or more near linear dependencies exists in the data, then one or more of the eigenvalues will be small. The strength of the linear dependency is indicated by the nearness to zero of the smallest eigenvalue (Hwang, 1996). Multicollinearity is often measured by the ratio of the largest to the smallest eigenvalue, which is called the condition number of the correlation matrix. A large condition number, defined as 1,000 or greater, indicates serious multicollinearity. Thus, in addition to the correlation matrix, VIF and eigenvalues were examined to assess the collinearity among the independent variables in this study.

Null Hypotheses

$H_0$1: Consumers' clothing shopping orientation and their previous online clothing shopping and/or purchasing experience will not be significantly related to their evaluation of the relative importance of clothing website attributes.

$H_0$2: Consumers' clothing shopping orientation and their previous online clothing shopping and/or purchasing experience will not be significantly related to their perceptions of the attributes of their favorite clothing websites.

To test null hypotheses 1 and 2, factor analysis, cluster analysis and MANOVA were employed. For null hypothesis 1, two separate factor analyses were performed to extract the clothing shopping orientation dimensions and the general clothing website attribute dimensions because factor analysis extracts the reliable items that significantly explain the variance of each factor. The clothing shopping orientation dimensions, or factors, formed from the factor analysis were used for cluster analysis to divide the respondents into groups with respect to shopping orientation. In order to identify the appropriate number of clusters, the hierarchical procedure was employed first. The agglomeration coefficients were calculated to determine the number of clusters in the hierarchical procedure. Then, the nonhierarchical procedure was used to fine tune the results by utilizing the hierarchical analysis results as a basis for generating the seed points.

The respondents were also divided into two groups with respect to their online clothing shopping and/or purchasing experience. The two groups were the information search group and the purchase group. The information search group includes respondents who had visited clothing websites only to search for product information, but not to purchase clothing from websites. The purchase group includes respondents who had actually purchased clothing from websites whether or not they had also searched for information from websites. The division into these two groups was simply based on respondents' answers to the questions about online information search and purchase.

Then, factorial MANOVA was utilized to test for the main and the interaction effects of the two sets of independent variables, the shopping orientation clusters and the online shopping experience groups, on the two sets of dependent variables, the website characteristics' relative importance and the favorite clothing websites' characteristics. MANOVA is an extension of the independent samples t-test or ANOVA in testing group differences, but it affords the analysis of the effects of independent variables on multiple dependent variables simultaneously. MANOVA, which is one of a class of multivariate analysis techniques, has greater statistical power than a set of univariate t-tests or ANOVA on the same dependent variables, due in part to taking into account correlations between the dependent variables and lowering the risk of Type I errors. Thus, in testing null hypotheses 1 and 2, factorial MANOVA was employed as an extension of factorial ANOVA with multiple dependent variables. This analysis permitted tests of the interaction between the two independent variables and was judged to be more powerful than the use of a one-way design on the same data because of the reduction of error associated with the two sets of independent variables.

For the MANOVA for testing null hypothesis 1, the independent variables were the different shopping orientation clusters found in the cluster analysis and the two online clothes shopping experience groups, and the dependent variables were five general clothing website characteristics constructs. For the MANOVA for testing null hypothesis 2, the independent variables were the same as those for the null hypothesis 1, and the dependent variables were five favorite clothing website characteristics constructs. In each of the two MANOVAs, all the dependent and independent variables were included in one equation as follows.

$$\underset{\text{(metric)}}{Y_1 + Y_2 + Y_3 + \ldots + Y_n} = \underset{\text{(nonmetric)}}{X_1 + X_2 + X_3 \ldots + X_n}$$

where Y_i = dependent variable, X_j = independent variable

H_03: Consumers' evaluation of the relative importance of clothing website attributes and their perceptions of the attributes of their favorite clothing websites will not be significantly correlated.

For this hypothesis, canonical correlation analysis was used to assess the strength of the multivariate relationships between the various dimensions of the relative importance placed on clothing website characteristics and of the perceived characteristics of favorite clothing websites. Canonical correlation analysis is one of the multivariate analysis techniques that focus on the simultaneous analysis of relationships between multiple independent and dependent variables. It is conceived as an extension of multiple regression with multiple dependent variables. In testing this hypothesis, canonical correlation analysis was used to determine the correlations between linear combinations of the dimensions of the relative importance of clothing website characteristics and linear combinations of the perceived favorite clothing website characteristics dimensions.

H_04: Consumers' attitudes toward their favorite clothing websites will not be related to their intentions to search for information about clothing items from those websites.

H_05: Consumers' intentions to search for information about clothing items at their favorite clothing websites will not be related to their intentions to purchase clothing items from those websites.

H_06: Consumers' attitudes toward their favorite clothing websites will not be and directly related to their intentions to purchase clothing items from their favorite clothing websites after finding the items at those websites.

H_07: Consumers' intentions to search for information about clothing items at their favorite clothing websites will not be related to their intentions to purchase clothing items from channels other than Internet clothing websites after finding those items at their favorite websites.

H_08: Consumers' attitudes toward their favorite clothing websites will not be and directly related to their intentions to purchase clothing items from channels

other than Internet clothing websites after finding the items at their favorite websites.

To test null hypotheses 4, 5, 6, 7 and 8, path analysis was employed. Path analysis is a useful regression-based method for examining direct and indirect effects of independent (exogenous) variables on other dependent (endogenous) variables; thus, it is useful for testing theory. Path analysis can provide evidence of the tenability of causal models a researcher formulates based on knowledge and theoretical considerations (Pedhazur, 1997). A causal model posits that a certain endogenous variable is explained by exogenous variables that themselves are assumed to be determined by causes outside the hypothesized model. In the particular case of this research, a unidirectional recursive model is hypothesized, rather than a model with reciprocal causation between variables, either directly or indirectly. In this recursive model, an endogenous variable is treated as dependent on a certain set of variables, which may also be conceived as an independent variable with respect to another endogenous variable.

Based on Fishbein and Ajzen's (1981) multiatttribute attitude theory, each respondent's attitude toward his or her favorite websites was determined by summing the products of that subject's indicated evaluation of the relative importance of each different clothing website attribute by the corresponding score indicating the perception of the degree to which his or her favorite clothing websites possessed that same attribute. Then, path analysis was employed to test the causal relationships among the estimated attitudes toward favorite clothing websites, intentions to search for information through those websites, and intentions to purchase clothing items from those websites or from non-Internet channels.

$H_0$9: Consumers' clothing shopping orientations will not be significantly related to their intentions to search for information about clothing items from their favorite websites.

Multiple regression was used to examine the relationship between clothing shopping orientation and intention to search for information from favorite clothing

websites. In this analysis, the predictor variables were the clothing shopping orientation factors determined from the factor analysis, and the criterion variable was intention to search for information search intention at favorite clothing websites.

$H_0$10: Consumers' clothing shopping orientations will not be significantly related to their intentions to purchase clothing items from their favorite websites.

Multiple regression was used to examine the relationship between clothing shopping orientation and intentions to purchase clothing items from favorite websites. The predictor variables were the clothing shopping orientation factors, and the criterion was intention to purchase clothing items from favorite clothing websites.

The regression analysis for testing null hypotheses 9 and 10 were to reveal the degree of influence of specific clothing shopping orientation dimensions on information search intentions, as well as purchase intentions. To diagnose whether multicollinearity was present in the clothing shopping orientation factors, the VIF (variation inflation factor) was calculated. As the variance inflation factor increases, so does the variance of the regression coefficient, resulting in inflated standard errors in estimation. Large VIF values are an indicator of multicollinearity.

A number of options exist to remedy multicollinearity. The preferred method is to eliminate one or more highly correlated independent variables (Hair, Anderson, Tatham, & Black, 1998; Myers, 1990); however, cautious interpretation is required to follow this option in order to avoid creating specification error. Another option is to use the model with highly correlated independent variables for prediction only; that is, to make no attempt to interpret the regression coefficients. Using the simple correlations between each independent and dependent variable to understand the relationships between them is one way to remedy multicollinearity (Hair, Anderson, Tatham, & Black).

$H_0$11: Consumers' online clothing shopping and/or purchasing experience will not be significantly related to their intentions to purchase clothing items from their favorite websites.

T-test was used to evaluate whether consumers' intentions to purchase clothing items from those websites were different between consumers who had previous online clothing shopping versus purchasing experience. As for a previous hypothesis, this one utilizes the two groups having online clothing shopping experience or having online purchasing experience.

CHAPTER V

RESEARCH RESULTS AND DISCUSSION

The purpose of this research was to determine the effects of the attitudes of young consumers, aged 18 to 22, toward favorite websites on intentions to purchase through the Internet and channels other than Internet clothing websites, such as brick-and-mortar stores and catalogs. This chapter presents the results of the data analysis and hypothesis testing. The results are presented and discussed and conclusions are drawn using the following sequence: (a) return rate for the survey; (b) demographic profile of the respondents; (c) instrument reliability; (d) preliminary analysis of measured variables; and (e) results and discussion of the hypothesis testing.

Return Rate for the Survey

A self-administered online questionnaire was sent through e-mail to a systematic sample of 15,000 students at Virginia Tech and The Ohio State University, 7,500 students from each school, in April 2003 and was followed by a second e-mailing a week after the initial e-mailing.

The students returned a total of 1,344 surveys, indicating a 9 percent response rate. The return from the first e-mailing was 830 surveys, 440 from Virginia Tech and 390 from The Ohio State University (OSU); the return for the second e-mailing was 514, with 293 from Virginia Tech and 221 from OSU. From Virginia Tech, 733 students out of the total random sample of 15,000 took the online survey, and 263 of these surveys were usable for the final data analysis, yielding a usage rate of 35.9 percent. From OSU, 611 students out of the total random sample of 15,000 took the online survey, and 151

surveys were used for the final analysis, yielding a usage rate of 24.7 percent. Table 1 summarizes the response rates for the online survey.

Table 1

Response Rates for the Online Survey

Sample	Respondents & Non-respondents[a]			Respondents[b] (%)
	First e-mail	Second e-mail	Total	
VT Students	440	293	733	263 (35.9 %)
OSU Students	390	221	611	151 (24.7 %)
Total	830	514	1,344	414 (30.8 %)

[a]Questionnaires taken by the sample.
[b]Questionnaires used in the final data analysis.

Because this research focuses on non-married undergraduate or graduate students, aged 18 to 22, who were Internet shoppers with favorite websites, those who were married, aged 23 or more, or had no favorite websites were dropped from the final data analysis. After eliminating those who did not meet the sample criteria, and those who completed it incorrectly, 414 students' responses were retained for the study, yielding an overall response rate of 2.8 percent. The retained questionnaires include some that were deemed useable even though they did not have all the questions answered. Thus, the number of respondents in different parts of the analysis varies; the computer programs used for any one part of the statistical analysis eliminated respondents with missing values for the variables included in that statistical procedure.

One concern associated with an online survey is its low response rate, and the possibility that non-respondents may have responded differently enough to have altered the final results. This is a particular concern when the percentage of non-respondents is high relative to the percentage of respondents. Given the high non-response rate (97.2%), potential problems of non-response bias are a major concern.

Although 930 responses out of the 1,344 total were dropped because they did not meet the criteria for the research sample, all of the 1,344 students filled out the section on demographics (see the next section), the survey sections 2 (clothing shopping orientation) and 3 (evaluation of clothing website characteristics). This enables comparisons between the respondents who had favorite clothing websites and respondents who did not have favorite clothing websites with respect to their clothing shopping orientation and evaluation of clothing website characteristics. The next section includes these comparisons and comparisons on demographics.

Demographic Profile of the Sample

Table 2 shows demographic characteristics of the overall sample for the online survey including the 414 respondents (those whose responses were used in the final data analysis), the 536 non-respondents defined as those who met the sample criteria but had no favorite clothing websites, and 381 others who did not meet the criteria for the research sample and did not have favorite clothing websites as well. The 414 respondents were 18 to 22 years old, non-married undergraduate or graduate students. Of these, the majority (75%) were female. The largest proportion of them was those were aged 20 (28.7%), followed by 21 (25.6%) and 19 (22%). Most were undergraduate students (98.6%).

The 536 respondents, those subjects who met the same criteria as the sample used in the final data analysis except that they had no favorite clothing websites, included undergraduate or graduate students, aged 18 to 22 and single; these 563 survey responses that met the above criteria for respondents were analyzed for the comparison between respondents with favorite clothing websites and respondents without favorite clothing websites. This section contains the non-respondents' profile, based on their demographic characteristics, but the comparison of their clothing shopping orientations and their evaluation of the general clothing website characteristics with those of the respondents is based on factor analysis and discussed in a later section.

Table 2

Demographic Profile of Overall Sample

Demographics		Frequency		
		Respondents (%)	Non-respondents (%)	Overall Sample (%)
Total		414	536	1,331
Gender	Male	103 (24.9)	259 (48.3)	508 (38.2)
	Female	310 (74.9)	276 (51.5)	818 (61.5)
	Total	413 (99.8)	535 (99.8)	1,326 (99.6)
Age	18	30 (7.2)	39 (7.3)	70 (5.3)
	19	91 (22.0)	120 (22.4)	215 (16.2)
	20	119 (28.7)	155 (28.9)	279 (21.0)
	21	106 (25.6)	132 (24.6)	244 (18.3)
	22	68 (16.4)	89 (16.6)	162 (12.2)
	23 or more	0 (0)	0 (0)	353 (26.5)
	Total	414 (100)	535 (99.8)	1,323 (99.4)
Student Status	Undergraduate Student	408 (98.6)	515 (96.1)	1,063 (79.9)
	Graduate Student	6 (1.4)	19 (3.5)	260 (19.5)
	Total	414 (100)	534 (99.6)	1,323 (99.4)
Marital Status	Single	414 (100)	536 (100)	1,225 (92.0)
	Married	0 (0)	0 (0)	100 (7.5)
	Total	414 (100)	536 (100)	1,325 (99.5)

Note. The overall sample includes the respondents with favorite clothing websites, respondents without favorite clothing websites, and additional subjects as described in the text. For each of these groups, the percentages for the demographic characteristics are based on the number of responses for each characteristic.

Among the 536 respondents without favorite clothing websites, 51.5 percent were female and 48.3 percent were male. Those were aged 20 took the largest proportion of responses (28.9%), followed by 21 (24.6%) and 19 (22.4%), which is similar to the age distribution of respondents. Most of them were undergraduate students (96.1%).

The overall sample of 1,331 respondents excludes those eliminated because they completed the questionnaire incorrectly or failed to provide demographic information. Of the 1,326 students in the overall sample who gave their gender, 61.5 percent were female. The majority of the 1,323 respondents who gave their age and student status, were 18 to 22 years old (73%) and undergraduate (79.9%). Of the 1,325 who gave their marital status, 92% were single.

Instrument Reliability

Cronbach's alpha values were computed to test the internal consistency aspect of reliability of the multi-item scales measuring shopping orientation, importance placed on general clothing website characteristics and perceived favorite clothing website characteristics. Each of the three scales had alpha values greater than 0.60. The clothing shopping orientation measure, consisting of 27 items, has an alpha value of 0.69. The general and favorite clothing website characteristics measures, each consisting of 36 items, have the respective alpha values of 0.89 and 0.92 (see Table 3).

Table 3

Cronbach's Alpha Coefficients

Scales	Cronbach's Alpha
Clothing Shopping Orientation (total 27 items)	0.69
General Clothing Website Characteristics (total 36 items)	0.89
Favorite Clothing Website Characteristics (total 36 items)	0.92

According to Schuessler (1971), a scale is considered to have good reliability if it has an alpha value greater than 0.60. Hair et al. (1998) suggest that reliability estimates between 0.6 and 0.7 represent the lower limit of acceptability for reliability estimates. The determination was made, therefore, to use an alpha value greater than 0.6 for the reliability estimates in this research. The coefficients shown in Table 3 indicate good reliability for the three variables (i.e., clothing shopping orientation, general clothing website characteristics, and favorite clothing website characteristics).

Preliminary Analysis of the Measured Variables

This section presents the results of the factor analysis, cluster analysis, and descriptive statistics including frequencies of responses, means, standard deviations and correlations. The constructs of the clothing shopping orientation and general and favorite clothing website characteristics were determined by factor analysis, and their mean values, standard deviations and correlations among the constructs are reported. Mean values and standard deviations of the other variables in the study are reported in this section. In addition, frequencies of responses for each item in this study are reported in Appendix E Tables 34 through 38. In preparation for hypothesis testing, shopping orientation factors were grouped by cluster analysis. The responses of the 414 students who met the sample criteria (i.e., the respondents with favorite clothing websites) are analyzed in this section.

Factor Analysis

An exploratory factor analysis (EFA) with principal components was conducted to determine the dimensions of the clothing shopping orientation and the general and favorite clothing website characteristics measures. This analysis includes preliminary tests to determine the appropriateness of factor analysis: the anti-image correlation matrix, Bartlett's test of sphericity, and the Kaiser-Meyer-Olkin measure of sampling adequacy (MSA). In factor analysis, some degree of multicollinearity is desirable,

because the objective is to identify interrelated sets of variables. If visual inspection of correlation matrix reveals substantial number of correlations greater than .30, then factor analysis is appropriate (Hair et al., 1998). The correlations among variables can be analyzed by computing the partial correlations among variables. If "true" factors exist in the data, the values of partial correlation should be small. The anti-image correlation matrix contains the negative values of the partial correlations among variables; smaller anti-image correlations are indicative of a data matrix suited to factor analysis. Bartlett's test of sphericity is a statistical test for the presence of correlations among variables. It provides the statistical probability that the correlation matrix has significant correlations among at least some of variables. Thus, a significant Bartlett's test of sphericity is required (Hair et al.). The Kaiser-Meyer-Olkin MSA index, which can range from 0 to 1, indicates the degree to which each variable in a set is predicted without error by the other variables. If the MSA index reaches 1, each variable is perfectly predicted by the other variables without error. According to Hair et al. (1998), a value of 0.50 or more from the Kaiser-Meyer-Olkin MSA test indicates that the data are adequate for EFA.

Clothing Shopping Orientation

The Kaiser-Meyer-Olkin measure of sampling adequacy test (0.810) and Bartlett's test of sphericity ($p<.001$) indicated that the data on clothing shopping orientation were appropriate for factor analysis. In addition, the anti-image correlation matrix indicated that the partial correlations were small, implying that true factors existed in the data. Given these results, the exploratory factor analysis (EFA) was conducted.

The EFA employed a principal component analysis with varimax rotation. Factors with eigenvalues greater than 1.0 and rotated factor loadings of 0.50 or greater were retained. Despite the fact that, with a sample size greater than 350, a factor loading of 0.30 can be considered significant in this research, Hair et al. (1998) suggest that factor loadings of 0.50 or greater are practically significant. To ensure that each factor identified by the EFA would have only one dimension and that each attribute would load on only one factor, items with factor loadings less than 0.50 and any item loading on more than one factor with a loading score equal to or greater than 0.40 on each factor

were eliminated from the analysis (Chen & Hsu, 2001; Kim, 2002). In addition, because the communality of a variable represents the amount of variance in the factor solution explained by that variable (Hair et al.), variables with communalities less than 0.40 were deleted for reasons of insufficient contribution to explaining the variance. In the end, two variables that did not meet the above criteria were excluded from the analysis, and the factor model was respecified by deriving a new factor solution with those two variables eliminated. The two variables deleted were "I shop around before deciding to buy clothes," and "I prefer to shop for clothes at malls."

After deletion of the two items, the computation of Cronbach's alpha resulted in an alpha value of 0.67 for the respecified scale. The Kaiser-Meyer-Olkin measure of sampling adequacy test (0.80) and Bartlett's test of sphericity ($p<.001$) indicated that these data were also appropriate for factor analysis. A new factor solution, derived by principal component factor analysis with varimax rotation, indicated that 63.3 percent of the total variance was explained by seven shopping orientation factors (see Table 4).

Factor 1 consists of five items, which have a Cronbach's alpha coefficient of 0.78 for this construct and explain 11.9 percent of the variance in this construct. Factor 2 consists of four items, which have a Cronbach's alpha coefficient of 0.83 and explain 11.5 percent of the variance. Factor 3 consists of six items, which have a Cronbach's alpha coefficient of 0.69 and explain 9.8 percent of the variance. The three items in Factor 4 have an alpha coefficient 0.71 and explain 8.9 percent of the variance. The three items in Factor 5 present an alpha coefficient of 0.70 and explain 8.2 percent of the variance. Factor 6 includes two items, having an alpha coefficient of 0.83 and explaining 7.0 percent of the variance. The two items in Factor 7 have an alpha coefficient of 0.62 and explain 6.0 percent of the variance. Cronbach's alpha coefficient of 0.60, which is the lower limit of acceptability, was used for the minimum reliability estimate because of the exploratory nature of this research (Hair et al., 1998).

After the factor analysis was completed, the seven factors were named based on the major characteristics of the measured variables (see Table 4); these names can be compared to those in previous studies (Bellenger & Korgaonkar, 1980; Lumpkin, 1985; Moye, 2000; Shim & Bickle, 1994; Shim & Kotsiopulos, 1993; Stone, 1954; Swaminathan, Lepkowska-White and Rao, 1999; Vijayasarathy & Jones, 2000).

Table 4

Factor Analysis Results: Clothing Shopping Orientation Constructs

Shopping Orientation Constructs	Item	Eigen Value	Factor Loading	Variance Explained (%)	Cronbach Alpha
Item Total (25 items)				63.3	.67
Brand/Fashion Consciousness (Factor 1)	I like to buy popular brands of clothing.	2.98	.78	11.9	.78
	I try to keep my wardrobe up to date with fashion trends.		.71		
	A well-known brand means good quality.		.70		
	I'm interested in fashion.		.67		
	I don't pay much attention to brand names.[a]		.63		
Shopping Enjoyment (Factor 2)	Shopping for clothes puts me in a good mood.	2.88	.78	11.5	.83
	I enjoy shopping for clothes.		.77		
	I enjoy spending time browsing for clothes.		.70		
	I don't like to spend much time shopping for clothes.[a]		.66		
Price Consciousness (Factor 3)	I shop a lot for special deals on clothing.	2.44	.73	9.8	.69
	I pay a lot of attention to clothing prices.		.71		
	I can save a lot of money on clothes by shopping around for bargains.		.68		
	When I find clothes I like, I usually buy them without hesitation.[a]		.53		
	I don't mind paying high prices for clothes.[a]		.52		
	I watch advertisements for sales on clothing.		.50		
Convenience/Time Consciousness (Factor 4)	I usually buy my clothes at the most convenient place.	2.22	.79	8.9	.71
	I shop for clothes where it saves time.		.76		
	I put a high value on convenience when shopping for clothes.		.66		
Shopping Confidence (Factor 5)	I feel confident in my ability to shop for clothes.	2.06	.78	8.2	.70
	I think I'm a good clothing shopper.		.75		
	I'm able to choose the right clothes for myself.		.74		

(table continues)

Table 4 (continued)

Factor Analysis Results: Clothing Shopping Orientation Constructs

Shopping Orientation Constructs	Item	Eigen Value	Factor Loading	Variance Explained (%)	Cronbach Alpha
In-home Shopping Tendency (Factor 6)	I like to shop for clothes by mail, telephone or the Internet.	1.75	.92	7.0	.83
	I like to shop from home.		.91		
Brand/Store Loyalty (Factor 7)	Once I find a brand I like, I stick with it.	1.50	.81	6.0	.62
	I try to stick to certain brands and stores when I buy clothes.		.76		
Kaiser-Meyer-Olkin MSA		.803			
Bartlett's Test of Sphericity		.000			

[a]Reverse-coded item.

Factor 1, named *Brand/Fashion Consciousness*, includes items on buying popular clothing brands, keeping the wardrobe up to date with fashion, tying well-known brands to good quality, being interested in fashion, and paying attention to brand names. This shopping orientation factor is similar to the combination of Shim and Kotsiopulos' (1993) fashion and brand conscious shopping orientations and Moye's (2000) brand conscious shopping orientation. Moye's results, however, show brand consciousness and brand loyalty as one factor, which differs from the results of this study.

Factor 2, named *Shopping Enjoyment,* includes items on a good mood from shopping, enjoyment in shopping and browsing for clothes, and spending time shopping for clothes. This factor is similar to Bellenger and Korgaonkar's (1980) recreational shopping orientation, which can be interpreted as a consumer's tendency to enjoy shopping. In addition, the *Shopping Enjoyment* factor is consistent with Vijayasarathy and Jones' (2000) characterization of enthusiastic shoppers as those who enjoy shopping.

Factor 3, named *Price Consciousness*, comprises such items as shopping for special deals on clothing, paying attention to clothing prices, saving money on clothes by shopping for bargains, and not wanting to pay high prices for clothes. This accords with Bellenger and Korgaonkar's (1980), Lumpkin's (1985), and Stone's (1954) economic

shopping orientation, which focuses on a concern about product price. It is also similar to Vijayasarathy and Jones' (2000) economic shoppers, who shop around before making purchase decisions.

Factor 4, named *Convenience/Time Consciousness*, includes items on buying clothes at a convenient place, shopping for clothes where it saves time, and valuing convenience in clothes shopping. This shopping orientation is the same as Shim and Kotsiopulos' (1993) time/convenience shopping orientation and parallels Vijayasarathy and Jones' (2000) convenience shoppers, who place a premium on convenience when shopping. Interestingly, although Swaminathan, Lepkowska-White and Rao (1999) identify convenience shoppers as those who tend to shop from home by mail or the Internet, such a tendency emerged as a separate factor in the present study.

Factor 5, named *Shopping Confidence*, has three items on being a confident and good clothes shopper and being able to choose the right clothes for oneself. This is like Shim and Bickle's (1994) confident shoppers, who have confidence in their shopping ability.

Factor 6 is named *In-home Shopping Tendency*. The two items in this shopping orientation factor involve shopping for clothes by mail, telephone, or the Internet and shopping from home. The factor is consistent with Vijayasarathy and Jones' (2000) in-home shoppers who like to shop from home.

Factor 7, named *Brand/Store Loyalty*, includes items on sticking with a liked brand and trying to stick to certain brands and stores when buying clothes. This is similar to Moye's (2000) brand conscious shopping orientation. As mentioned above, however, the factor analysis in the present study separated brand consciousness and brand/store loyalty, and that in Moye's study combined them in one.

Clothing Website Characteristics

The factor analysis on both evaluation of relative importance of general clothing website characteristics and perception of favorite clothing websites was conducted in view of the canonical correlation analysis to be performed later in testing hypothesis 3. Only either general or favorite website characteristics were factor-analyzed. Because the

canonical correlation analysis assesses the strengths of the relationships between the constructs of the relative importance of general clothing website characteristics and the perception of favorite websites, a common set of constructs for the two types of website characteristics was required. This led to the decision to use the results of the exploratory factor analysis on the characteristics of only one of the two types of websites, general and favorite, and then to use the constructs identified in that factor analysis as the common set of constructs in determining the canonical correlations. Because a more clear set of factors emerged for the favorite clothing website characteristics, indicated by fewer items loading on multiple factors, each with a loading score equal to or greater than 0.40 on each factor, the EFA results for the perception of favorite clothing website characteristics were chosen to provide the common set of constructs.

The results of the Kaiser-Meyer-Olkin MSA test (0.91) and Bartlett's test of sphericity ($p<.001$) indicated that data on the favorite clothing website characteristics were appropriate for factor analysis. The anti-image correlation matrix for these data showed small partial correlations, implying the existence of "true" factors in the data. Based on the principal components factor analysis, factors with eigenvalues greater than 1.0 and 21 items with rotated factor loadings of 0.50 or greater were retained. The communality of all the retained variables (items) was greater than 0.40. On the other hand, 15 items were eliminated from the analysis (see Appendix E Table 33). These included items that had factor loadings lower than 0.50 and each that loaded on more than one factor, indicated by a loading score equal to or greater than 0.40 on the each factor (Chen & Hsu, 2001; Kim, 2002). The two one-item factors were also eliminated in the analysis.

The factor model was respecified by deriving a new factor solution with those 15 variables eliminated. After deleting the 15 items, the Kaiser-Meyer-Olkin MSA test (0.91) and Bartlett's test of sphericity ($p<.001$) showed that these data were appropriate for factor analysis. The Cronbach's alpha value was 0.86 for favorite clothing website characteristics and 0.80 for general clothing website characteristics. The new factor solution, derived by principle components factor analysis with varimax rotation, indicated that five favorite clothing website characteristics constructs explained 63 percent of the total variance (see Table 5).

Table 5

Factor Analysis Results: Favorite and General Clothing Website Characteristics Constructs

Clothing Website Characteristics Constructs	Item	Factor Loading	Variance Explained (%)	Eigen Value	Cronbach Alpha	
		Favorite Website	Favorite Website	Favorite Website	Favorite Website	General Website
Item Total (21 items)			63.0		.86	.80
Product Information (Factor 1)	It shows all the colors available for each product.	.86	16.8	3.53	.85	.73
	It shows all the sizes available for each product.	.81				
	It tells the prices of products.	.70				
	It gives up-to-date information about products.	.64				
	It has good quality photos of products.	.62				
	It truthfully shows the colors of the products.	.60				
Customer Service (Factor 2)	I can return products if I am not happy with them.	.75	13.3	2.79	.78	.67
	I can get personal sales assistance by e-mail or 1-800 phone numbers.	.69				
	If I want to return a product I've bought on the website, I will get my money back quickly.	.65				
	I can re-check that my order is correct.	.64				
	I can track the status of my order.	.59				
Privacy/ Security (Factor 3)	I know that information I give about myself is kept confidential.	.86	11.9	2.50	.89	.79
	I know my credit card number won't be stolen.	.82				
	Information I provide is confidential.	.81				
Navigation (Factor 4)	The screens are not cluttered.	.74	11.2	2.36	.72	.60
	It's fun to visit.	.69				
	The different screens come up quickly.	.69				
	I can easily follow the search path on the screen.	.59				

(table continues)

Table 5 (continued)

Factor Analysis Results: Favorite and General Clothing Website Characteristics Constructs

Clothing Website Characteristics Constructs	Item	Factor Loading	Variance Explained (%)	Eigen Value	Cronbach Alpha	
		Favorite Website	Favorite Website	Favorite Website	Favorite Website	General Website
Auditory Experience/ Comparison Shopping (Factor 5)	It uses sound to describe products.	.88	9.8	2.06	.73	.69
	It plays music.	.85				
	I can easily compare competitors' products.	.64				
Kaiser-Meyer-Olkin MSA		.874				
Bartlett's Test of Sphericity		.000				
Total Variance Explained						

Factor 1, consisting of six items, has Cronbach's alpha coefficients of 0.85 for favorite websites and 0.73 for general websites and accounts for the largest percentage of the total variance explained (16.8%). Factor 2, having five items, shows Cronbach's alpha coefficients of 0.78 for favorite websites and 0.67 for general websites and explains 13.3 percent of the variance. Factor 3 consists of three items, has an alpha value of 0.89 for favorite websites and a 0.79 for general websites, and explains 11.9 percent of the variance. The four items in Factor 4 have an alpha coefficient of 0.72 for favorite websites and 0.60 for general websites and explain 11.2 percent of the variance. Factor 5 includes three items, has an alpha coefficient of 0.73 for favorite websites and 0.69 for general websites, and explains 9.8 percent of the variance. The names given to the factors are based on the major characteristics of the measured variables (see Table 5) and can be compared to those in previous studies (Childers, Carr, Peck, & Carson, 2001; Liu, Arnett, & Litecky, 2000; Shim et al., 2001; Szymanski & Hise, 2000).

Factor 1, named *Product Information*, includes items on availability of product colors, sizes and prices and provision of up-to-date product information, good quality photos, and truthful colors of products. The *Product Information* dimension of clothing website characteristics is partially consistent with the merchandise factor of Shim et al.,

which also includes such items as the latest product information, but other items are different.

Factor 2, *Customer Service,* includes items on allowing product returns, personal sales assistance, money back, and the tracking and re-checking of an order. This factor resembles the transaction service factor of Shim et al. (2001), but unlike the present analysis, theirs revealed personal sales assistance to be part of a sensory experience factor. This is also similar to Childers, Carr, Peck, and Carson's (2001) substitutability of personal examination, which includes such items as providing a good substitute for seeing and touching a product, providing information about product materials, and allowing the viewing of workmanship at close range.

Factor 3, *Privacy and Security*, comprises items on information confidentiality and security for a credit card number. Contrarily, this factor presented in the transaction service factor of Shim et al. (2001).

Factor 4, *Navigation*, includes such items as an uncluttered screen and ease in following the screen path. Interestingly, this factor includes the fun-to-visit item, suggesting an interrelationship between a website's navigability and the enjoyment from visiting the site. This is contrary to the finding of Shim et al. (2001) that "fun place to visit" was part of a sensory experience factor. The *Navigation* factor in the present study is similar to the navigation and ease of use factors of Childers, Carr, Peck, and Carson (2001) and the convenience factor of Shim et al. (2001). Shim et al. found, however, that the item "fun place to visit" was included in the sensory experience factor, which is different from this study.

Factor 5, named *Auditory Experience/Comparison Shopping*, comprises items dealing with the use of sound to describe products, playing music, and comparison shopping. This is different from the finding of Shim et al. (2001) that "comparison shopping" was in the merchandise factor of Shim et al.

Mean Ratings and Standard Deviations of the Variables

Shopping Orientation

Table 6 shows the mean values and standard deviations for the 25 components of shopping orientation and for the seven shopping orientation factors. The shopping orientation variables (items) were measured on a 4-point scale ranging from strongly disagree (1) to strongly agree (4), so that, for example, "strongly disagree" received a score of 1 and "strongly agree" a score of 4. Based on the factor analysis, shopping orientation includes seven factors. Those factors, with the number of items in each shown in parentheses, are *Brand/Fashion Consciousness* (5), *Shopping Enjoyment* (4), *Price Consciousness* (6), *Convenience/Time Consciousness* (3), *Shopping Confidence* (3), *In-home Shopping Tendency* (2), *and Brand/Store Loyalty* (2). The respondents tended to be confident clothes shoppers, based on the mean value of 3.23 for Factor 5 which had the highest mean value of all the factors. They also tended to enjoy clothes shopping ($\underline{m}$ = 2.97). As well, they tended to be loyal to certain brands or stores ($\underline{m}$ = 2.91) and conscious of clothing prices ($\underline{m}$ = 2.95).

Table 6

Means and Standard Deviations for the Shopping Orientation Constructs

Shopping Orientation Constructs and Components	Means	SD
Brand/Fashion Consciousness (Factor 1)	***2.86***	***.51***
I like to buy popular brands of clothing.	3.02	.63
I try to keep my wardrobe up to date with fashion trends.	2.92	.72
A well-known brand means good quality.	2.53	.71
I'm interested in fashion.	3.07	.69
I don't pay much attention to brand names.	2.76	.71
Shopping Enjoyment (Factor 2)	***2.97***	***.61***
Shopping for clothes puts me in a good mood.	3.09	.74
I enjoy shopping for clothes.	3.18	.69
I enjoy spending time browsing for clothes.	2.95	.74
I don't like to spend much time shopping for clothes.	2.66	.81
Price Consciousness (Factor 3)	***2.95***	***.44***
I shop a lot for special deals on clothing.	3.05	.73
I pay a lot of attention to clothing prices.	3.31	.67
I can save a lot of money on clothes by shopping around for bargains.	3.25	.62
When I find clothes I like, I usually buy them without hesitation.	2.41	.73
I don't mind paying high prices for clothes.	2.87	.76
I watch advertisements for sales on clothing.	2.82	.72
Convenience/Time Consciousness (Factor 4)	***2.57***	***.51***
I usually buy my clothes at the most convenient place.	2.43	.65
I shop for clothes where it saves time.	2.47	.66
I put a high value on convenience when shopping for clothes.	2.81	.63
Shopping Confidence (Factor 5)	***3.23***	***.45***
I feel confident in my ability to shop for clothes.	3.27	.60
I think I'm a good clothing shopper.	3.16	.57
I'm able to choose the right clothes for myself.	3.27	.53
In-home Shopping Tendency (Factor 6)	***2.55***	***.67***
I like to shop for clothes by mail, telephone or the Internet.	2.54	.75
I like to shop from home.	2.57	.71
Brand/Store Loyalty (Factor 7)	***2.91***	***.58***
Once I find a brand I like, I stick with it.	2.99	.67
I try to stick to certain brands and stores when I buy clothes.	2.83	.69

Note. Possible score ranges for each variable are from 1 to 4.

Clothing Website Characteristics

Each of the importance of the general clothing website characteristics and the perception of the favorite clothing websites were measured on a 4-point scale. The scale for the general clothing website characteristics included not important (1), somewhat important (2), important (3), and very important (4), so that, for example, the last received a score of 4. The 4-point scale for the favorite website characteristics ranged from strongly disagree (1) to strongly agree (4), with scoring as for the general website characteristics. The five clothing website characteristics constructs are the following (number of items in parentheses): *Product Information* (6), *Customer Service* (5), *Privacy/Security* (3), *Navigation* (4), and *Auditory Experience/Comparison Shopping* (3).

Table 7 shows the mean values and standard deviations for the 21 components of the clothing website characteristics constructs and for the five constructs, with respect to the both the general and the favorite clothing website characteristics. The respondents tended to consider privacy/security as the most important of the general website characteristics ($\underline{m} = 3.83$), followed by the product information ($\underline{m} = 3.59$) and customer service features ($\underline{m} = 3.38$). They perceived auditory experience/comparison shopping as the least important of the general clothing website characteristics constructs.

As to the perceived characteristics of favorite clothing websites, the respondents tended to agree that these websites provided the privacy/security feature ($\underline{m} = 3.47$), and somewhat less the product information ($\underline{m} = 3.41$) and customer service feature ($\underline{m} = 3.23$). They also evaluated their favorite websites as providing the navigation feature ($\underline{m} = 3.20$) and much less the auditory experience/comparison shopping feature ($\underline{m} = 1.94$). Interestingly, the mean values for these two constructs with respect to favorite websites are greater than those for the importance placed on these features with respect to general websites.

Table 7

Means and Standard Deviations for Clothing Website Characteristics Constructs

Clothing Website Characteristics Constructs and Components	Mean		SD	
	General Website	Favorite Website	Favorite Website	General Website
Product Information (Factor 1)	***3.59***	***3.41***	***.42***	***.36***
It shows all the colors available for each product.	3.59	3.49	.54	.53
It shows all the sizes available for each product.	3.52	3.45	.55	.59
It tells the prices of products.	3.81	3.56	.51	.42
It gives up-to-date information about products.	3.24	3.14	.64	.71
It has good quality photos of products.	3.73	3.47	.55	.47
It truthfully shows the colors of the products.	3.64	3.34	.55	.54
Customer Service (Factor 2)	***3.38***	***3.23***	***.44***	***.46***
I can return products if I am not happy with them.	3.68	3.38	.57	.56
I can get personal sales assistance by e-mail or 1-800 phone numbers.	2.90	3.07	.65	.89
If I want to return a product I've bought on the website, I will get my money back quickly.	3.58	3.21	.63	.63
I can re-check that my order is correct.	3.41	3.30	.50	.60
I can track the status of my order.	3.34	3.18	.64	.76
Privacy/Security (Factor 3)	***3.83***	***3.47***	***.53***	***.36***
I know that information I give about myself is kept confidential.	3.78	3.45	.61	.50
I know my credit card number won't be stolen.	3.90	3.48	.59	.36
Information I provide is confidential.	3.82	3.47	.56	.42
Navigation (Factor 4)	***3.05***	***3.20***	***.41***	***.53***
The screens are not cluttered.	2.62	3.20	.56	.82
It's fun to visit.	3.31	3.18	.56	.70
The different screens come up quickly.	3.15	3.14	.60	.75
I can easily follow the search path on the screen.	3.13	3.27	.50	.66
Auditory Experience/Comparison Shopping (Factor 5)	***1.74***	***1.94***	***.65***	***.54***
It uses sound to describe products.	1.45	1.82	.79	.71
It plays music.	1.27	1.85	.83	.56
I can easily compare competitors' products.	2.49	2.14	.81	.89

Note. General website relate to the importance of general clothing website characteristics and the favorite website to the degree of having the characteristics. Possible score ranges for each variable are from 1 to 4.

Additional Variables

Table 8 shows the mean values and standard deviations of the following variables: previous online shopping and purchasing experience; attitude toward favorite clothing websites; intention to search for information at favorite clothing websites; and intention to purchase clothing items from favorite clothing websites and from channels other than the Internet.

The subjects (respondents with favorite clothing websites) in this research are Internet shoppers who have favorite clothing websites that they especially like to visit to obtain information about products or stores or to purchase products. Table 8 shows, therefore, that the respondents had had online experience in searching for information about clothing items or in purchasing clothing; however, they visited clothing websites more to search for information ($\underline{m}$ = 2.20) than to purchase products ($\underline{m}$ = 1.31 for number of times they purchased; $\underline{m}$ = 1.24 for number of items purchased). The latter is consistent with their strong intention to search for information at favorite clothing websites ($\underline{m}$ = 3.35) (see Table 8). The respondents showed moderate intentions to purchase clothing items from their favorite websites ($\underline{m}$ = 2.20), but a stronger intention to purchase clothing items from channels other than the Internet after finding clothes at their favorite websites ($\underline{m}$ = 3.04) (see Table 8).

Attitude toward the favorite clothing websites was computed according to Fishbein and Ajzen's (1967) multi-attribute model, ($A = \sum e_i b_i$) where e_i represents the relative importance of a website characteristic, and b_i the belief that the favorite websites provide the attribute. Despite the respondents' previous online experience and their strong intention to search for information at their favorite websites and to purchase from them, their attitudes toward their favorite websites varied considerably with a standard deviation of 63.56. Considering that individuals' attitudes can vary to a large extent, a high standard deviation is not surprising.

Table 8

Means and Standard Deviation of Additional Variables

Variables	n	Mean	SD
Previous Online Shopping and Purchasing Experience			
Number of times a respondent searched on the Internet for information about clothing items	411	2.20	.65
Times that clothing items were purchased through the Internet	413	1.31	.83
Number of clothing items purchased through the Internet	409	1.24	.82
Attitude toward Favorite Clothing Websites	315	374.29	63.56
Intention to Search for Information at Favorite Clothing Websites	413	3.35	.64
Intention to Purchase from Favorite Clothing Websites	414	2.71	.75
Intention to Purchase from Channels other than the Internet	410	3.04	.76

Note. The possible score range for the variables of previous online shopping and purchasing experience, intention to search for information at favorite clothing websites, and intention to purchase from channels other than the Internet is 1 to 4. The possible score range for attitude toward favorite clothing websites is 36 to 576.

Pearson Correlations of Measured Variables

The correlations among the clothing shopping orientation and clothing website characteristics constructs were examined to see the relationships between the variables. The significant correlations were considered in interpreting the multiple regression results in hypothesis testing.

Correlation Coefficients for Clothing Shopping Orientation Constructs

Table 9 shows the correlation matrix for the shopping orientation constructs. The significant correlations range from -.108 to .439. Factor 1 is significantly correlated with five factors, positively with Factors 2, 5 and 7 and negatively with Factors 3 and 4. This indicates that the greater the respondents' brand/fashion consciousness, the more their shopping enjoyment, shopping confidence and brand/store loyalty, but the less their price consciousness and convenience/time consciousness. Note that the respondents'

brand/fashion consciousness is not significantly correlated with in-home shopping tendency.

Table 9

Pearson Correlation Coefficients for the Shopping Orientation Constructs

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Factor 1 (n)	1.000 (411)						
Factor 2 (n)	.439** (403)	1.000 (405)					
Factor 3 (n)	-.261** (404)	-.038 (398)	1.000 (406)				
Factor 4 (n)	-.142** (408)	-.308** (402)	.134** (403)	1.000 (410)			
Factor 5 (n)	.269** (406)	.405** (401)	.007 (401)	-.108* (405)	1.000 (408)		
Factor 6 (n)	-.071 (409)	-.074 (403)	.011 (404)	.173** (408)	.108* (406)	1.000 (412)	
Factor 7 (n)	.286** (409)	.112* (403)	-.183** (404)	.105* (408)	.114* (406)	.051 (410)	1.000 (412)

Note. n indicates sample size for each correlation analysis.
Factor 1: Brand/Fashion Consciousness
Factor 2: Shopping Enjoyment
Factor 3: Price Consciousness
Factor 4: Convenience/Time Consciousness
Factor 5: Shopping Confidence
Factor 6: In-home Shopping Tendency
Factor 7: Brand/Store Loyalty
*$p < 0.05$. **$p < 0.01$.

Factor 2 is significantly correlated with four factors, positively with Factors 1, 5 and 7 and negatively with Factor 4. This shows that the greater the respondents' shopping enjoyment, the more their brand/fashion consciousness, shopping confidence and brand/store loyalty, but the less their convenience/time consciousness. Factor 2, shopping enjoyment, is not significantly correlated with price consciousness and in-home shopping tendency.

Factor 3 is significantly correlated with Factors 1, 4 and 7, positively with Factor 4 and negatively with Factors 1 and 7. This indicates that the greater the respondents'

price consciousness, the more their convenience/time consciousness, but the less their brand/fashion consciousness and brand/store loyalty.

Factor 4 is significantly correlated with all the other shopping orientation factors. It is positively correlated with Factors 3, 6 and 7, and negatively with Factors 1, 2, and 5. The greater the respondents' convenience/time consciousness, the more their price consciousness, in-home shopping tendency and brand/store loyalty, but the less their brand/fashion consciousness, shopping enjoyment and shopping confidence.

Factor 5 is significantly correlated with all the other shopping orientation factors except Factor 3, positively with Factors 1, 2, 6 and 7 and negatively with Factor 4. The more the respondents' shopping confidence, the greater their brand/fashion consciousness, shopping enjoyment, in-home shopping and brand/store loyalty, but the less convenience/time consciousness.

Factor 6 is significantly correlated with Factors 4 and 5. This indicates that the more the respondents' in-home shopping tendency, the greater convenience/time Consciousness and shopping confidence.

Factor 7 is significantly correlated with five factors, positively with factors 1, 2, 4 and 5 and negatively with Factor 3. This indicates that the greater the respondents' brand/store loyalty, the more their brand/fashion consciousness, Convenience/Time Consciousness, and shopping enjoyment and confidence, but the less their price consciousness.

Correlation Coefficients for Clothing Website Characteristics Constructs

Table 10 reports the correlation matrix for the clothing website characteristics constructs. The results show that the constructs of clothing website characteristics are correlated (see Table 10). The significant correlations range from -.121 to .557.

Looking first at the correlations for general clothing website characteristics, Factor 1 is significantly and positively correlated with Factors 2, 3, and 4. This indicates that the greater the importance given to product information, the greater the importance given to customer service, privacy/security and navigation. In addition, Factor 1 is significantly correlated with all the factors in the perception of favorite clothing website

characteristics, which include the product information, customer service, privacy/security, navigation and auditory experience/comparison shopping factors.

Table 10

Pearson Correlation Coefficients for the Clothing Website Characteristics Constructs

		General Clothing Websites Constructs					***Favorite Clothing Websites Constructs***				
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
General Clothing Website Characteristics Constructs	Factor 1 (n)	1.000 (407)									
	Factor 2 (n)	.405** (402)	1.000 (407)								
	Factor 3 (n)	.413** (401)	.424** (404)	1.000 (407)							
	Factor 4 (n)	.395** (404)	.412** (404)	.224** (405)	1.000 (409)						
	Factor 5 (n)	-.050 (403)	.278** (404)	-.042 (404)	.237** (406)	1.000 (409)					
Favorite Clothing Website Characteristics Constructs	Factor 1 (n)	.451** (396)	.251** (396)	.139** (396)	.259** (398)	-.004 (398)	1.000 (403)				
	Factor 2 (n)	.263** (398)	.378** (397)	.098 (397)	.184** (399)	.081 (399)	.557** (394)	1.000 (404)			
	Factor 3 (n)	.237** (402)	.161* (402)	.243** (402)	.133** (404)	-.029 (404)	.495** (398)	.540** (400)	1.000 (409)		
	Factor 4 (n)	.316** (395)	.263* (395)	.146** (396)	.442** (397)	.134** (397)	.490** (391)	.445** (393)	.404** (397)	1.000 (402)	
	Factor 5 (n)	-.126* (402)	.032 (401)	-.121* (401)	.036 (403)	.448** (403)	-.045 (397)	.062 (400)	-.018 (404)	.084 (397)	1.000 (408)

Note. n indicates sample size for each correlation analysis.
Factor 1: Product Information
Factor 2: Customer Service
Factor 3: Privacy and Security
Factor 4: Navigation
Factor 5: Auditory experience/Comparison Shopping
*$p < .05$. **$p < .01$.

General clothing website characteristics Factor 2 is significantly correlated with all the constructs in the evaluation of general clothing website characteristics. The greater the respondents' evaluation of the relative importance of customer service, the greater their importance of product information, privacy/security, navigation and auditory experience/comparison shopping. This factor is also significantly correlated with respondents' perception of their favorite clothing website characteristics factors 1, 2, 3

and 4, positively with product information, customer service, privacy/security and navigation factors.

General clothing website characteristics Factor 3 is significantly correlated with three factors in those constructs, positively with Factors 1, 2 and 4. This indicates that the greater the respondents' evaluation of the relative importance of privacy/security, the greater their importance of product information, customer service and navigation. This factor is significantly correlated with four factors in the perception of favorite clothing website characteristics, positively with product information, privacy/security and navigation, and negatively with auditory experience/comparison shopping factors.

General clothing website characteristics Factor 4 is significantly and positively correlated with all the factors in general clothing website characteristics constructs. The greater the respondents' evaluation of the relative importance of navigation, the greater their importance of product information, customer service, navigation and auditory experience/comparison shopping. This factor is significantly correlated with respondents' perception of favorite clothing website characteristics factors 1, 2, 3 and 4, positively with product information, customer service, privacy/security and sensory experience factors.

General clothing website characteristics Factor 5 is significantly correlated with two factors in general clothing website characteristics constructs, positively with customer service and navigation factors. This indicates that the greater the respondents' evaluation of the relative importance of auditory experience/comparison shopping, the greater their importance of customer service and navigation. This factor is also significantly related with the respondents' perception of favorite clothing website characteristics factors 4 and 5, positively with navigation and auditory experience/comparison shopping factors.

Cluster Analysis of Shopping Orientation

The shopping orientation factors were used in a cluster analysis to segment the respondents according to different perceptions regarding clothes shopping. The assumptions behind cluster analysis were tested before conducting the analysis. The data

were examined for multicollinearity and outliers. Pearson correlations were examined to help determine if multicollinearity was present. The correlations showed that the variables (i.e., the factors) were not highly correlated (see Table 6). The Pearson correlations ranged from 0.007 to 0.439, with no correlation above 0.70. Hair et al. (1998) suggest that the dendrogram and agglomeration schedule are ways to identify outliers in a sample. The dendrogram and agglomeration schedule revealed that no outliers were present, indicated by having no late branch-joining in the dendrogram and by having no single-member clusters in the agglomeration schedule. The representativeness of the sample should also be considered. Despite using the systematic random sampling, which is a probability sampling technique, representativeness might be a problem due to self-selected responses. Standardization of the variables was not undertaken because all the variables were measured on the same scale.

The shopping orientation factors were clustered using a two-step process. Step 1 of the cluster analysis was the hierarchical procedure to determine the appropriate number of clusters. In Step 2, the factors were clustered using Ward's method, and distance was calculated using squared Euclidean distances. According to Hair et al. (1998), a squared Euclidean distance is recommended for Ward's method and centroid clustering.

Because cluster analysis is a rather subjective process, a combination of methods was used to determine the appropriate number of clusters in the hierarchical procedure. These methods included examination of the agglomeration schedule, icicle plot, dendrogram, and cluster membership. For the clustering algorithm, the average linkages were determined, that is, the average distance of all the variables in one cluster from all the variables in another. A hierarchical cluster analysis shows the variables being combined at each stage of the process and the agglomeration coefficient. The computed agglomeration, or clustering, coefficients show a rather large increase in going from six to five clusters (823.569-718.853) and from three to two (626.519-502.692) (see Table 11). Small changes in the agglomeration coefficient are characteristic of homogeneous clusters being combined, and large changes indicate very different clusters being combined (Hair et al., 1998). To identify the degree of increase in cluster homogeneity,

the percentage changes in the agglomeration coefficient for the six through two cluster solutions were calculated (see Table 11).

Table 11

Hierarchical Cluster Analysis Results: The Agglomeration Coefficients

Number of Clusters	Agglomeration Coefficient	Percentage Change in Coefficient to Next Level
6	823.569	12.72
5	718.853	12.06
4	632.185	0.90
3	626.519	19.76
2	502.692	14.96
1	427.508	-

Because the largest percentage increase by far occurred in going from three to two clusters, a three-cluster solution was examined in a non-hierarchical procedure as the second step of the cluster analysis. According to Hair et al. (1998), a non-hierarchical procedure starts by examining the levels of significance for the differences across clusters. The ANOVA table for the K-means cluster analysis, a non-hierarchical procedure, indicates that each factor is significantly different across the three clusters identified from hierarchical cluster analysis (see Table 12). This implies that, in forming a profile of the clusters, the differences of each cluster are distinctive.

After determining that the three clusters of shopping orientation factors were significantly different from each other, the mean scores of the shopping orientation factors within each cluster were examined and used to characterize and name the dominant features of each cluster. The examination of the mean scores included between-cluster and within-cluster comparisons of the final cluster centers (means) for each shopping orientation factor in the clusters. An interesting, yet not surprising,

finding is that individual respondents are identified as having more than one shopping orientation. This is similar to the findings of previous studies (Moye, 2000; Shim & Kotsiopulos, 1993).

Table 12

K-means Cluster Analysis Results: ANOVA Table of Shopping Orientation Clusters

	Cluster		Error		F-value
	Mean Square	df	Mean Square	df	
Brand/Fashion Consciousness (Factor 1)	15.770	2	.182	382	86.873***
Shopping Enjoyment (Factor 2)	30.923	2	.213	382	145.133***
Price Consciousness (Factor 3)	1.416	2	.189	382	7.495***
Convenience/Time Consciousness (Factor 4)	6.524	2	.230	382	28.396***
Shopping Confidence (Factor 5)	6.900	2	.164	382	42.001***
In-home Shopping Tendency (Factor 6)	52.912	2	.189	382	280.196***
Brand/Store Loyalty (Factor 7)	5.040	2	.311	382	16.189***

*$\underline{p} < .05$. **$\underline{p} < .01$. *** $\underline{p} < .001$

Table 13 shows the final cluster centers (means) for the shopping orientation factors in each of the three clusters. Of three clusters, Cluster 1 has the lowest mean score for in-home shopping tendency when compared within and between clusters, and it has mid-level scores for the other factors; therefore, Cluster 1 was named *Hesitant In-home Shoppers*. The *Hesitant In-home Shoppers* can be characterized as respondents who are unlikely to shop at home and in general not highly involved in shopping activities. Cluster 2 has the highest mean score for price consciousness, based on the between-cluster and within-cluster comparisons, and a fairly high mean score for Convenience/Time Consciousness, according to the between-group comparison; therefore, Cluster 2 was named *Practical Clothing Shoppers*. *Practical Clothing*

Shoppers in this study are the most concerned about price, time and convenience, but they exhibit the least brand/fashion consciousness, shopping enjoyment and brand/store loyalty of the three clusters. Those in this shopping orientation group are similar to *Economic Shoppers* in Lumpkin's (1995) study, characterized as those who are mostly concerned about price and tend to exhibit little shopping activity and enjoyment. Also, *Practical Clothing Shoppers* in this research are similar to Stone's (1954) *Apathetic Shoppers* and Gutman and Mills' (1982) *Neutral, Uninvolved, Negatives*, and *Rejecters* who have little or no interest in shopping or store type and try to minimize buying effort.

Table 13

K-means Cluster Analysis Results: Final Cluster Centers by Shopping Orientation Factors within Clusters

	Cluster 1 ***Hesitant In-home Shoppers***	Cluster 2 ***Practical Clothing Shoppers***	Cluster 3 ***Involved Clothing Shoppers***
Factor 1 ***Brand/Fashion Consciousness***	2.89	2.48	3.19
Factor 2 ***Shopping Enjoyment***	3.08	2.42	3.41
Factor 3 ***Price Consciousness***	2.99	3.04	2.83
Factor 4 ***Convenience/Time Consciousness***	2.44	2.85	2.46
Factor 5 ***Shopping Confidence***	3.17	3.03	3.49
Factor 6 ***In-home Shopping Tendency***	1.87	2.94	2.96
Factor 7 ***Brand/Store Loyalty***	2.82	2.78	3.15
Cluster Sample Size	142	121	122

Note. The possible range of the scores for each shopping orientation factor is 1 to 4.
*p < .05. **p < .01. ***p < .001

Finally, through comparing between and within the clusters, Cluster 3 was named *Involved Clothing Shoppers.* Cluster 3 has the highest mean scores for brand/fashion consciousness, shopping enjoyment, shopping confidence, in-home shopping tendency, and brand/store loyalty, but the lowest mean score for Convenience/Time Consciousness and a mid-level score for price consciousness; thus, respondents who fall into Cluster 3 seem to be involved in shopping activities and tend to have little concern about price, convenience or time. These shoppers are similar to Shim and Kotsiopulos' (1993) *Highly Involved Shoppers*, characterized by three shopping orientations: *Confident Apparel Shoppers, Bargain Apparel Shoppers,* and *Appearance Conscious Apparel Shoppers*. Shim and Kotsiopulos' results indicate that *Confident Apparel Shoppers* feel they are good clothing shoppers and are confident in their ability to shop for clothes and to choose the right clothes for themselves. The *Appearance Conscious Apparel Shoppers* tend to keep up to date with fashions, identify with fashion trends and favor certain brand names. Price consciousness is characteristic of *Highly Involved Shoppers* in Shim and Kotsiopulos' study, but is characteristic of *Practical Clothing Shoppers* in the present study. In addition, the *Involved Clothing Shoppers* in this study resemble the *Active Apparel Shoppers* in Lumpkin's (1985) study, whom he describes as those who enjoy and are confident in shopping and are interested in fashion.

Results and Discussion of the Hypothesis Testing

This section presents and discusses the results of testing each of the 13 research hypotheses. The hypothesis testing is based on the responses of the 414 survey respondents who were 18-22 years old and single and had favorite clothing websites.

Hypotheses 1

Hypothesis 1 concerns the relationship between clothing shopping orientation and previous online shopping experience and the evaluation of the relative importance of general clothing website characteristics. The research hypothesis is as follows.

H1: Consumers' clothing shopping orientation and their previous online clothing shopping and/or purchasing experience will be significantly related to their evaluation of the relative importance of clothing website attributes.

Factorial MANOVA was used to test the null forms of hypotheses 1, indicating no significant relationship in opposition to the hypothesized significant relationships. Factorial MANOVA tested the significance of the main and interaction effects of the two independent variables, the shopping orientation clusters and the online shopping and purchasing experience groups, on the relative importance of general clothing website characteristics constructs. Factorial MANOVA permits testing of the significance of the main and the interaction effects of the two independent variables and is generally more powerful than a one-way MANOVA with the same data due to the reduction of error associated with multiple independent variables.

The three shopping orientation clusters identified in the cluster analysis, two online experience groups and the five general clothing website characteristics constructs identified in the factor analysis were used in the hypothesis testing. Because of the three shopping orientation clusters and the two online experience groups, the MANOVA has a 3 x 2 factorial design with six groups. One independent variable is the three shopping orientation clusters: *Hesitant In-home Shopper*, *Practical Clothing Shopper*, and *Involved Clothing Shopper*. The other independent variable is the online information search group versus the online purchasing group.

The respondents indicated their previous online shopping experiences on a 4-point ordinal scale for each of three questions. The time frame for each question is in the past 12 months. The questions concerning the number of times a respondent had searched on the Internet for information about clothing items and the number of times clothing items had been purchased through the Internet were rated never, seldom, occasionally, or a lot. The question asking the number of clothing items that had been purchased on the Internet was rated none, few, some, or a lot. The respondents who had searched on the Internet for information about clothing items, but had never purchased through the Internet were categorized as online information searchers. The respondent who had purchased clothing

items through the Internet, regardless of having had online information search experience, were categorized as online purchasers.

The dependent variables are the five constructs of the relative importance of general clothing website characteristics, including product information, customer service, privacy/security, navigation, and auditory experience comparison shopping.

In a factorial MANOVA, adequate sample size in the various groups is important. The total sample size of 369 broke down into 65 in the online information search group and 304 in the online purchase group, and these are considered sufficient sample sizes in total and in each group because they exceeded the number of dependent variables, which is the minimum requirements of group size in factorial MANOVA.

Tests of Factorial MANOVA Assumptions

Before conducting the factorial MANOVA, assumptions behind it were tested, including the homogeneity of the variance-covariance matrices for the dependent variables and the degree of correlation between the dependent variables (Hair et al., 1998). Box's Test of Equality of Covariance, with the null hypothesis of equal covariance matrices for the dependent variables, was significant, $F(75, 109.782) = 1.320$, $p < .05$. This indicated that the observed covariance matrices were not equal, suggesting violation of the assumptions of homogeneity of the variance-covariance matrices. Bartlett's test of sphericity, which assessed the correlation among all dependent variables, revealed a significant correlation among the dependent variables at the 0.001 level. Thus, the assumption of correlated dependent variables was met.

Factorial MANOVA for Hypothesis 1

The factorial MANOVA model in this study tested for the interaction, or joint, effect and the main effects of the two independent variables on the five dependent variables. The first step was to examine the interaction effect and determine whether it was statistically significant. All four multivariate tests, Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root, revealed that the interaction effect was not

significant, indicated by a non-significant F value under Pillai's Trace criterion, F (10, 720) = .934, p = 0.501. Pillai's criterion was used to test for significance because it is more robust than other multivariate test criteria, and should be used when one or more of the MANOVA assumptions are violated (Hair et al., 1998). Given the non-significant interaction effects, the main effects of the two independent variables were interpreted directly.

Table 14 presents the MANOVA results for the main and interaction effects of the two independent variables on the set of dependent variables. The three shopping orientation clusters are: 1 = *Hesitant In-home Shoppers*, 2 = *Practical Clothing Shoppers*, and 3 = *Involved Clothing Shoppers*. The previous online experience groups are: 1 = *Information Search Group*, and 2 = *Online Purchase Group*.

The multivariate tests under Pillai's trace criterion revealed that the main effect of shopping orientation on the dependent variables was significant, F(10, 720) = 1.950, p < .05; thus, the relative importance the respondents gave to the general clothing website characteristics varied across the shopping orientation clusters. Moreover, the statistical power is .88, a high level of power.

The univariate F tests indicated that the respondents' evaluations of the customer service, navigation and auditory experience/comparison shopping factors of clothing website characteristics differed significantly across the shopping orientation clusters at the 0.05 level. Thus, multiple comparisons with Tukey's HSD, as a post hoc test, were conducted to examine the between-group differences among the three shopping orientation clusters, while controlling the overall Type I error.

The post hoc pairwise comparisons for the shopping orientation clusters showed significant differences between the shopping orientation clusters regarding the evaluation of the customer service, navigation and auditory experience/comparison shopping factors. Cluster 1 (*Hesitant In-Home Shoppers*) and Cluster 3 (*Involved Clothing Shoppers*) differ significantly with respect to the evaluations of customer service (p=.0133), navigation (p=.0140) and auditory experience/comparison shopping (p=.0043). The *Involved Clothing Shoppers* perceived the product information, customer service and navigation features of clothing websites as more important than did the *Hesitant In-home Shoppers* (see Table 14).

Table 14

Factorial MANOVA Results: Differences between the Independent Variable Groups in Evaluations of Relative Importance of General Clothing Website Characteristics

Independent Variables	Dependent Variables General Clothing Websites Constructs	Group Means			
		1	2	3	F-value
Shopping Orientation Groups	***MANOVA-Pillai's Trace criterion***				1.95*
	Univariate F tests				
	Product Information	3.564	3.572	3.653	.90
	Customer Service	3.329	3.449	3.541	3.51*
	Privacy/Security	3.845	3.759	3.895	1.87
	Navigation	3.041	3.053	3.286	3.20*
	Auditory Experience & Comparison Shopping	1.721	1.802	2.011	4.13*
Online Experience Groups	***MANOVA-Pillai's Trace citerion***				3.15**
	Univariate F tests				
	Product Information	3.606	3.587	-	.12
	Customer Service	3.502	3.377	-	3.00
	Privacy/Security	3.825	3.841	-	.09
	Navigation	3.240	3.013	-	7.37**
	Auditory Experience & Comparison Shopping	1.986	1.703	-	11.15**
Shopping Orientation X Online Experience	***MANOVA-Pillai's Trace criterion***				.934
	Univariate F tests				
	Product Information	-	-	-	.24
	Customer Service	-	-	-	.64
	Privacy/Security	-	-	-	.41
	Navigation	-	-	-	.04
	Auditory Experience & Comparison Shopping	-	-	-	3.07*

Note.
Cluster 1: Hesitant In-Home Shopper
Cluster 2: Practical Clothing Shopper
Cluster 3: Involved Clothing Shopper
*$p < .05$. **$p < .01$. ***$p < .001$

In addition, Cluster 2 (*Practical Clothing Shoppers*) and Cluster 3 (*Involved Clothing Shoppers*) differ significantly in the evaluation of the navigation factor (p=.0443). *Involved Clothing Shoppers* put more importance on navigation features of clothing website characteristics than did *Practical Clothing Shoppers*.

The multivariate tests under Pillai's trace criterion revealed that the main effect of online shopping experience was significant, $F(5, 359) = 3.142$, $p < .01$. This implies that the two online experience groups differ in their evaluation of the relative importance of clothing website characteristics. The statistical power is 0.88. Respondents who had previous online information search experience evaluated the navigation and auditory experience/comparison shopping features of websites as more important than did the online purchase group.

Given the results of testing hypothesis 1, both shopping orientation and previous online experience appear to affect the evaluation of the relative importance of general clothing websites; thus, hypothesis 1 was supported.

Hypotheses 2

Hypothesis 2 concerns the relationship between clothing shopping orientation and previous online shopping experience and the perception of favorite clothing website characteristics. The research hypothesis is as follows.

H2: Consumers' clothing shopping orientation and their previous online clothing shopping and/or purchasing experience will be significantly related to their perceptions of the attributes of their favorite clothing websites.

Factorial MANOVA was used to test the main and interaction effects of the two independent variables on the favorite clothing website characteristics constructs. The independent variables were the three shopping orientation clusters and the two online experience groups; thus, as for hypothesis 1, a 3 x 2 factorial design was employed.

Tests of Factorial MANOVA Assumptions

Before conducting the factorial MANOVA, assumptions of homogeneity of variance-covariance matrices for the dependent variables and the degree of correlation between the dependent variables were tested (Hair et al., 1998). Box's Test of Equality of Covariance was significant, F (75, 117.525) = 1.391, $p < .05$, which indicated violation of the homogeneity of variance-covariance matrices and non-equal observed covariance matrices across the groups. Bartlett's test of sphericity revealed a significance correlation among dependent variables at 0.001 level, suggesting that the assumption of correlated dependent variables was met.

Factorial MANOVA for Hypothesis 2

Table 15 shows the results of the factorial MANOVA for differences between the independent variable groups in the perception of favorite clothing websites. The first step was to examine the interaction effect. Pillai's criterion was used because it is robust to the violation of homogeneity of variance-covariance assumption. A significant F test under Pillai's trace criterion, F (10, 684) = 1.853, $p = 0.049$, revealed that the interaction effect was significant. This means that the differences between shopping orientation clusters are not equal across the two different online experience groups. Given the significant interaction effect, the main effect was not interpreted directly, and the cell level effect was interpreted after testing the simple main effects at the univariate level followed by simple main effect contrasts.

Table 16 presents the mean scores for cells used to test the simple main effects of the two independent variables on the five dependent variables. The cells to test the simple main effects were the following six groups: 1 = *Hesitant In-home Shoppers/Online Information Searchers*; 2 = *Hesitant In-home Shoppers/Online Purchasers*; 3 = *Practical Clothing Shoppers/Online Information Searchers*; 4 = *Practical Clothing Shoppers/Online Purchasers*; 5 = *Involved Clothing Shoppers/Online Information Searchers*; and 6 = *Involved Clothing Shoppers/Online Purchasers*.

Table 15

Factorial MANOVA Results: Differences between the Independent Variable Groups in Perception of Favorite Clothing Website Characteristics

Independent Variables	Dependent Variables Favorite Clothing Websites Constructs	Group Means			
		1	2	3	F-value
Shopping Orientation Groups	***MANOVA-Pillai's Trace Criterion***				1.49
	Univariate F tests				
	Product Information	3.383	3.258	3.436	1.91
	Customer Service	3.066	3.111	3.218	1.86
	Privacy/Security	3.391	3.237	3.382	1.24
	Navigation	3.165	3.081	3.266	1.92
	Auditory Experience & Comparison Shopping	1.944	1.808	1.939	.63
Online Experience Groups	***MANOVA-Pillai's Trace Criterion***				4.73***
	Univariate F tests				
	Product Information	3.279	3.439	-	5.36*
	Customer Service	2.980	3.283	-	19.18***
	Privacy/Security	3.181	3.493	-	12.52***
	Navigation	3.146	3.195	-	.52
	Auditory Experience & Comparison Shopping	1.897	1.896	-	.00
Shopping Orientation X Online Experience	***MANOVA-Pillai's Trace Criterion***				1.85*
	Univariate F tests				
	Product Information	-	-	-	3.03*
	Customer Service	-	-	-	2.53
	Privacy/Security	-	-	-	7.69***
	Navigation	-	-	-	2.83
	Auditory Experience & Comparison Shopping	-	-	-	.30

Note.
Cluster 1: Hesitant In-Home Shopper
Cluster 2: Practical Clothing Shopper
Cluster 3: Involved Clothing Shopper
*p < .05. **p < .01. ***p < .001

Table 16

Cell Means for Perception of Favorite Clothing Websites

Dependent Variable	Shopping Orientation Clusters	Online Experience Groups	Cell Levels	Mean
Product Information	1	1	1	3.404
		2	2	3.362
	2	1	3	3.117
		2	4	3.399
	3	1	5	3.317
		2	6	3.554
Customer Service	1	1	1	3.000
		2	2	3.133
	2	1	3	2.960
		2	4	3.262
	3	1	5	2.980
		2	6	3.455
Privacy/Security	1	1	1	3.442
		2	2	3.341
	2	1	3	2.967
		2	4	3.506
	3	1	5	3.133
		2	6	3.630
Navigation	1	1	1	3.238
		2	2	3.093
	2	1	3	3.000
		2	4	3.161
	3	1	5	3.200
		2	6	3.332
Auditory Experience/ Comparison Shopping	1	1	1	1.992
		2	2	1.895
	2	1	3	1.767
		2	4	1.849
	3	1	5	1.933
		2	6	1.944

Note.
Shopping Orientation Cluster 1: Hesitant In-home Shoppers
Shopping Orientation Cluster 2: Practical Clothing Shoppers
Shopping Orientation Cluster 3: Involved Clothing Shoppers
Online Experience Group 1: Online Information Searchers
Online Experience Group 2: Online Purchasers
Cell level 1: Hesitant In-home Shoppers/Online Information Searchers
Cell level 2: Hesitant In-home Shoppers/Online Purchasers
Cell level 3: Practical Clothing Shoppers/Online Information Searchers
Cell level 4: Practical Clothing Shoppers/Online Purchasers
Cell level 5: Involved Clothing Shoppers/Online Information Searchers
Cell level 6: Involved Clothing Shoppers/Online Purchasers

Cell 6 (*Involved Clothing Shoppers/Online Purchasers*) has the highest mean values for product information ($\underline{m}$ = 3.554), customer service ($\underline{m}$ = 3.455), privacy and security ($\underline{m}$ = 3.630) and navigation ($\underline{m}$ = 3.332). These findings indicate that the *Involved Clothing Shoppers/Online Purchasers* perceived that their favorite clothing websites provided those characteristics to a greater degree than did the other groups. On the other hand, Cell 3 (*Practical Clothing Shoppers/Online Information Searchers*) has the lowest mean values for all five favorite website characteristics factors. These findings imply that those in this group perceived that their favorite clothing websites provides those characteristics to a lesser degree than did the other five groups.

Appendix E Tables 39 through 43 show more detailed information about the cell level effects. With respect to the product information factor for favorite clothing websites, Cell 1 differs significantly from Cell 3 and from Cell 6. Cell 2 differs significantly from Cell 6 with regard to the perception of the product information factor for favorite clothing websites. Cell 3 differs significantly from Cells 1, 4 and 6, and Cell 4 differs significantly from Cells 3 and 6 in the perception of product information provided by favorite websites. In addition, Cell 6 is significantly different from each other group, except for Cell 5. Cell 5, however, is not significantly different from any other cell as to the perception of the product information factor for favorite clothing websites. Regarding the perception of favorite clothing websites' customer service, Cell 1 differs significantly from Cells 4 and 6, Cell 2 from Cells 4 and 6, and Cell 3 from Cells 4 and 6. Cells 4 and 6 are each significantly different from each other group with respect to the perception of the customer service factor of favorite clothing websites. Cell 5 is significantly different from Cells 4 and 6.

For the privacy and security factor of favorite clothing websites, Cell 2 differs significantly from Cells 3, 4 and 6, and Cell 3 is from each other group, except Cell 5. Cell 4 differs significantly from Cells 2, 3 and 5; Cell 5 differs significantly from Cells 4 and 6. Cell 6 is significantly different from Cells 2, 3 and 5.

With respect to the navigation factor of favorite clothing websites, Cell 6 differs significantly from Cells 2, 3 and 4. For the auditory experience/comparison shopping factor, no group differences were found. Given the results of testing hypothesis 2, both

shopping orientation and previous online experience appear to affect the evaluation of the favorite clothing websites; thus, hypothesis 2 was supported.

Hypothesis 3

Hypothesis 3 concerns the relationships between the constructs of general and favorite clothing website characteristics. The research hypothesis is as follows.

H3: Consumers' evaluation of the relative importance of clothing website attributes and their perceptions of the attributes of their favorite clothing websites will be significantly correlated.

Canonical correlation analysis was employed to assess the strength of the relationships between the constructs of the relative importance of general clothing website characteristics and the constructs of the perception of favorite clothing website characteristics. A canonical correlation analysis identifies the dimensions between the dependent and independent variables and maximizes the relationship between the dimensions. The independent variables are the five general clothing website characteristics constructs and the dependent variables are the five favorite clothing website characteristics constructs.

Tests of Canonical Correlation Assumptions

The principle assumptions of normality and linearity underlying canonical correlation analysis were tested first. The histograms for the dependent variables showed that the data were distributed fairly normally and that the skewness of each variable fell below magnitude one. For the linearity assumption, a normal probability plot showed linear relationships between the dependent variables and the independent variables.

Canonical Correlation Analysis for Hypothesis 3

The canonical correlation analysis indicated the derivation of five canonical functions because the dependent variable set contained five variables and all five functions were statistically significant at the 0.001 level. In addition, a redundancy analysis on the each canonical function was performed to assess its practical significance. Of the five functions (see Tables V-17 through V-21), only the first function had practical significance, indicated by the highest redundancy index value, the canonical correlation of 0.537 and the canonical R squared of 0.288. Here, only the first function is reported and discussed. Table 17 shows the results of the canonical correlation analysis for function one.

The magnitudes of the canonical weights (coefficients) represent the relative contributions of each of the variables to the variate. The larger a weight (i.e., the larger the weight's absolute value), the greater the respective variable's unique positive or negative contribution to the variate; that is, a variable's weight indicates the variables unique contribution to the weighted sum of a set of variables (canonical variate).

Based on the relative sizes of the weights, the order of the magnitudes of their contributions of the independent variables, the importance given to the characteristics, to the first variate is product information, navigation, privacy/security, customer service and auditory experience/comparison shopping. The order of the magnitudes of the contributions of the dependent variables, the perceived provisions of the characteristics, to the first variate is navigation, product information, privacy/security, customer service, and auditory experience/comparison shopping. Because canonical weights are typically unstable in the presence of multicollinearity, canonical loadings and cross loadings are more appropriate for examining the relative contributions of variables to a variate.

Canonical loadings measure the linear correlation between an original observed variable in the dependent or independent set and the set's canonical variate. A canonical loading reflects the variance that an observed variable shares with the canonical variate; that is, the larger the coefficient, the more important it is in deriving the canonical variate. The criteria for determining the significance of canonical loadings are the same as for factor loadings. In the dependent variate in the first function, both product information

and navigation have canonical loadings exceeding 0.80 and customer service has -0.576, resulting in contributing a shared variance of 0.381 (see Table 17). This indicates a high degree of intercorrelation among these three variables.

Table 17

Canonical Correlation Analysis Results for Hypothesis 3: Function One

Variates/ Variables	Canonical Coefficients (Weights)	Canonical Loadings	Cross Loadings	Squared Loadings	Average Squared Loadings	Redundancy Index
Dependent Variables (Favorite Websites)						
Product Information	-.576	-.830	-.445	.689		
Customer Service	-.119	-.576	-.309	.332		
Privacy/Security	.251	-.364	-.196	.132		
Navigation	-.629	-.866	-.465	.750		
Auditory Experience/ Comparison Shopping	.050	.006	.003	.000036		
					.381	.110
Independent Variables (General Websites)						
Product Information	-.651	-.830	-.446	.689		
Customer Service	-.191	-.564	-.303	.318		
Privacy/Security	.268	-.229	-.123	.052		
Navigation	-.522	-.793	-.426	.629		
Auditory Experience/ Comparison Shopping	.009	-.155	-.083	.024		
					.342	.099
Canonical R	.537					
Canonical R²	.288					
Wilks' Lamda	.434					
p-value	.000					

Note.

Redundancy Index = Average Squared Loading * Canonical R^2

$$= \frac{\text{(Canonical Loadings)}^2}{\text{Number of Variables}} * \text{Canonical } R^2$$

where average squared loading is the shared variance of the relevant set of variables.

Table 18

Canonical Correlation Results for Hypothesis 3: Function Two

Variates/ Variables	Canonical Coefficients (Weights)	Canonical Loadings	Cross Loadings	Squared Loadings	Average Squared Loadings	Redundancy Index
Dependent Variables (General Websites)						
Product Information	-.289	-.204	-.097	.042		
Customer Service	.236	.100	.047	.01		
Privacy/Security	-.269	-.194	-.092	.038		
Navigation	.239	.164	.078	.027		
Auditory Experience & Comparison Shopping	.886	.932	.442	.869		
					.197	.044
Independent Variables (Favorite Websites)						
Product Information	-.224	-.252	-.119	.064		
Customer Service	.089	.252	.120	.064		
Privacy/Security	-.092	-.164	-.078	.027		
Navigation	.016	.153	.073	.023		
Auditory Experience & Comparison Shopping	.931	.971	.460	.943		
					.224	.050
Canonical R	.474					
Canonical R²	.225					
Wilks' Lamda	.610					
p-value	.000					

Note.

Redundancy Index = Average Squared Loading * Canonical R^2

$$= \frac{\text{(Canonical Loadings)}^2}{\text{Number of Variables}} * \text{Canonical } R^2$$

where average squared loading is the shared variance of the relevant set of variables.

Table 19

Canonical Correlation Results for Hypothesis 3: Function Three

Variates/ Variables	Canonical Coefficients (Weights)	Canonical Loadings	Cross Loadings	Squared Loadings	Average Squared Loadings	Redundancy Index
Dependent Variables (General Websites)						
Product Information	.109	.151	.052	.023		
Customer Service	1.159	.630	.217	.397		
Privacy/Security	-.525	-.095	-.033	.009		
Navigation	-.655	-.301	-.104	.091		
Auditory Experience & Comparison Shopping	-.095	-.066	-.023	.004		
					.105	.012
Independent Variables (Favorite Websites)						
Product Information	.067	.031	.011	.001		
Customer Service	1.088	.570	.196	.325		
Privacy/Security	-.513	-.238	-.082	.057		
Navigation	-.647	-.370	-.127	.137		
Auditory Experience & Comparison Shopping	-.251	-.065	-.022	.004		
					.105	.012
Canonical R	.344					
Canonical R²	.118					
Wilks' Lamda	.787					
p-value	.000					

Note.

Redundancy Index = Average Squared Loading * Canonical R^2

$$= \frac{(\text{Canonical Loadings})^2}{\text{Number of Variables}} * \text{Canonical } R^2$$

where average squared loading is the shared variance of the relevant set of variables.

Table 20

Canonical Correlation Results for Hypothesis 3: Function Four

Variates/ Variables	Canonical Coefficients (Weights)	Canonical Loadings	Cross Loadings	Squared Loadings	Average Squared Loadings	Redundancy Index
Dependent Variables (General Websites)						
Product Information	.906	.497	.124	.247		
Customer Service	-.458	-.011	-.003	.0001		
Privacy/Security	.458	.365	.091	.133		
Navigation	-.753	-.280	-.070	.078		
Auditory Experience & Comparison Shopping	.475	.352	.087	.124		
					.116	.007
Independent Variables (Favorite Websites)						
Product Information	.837	.495	.123	.015		
Customer Service	-.363	-.062	-.015	.0002		
Privacy/Security	.388	.364	.090	.008		
Navigation	-.829	-.406	-.101	.010		
Auditory Experience & Comparison Shopping	.508	.168	.042	.002		
					.007	.007
Canonical R	.249					
Canonical R²	.062					
Wilks' Lamda	.893					
p-value	.000					

Note.

Redundancy Index = Average Squared Loading * Canonical R^2

$$= \frac{\text{(Canonical Loadings)}^2}{\text{Number of Variables}} * \text{Canonical } R^2$$

where average squared loading is the shared variance of the relevant set of variables.

Table 21

Canonical Correlation Results for Hypothesis 3: Function Five

Variates/ Variables	Canonical Coefficients (Weights)	Canonical Loadings	Cross Loadings	Squared Loadings	Average Squared Loadings	Redundancy Index
Dependent Variables (General Websites)						
Product Information	-.707	.005	.001	.000025		
Customer Service	.338	.511	.112	.261		
Privacy/Security	.992	.829	.182	.687		
Navigation	.036	.233	.051	.054		
Auditory Experience & Comparison Shopping	.009	.054	.012	.003		
					.201	.010
Independent Variables (Favorite Websites)						
Product Information	-.554	.025	.006	.001		
Customer Service	.423	.537	.118	.288		
Privacy/Security	.915	.856	.188	.733		
Navigation	.036	.213	.047	.045		
Auditory Experience & Comparison Shopping	-.105	.036	.008	.001		
					.214	.010
Canonical R	.220					
Canonical R²	.048					
Wilks' Lamda	.952					
p-value	.000					

Note.

Redundancy Index = Average Squared Loading * Canonical R^2

$$= \frac{\text{(Canonical Loadings)}^2}{\text{Number of Variables}} * \text{Canonical } R^2$$

where average squared loading is the shared variance of the relevant set of variables.

The independent variate in the first function has a similar pattern. The three variables for perceived provision of characteristics with the highest loadings on the independent variate are product information, navigation and customer service, with respective loadings of -0.830, -0.793, and -0.564. Those three independent variables were, therefore, included in a stepwise regression analysis in which the evaluation of product information, navigation and customer service factors of favorite websites were the dependent variables. The first canonical function closely corresponds to the results of that regression, indicating that each of these three independent variables is significantly related to each dependent variable.

In looking at the independent variables' cross loadings (see Table 17), the three noted above, product information, navigation and customer service, are highly correlated with a dependent variate. The highest cross loadings of the first independent variate correspond to the variables with the highest canonical loadings as well.

A sensitivity analysis on the set of independent variables was performed to validate the results of the canonical correlation analysis. Table 22 shows the sensitivity analysis results. In such a sensitivity analysis, the canonical loadings are examined for stability when individual independent variables are deleted from the analysis. As seen in Table 22, the canonical loadings are remarkably stable and consistent in each of the two cases with one independent variable deleted, either auditory experience/comparison shopping or privacy/security. Overall, the canonical correlations also remain stable.

A canonical correlation analysis addresses two primary objectives: (1) identification of dimensions between the dependent and independent variables, and (2) maximization of the relationship between the dimensions. The results in this research indicate that three dependent variables, product information, navigation and customer service, are closely related to each other and create a well-defined dimension for representing the respondents' perceptions of the characteristics of their favorite clothing websites. As well, these dimensions are fairly well predicted by the set of independent variables, the importance placed on the product information, navigation, and customer service characteristics of clothing websites in general. When interpreting the independent variate, three factors, the relative importance of product information, navigation and customer service factors of clothing websites in general, provide substantive

contributions to the variables in the dependent variate found in this analysis, and thus are the key predictors of those variables. These findings are somewhat consistent with those of Watchravesringkan and Shim (2003) who found that speed of processing was one of the important factors in forming consumers' attitudes toward online shopping.

Table 22

Sensitivity Analysis of the Canonical Correlation Results with Deletion of Selected Independent Variables

Variates/ Variables	Canonical Loadings		
	Complete Variate	With Factor 5 Deleted	With Factor 3 Deleted
Canonical R	.537	.536	.527
Canonical R²	.288	.287	.278
Dependent Variables (General Websites)			
Product Information	-.830	-.834	-.843
Customer Service	-.576	-.580	-.533
Privacy/Security	-.364	-.367	-.452
Navigation	-.866	-.861	-.875
Auditory Experience/ Comparison Shopping	.006	.000	.072
Shared Variance			
Redundancy Index	.110	.110	.110
Independent Variables (Favorite Websites)			
Product Information	-.830	-.833	-.865
Customer Service	-.564	-.564	-.528
Privacy/Security	-.229	-.234	Deleted
Navigation	-.793	-.793	-.812
Auditory Experience/ Comparison Shopping	-.155	Deleted	-.079
Shared Variance			
Redundancy Index	.099	.122	.118

Note.

Redundancy Index = Average Squared Loading * Canonical R^2

$$= \frac{\text{(Canonical Loadings)}^2}{\text{Number of Variables}} * \text{Canonical } R^2$$

where average squared loading is the shared variance of the relevant set of variables.

The findings generated from Hypothesis 3 suggested that the major constructs of clothing website characteristics are the product information, navigation and customer service factors. Thus, these three factors should be the important elements for apparel retailers in developing effective clothing websites. Figure 4 shows the significant relationships between characteristics viewed as important for clothing websites in general and those provided by favorite clothing websites. Given the results of canonical correlation analysis, Hypothesis 3 was supported.

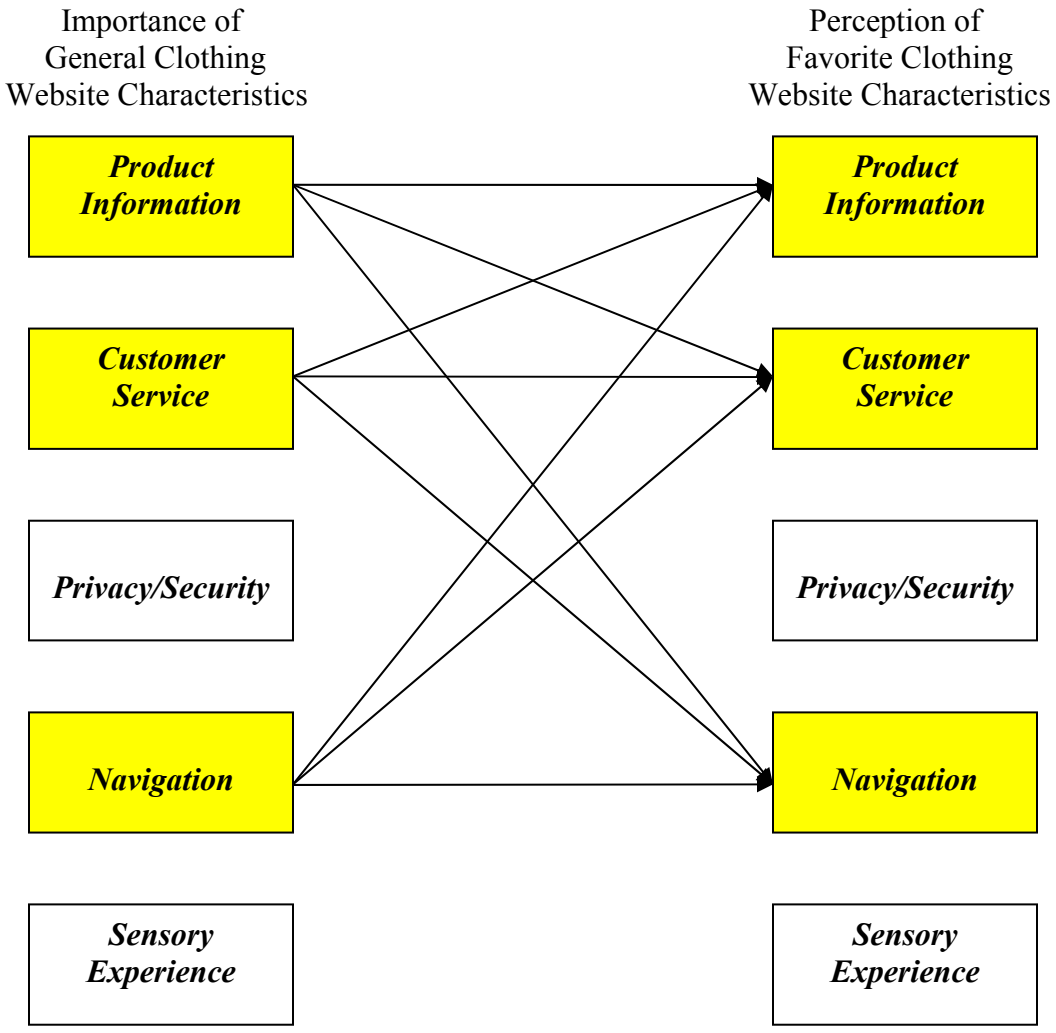

Figure 4. Canonical Correlation Analysis Results: Significant Relationships between Characteristics Viewed as Important for Clothing Websites in General and Those Provided by Favorite Clothing Websites

Note. The shaded variables are significantly related, according to the canonical correlation analysis.

Hypotheses 4, 5, 6, 7 and 8

Hypotheses 4, 5, 6, 7 and 8 deals with two path models for examining the causal relationship of attitudes toward favorite clothing websites to intentions to search for information at favorite clothing websites and to intentions to purchase from those websites and from channels other than Internet clothing websites. The research hypotheses 4, 5, 6, 7 and 8 are as follow.

H4: ***Consumers' attitudes toward their favorite clothing websites will be positively related to their intentions to search for information about clothing items from those websites.***

H5: ***Consumers' intentions to search for information about clothing items at their favorite clothing websites will be positively related to their intentions to purchase clothing items from those websites.***

H6: ***Consumers' attitudes toward their favorite clothing websites will be positively and directly related to their intentions to purchase clothing items from their favorite clothing websites after finding the items at those websites.***

H7: ***Consumers' intentions to search for information about clothing items at their favorite clothing websites will be positively related to their intentions to purchase clothing items from some channels other than the Internet clothing websites after finding those items at their favorite websites.***

H8: ***Consumers' attitudes toward their favorite clothing websites will be positively and directly related to their intentions to purchase clothing items from some channels other than the Internet clothing websites after finding the items at their favorite websites.***

Path analysis was used to test hypotheses 4, 5, 6, 7 and 8. This type of analysis examines the direct and indirect effects of independent (exogenous) variables on dependent (endogenous) variables. Two three-variable causal models were postulated to test these five hypotheses, each dealing with the determinants of information search or purchase intention. The first path model posits a relationship of attitudes toward favorite clothing websites to intentions to search for information at favorite clothing websites and intentions to purchase clothing items from favorite clothing websites. In this model, attitude toward favorite clothing websites is considered a cause of the information search and purchase intentions. Furthermore, both attitude toward favorite clothing websites and intentions to search for information at favorite clothing websites are considered causes of the intentions to purchase clothing items from favorite clothing websites after finding the items at those websites.

To explain consumers' intentions to purchase from channels other than Internet clothing websites, the second path model posits a relationship of attitude toward favorite clothing websites to intentions to search for information at favorite clothing websites and intentions to purchase from channels other than Internet clothing websites. In this model, attitude toward favorite clothing websites is considered a cause of intentions to search for information at such websites and intentions to purchase from channels other than the Internet. Furthermore, both attitude toward favorite clothing websites and the information search intention are considered causes of intent to purchase from other channels. The path analysis revealed that all relationships proposed by the theoretical model were significant except for the path from attitude toward favorite clothing websites to intent to purchase from channels other than the Internet.

The equations of the model are

$Z_1 = e_1$,
$Z_2 = P_{21} Z_1 + e_2$,
$Z_3 = P_{31} Z_1 + P_{32} Z_2 + e_3$., and
$Z_4 = P_{41} Z_1 + P_{42} Z_2 + e_3$,

Where
Z_1: Attitude toward favorite clothing websites
Z_2: Information search intention at favorite clothing websites
Z_3: Intent to purchase from favorite clothing websites
Z_4: Intent to purchase from channels other than Internet clothing websites
P_{21}: Path coefficient from variable 1 and 2
P_{31}: Path coefficient from variable 1 and 3
P_{32}: Path coefficient from variable 2 and 3
P_{42}: Path coefficient from variable 2 and 4

Path Model 1

The first path model addresses hypotheses 4, 5 and 6. Table 23 reports the results of the path analysis that tested the relationship of attitude toward favorite clothing websites to intention to search for information at favorite clothing websites and to purchase from those websites.

Table 23

Path Analysis Results: Relationship of Attitude toward Favorite Clothing Websites to Intention to Search for Information at, and to Purchase, from Favorite Clothing Websites

Parameter Estimates			
	Model	Standardized Coefficients (ß)	t-value
Path 1[a]	***Intercept***		14.822***
	Attitude toward Favorite Clothing Websites	.166	3.417***
Path 2[b]	***Intercept***		3.916***
	Information Search Intention at Favorite Clothing Websites	.235	4.947***
	Attitude toward Favorite Clothing Websites	.176	3.709***

[a]The predictor variable is Attitude toward Favorite Clothing Websites; the dependent variable is Information Search Intention from Favorite Clothing Websites.
[b]The predictor variables are Attitude toward Favorite Clothing Websites and Information Search Intention at Favorite Clothing Websites; the dependent variable is Intention to Purchase from Favorite Clothing Websites.
*p < .05. **p < .01. ***p < .001

Hypothesis 4, predicting a positive relationship between attitude toward favorite clothing websites and information search intention at favorite websites, is supported. According to the results, the path between these two constructs is positive (ß = .166) and significant (t = 3.471, p < .001). The more favorable the respondents' attitudes toward their favorite clothing websites, the higher their intentions to search for information at those websites in the future. The path analysis results on the relationship between these two constructs show that attitudes toward favorite clothing websites account for 2.8 percent of the variance in intention to search for information from such websites (R^2 = 0.028). The overall regression model for testing the relationship between attitude toward favorite clothing websites and information search intention at favorite clothing websites is significant, F (1, 412) = 11.675, p < .01. The findings are consistent with those of Shim et al. (2001) and Watchravesringkan and Shim (2003), who found a positive relationship between consumers' attitudes toward online shopping and their online information search intentions.

The proposed relationship between the information search intention at favorite clothing websites and intention to purchase from those websites in hypothesis 5 is supported (see Table 23). According to the results, the path between these two constructs is positive (ß = .235) and significant (t = 4.947, p < .001). The higher respondents' intentions to search for information at favorite clothing websites, the higher their intentions to purchase from those websites after finding the items at those websites. The findings are consistent with those of Shim et al. (2001) and Watchravesringkan and Shim (2003), who found a positive relationship between consumers' online information search intentions and their online purchase intentions.

Hypothesis 6, predicting a positive and direct relationship between attitude toward favorite clothing websites and intention to purchase from those websites, is also supported (see Table 23). According to the results, the path between these two constructs is positive (ß = .176) and significant (t = 3.709, p < .001). The more favorable the respondents' attitudes toward their favorite clothing websites, the higher their intentions to purchase from those websites after finding the items at those websites. The findings are consistent with those of Shim et al. (2001), Kim, Kim, and Kumar (2003) and Watchravesringkan and Shim (2003), who found a direct and positive relationship

between consumers' attitudes toward online shopping and their online purchase intentions.

The overall regression model for testing Hypotheses 5 and 6 is significant, F (2, 411) = 22.790, p < .001, and 10 percent of the variance in intention to purchase clothing items from favorite clothing websites is explained by attitude toward favorite clothing websites and information search intention at such websites (R^2 = 0.100).

Figure 5 shows the path model 1 for the relationship of attitude toward favorite clothing websites to intention to search for information at, and to purchase from, favorite clothing websites.

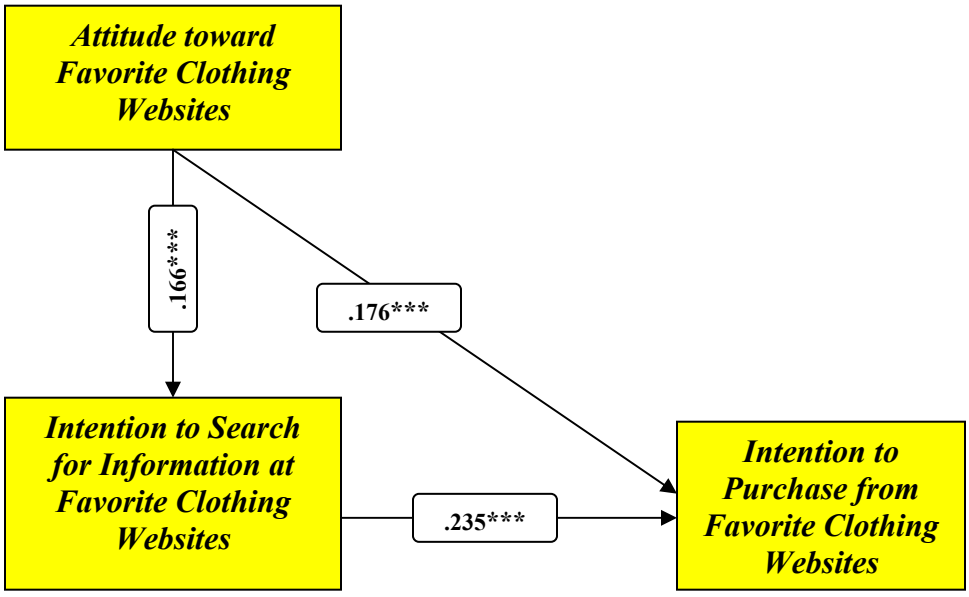

Figure 5. Path-analytic model 1: Relationship of Attitude toward Favorite Clothing Websites to Intention to Search for Information at, and to Purchase from, Favorite Clothing Websites.

Note. The shading indicates the variables significantly related to each other; the numbers indicate the path coefficients, with the stars showing significance at the .001 level.

Based on the direct effect of attitude toward favorite websites (ß = .176) and information search intention at those websites (ß = .235) on purchase intention, the indirect effect of attitude toward favorite websites on the intention to purchase from those websites via an information search intention was calculated (ß = .166 * .235 = 0.039). Then, the total effect of attitude toward favorite websites on intention to purchase from those websites was calculated by summing the direct and indirect effects (ß = .176 + .039 = .215). The overall path model is significant in explaining the relationships of attitude toward favorite clothing websites to information search intention at those websites and to intention to purchase from favorite websites. The findings from the first path model are consistent with the study by Shim et al. (2001) in that attitude toward Internet shopping influences intention to use the Internet for purchasing through the intention to use the Internet for information search. They also suggest that attitude toward Internet shopping directly influences intention to use the Internet for purchasing, which also supports the findings in this study.

Path Model 2

Path model 2 addresses hypotheses 4, 7 and 8. The proposed relationship in hypothesis 7 between intention to search for information at favorite clothing websites and intention to purchase from channels other than Internet clothing websites is supported (see Table 24). The results reveal that the path between these two constructs is positive (ß = .232) and significant (t = 4.771, p < .001). The higher respondents' intentions to search for information at favorite clothing websites, the higher their intentions to purchase from channels other than the Internet clothing websites after finding the items at those websites. The findings indicate that Internet websites play an important role in retaining customers by functioning as information channels.

Hypothesis 8, predicting a positive and direct relationship between attitude toward favorite clothing websites and intention to purchase from channels other than Internet clothing websites, is not supported (t = 1.2000, p > .05) (see Table 24). The result implies that consumers' attitudes toward their favorite clothing websites do not always lead to purchase from other channels. The overall regression model for testing

hypotheses 7 and 8 is significant, F (2, 407) = 13.424, p < .001; however, only 6.2 percent of the variance in the intention to purchase clothing items from channels other than Internet clothing websites is explained by attitude toward favorite clothing websites and information search intention ($R^2 = 0.062$).

The regression model for testing the relationship between attitude toward favorite clothing websites and information search intention (hypothesis 4) in the second path model is significant, F (1, 408) = 11.561, p < .01. The direct effect of attitude toward favorite websites on information search intention is positive (ß = .166) and significant at the 0.001 level.

Table 24

Path Analysis Results: Relationship of Attitude toward Favorite Clothing Websites to Intention to Search for Information at Favorite Clothing Websites and to Purchase from Channels Other than the Internet

Parameter Estimates			
	Model	Standardized Coefficients (ß)	t-value
Path 1[a]	***Intercept***		14.749***
	Attitude toward Favorite Clothing Websites	.166	3.400**
Path 2[b]	***Intercept***		6.800***
	Information Search Intention at Favorite Clothing Websites	.232	4.771***
	Attitude toward Favorite Clothing Websites	.058	1.200

[a]The predictor variable is Attitude toward Favorite Clothing Websites; the dependent variable is Information Search Intention at Favorite Clothing Websites.

[b]The predictor variables are Attitude toward Favorite Clothing Websites and Information Search Intention at Favorite Clothing Websites; the dependent variable is Intention to Purchase from Some Channels other than the Internet.

*p < .05. **p < .01. ***p < .001

Based on the direct effect of attitude toward favorite clothing websites (ß = .058) and the information search intention at those websites (ß = .232) on the intention to purchase from other channels, the indirect effect of attitude toward favorite clothing websites on the intention to purchase from channels other than Internet clothing websites was calculated (ß = .166 * .232 = 0.039). Then, the total effect of attitude toward favorite websites on intention to purchase from channels other than the Internet was calculated by summing the direct and indirect effects (ß = .058 + .039 = .097). The overall path model is not significant in explaining the relationships of attitude toward favorite clothing websites to intention to search for information at those websites and intention to purchase from channels other than Internet clothing websites. Figure 6 shows the path model 2 for the relationship of attitude toward favorite clothing websites to intention to search for information at favorite clothing websites and intention to purchase from channels other than the Internet.

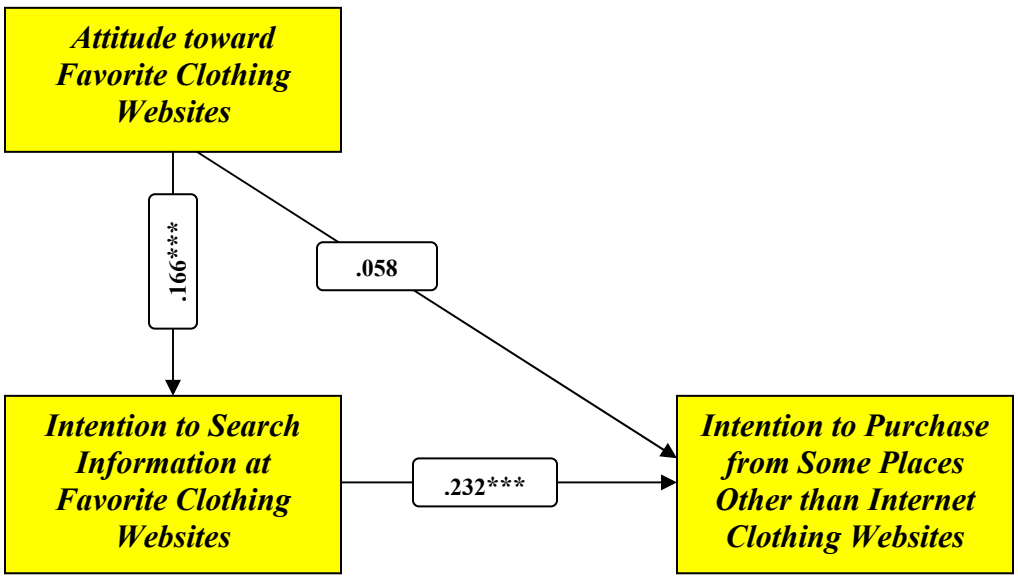

Figure 6. Path-analytic model 2: Relationship of Attitude toward Favorite Clothing Websites to Information Search Intention at Favorite Clothing Websites and Intention to Purchase from Channels other than the Internet.
Note. The shading indicates the variables significantly related to each other; the numbers indicate the path coefficients, with the stars showing significance at the .001 level.

The findings with respect to hypothesis 8 indicate that attitude toward favorite clothing websites does not directly influence intention to purchase from other channels after finding clothing items at those websites. The respondents' attitudes toward favorite clothing websites indirectly influenced their intention to purchase from other channels through their information search activities. This may be partly because many companies with Internet clothing websites do not offer channels other than Internet stores. Also, many products available online are Internet-exclusive such that online shoppers may expect to buy products found on the Internet only through the Internet. This result is consistent with the responses from pilot test in this research. In the pilot test of the present study, many students responded that they did not have intention to buy clothing items found in the Internet from other channels because those items were Internet exclusive. Another possible reason for this result is that the attitude variable has a large variance, with a standard deviation of 63.56, which may have caused problems in trying to explain the influence of attitude on future behavior. The results of the path model for testing hypothesis 8 indicate, however, that attitude toward favorite clothing websites may indirectly influence online shoppers' intentions to purchase clothing items from channels other than the Internet after finding the items at their favorite websites.

From the results of path models 1 and 2, it is concluded that consumers' attitude toward their favorite clothing websites play an important role in retaining customers through the Internet. A positive attitude toward those websites is likely to lead to information search behavior at those websites, and information search behavior is likely to eventually lead to purchases from one of the retail venues (Internet, catalogs, retail stores, department stores, etc.). In addition, clothing websites play an important role as information channels, which may lead to purchases from the websites or other channels after finding the clothing items at the websites. In this vein, building effective websites is a critical issue for marketers in retaining customers through the Internet.

Hypothesis 9

Hypothesis 9 concerns the relationship between shopping orientation and the intention to search for information from favorite clothing websites. The research hypothesis is as follows.

H9: Consumers' clothing shopping orientations will be significantly related to their intentions to search for information about clothing items at their favorite websites.

Multiple regression analysis was conducted to examine the relationship between clothing shopping orientation and intention to search for information at favorite clothing websites. In this analysis, the independent variables were the seven clothing shopping orientation factors, and the dependent variable was the intention to search for information at favorite clothing websites. Prior to conducting the multiple regression analysis, tests of the regression assumptions and multicollinearity diagnostics were performed.

Tests of Regression Assumptions

The assumption of normality of residuals was met, as shown by relatively normal distributions of the residuals in a histogram. Also, a normal probability plot of the residuals showed they fell in a fairly straight line. Assumptions of homoscedasticity and the inclusion of all the relevant independent variables were violated, however. Because the residuals scatter plot showed a non-random pattern, one or more important variables may have been omitted from the model. This suggests that other relevant variables should be considered in future studies. The patterns shown in the residuals scatter plot also suggest the presence of some distinct groups. This implies that the seven shopping orientation constructs of independent variables need to be segmented according to similar perceptions regarding clothes shopping.

Multicollinearity Diagnostics

The collinearity among the independent variables was examined through VIF and eigenvalues (see Appendix E Table 2). Although the examination of the correlation matrix among independent variables is the first diagnostic tool for the multicollinearity problem, collinearity among more than two independent variables cannot be diagnosed by simple correlations alone. Thus, the variance inflation (VIF) and the condition number of the correlation matrix were examined.

The VIF for each independent variable was less than the standard comparison score of 10, which indicates multicollinearity is not serious. The condition number of the correlation matrix; that is, the ratio of the largest to the smallest eigenvalue, was 1,687.1, which is greater than the standard comparison score of 1,000. Multicollinearity is, therefore, a threat to the interpretation of the effect of each independent variable. The interpretation of the results in multiple regression should be made cautiously.

Multiple Regression Analysis for Hypothesis 9

Table 25 reports the regression analysis results for the relationship of attitude toward favorite clothing websites to intention to search for information at favorite clothing websites and to purchase from those websites. The multiple regression analysis shows that 8.4 percent of the variance in intention to search for information from favorite clothing websites is explained by the seven clothing shopping orientation factors: *Brand/Fashion Consciousness, Shopping Enjoyment, Price Consciousness, Convenience/Time Consciousness, Shopping Confidence, In-home Shopping Tendency,* and *Brand/Store Loyalty* ($R^2 = 0.084$). The regression model is significant in explaining information search intention at favorite clothing websites, F (7, 376) = 4.92, $p < .001$.

The tests of the relative contributions of the independent variables to explaining information search intention at favorite clothing websites show significant t values for *In-home Shopping Tendency* and *Brand/Store Loyalty* (see Table 25). Moreover, the positive coefficients and squared part correlations for these variables indicate that *In-home Shopping Tendency* and *Brand/Store Loyalty* uniquely account for significant

portions of the variance in the intention to search for information at favorite clothing websites. The greater the respondents' in-home shopping tendency and brand/store loyalty, the higher their intention to search for information from their favorite clothing websites. The results are consistent with those of Vijayasarathy and Jones (2000) in showing that the more consumers' affinity for in-home shopping, the higher their intentions to shop online. In addition, this result supports Klein's (1998) idea that consumer characteristics directly influence their information search behavior. Figure 7 shows the regression model for hypothesis 9.

From the results, it is concluded that intention to search for information from favorite clothing websites can be explained, at least to some extent, by clothing shopping orientation. Hypothesis 9 is supported.

Table 25

Multiple Regression Analysis Results for Hypothesis 9: Relationship of Attitude toward Favorite Clothing Websites to Intention to Search for Information at Favorite Clothing Websites and to Purchase from such Websites

Variables	Standardized Coefficients	Squared Part Correlations	t-value
Intercept			4.653
Brand/Fashion Consciousness	.018	.000225	.296
Shopping Enjoyment	.108	.007744	1.774
Price Consciousness	-.039	.001369	-.753
Convenience/Time Consciousness	.031	.000841	.581
Shopping Confidence	.043	.001444	.772
In-home Shopping Tendency	.197	.036481	3.875***
Brand/Store Loyalty	.120	.012321	2.258*

*$\underline{p} < .05$. **$\underline{p} < .01$. ***$\underline{p} < .001$

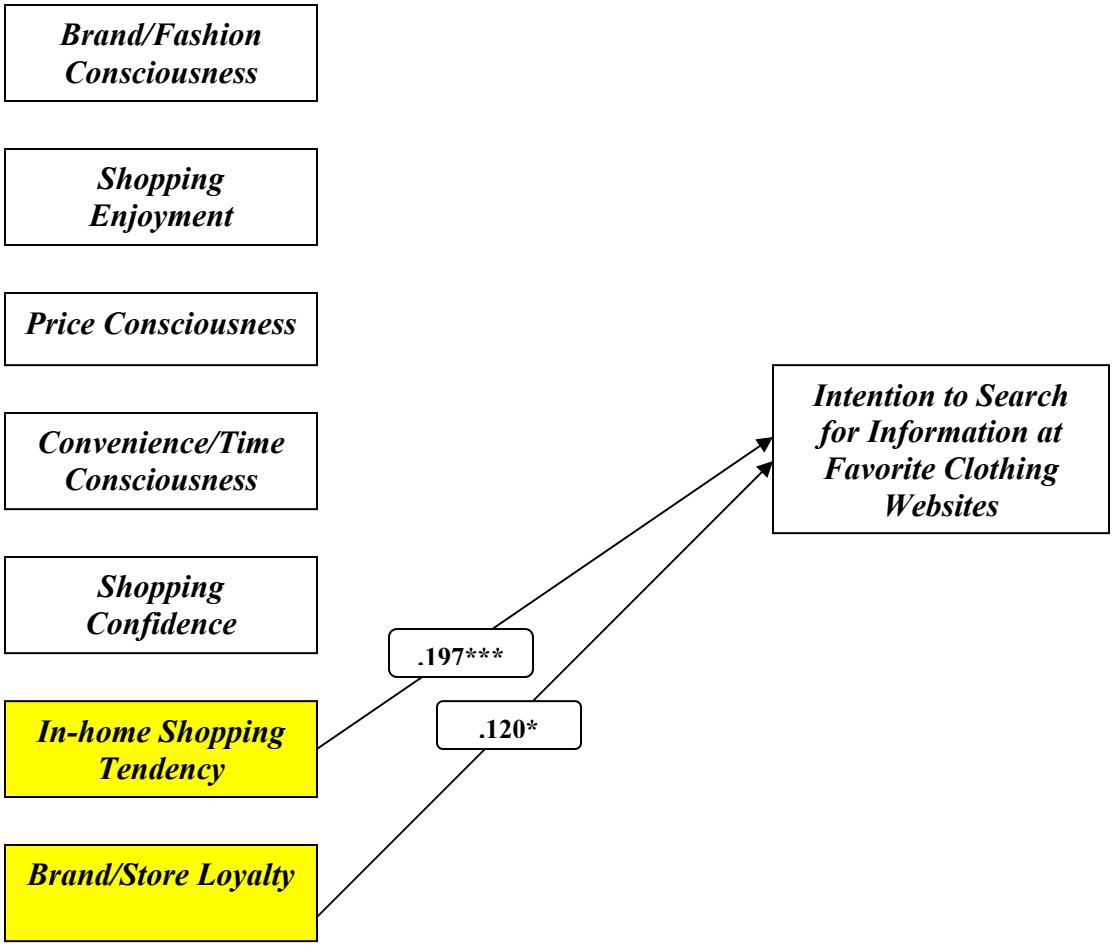

Figure 7. The Multiple Regression Model in Hypothesis 9: Relationship between Intention to Information Search for Information at Favorite Clothing Websites and the Clothing Shopping Orientation Constructs.
Note. The shading indicates the variables significantly related to each other; the numbers indicate the regression coefficients.

Hypothesis 10

Hypothesis 10 concerns the relationship between shopping orientation and the intention to purchase clothing items from favorite clothing websites. The research hypothesis is as follows.

H10: Consumers' clothing shopping orientations will be significantly related to their intentions to purchase clothing items from their favorite websites.

Multiple regression analysis was conducted to examine the relationship between clothing shopping orientation and intention to purchase clothing items their favorite clothing websites. The independent variables were the seven clothing shopping orientation factors, and the dependent variable was the intention to purchase clothing items from favorite clothing websites. Prior to conducting the regression analysis, tests of the regression assumptions and multicollinearity diagnostics were performed.

Test of Regression Assumptions

The regression assumptions of normality of the residuals, homoscedasticity, linearity of variance, and inclusion of relevant independent variables were tested. The assumption of normality of the residuals was met, based on a histogram of the residuals showing that their distributions were relatively normal and on a normal probability p-p plot showing that the residuals fell in a fairly straight line. Violation of the assumptions of homoscedasticity and inclusion of relevant independent variables was evident, however. A scatter plot of the residuals showed a non-random pattern, suggesting the possible omission of one or more important variables from the model, and thus the need to consider inclusion of other relevant variables in a future study. Also, the patterns evident in the residuals scatter plot of the regression analysis suggest the presence of some distinct groups. Thus, the seven shopping orientation constructs of independent variables may need to be segmented according to similar perceptions regarding clothes shopping.

Multicollinearity Diagnostics

As for the hypothesis 9, collinearity among more than two independent variables cannot be diagnosed by simple correlations alone, thus, the variance inflation (VIF) and the condition number of the correlation matrix were examined for multicollinearity

diagnostics (see Appendix E Table 3). The VIF for each independent variable was less than 10, which is cut-off value beyond which multicollinearity would be indicated; this implies no serious mutilcollinearity. Multicollinearity was also assessed by the ratio of the largest to the smallest eigenvalue; this ratio is called the condition number of the correlation matrix. The condition number was 1681.28, which is greater than the standard comparison score of 1,000. The collinearity problem appears, therefore, serious in the regression model for hypothesis 10. The interpretation of the results in multiple regression should be made cautiously.

Multiple Regression Analysis for Hypothesis 10

The regression analysis shows that 24.1 percent of the variance in intention to purchase clothing items from favorite clothing websites is explained by the seven clothing shopping orientation factors: *Brand/Fashion Consciousness, Shopping Enjoyment, Price Consciousness, Convenience/Time Consciousness, Shopping Confidence, In-home Shopping Tendency,* and *Brand/Store Loyalty* ($R^2 = 0.241$). The regression model is significant in explaining intention to purchase from favorite clothing websites, F (7, 377) = 17.01, $p < .001$. These results indicate partial support for hypothesis 10.

The t-tests of the significance of each independent variable in explaining intention to purchase from favorite clothing websites show that *Price Consciousness*, *Convenience/Time Consciousness* and *In-home Shopping Tendency* are the only significant variables (see Table 26). That is, each of those three independent variables uniquely accounts for a significant proportion of the variance in intention to purchase clothing items from favorite clothing websites. Of the three, *Convenience/Time Consciousness* and *In-home Shopping Tendency* are positively related, and *Price Consciousness* is negatively related, to purchase intention. That is, the more the respondents' Convenience/Time Consciousness and in-home shopping tendency, and the less their price consciousness, the greater their intention to purchase clothing items from their favorite clothing websites. Hypothesis 10 was supported. Figure 8 shows the regression model for hypothesis 10.

Table 26

Multiple Regression Analysis Results for Hypothesis 10: Relationships between Intention to Purchase from Favorite Clothing Websites and the Clothing Shopping Orientation Constructs

Variables	Standardized Coefficients	Squared Part Correlations	t-value
Intercept			2.765
Brand/Fashion Consciousness	.004	.000016	.080
Shopping Enjoyment	.006	.000016	.100
Price Consciousness	-.098	.008464	-2.050*
Convenience/Time Consciousness	.097	.007921	1.980*
Shopping Confidence	.094	.007056	1.868
In-home Shopping Tendency	.445	.186624	9.621***
Brand/Store Loyalty	-.063	.003481	-1.306

*$\underline{p} < .05$. **$\underline{p} < .01$. ***$\underline{p} < .001$

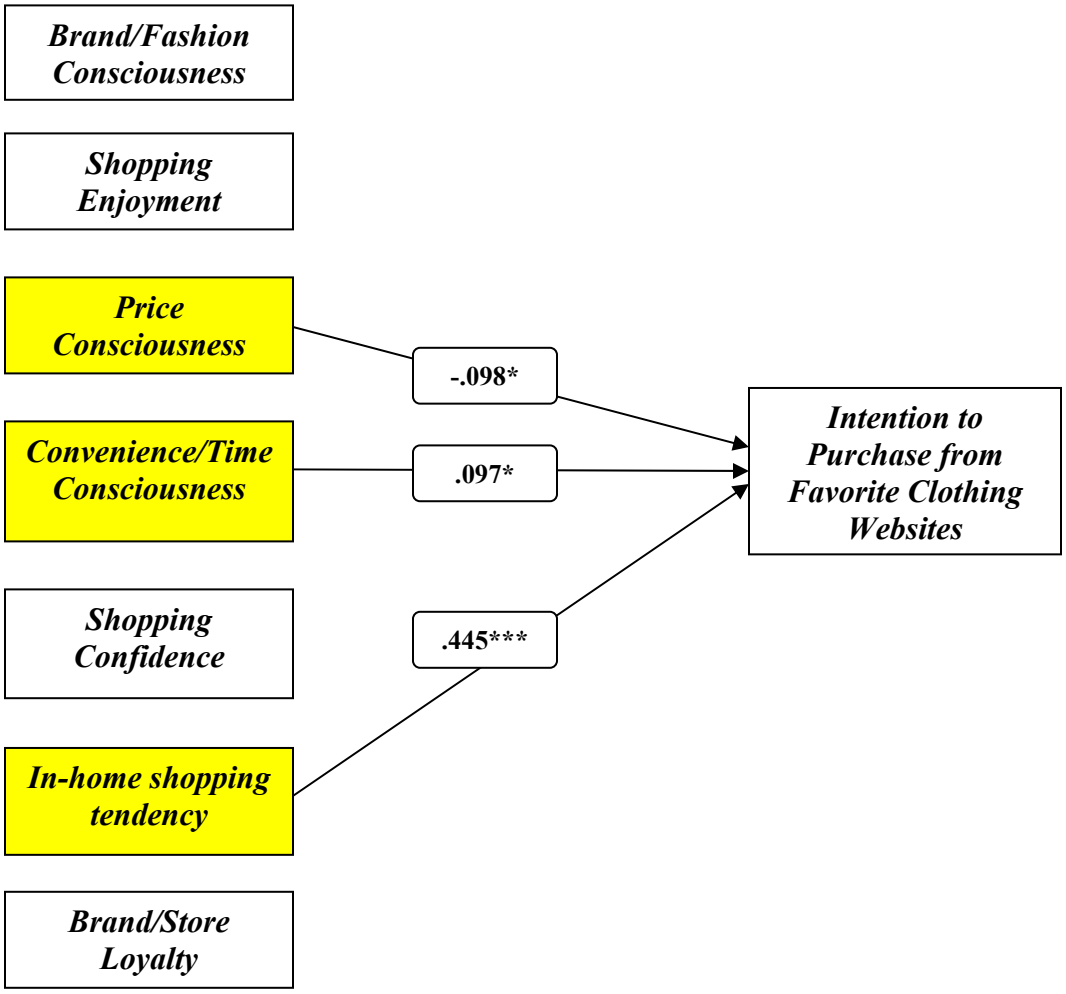

Figure 8. Multiple Regression Model for Hypothesis 10: Relationship between Clothing Shopping Orientation Constructs and Intention to Purchase from Favorite Clothing Websites.

Note. The shading indicates the variables significantly related to each other; the numbers indicate the regression coefficients.

From the findings related to hypothesis 9 and 10, it is concluded that consumers' shopping orientation plays an important role in forming their future online shopping behavior regarding information search and purchasing. In this light, information about the shopping orientation of young adult consumers is needed for developing effective marketing strategies geared to such consumers.

Hypothesis 11

Hypothesis 11 concerns the difference between the online information search group and the purchase group on their intentions to purchase clothing items from their favorite clothing websites. The research hypothesis is as follows.

H11: Consumers' online clothing shopping and/or purchasing experience will be significantly related to their intentions to purchase clothing items from their favorite websites.

A t-test was used to determine whether the online information search group and the purchase group were significantly different in their mean scores on intention to purchase clothing items from favorite websites. Tests of the assumptions for t-test analysis were performed prior to the analysis.

Test of T-test Assumptions

The assumption of normality was not met because both groups' mean scores on intention to purchase were not normally distributed. According to the central limit theorem, however, nonnormality is not a problem with a sample size larger than 30. In addition, the assumption of independence of observation might be violated. Despite the systematic random sampling, it is possible to have respondent bias due to self-selection by the respondents. Violation of the assumption of homogeneity of variance was evident from the significant F value for the Levene's statistic. Equal variances were not assumed given the violation of the homogeneous variance assumption and the unequal group sizes, representing a ratio of greater than 1.5; thus, the degrees of freedom were adjusted.

T-test for Hypothesis 11

Based on the unequal variance estimates for the two groups, the t-test shows a significant difference between the means of the two groups, t (100.59) = -9.74, $p < .001$

(see Table 27). The online information search group and the online purchase group are significantly different in their intentions to purchase clothing items from their favorite websites. The respondents who had previous online purchasing experience had higher intentions to purchase clothing items from their favorite clothing websites than did those who only had online information search experience. Hypothesis 11 is, therefore, supported.

This result implies that consumers with online purchasing experience are more likely than those with only online information search experience to purchase clothing items from websites. The results are consistent with those of previous studies (Eastlick, 1996; Shim et al., 2001; Weber & Roehl, 1999) in showing that consumers' past online purchasing experience has a direct impact on their future online purchase intentions. The results also support the studies of Lian and Huang (1998) and Shim and Drake (1990), which indicate that consumers' previous experience with non-store shopping formats influences their use of the Internet for shopping.

Based on the findings for hypotheses 10 and 11, it is concluded that, along with shopping orientation, consumers' online experience plays an important role in forming their future online behavior.

Table 27

T-test Result for Hypothesis 11: Group Differences in Intention to Purchase Clothing Items from Favorite Clothing Websites

Purchase Intention from Favorite Websites	Mean		Levene's Test	t-test for Equality of Means	
	Online Information Search Group	Online Purchase Group	F	df	t-value
Equal variance Not assumed	2.015	2.846	4.363*	100.59	-9.737***

*p < .05. **p < .01. ***p < .001

The results showed support for all but all one of the 11 hypotheses, the exception being hypothesis 8. Table 28 presents the hypothesized relationships and summarizes the results.

Table 28

Hypothesized Relationships and Summary of the Results

Hypothesized Relationships	Result
H1: Consumers' clothing shopping orientation and their previous online clothing shopping and/or purchasing experience will be significantly related to their evaluation of the relative importance of clothing website attributes.	Supported
H2: Consumers' clothing shopping orientation and their previous online clothing shopping and/or purchasing experience will be significantly related to their perceptions of the attributes of their favorite clothing websites.	Supported
H3: Consumers' evaluation of the relative importance of clothing website attributes and their perceptions of the attributes of their favorite clothing websites will be significantly correlated.	Supported
H4: Consumers' attitudes toward their favorite clothing websites will be positively related to their intentions to search for information about clothing items from those websites.	Supported
H5: Consumers' intentions to search for information about clothing items at their favorite clothing websites will be positively related to their intentions to purchase clothing items from those websites.	Supported
H6: Consumers' attitudes toward their favorite clothing websites will be positively and directly related to their intentions to purchase clothing items from their favorite clothing websites after finding the items at those websites.	Supported
H7: Consumers' intentions to search for information about clothing items at their favorite clothing websites will be positively related to their intentions to purchase clothing items from some channels other than the Internet clothing websites after finding those items at their favorite websites.	Supported
H8: Consumers' attitudes toward their favorite clothing websites will be positively and directly related to their intentions to purchase clothing items from some channels other than the Internet clothing websites after finding the items at their favorite websites.	Not Supported
H9: Consumers' clothing shopping orientations will be significantly related to their intentions to search for information about clothing items at their favorite websites.	Supported
H10: Consumers' clothing shopping orientations will be significantly related to their intentions to purchase clothing items from their favorite websites.	Supported
H11: Consumers' online clothing shopping and/or purchasing experience will be significantly related to their intentions to purchase clothing items from their favorite websites.	Supported

Additional Analysis of Interest

The following reports the results of data analysis on relationships that were not hypothesized but are of interest. This analysis includes a comparison of the respondents with and without favorite clothing websites on shopping orientation and clothing website characteristics constructs, as well as assessments of the relationship between clothing shopping orientation and intention to purchase from channels other than the Internet and of the relationship between online shopping experience and intention to purchase from channels other than the Internet were analyzed.

Comparisons of Respondents with and without Favorite Clothing Websites on Shopping Orientation and Clothing Website Characteristics

T-tests were performed to determine whether the respondents with and without favorite clothing websites were significantly different with respect to the mean values for the clothing shopping orientation constructs and for the degree of importance they placed on the clothing website characteristic constructs. Respondents without favorite clothing websites were like the respondents with favorite clothing websites in being aged 18 to 22 and single, but unlike the respondents, they did not have favorite clothing websites.

Test of T-test Assumption

The assumptions behind t-test analysis were tested prior to conducting that analysis. The normality assumption was met for both the respondents with and without favorite clothing websites because the values of the shopping orientation and website characteristics constructs were normally distributed for each group, indicated by a skewness magnitude of less than one for each. The assumption of independence of observation might be violated, however. In spite of the systematic random sampling, it is possible to have "respondent bias," due to self-selection. As discussed below, the homogeneity of variance was tested according to Leven's statistic for each of the seven shopping orientation factors and five clothing website characteristics constructs.

The assumption of homogeneity of variance was met for six of the shopping orientation factors, based on the non-significant F values for these factors under Levene's statistic. These six factors are *Brand/Fashion Consciousness*, F (939) = .690, p > .05; *Price Consciousness*, F (927) = 1.507, p > .05); *Convenience/Time Consciousness*, F (937) = .811, p > .05); *Shopping Confidence*, F (934) = .013, p > .05; *In-home Shopping Tendency*, F (946) = 2.936, p > .05; and *Brand/Store Loyalty*, F (943) = 1.554, p > .05. The homogeneity of variance assumption was violated, however, for *Shopping Enjoyment*, F (928) = 24.565, p < .001, a significant F value. Due to this factor's non-homogeneous variance, the degrees of freedom were adjusted in the manner noted in the footnote of Table 29.

Among the five clothing website characteristics factors, the assumption of homogeneity of variance was met for *Navigation*, F (933) = .591, p > .05, indicated by a non-significant F value in Leven's test for equality of variance. Based on significant F values in Leven's test, the assumption of homogeneity of variance was violated for the other four factors: *Product Information*, F (927.33) = 25.025, p < .001*, Customer Service*, F (905.88) = 5.676, p < .05, *Privacy and Security*, F (935) = 43.284, p < .001 *and Auditory Experience/Comparison Shopping*, F (941) = 8.544, p < .01. Because equal variance could not be assumed in those four cases, the degrees of freedom were adjusted for those as described in Table 29.

T-tests for Clothing Shopping Orientation Constructs

Table 29 shows the results of the t-test comparison between respondents with and without favorite clothing websites with respect to clothing shopping orientation. The respondents with and without favorite clothing websites are significantly different in terms of brand/fashion consciousness, t (939) = 7.739, p < .001. As indicated in Table 11, the respondents tend to be more brand/fashion conscious.

The two groups' mean scores for shopping enjoyment are also significantly different, t (917.875) = 8.086, p < .001, and the respondents with favorite clothing websites tended to enjoy shopping for clothing items more than the respondents without favorite websites.

Table 29

T-test Comparison of Respondents with and without Favorite Clothing Websites: Clothing Shopping Orientation Constructs

Clothing Shopping Orientation Constructs		Means		Levene's Test	t-test for Equality of Means	
		Respondents with FCW	Respondents without FCW	F-value	df	t-value
Brand/Fashion Consciousness	Equal Variance Assumed	2.86	2.60	.690	939	7.739***
Shopping Enjoyment	Equal Variance Not assumed	2.97	2.62	24.565***	917.88[a]	8.086***
Price Consciousness	Equal Variance Assumed	2.95	2.90	1.507	927	1.779
Time/Convenience Consciousness	Equal Variance Assumed	2.57	2.63	.811	937	-1.944
Shopping Confidence	Equal Variance Assumed	3.23	3.06	.013	934	5.348***
In-home Shopping Tendency	Equal Variance Assumed	2.55	2.13	2.936	946	9.753***
Brand/Store Loyalty	Equal Variance Assumed	2.91	2.71	1.554	943	5.175***

Note. [a] The degrees of freedom for *Shopping Enjoyment* in the t-test were adjusted before performing the t-test due to the respondents' and non-respondents' non-homogeneous variances for this factor. FCW means favorite clothing websites. The degrees of freedom were adjusted according to the following equation: $df = \{(S_1^2/N_1\text{-}1 + S_2^2/N_2\text{-}1)^2 / (S_1^2/N_1\text{-}1)^2 (1/N_1+1) + (S_2^2/N_2\text{-}1)^2 (1/N_2+1)^2\}\text{-}\ 2$, where S_1 & S_2 = standard deviation of each group, N_1 & N_2 = each group's sample size.
*$p < .05$. **$p < .01$. ***$p < .001$

The t-test results show that the respondents had a greater in-home shopping tendency, $t\ (953) = 9.722$, $p < .001$. Based on their mean values, both groups tended to be confident in shopping for clothes, but still show a significant difference, $t\ (941) = 5.542$, $p < .001$. The respondents with favorite clothing websites were more confident in clothes shopping than the respondents without favorite websites, which may partially explain their greater in-home shopping tendency. In addition, the respondents with favorite clothing websites were more brand/store loyal than the respondents without

favorite websites, t (950) = 5.337, p < .001, another possible reason for their stronger in-home shopping tendency. If the respondents with favorite websites were loyal to certain brands or stores, they may have known a lot about products as well as brands or stores they saw on the Internet which may have made them more confident in shopping online. Despite the noted differences between the respondents with and without favorite clothing websites, the t-tests indicate no differences with respect to price consciousness, t (927) = -1.779, p > .05, and convenience/time consciousness, t (937) = -1.944, p > .05.

T-tests for General Clothing Website Characteristics Constructs

Table 30 shows the results of the t-test comparisons between the respondents with and without favorite clothing websites with respect to their evaluation of clothing websites in general.

The t-tests, which compared the respondents and non-respondents with respect to their mean scores for evaluation of the relative importance of clothing website characteristics, showed significant differences between the two groups on all five of the constructs. For the *Product Information* construct, t (927.331) = 6.121, p < .001, the product information feature was more important to the respondents with favorite clothing websites than the respondents without favorite ones. The *Customer Service* dimension, t (905.881) = 2.881, p < .01, was also more important to the respondents with favorite ones. Both groups indicated that *Privacy and Security* was very important to them, but the respondents with favorite clothing websites perceived it as more important than the respondents without ones, t (935) = 4.467, p < .001. The t-test results also show a significant mean difference between the two groups for the *Navigation* factor, t (933) = 2.133, p < .05. The *Navigation* factor was more important to the respondents with favorite websites than the respondents without favorite ones. The non-respondents perceived the *Auditory Experience/Comparison Shopping* factor as more important than did respondents, t (928.723) = -4.899, p < .001. This may help explain why they did not tend to shop online and had no favorite clothing websites.

Table 30

T-test Comparison for Respondents with and without Favorite Clothing Websites: Clothing Website Characteristics Constructs

Clothing Website Characteristics Constructs		Mean		Levene's Test	t-test for Equality of Means	
		Respondents with FCW	Respondents without FCW	F-value	df	t-value
Product Information	Equal Variance Not assumed	3.59	3.42	25.025***	927.33[a]	6.121***
Customer Service	Equal Variance Not assumed	3.38	3.29	5.676***	905.88[a]	2.881**
Privacy/Security	Equal Variance Not assumed	3.83	3.71	43.284***	935.00[a]	4.467***
Navigation	Equal Variance Assumed	3.05	2.98	.591	933	2.133*
Auditory Experience/ Comparison Shopping	Equal Variance Not assumed	1.74	1.93	8.544***	928.72[a]	-4.899***

Note. [a] The degrees of freedom for *Product Information, Customer Service, Privacy/Security and Auditory Experience/Comparison Shopping* in the t-test were adjusted before performing the t-test due to the respondents' and non-respondents' non-homogeneous variances for these factors. FCW means favorite clothing websites. The degrees of freedom were adjusted according to the following equation: $df = \{(S_1^2/N_1\text{-}1 + S_2^2/N_2\text{-}1)^2 / (S_1^2/N_1\text{-}1)^2 (1/N_1+1) + (S_2^2/N_2\text{-}1)^2 (1/N_2+1)^2\}$ - 2, where S_1 & S_2 = standard deviation of each group, N_1 & N_2 = each group's sample size.
*p < .05. **p < .01. ***p < .001

Relationship between Clothing Shopping Orientation and Intention to Purchase from Channels Other than the Internet

Multiple regression analysis was conducted to examine the relationship between the clothing shopping orientation constructs and intentions to purchase clothing items from channels other than Internet clothing websites. The independent variables were the seven clothing shopping orientation factors, and the dependent variable was intention to purchase clothing items from channels other than Internet clothing websites. Prior to

conducting the regression analysis, tests of the regression assumptions and multicollinearity diagnostics were performed.

Tests of Regression Assumptions

The assumption of the normality of residuals was met, based on the residuals' relatively normal distributions in the histogram of residuals. Also, the normal probability p-p plot showed that the residuals fell in a fairly straight line. The assumptions on homoscedasticity and inclusion of the relevant independent variables were violated. Because the residuals scatter plot showed a non-random pattern, the model may have omitted one or more important variables, and other relevant variables should be considered in future studies. The residuals scatter plot also suggests the presence of some distinct groups. The seven shopping orientation constructs of independent variables may need to be segmented according to similar perceptions regarding clothes shopping.

Multicollinearity Diagnostics

As for the hypotheses 9 and 10, collinearity among more than two independent variables cannot be diagnosed by simple correlations alone, thus, the variance inflation (VIF) and the condition number of the correlation matrix were examined for multicollinearity diagnostics. The VIF for each independent variable was less than cut-off score of 10. Multicollinearity was also examined by the ratio of the largest to the smallest eigenvalue; this is called the condition number of the correlation matrix. The condition number was 1692.8, which is greater than the cut-off score of 1,000. Therefore, the collinearity is a threat to the interpretation of the effect of each independent variable. The interpretation of the results in multiple regression need to be incorporated with the Pearson correlation coefficients for the dependent and independent variables.

Multiple Regression Analysis

The results of the regression analysis show that 16.5 percent of the variance in intention to purchase clothing items from channels other than Internet clothing websites is explained by the seven clothing shopping orientation factors – *Brand/Fashion Consciousness, Shopping Enjoyment, Price Consciousness, Convenience/Time Consciousness, Shopping Confidence, In-home Shopping Tendency,* and *Brand/Store Loyalty* ($R^2 = 0.165$). The regression model is significant in explaining the intention to purchase clothing items from channels other than Internet clothing websites, F (7, 373) = 10.540, $p < .001$. It is concluded that consumers' clothing shopping orientation can help explaining the intention to purchase clothing items from channels other than Internet clothing websites after finding the items at such websites.

The tests of the significance of each independent variable in explaining intention to purchase from other channels show that *Shopping Enjoyment, Shopping Confidence* and *In-home Shopping Tendency* are significant (see Table 31). In other words, the respondents' *Shopping Enjoyment, Shopping Confidence* and *In-home Shopping Tendency* each uniquely accounts for a significant proportion of the variance in the intention to purchase from channels other than Internet clothing websites. Also, each of these variables is positively related to purchase intention from other channels.

Shopping Enjoyment and *Shopping Confidence* were positively related to intention to purchase clothing items from channels other than the Internet, whereas *Convenience/Time Consciousness* and *In-home Shopping Tendency* were negatively related to the intention to purchase from other channels. The more brand and fashion conscious consumers were, the more likely they were to purchase clothing items from channels other than Internet clothing websites. Time and convenience conscious and in-home shoppers, compared to brand/fashion conscious shoppers and consumers who enjoyed shopping, were less likely to purchase clothing items from channels other than the Internet. In other words, the time and convenience conscious shoppers and the in-home shoppers were more likely to purchase clothing items from their favorite clothing websites, which gives added support to hypothesis 10.

Table 31

Multiple Regression Analysis: Relationships between Clothing Shopping Orientation Constructs and Intention to Purchase from Channels other than the Internet

Parameter Estimates			
Variables	Standardized Coefficients	Squared Part Correlations	t-value
Intercept			3.215
Brand/Fashion Consciousness	.068	.003	1.187
Shopping Enjoyment	.165	.018	2.825**
Price Consciousness	.002	.001	.037
Convenience/Time Consciousness	-.035	.001	-.673
Shopping Confidence	.200	.031	3.735***
In-home Shopping Tendency	-.188	.033	-3.848***
Brand/Store Loyalty	.042	.002	.826

*p < .05. **p < .01. ***p < .001

Relationship between Online Shopping Experience and Intention to Purchase from Channels other than the Internet

A t-test was used to determine whether the online information search group and the online purchase group were significantly different in their mean scores on intention to purchase clothing items from channels other than Internet clothing websites. Tests of the assumptions for t-tests were performed prior to the analysis.

Tests of T-test Assumption

The assumption of normality was not met because both groups' mean scores on intention to purchase from other channels were not normally distributed. According to

the central limit theorem, however, nonnormality is not a problem with a sample size larger than 30. In addition, the assumption of independence of observations might be violated. Despite the systematic random sampling, it is possible to have respondent bias, due to the respondents' self-selection in their response. The assumption of homogeneity of variance was met, based on the non-significant F value for the Levene's statistic. (see Table 32).

T-test for the Relationship

Based on the equal variance estimates, the t-test shows a significant difference between the means of the two groups, t (407) = 2.125, $p < .05$ (see Table 32). It is concluded that the online information search and purchase groups are significantly different in their intentions to purchase clothing items from channels other than Internet clothing websites. The respondents who only had online information search experience had higher intentions to purchase clothing items from channels other than Internet clothing websites than did those who had previous online purchasing experience. This result implies that consumers with only online information search experience are more likely to purchase clothing items from channels other than the Internet clothing websites after finding them at their favorite clothing websites. In other words, consumers with online purchasing experience are more likely than those with only online information search experience to purchase clothing items from favorite clothing websites.

Table 32

T-test results: Differences between the Online Information Search and Purchase Groups in Intention to Purchase Clothing Items from Channels other than Internet Clothing Websites

Purchase Intention from Favorite Websites	Mean		Levene's Test	t-test for Equality of Means	
	Online Information Search Group	Online Purchase Group	F	df	t-value
Equal variance assumed	3.221	3.006	2.157	407	2.125*

*$p < .05$.

This result adds further support to hypothesis 11 and to results of previous studies (Eastlick, 1996; Lian & Huang, 1998; Shim & Drake's, 1990; Shim et al., 2001; Weber & Roehl, 1999). All the cited studies indicate that consumers' past online purchasing experience have a direct impact on their online future purchase intentions.

CHAPTER VI

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND SUGGESTIONS

This chapter summarizes the research, discusses the hypotheses, conclusions, and implications of the findings, and provides suggestions for future research.

Summary

As consumers' demands for products and services become more diversified, and their shopping and purchasing behavior changes with the expanded number of vendors available to them via the Internet and other means, marketers will find it increasingly challenging to acquire and keep customers. In today's era of intense competition for acquiring and retaining customers, one of the main marketing issues facing many companies is the need to focus business activities on the consumer. Acquiring new customers can be as much as six times more expensive than keeping current ones; therefore, customer retention and effective management of customer relationships have become major issues and key objectives in modern retailing.

Since the emergence of new information technologies, such as the World Wide Web, the Internet has provided new types of intermediaries between businesses and consumers, such as the interface through websites. By allowing distantly separated consumers to interact directly with each other, the Internet provides a feasible way for individuals and companies to buy, sell or trade products and services through electronic market places and offers new possibilities for customer retention through the management of relationships between marketers and consumers.

Despite many consumers' use of the Internet as a shopping method and companies' need to build effective websites to ultimately contribute to marketers' ability

to retain customers for their stores or brands, little empirical research has addressed the role of Internet websites in forming consumers' intentions to purchase particular brands or at particular stores within the context of customer relationship management.

In this research, a model was developed on dimensions presumed relevant to customer retention through Internet clothing websites within the context of customer relationship management via the Internet. Specifically, this study investigates how the characteristics of clothing websites affect customers' intentions to purchase clothing items from those websites and to purchase from channels other than Internet clothing websites after finding items at the websites. The overall purpose of this research was to determine the effects of the attitudes of young consumers, aged 18 to 22, toward their favorite websites on intentions to purchase through the Internet and channels other than Internet clothing websites, such as brick-and-mortar stores and catalogs.

The research hypotheses were formulated with respect to the specific relationships in the conceptual framework. These relationships are the major concern of the study. Hypothesis 1 deals with the relationships of two independent variables, respondents' shopping orientations and their previous online shopping experience, to the dependent variable, respondents' evaluation of the relative importance of general clothing website characteristics; whereas hypothesis 2 deals with the relationships of the same independent variables to a different dependent variable, respondents' perceptions of the characteristics of their favorite apparel websites. Hypothesis 3 concerns the relationships between the ratings of the relative importance of general clothing website characteristics and the perceptions of favorite clothing websites. Hypotheses 4, 5, 6, 7 and 8 involve a causal model relating attitude toward favorite clothing websites to the following: intention to search for information at favorite clothing websites; intention to purchase from favorite clothing websites; and intention to purchase from channels other than Internet clothing websites. Hypotheses 9 and 10 involve the relationships of clothing shopping orientation constructs to intention to search for information at favorite clothing websites and to intention to purchase from those websites. Finally, hypothesis 11 concerns the relationship between online clothing shopping experience and intention to purchase clothing items from favorite clothing websites, in particular the differences between two groups, the online information search and purchase groups, with respect to intentions to

purchase from favorite websites. Theories and reasoning were discussed to provide the rationale for each hypothesis. The results of the study show support for each proposed hypothesis, except hypothesis 8.

The study specifically focuses on a population of young Internet shoppers, aged 18 to 22, who have favorite clothing websites that they especially like to visit to obtain information about products or stores or to purchase products. The sample for the study was drawn by a systematic random sampling method. The subjects of the study include 414 male and female undergraduate and graduate students, all of whom are non-married, aged 18 to 22 and have favorite clothing websites. To measure the variables, an instrument was developed from previous studies and modified by the researcher. The clothing shopping orientation variable had 27 items, and clothing website characteristics had 36 items. Three items were used to measure previous online experience. Attitude toward favorite clothing websites was computed by Fishbein and Ajzen's (1967) multiattribute model (i.e., $A = \sum e_i b_i$) using the responses from 36 items common to both evaluation of general clothing website characteristics and perception of favorite clothing websites. Each of the three intention measures, intention to search for information, intention to purchase from favorite clothing websites and intention to purchase from channels other than Internet clothing websites, had one item. A pilot test was conducted with 85 college students at Virginia Tech.

A self-administered online questionnaire was sent through e-mail to a systematic sample of 15,000 students at Virginia Tech and The Ohio State University, 7,500 students from each school. The students returned a total of 1,344 surveys. After eliminating the questionnaires of those who did not meet the sample criteria, and who completed the questionnaire incorrectly, 414 responses were retained for the study. Each scale had a Cronbach's coefficient alpha greater than 0.60, indicating sufficient reliability in terms of internal consistency.

Conclusions and Implications

The preliminary analysis of the data included an exploratory factor analysis to extract the clothing shopping orientation constructs, the importance of clothing website characteristics constructs, and the perception of favorite clothing websites constructs. The factor analysis of clothing shopping orientation identified seven clothing shopping orientation constructs: brand/fashion consciousness, shopping enjoyment, price consciousness, Convenience/Time Consciousness, shopping confidence, in-home shopping tendency, and brand/store loyalty. Each clothing shopping orientation construct had a Cronbach's alpha coefficient value greater than 0.60, indicating good reliability.

The factor analysis on both evaluation of relative importance of general clothing website characteristics and perception of favorite clothing websites was conducted. Because a more clear set of factors emerged for the perception of favorite clothing websites, the factor analysis on the perception of favorite clothing website characteristics was chosen over that on the evaluation of general clothing websites characteristics to provide the characteristic constructs used in later data analysis. The constructs identified in the factor analysis on the perception of favorite clothing websites characteristics were applied to the evaluation of general clothing websites characteristics constructs. The five clothing website characteristics were: product information, customer service, privacy and security, navigation, and auditory experience/comparison shopping. For both the general and the favorite clothing website characteristics, each construct had an alpha value greater than 0.60, indicating good reliability.

The mean values, standard deviations and correlations are reported for all the variables in the study: the seven shopping orientation factors, the five clothing website characteristic factors, previous online information search and purchasing experience, attitude toward favorite clothing websites, intention to search for information at favorite clothing websites, intention to purchase from favorite clothing websites, and intention to purchase from channels other than Internet clothing websites. Regarding clothing shopping orientation, the respondents tended to be confident in shopping and to enjoy shopping for clothes. They also tended to be loyal to certain brands or stores. With respect to online shopping experience, they visited clothing websites to search for

information more than to purchase clothing items, which is consistent with their higher intentions to search for information about products at their favorite clothing websites than to purchase from those websites. When evaluating general clothing website characteristics, they tended to consider privacy and security as the most important attribute of the website characteristics examined, followed by the product information and customer service features. This finding is consistent with that in the study by Watchravesringkan and Shim (2003), who found that the privacy and security of transactions is an important website characteristic in evaluating the websites. The respondents also evaluated their favorite clothing websites as providing those characteristics.

The respondents generally had high intentions to search for information about products at their favorite clothing websites. They showed higher intentions to purchase clothing items from channels other than Internet clothing websites than to purchase from their favorite clothing websites, implying hesitancy to shop online. A possible reason is that they may perceive risks in online shopping, such as inability to touch, feel and try on products. It can be concluded that they perceived Internet websites as important channels to obtain product information but not as purchase channels.

Hypothesis 1 concerned the relationships between clothing shopping orientation and previous online shopping experience and the evaluation of the relative importance of general clothing website characteristics. The results showed that the respondents' shopping orientation and previous online shopping experience affected their evaluation of general clothing website characteristics, which supported Hypothesis 1. *Hesitant In-Home Shoppers* and *Involved Clothing Shoppers* were significantly different with respect to the evaluations of the customer service, navigation and auditory experience/comparison shopping factors. *Involved Clothing Shoppers* perceived the product information, customer service, and navigation features of clothing websites as being more important than did *Hesitant In-home Shoppers*. In addition, *Practical Clothing Shoppers* and *Involved Clothing Shoppers* showed significance differences in their evaluation of the navigation factor. *Involved Clothing Shoppers* put more importance on the navigation feature of clothing websites than did *Practical Clothing Shoppers*. In addition, the respondents who had previous online information search

experience evaluated the navigation and auditory experience/comparison shopping features of websites as being more important than did those with online purchasing experience.

Hypothesis 2 concerned the relationships between clothing shopping orientation and previous online shopping experience and the perception of favorite clothing website characteristics. The results showed that the respondents' shopping orientation and previous online shopping experience affected their perception of favorite clothing websites, which supported Hypothesis 2. In addition, a significant interaction effect, that between clothing shopping orientation and online information search and purchasing experience on the perception of favorite clothing website characteristics. This implied that the differences between shopping orientation clusters were not equal across the two different levels of online experience for the five favorite clothing website characteristics constructs.

The findings for hypotheses 1 and 2 have theoretical implications in that consumers' characteristics, such as shopping orientation and previous online information search and purchasing experience are related to their evaluation of clothing website characteristics and their perceptions of their favorite clothing websites. These findings are consistent with previous studies that show that consumers' psychographic characteristics (Berkowitz, Walton, & Walker, 1979; Cox & Rich, 1964; Cunningham & Cunningham, 1973; Gillet, 1970; Lumpkin & Hawes, 1985; Shim & Drake, 1990) and previous online shopping experience (Jasper & Ouellette, 1994; Shim & Drake; Shim et al., 2001) are important elements in predicting their purchase decisions; therefore, information on consumer characteristics is important for retailers to understand their target customers and to develop effective marketing strategies.

Hypothesis 3 concerned the relationships between the evaluation of the importance of general clothing websites characteristics and the perception of favorite clothing websites constructs. The canonical correlation analysis identified the dimensions between the dependent and independent variables and maximized the relationship between the dimensions. The results revealed that three dependent variables, the product information, customer service and navigation factors, were closely related to each other and represented the perceived favorite clothing website characteristics. These

dimensions were fairly well predicted by the following set of independent variables: the product information, navigation, and customer service factors of general clothing website characteristics. It is concluded that the product information, navigation and customer service factors of general website characteristics provide a substantive contribution to the variance in the variables in the dependent variate and thus are the key predictors of those variables. Online clothing shoppers perceived the product information, navigation and customer service factors as being major elements in representing the perception of their favorite clothing websites and they tend to shop online at their favorite clothing websites because they perceive their favorite clothing websites as providing those characteristics. Thus, it is concluded that these three factors are important for apparel retailers in developing effective clothing websites. Apparel retailers must ensure that their websites provide product information such as price, up-to-date product information, size, colors, and quality photos, and customer services such as sales assistance system, return policy, and order tracking and checking. In addition, they should ensure that they provide well-established websites that have uncluttered screens and easy search paths and that are fun to visit.

Interestingly, the results for hypothesis 3 showed that privacy and security were not major elements in respondents' perceptions of their favorite clothing websites, although the factor comprising these elements had the highest mean value of the five constructs of perception of favorite clothing websites. Not taking into account the mean value, this finding supports those of Swaminathan, Lepkowska-White, and Rao (1999) and Milne and Gordon (1993) which suggest that privacy and security are not major concerns of consumers. Swaminathan, Lepkowska-White, and Rao also mentioned that the concern over security has decreased over the years partly because of the developments in payment systems that ensure confidentiality. However, the result showing the highest mean value for the privacy and security factor in the evaluation of general clothing websites and the perception of favorite clothing websites may imply the possibility of biased data. Another possible reason for this result may lie in the difference between the mean values for the evaluation of general clothing websites and the perception of favorite clothing websites. The mean value of privacy/security for the evaluation of general clothing websites was much higher than that for the perception of

favorite clothing websites. That is, despite the highest mean value, respondents may have perceived that their favorite clothing websites did not satisfy their expectations for privacy and security. Furthermore, privacy and security may be comparatively less correlated to other factors in representing the perception of favorite clothing websites. Because canonical correlation takes into account correlations among dependent variables in representing the variate, the lack of correlation with other variables might cause exclusion of privacy and security. The privacy and security factor cannot be overlooked, however, in establishing clothing websites because, with respect to the mean score, respondents put this factor in the first place among the five constructs in their evaluation of general clothing website and their perception of favorite clothing websites.

Hypotheses 4, 5, 6, 7 and 8 concerned the causal relationships of attitudes toward favorite clothing websites to intentions to search for information at favorite clothing websites and intentions to purchase from those websites as well as from channels other than Internet clothing websites. Analysis with the first path model revealed that attitude toward favorite clothing websites was positively related to intention to search for information at favorite clothing websites and that intention to search for information at those websites was positively related to intention to purchase from those websites. In addition, attitude toward favorite clothing websites was directly and positively related to intention to purchase clothing items from favorite clothing websites. All the relationships proposed in this path model were supported.

The findings from the analysis with the first path model are consistent with those of Shim et al. (2001) in that attitude toward Internet shopping, through intentions to use the Internet for information search, influences intentions to use the Internet for purchasing. Their study also indicated that attitude toward Internet shopping directly influenced intention to use the Internet for purchasing, which also supports the findings in this study. The results from the study by Shim et al. and the present study confirm the predicted causal relationships of attitude toward websites or Internet shopping to intentions to search for information online and to online purchase intention. In addition, the result for hypothesis 5 with the first path model, involving the relationship between intentions to search for information at favorite clothing websites and intentions to purchase from those websites, is consistent with those of Shim et al., and

Watchravesringkan and Shim (2003) in that consumers' online information search intentions are positively related to their online purchase intentions. The results suggest that the selected channel for information search should be considered crucial in leading to a choice of purchase channel. Therefore, apparel retailers should not view search via the Internet and purchase via the Internet as independent processes. The result for hypothesis 6, involving the relationship between attitude toward favorite clothing websites and intentions to purchase from those websites, is also consistent with those of Shim et al. (2001), Kim, Kim, and Kumar (2003), and Watchravesringkan and Shim (2003) in that consumers' attitudes toward online shopping are directly and positively related to their online purchase intentions.

The analysis based on the second path model revealed that attitude toward favorite clothing websites was positively related to intention to search for information at favorite clothing websites, and that intention to search for information at those websites was positively related to intention to purchase from channels other than Internet clothing websites. Attitude toward favorite clothing websites was not directly related to intention to purchase clothing items from channels other than Internet clothing websites. The results revealed that all the relationships in the second path model were supported except for the direct relationship between attitude toward favorite clothing websites and intention to purchase from channels other than Internet clothing websites.

Although the results showed that the respondents' attitudes toward favorite clothing websites did not directly influence their intentions to purchase from other channels after finding clothing items at those websites, the results did indicate that the respondents' attitudes toward favorite clothing websites, through their information search activities, did indirectly influence their intentions to purchase from other channels. Based on the responses from the pilot test of the present study, this may be partly because many companies with Internet clothing websites do not offer any channels other than Internet stores such that many products available online are Internet-exclusive, meaning that online shoppers can buy these products found on the Internet only through the Internet. Another possible reason for this result is that the attitude variable had a large variance, with standard deviation of 63.56, which may have presented problems in trying to explain the influence of attitude on consumers' future behavior.

From the results with path models 1 and 2, it is concluded that consumers' positive attitude toward their favorite clothing websites may influence their online information search as well as purchase behavior. That is, attitude toward favorite clothing websites, which is formulated by consumers' evaluation of general clothing website characteristics and their perception about favorite clothing websites, plays an important role in retaining customers through the Internet. Consumers' positive attitudes toward their favorite websites are likely to lead to information search behavior at those websites. In addition, information search behavior at favorite websites is likely to eventually lead to purchases from various retail venues (Internet, catalogs, retail stores, department stores, etc.) after finding the items at those websites. Website characteristics, therefore, play a critical role in retaining customers by helping to determine customers' attitudes toward the websites, which then influence information search behavior at the websites and purchase behavior in various retailing settings. In this vein, building effective websites is important to marketers in retaining customers through the Internet.

The result for hypothesis 7 in path model 2, which concerned the relationship between intention to search for information from favorite clothing websites and intention to purchase from channels other than the Internet, also suggest that consumers are willing to use multiple-channel combinations including Internet, brick-and-mortar stores, and catalogs in their information search-purchase patterns. Although consumers browse the Internet for obtaining product information, they may view purchasing from Internet stores as more risky than from brick-and-mortar stores. Because the purchase of clothing, particularly, is a complicated process, consumers may perceive risks related to inability to see and try on products. Thus, apparel retailers need to employ multiple channel strategies. In addition, they need to inform their customers that they offer other channels, such as catalogs, retail stores and department stores, so that their customers are able to purchase from other channels after finding the items at websites. Furthermore, considering consumers' intention to purchase products from the Internet or other channels, companies need to balance the number of items that are placed in retail stores with the numbers that are online exclusive. Some apparel companies offer online exclusive products. It is important to balance how many items will be placed at the retail stores and how many will be online exclusive.

Hypotheses 9 and 10 concerned the relationships between shopping orientation and intention to search for information at favorite clothing websites on one hand, and intention to purchase clothing items from favorite clothing websites on the other. The results showed that the respondents' shopping orientation influenced their intentions to search for information at, and to make purchases from, their favorite clothing websites. The findings showed that respondents' *In-home Shopping Tendency* and *Brand/Store Loyalty* were positively related to their intentions to search for information from their favorite clothing websites. This result supports Klein's (1998) suggestion that consumer characteristics directly influence their information search behavior. The results suggest that, in order to attract brand or store loyal customers to the Internet websites and retain them to stay with the company for a long time, apparel companies need to offer unique and novel products and to develop loyalty programs such as providing information about new products and sales in advance through e-mail, special discounts or reward systems as through points accumulation by dollars spent. In order to draw their loyal customers into other channels to purchase after finding items from their websites, apparel companies need to provide information at their websites about other channels where they offer merchandise.

In addition, *Convenience/Time Consciousness* and *In-home Shopping Tendency* were positively related to intentions to purchase clothing items from favorite clothing websites. These results are consistent with the studies by Vijayasarathy and Jones' (2000) and Swaminathan, Lepkowska-White, and Rao (1999). Vijayasarathy and Jones note that consumers with an affinity for in-home shopping tended to show high intentions toward online shopping. Swaminathan, Lepkowska-White, and Rao suggest that convenience shoppers tend to use the Internet frequently to purchase goods and that they spend considerable amounts on their Internet purchases. All this suggests that retailers should fine tune their online offerings with respect to utilitarian aspects. Consumers who are primarily motivated by convenience and time may focus on the usefulness of information provided on websites and the efficiency of shopping online such as hassle free shopping, easy to order and return, convenient payment system, and short delivery time. In this sense, quality of the products and services offered online, such as useful

information about products and easy-to-use services, may have major impacts on consumers' purchase decisions.

However, *Price Consciousness* was negatively related to intentions to purchase from clothing websites. A possible reason for the negative relationship between *Price Consciousness* and intention to purchase from websites is that consumers must pay shipping and handling fees when they shop online. Although Internet stores often offer bargain prices, consumers perceive buying from those websites as being expensive because of the shipping and handling fees. Moreover, if they are unsatisfied with products bought from websites after receiving them, they often must pay shipping costs to return the items. Thus, retailers need to find solutions to compensate for shipping and handling fees. Some apparel retailers offer free shipping for certain amounts of money spent on a purchases (e.g., $100) or pay shipping cost for product return, which might be possible approaches to reduce perceived risks involving shipping costs and thereby increase sales volume. As well, apparel companies need to find ways to lower the unit cost for website operation.

Hypothesis 11 concerned the difference between the online information search and purchase groups in their intentions to purchase clothing items from their favorite clothing websites. The results showed a significant difference between the two groups. Respondents who had previous online purchasing experience had greater intentions to purchase clothing items from their favorite clothing websites than those who only had online information search experience. This result supports those of previous studies (Eastlick, 1996; Shim et al., 2001; Weber & Roehl, 1999) in showing that consumers' past online purchasing experience has a direct effect on their future online purchase intentions. The result also supports the studies of Lian and Huang (1998) and Shim and Drake (1990), which indicated that consumers' previous experience with non-store shopping formats influenced their use of the Internet for shopping.

Due to the findings for hypothesis 11, it is concluded that, along with shopping orientation, consumers' online experience plays an important role in forming their future online behavior. In this light, information on consumers' past online experience is needed to develop effective websites as well as effective marketing strategies. One of the possible ways to gather information on consumers' past online information search and

purchasing behavior is to profile customers, which can be done either by communicating with customers or by using cookies and website tracking.

This research provides apparel marketers with useful information concerning customer retention through the new medium of the Internet. The findings are important to apparel marketers for attracting and retaining customers through the Internet. The findings show that consumers' shopping orientation and online information search and purchasing experience influence the relative importance they give to different characteristics of clothing websites and their perception of their favorite clothing websites, which will eventually affect their attitudes toward their favorite clothing websites. In addition, their attitudes toward websites affect their future intentions to use those favorite websites for information searches and purchasing clothes. After finding items from their favorite websites, they are likely to purchase those items at their favorite websites or from other channels such as catalogs and department stores. In other words, consumers may stay with a company's products through the information search at the websites. The findings of this study imply that Internet websites are important information and distribution channels to consumers. In this vein, the Internet plays a pivotal role in managing relationships with customers. By establishing effective clothing websites based on information about customers' online shopping behavior, marketers could retain their customers by managing relationships with them and even attract new customers through the websites.

Suggestions for Future Study

Based on the results and the limitations of this study, the following suggestions for further research are proposed.

The sample is college students aged 18 to 22, which limits the generalizability of the results. Although the subjects were from two different major universities, Virginia Tech in Blacksburg, Virginia and The Ohio State University in Columbus, Ohio, the results cannot be generalized to all college students. Students in other universities or

colleges may have different shopping orientations, online shopping experiences, perceptions about clothing websites, attitudes toward favorite clothing websites, and intentions to search for information and to purchase from websites. Future research should be expanded to include online shoppers of different ages and in different colleges. For instance, high school students are one of the major groups of Internet users, and they have a great potential to shop online. Future research for this age group is recommended.

This study did not investigate the differences between the measured variables with respect to the respondents' demographic characteristics. Subjects who have different demographic characteristics may have different shopping behavior. Further analysis of measured variables with respect to demographic characteristics, such as age, gender and student status, is recommended.

This study developed five dimensions of clothing websites characteristics, using 21 items out of the original 36 clothing website characteristics, as a result of dropping 15 items from the final analysis. Future study is needed to confirm the constructs of clothing website characteristics using different samples; for instance, a different sample of respondents might evaluate the clothing website characteristics differently. Although 15 items were not used in the final analysis, they might be significant elements in another sample. In addition, confirmatory factor analysis using different sample is suggested as well. Moreover, looking into possible revision of the items is recommended for future research.

The study has the limitation that multicollinearity among the clothing shopping orientation constructs used existed in the regression analysis. Multicollinearity poses a threat to the interpretation of the influences of the independent variables on the dependent variable. Including more or excluding some independent variables in the analysis may be one approach.

The patterns shown in the residuals scatter plot in testing the multiple regression assumptions suggest the presence of some distinct groups among the seven shopping orientation constructs used as independent variables. This implies that the seven shopping orientation constructs may need to be segmented further or differently, perhaps by cluster analysis rather than factor analysis.

This study investigated the consumer characteristics of clothing shopping orientation and previous online information search and purchasing experience for their impact on online shopping behavior; however, other or additional characteristics may have important effects on consumers' online shopping behavior. Perceived risk toward online shopping, for example, may be an important characteristic that affects online clothing shopping behavior. The purchase of clothing products is a complicated process, and many consumers show reluctance to shop online for reasons such as an inability to see and try on products. In addition, the perceived risks associated with purchasing clothes online might be critical barriers to marketers in attracting consumers to websites and in retaining them through the Internet. Future research that includes perceived risks toward online shopping should be conducted within the context of consumers' online shopping behavior.

This study examined the difference between online information-search and purchase groups in their online shopping behavior. However, in order to convert online information searchers to buyers, further study of information-search online shoppers is recommended. In addition, further study investigating the factors that influence converting browsers to purchasers is needed.

This study examined two different types of retail channels; Internet websites and other generalized channels, but it did not distinguish between websites that are companies' only retail venues and websites that are just one of companies' retail venues. Some companies with online stores use only websites and catalogs as their retail channels, and others have a greater number of retail channels, such as Internet websites, catalogs, and brick-and-mortar retail stores. Companies' customers have different opportunities to find and purchase the companies' products based on the types of different retail channels companies have, which may affect the consumers' shopping behavior. Future research is recommended that takes into account the different possibilities for retail venue combinations and consumers' shopping behavior in accordance with those.

In the context of in-home shopping, both catalogs and Internet websites can be important for a company to attract and keep customers. Many apparel companies offer both catalogs and Internet websites as direct marketing channels, so that consumers often

compare the products through the two channels. Future study is recommended to assess the relative importance of catalogs and Internet websites in retaining in-home customers and attracting new ones.

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Appendix A

Publishers' Permission to Use Re-print the Building Blocks of the "Management of Customer Relationships in Business Media" Approach

Dear Yoo-Kyoung Seock

Thank you very much for your interest in our work.

As it is usual in the scientific community of course you may use the published model as far as you provide the original sources.

Kind regards,
Hans-Dieter

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Appendix B

Human Subjects Approval

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

Institutional Review Board

Dr. David M. Moore
IRB (Human Subjects) Chair
Assistant Vice Provost for Research Compliance
CVM Phase II - Duckpond Dr., Blacksburg, VA 24061-0442
Office: 540/231-4991; FAX: 540/231-6033
e-mail: moored@vt.edu

March 21, 2003

MEMORANDUM

TO: M. Norton 0410
Y. Seock 0410

FROM: David M. Moore

SUBJECT: IRB EXEMPTION APPROVAL – " Analysis of Apparel Websites for Young Customer Retention" – IRB # 03-166

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of March 21, 2003.

cc: file
Department Reviewer: B. Shabanowitz 0426

Appendix C

Questionnaire for the Pilot Test

I'm interested to know about your clothes shopping experience and your opinions about shopping on the Internet.

Section I. Demographics

For each question below, please put an X by the **one** answer that describes you.

1. **Gender** ____Male ____Female

2. **Age** ____14-15 ____16-17 ____18-19 ____20-21 ____22 ____23 or more

3. **Student Status** ____High school student ____College/University student ___Graduate student

Section II. Feelings about Clothes Shopping

For each statement below, please circle the **one** number from 1 (strongly disagree) to 4 (strongly agree) that best describes how you feel.

		Strongly Disagree			**Strongly Agree**
1.	I like to buy popular brands of clothing	1	2	3	4
2.	I try to keep my wardrobe up to date with fashion trends	1	2	3	4
3.	When I find clothes I like, I usually buy them without hesitation	1	2	3	4
4.	I don't mind paying high prices for clothes	1	2	3	4
5.	I put a high value on convenience when shopping for clothes	1	2	3	4
6.	Once I find a brand I like, I stick with it	1	2	3	4
7.	Shopping for clothes puts me in a good mood	1	2	3	4
8.	I shop for clothes where it saves time	1	2	3	4
9.	I feel confident in my ability to shop for clothes	1	2	3	4
10.	I shop around before deciding to buy clothes	1	2	3	4
11.	A well-known brand means good quality	1	2	3	4
12.	I pay a lot of attention to clothing prices	1	2	3	4
13.	I enjoy spending time browsing for clothes	1	2	3	4
14.	I usually buy my clothes at the most convenient place	1	2	3	4
15.	I'm interested in fashion	1	2	3	4
16.	I don't pay much attention to brand names	1	2	3	4
17.	I think I'm a good clothing shopper	1	2	3	4
18.	I don't like to spend much time shopping for clothes	1	2	3	4
19.	I shop a lot for special deals on clothing	1	2	3	4
20.	I prefer to shop for clothes at malls	1	2	3	4
21.	I can save a lot of money on clothes by shopping around for bargains	1	2	3	4
22.	I try to stick to certain brands and stores when I buy clothes	1	2	3	4
23.	I like to shop for clothes by mail, telephone or the Internet	1	2	3	4
24.	I enjoy shopping for clothes	1	2	3	4
25.	I am able to choose the right clothes for myself	1	2	3	4
26.	I watch advertisements for sales on clothing	1	2	3	4
27.	I like to shop from home	1	2	3	4

Section III. Evaluation of Importance of Clothing Website Characteristics

When you shop for clothes on the Internet, what is most important to you, and what is less important, about websites that sell clothes? For each of the **characteristics of clothing websites** listed below, please circle the **one** number from 1 (not important at all) to 4 (very important) that says **how important you think the clothing website characteristic is for you.**

		Not Important	Somewhat Important	Important	Very Important
1.	I can easily browse the website	1	2	3	4
2.	It offers many different products	1	2	3	4
3.	It gives information about the fabrics and care instructions for the products	1	2	3	4
4.	It tells the policy for shipping and handling of products	1	2	3	4
5.	I can shop and place orders quickly	1	2	3	4
6.	Paying for products is easy	1	2	3	4
7.	I can track the status of my order	1	2	3	4
8.	I know that information I give about myself is kept confidential	1	2	3	4
9.	It's fun to visit	1	2	3	4
10.	I can easily find what I want	1	2	3	4
11.	It shows all the sizes available for each product	1	2	3	4
12.	It offers many different brands	1	2	3	4
13.	It shows all the colors available for each product	1	2	3	4
14.	The different screens come up quickly	1	2	3	4
15.	It gives up-to-date information about products	1	2	3	4
16.	I can re-check that my order is correct	1	2	3	4
17.	I can quickly receive items I order	1	2	3	4
18.	The screens are not cluttered	1	2	3	4
19.	It has the brands I like	1	2	3	4
20.	I can see and hear new things on the website	1	2	3	4
21.	I can easily follow the search path on the screen	1	2	3	4
22.	I can get personal sales assistance by e-mail or 1-800 phone numbers	1	2	3	4
23.	It gives detailed written descriptions of products	1	2	3	4
24.	If I want to return a product I've bought on the website, I will get my money back quickly	1	2	3	4
25.	I know my credit card number won't be stolen	1	2	3	4
26.	I can easily compare competitors' products	1	2	3	4
27.	I can get to the website quickly	1	2	3	4
28.	It uses sound to describe products	1	2	3	4
29.	It tells the prices of products	1	2	3	4
30.	It has good quality photos of products	1	2	3	4
31.	I can return products if I am not happy with them	1	2	3	4
32.	Information I provide is confidential	1	2	3	4
33.	It tells about follow-up services	1	2	3	4
34.	It uses animation or images to describe products	1	2	3	4
35.	It plays music	1	2	3	4
36.	It shows colors that truthfully reflect the color of products	1	2	3	4
37.	It has a sizing chart	1	2	3	4

Section IV. Previous Online Shopping and Purchasing Experience

Please answer the three questions that follow by putting an X beside **one** of the items shown under each question.

In the parentheses below, please put the number of times or items that the word "seldom," "occasionally," "few," "some," "a lot" mean to you.

1. **Over the past 12 months**, about **how much** did you **search** the Internet for information about clothes you might buy?

_____Never _____Seldom (times) _____Occasionally (times) _____A lot (times or more)

2. **Over the past 12 months**, about **how much** did you **buy** clothes on the Internet?

_____Never _____Seldom (times) _____Occasionally (times) _____A lot (times or more)

3. **Over the past 12 months**, about **how many items of clothing** did you **buy** on the Internet?

_____None _____Few (items) _____Some (items) _____A lot (items or more)

Section V. Clothing Websites You Like to Visit

Do you have clothing websites that you especially like to visit? Yes _____ No _____

1. **IF YES**, what are they?

_____

_____**Go on to Sections VI, VII and VIII.**

2. **IF NO**, do not answer the questions below. You are finished with the questionnaire.

Section VI. Evaluation of Clothing Websites You Like to Visit

Please think about the **characteristics of clothing websites that you especially like to visit** to shop for clothes online. For each of the characteristics of clothing websites listed below, please circle the **one** number from 1 (strongly disagree) to 4 (strongly agree) that says **how strongly you agree that those clothing websites have that characteristic.**

		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
1.	It has good quality photos of products…	1	2	3	4
2.	The different screens come up quickly……	1	2	3	4
3.	It has the brands I like……1		2	3	4
4.	I can easily browse the website……	1	2	3	4
5.	It gives information about the fabrics and care instructions for the products...……...……	1	2	3	4

	Strongly Disagree	Disagree	Agree	Strongly Agree
6. I can easily find what I want……	1	2	3	4
7. It shows all the colors available for each product..……	1	2	3	4
8. It tells the prices of products……	1	2	3	4
9. I can track the status of my order……1		2	3	4
10. I can quickly receive items I order..……	1	2	3	4
11. It shows all the sizes available for each product……1		2	3	4
12. It tells the policy for shipping and handling of products..……	1	2	3	4
13. I can get personal sales assistance by e-mail or 1-800 phone numbers…	1	2	3	4
14. It uses animation or images to describe products...……	1	2	3	4
15. I can easily compare competitors' products.……	1	2	3	4
16. It offers many different brands..……	1	2	3	4
17. It gives up-to-date information about products……	1	2	3	4
18. It uses sound to describe products……	1	2	3	4
19. I know my credit card number won't be stolen……	1	2	3	4
20. I know that information I give about myself is kept confidential.…1		2	3	4
21. If I want to return a product I've bought on the website, . I will get my money back quickly……..……1		2	3	4
22. I can return products if I am not happy with them…….	1	2	3	4
23. It gives detailed written descriptions of products...……	1	2	3	4
24. It plays music…….....	1	2	3	4
25. Paying for products is easy…….....	1	2	3	4
26. I can re-check that my order is correct……..	1	2	3	4
27. Information I provide is confidential…….....	1	2	3	4
28. It tells about follow-up services…….....	1	2	3	4
29. The screens are not cluttered……	1	2	3	4
30. I can see and hear new things on the website…….	1	2	3	4
31. I can shop and place orders quickly…..……..	1	2	3	4
32. I can get to the website quickly……	1	2	3	4
33. It offers many different products……..……..	1	2	3	4
34. It's fun to visit……	1	2	3	4
35. I can easily follow the search path on the screen……..	1	2	3	4
36. It shows colors that truthfully reflect the color of products……1		2	3	4
37. It has a sizing chart……..……	1	2	3	4

Section VII. Previous Online Shopping Experience at Clothing Websites You Like to Visit

Please think about **clothing websites that you especially like to visit** to shop for clothes and answer the three questions that follow by putting an X beside **one** of the items shown under each question.

1. **Over the past 12 months**, about **how much** did you **search** the clothing websites that you especially like to visit for information about clothes you might buy?

_____Never _____Seldom _____Occasionally _____A lot

2. **Over the past 12 months**, about **how much** did you **buy** clothes on the clothing websites that you especially like to visit?

_____Never _____Seldom _____Occasionally _____A lot

3. **Over the past 12 months**, about **how many items of clothing** did you **buy** on the clothing websites that you especially like to visit?

_____None _____Few _____Some _____A lot

Section VIII. Intention

Please think about **clothing websites that you especially like to visit** to shop for clothes and put an X beside **one** of the items shown under each question.

.

1. In the next 6 months, how likely are you to **search for information** about clothes at clothing websites that you especially like to visit?

_____Very unlikely _____Unlikely _____Likely _____Very likely

2. After finding clothes at clothing websites that you especially like to visit, how likely are you to **buy the clothes from those websites** in the next 6 months?

_____ Very unlikely _____Unlikely _____Likely _____Very likely

3. After finding clothes at clothing websites that you especially like to visit, how likely are you to **buy those clothes at places other than the Internet** in the next 6 months?

_____Very unlikely _____Unlikely _____Likely _____Very likely

Thank you for your participation!

Appendix D

Online Questionnaire and Cover Letter

A CHANCE TO WIN $200!!!

Do you shop for clothes on the Internet (browsing and/or buying)?
If so, PARTICIPATE IN A SURVEY and get a chance to WIN $200 in CASH!

To be eligible for the drawing,
1. COMPLETE the questionnaire at the link below
2. PUT your e-mail address at the bottom of the questionnaire
3. SUBMIT it by MAY 10, 2003

I am a Ph. D. student in the Clothing and Textiles program at Virginia Tech, working on my dissertation. As a part of my research, I would like to collect information on your evaluation of clothing websites and your opinions about Internet clothes shopping. The purpose of my study is to investigate INTERNET clothes shopping behavior and the perception of clothing websites.

To finish my study, I definitely need your help! It will take about 10 minutes to complete this questionnaire. To help me collect this information, please complete the questionnaire at the link below and submit it. A completion of the questionnaire and submitting it will imply your consent for participation in this survey. If you have any questions about the survey, please feel free to contact me at yoseock@vt.edu

Please remember if you want to be included in the drawing, type your email address in the end of a questionnaire. The winner will be announced after all survey is done.

Thank you very much.

Sincerely,

Yoo-Kyoung Seock, Ph. D. Candidate
Clothing and Textiles
Department of Apparel, Housing and Resource Management
Wallace Hall 248
Virginia Tech
E-mail: yoseock@vt.edu

https://survey.vt.edu/survey/entry.jsp?id=1051225067956

P.S. Students, who are age 17 or under, cannot participate this survey without parental consent.

Internet Clothes Shopping

Section 1. Demographics

1-1. Gender
○ Male ○ Female
1-2. Age
○ 18 ○ 19 ○ 20 ○ 21 ○ 22 ○ 23 or more
1-3. Student Status
○ College/University student ○ Graduate student
1-4. Marital Status
○ Single ○ Married

Section 2. Feelings about Clothing Shopping

For each statement below, please choose one that best describes how you feel.

2-1. I like to buy popular brands of clothing.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-2. I try to keep my wardrobe up to date with fashion trends.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-3. When I find clothes I like, I usually buy them without hesitation.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-4. I don't mind paying high prices for clothes.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-5. I put a high value on convenience when shopping for clothes.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-6. Once I find a brand I like, I stick with it.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-7. Shopping for clothes puts me in a good mood.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-8. I shop for clothes where it saves time.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-9. I feel confident in my ability to shop for clothes.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-10. I shop around before deciding to buy clothes.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

Feelings about Clothes Shopping (cont'd)

2-11. A well-known brand means good quality.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-12. I pay a lot of attention to clothing prices.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-13. I enjoy spending time browsing for clothes.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-14. I usually buy my clothes at the most convenient place.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-15. I'm interested in fashion.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-16. I don't pay much attention to brand names.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

2-17. I think I'm a good clothing shopper.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-18. I don't like to spend much time shopping for clothes.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-19. I shop a lot for special deals on clothing.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-20. I prefer to shop for clothes at malls.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

Feelings about Clothes Shopping (cont'd)

2-21. I can save a lot of money on clothes by shopping around for bargains.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-22. I try to stick to certain brands and stores when I buy clothes.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-23. I like to shop for clothes by mail, telephone or the Internet.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-24. I enjoy shopping for clothes.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-25. I am able to choose the right clothes for myself.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-26. I watch advertisements for sales on clothing.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
2-27. I like to shop from home.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

Section 3. Evaluation of Importance of Clothing Website Characteristics

For each of the characteristics of clothing websites listed below, please choose <u>one</u> that says how important you think the clothing website characteristic is for you.

3-1. I can easily browse the website.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-2. I can shop and place orders quickly.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-3. It offers many different brands.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-4. It offers many different products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-5. I can easily find what I want.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-6. It gives information about the fabrics and care instructions for the products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-7. It shows all the sizes available for each product.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-8. It shows all the colors available for each product.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-9. It gives up-to-date information about products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-10. It tells the policy for shipping and handling of products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important

Evaluation of Importance of Clothing Website Characteristics (cont'd)

3-11. Paying for products is easy.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-12. I can track the status of my order.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-13. I know that information I give about myself is kept confidential.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-14. I can quickly receive items I order.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-15. It gives detailed written descriptions of products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-16. It has the brands I like.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-17. I can see and hear new things on the website.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-18. It's fun to visit.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-19. The different screens come up quickly.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-20. The screens are not cluttered.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important

Evaluation of Importance of Clothing Website Characteristics (cont'd)

3-21. I can easily follow the search path on the screen.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-22. I can easily compare competitors' products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-23. I can get personal sales assistance by e-mail or 1-800 phone numbers.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-24. I can re-check that my order is correct.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-25. I know my credit card number won't be stolen.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-26. If I want to return a product I've bought on the website, I will get my money back quickly.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-27. It uses sound to describe products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-28. It tells the prices of products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-29. It has good quality photos of products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-30. I can get to the website quickly.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important

Evaluation of Importance of Clothing Website Characteristics (cont'd)

3-31. I can return products if I am not happy with them.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-32. Information I provide is confidential.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-33. It tells about follow-up services.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important
3-34. It plays music.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important

3-35. It truthfully shows the color of the products.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important

3-36. It has a sizing chart.
○ Not Important ○ Somewhat Important ○ Important ○ Very Important

Section 4. Previous Online Shopping and Purchasing Experience

Please answer the three questions that follow by choosing one of the items shown under each question.

4-1. Over the past 12 months, about how much did you search the Internet for information about clothes you might buy?
○ Never ○ Seldom ○ Occasionally ○ A lot

4-2. Over the past 12 months, about how much did you buy clothes on the Internet?
○ Never ○ Seldom ○ Occasionally ○ A lot

4-3. Over the past 12 months, about how many items of clothing did you buy on the Internet?
○ None ○ Few ○ Some ○ A lot

4-4. After finding clothes on the Internet, about how much did you buy those clothes at places other than the Internet over the past 12 months?
○ Never ○ Seldom ○ Occasionally ○ A lot

4-5. After finding clothes on the Internet, about how many items of clothing did you buy those clothes at places other than the Internet over the past 12 months?
○ None ○ Few ○ Some ○ A lot

Section 5. Clothing Websites You Like to Visit

Do you have clothing websites that you especially like to visit?

5-1. IF YES, what are they? _____
Please Go on to Next Sections.

5-2. IF NO, do not answer the questions below. You are finished with the questionnaire.

Section 6. Evaluation of Clothing Websites You Like to Visit

Please think about the characteristics of clothing websites that you especially like to visit to shop for clothes online. For each of the characteristics of clothing websites listed below, please choose one that says how strongly you agree that those clothing websites have that characteristic.

6-1. I can easily browse the website.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-2. I can shop and place orders quickly.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-3. It offers many different brands.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-4. It offers many different products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-5. I can easily find what I want.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-6. It gives information about the fabrics and care instructions for the products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-7. It shows all the sizes available for each product.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-8. It shows all the colors available for each product.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-9. It gives up-to-date information about products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-10. It tells the policy for shipping and handling of products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

Evaluation of Clothing Websites You Like to Visit (cont'd)

6-11. Paying for products is easy.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-12. I can track the status of my order.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-13. I know that information I give about myself is kept confidential.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-14. I can quickly receive items I order.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-15. It gives detailed written descriptions of products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-16. It has the brands I like.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-17. I can see and hear new things on the website.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-18. It's fun to visit.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-19. The different screens come up quickly.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-20. The screens are not cluttered.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

Evaluation of Clothing Websites You Like to Visit (cont'd)

6-21. I can easily follow the search path on the screen.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-22. I can easily compare competitors' products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-23. I can get personal sales assistance by e-mail or 1-800 phone numbers.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-24. I can re-check that my order is correct.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-25. I know my credit card number won't be stolen.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-26. If I want to return a product I've bought on the website, I will get my money back quickly.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-27. It uses sound to describe products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-28. It tells the prices of products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-29. It has good quality photos of products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree
6-30. I can get to the website quickly.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

Evaluation of Clothing Websites You Like to Visit (cont'd)

6-31. I can return products if I am not happy with them.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-32. Information I provide is confidential.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-33. It tells about follow-up services.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-34. It plays music.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-35. It truthfully shows the color of the products.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6-36. It has a sizing chart.
○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

Section 7. Previous Online Shopping Experience at Clothing Websites You Like to Visit

Please think about clothing websites that you especially like to visit to shop for clothes and choose one of the items shown under each question.

7-1. Over the past 12 months, about how much did you search the clothing websites that you especially like to visit for information about clothes you might buy?
○ Never ○ Seldom ○ Occasionally ○ A lot

7-2. After finding clothes at clothing websites that you especially like to visit, about how much did you buy the clothes from those clothing websites over the past 12 months?
○ Never ○ Seldom ○ Occasionally ○ A lot

7-3. After finding clothes at clothing websites that you especially like to visit, about how many items of clothing did you buy from those clothing websites over the past 12 months?
○ None ○ Few ○ Some ○ A lot

7-4. After finding clothes at clothing websites that you especially like to visit, about how much did you buy those clothes at places other than the Internet over the past 12 months?
○ Never ○ Seldom ○ Occasionally ○ A lot

Section 8. Intention

Please think about clothing websites that you especially like to visit to shop for clothes and choose one of the items shown under each question.

8-1. In the next 6 months, how likely are you to search for information about clothes at clothing websites that you especially like to visit?
○ Very unlikely ○ Unlikely ○ Likely ○ Very likely

8-2. After finding clothes at clothing websites that you especially like to visit, how likely are you to buy the clothes from those websites in the next 6 months?
○ Very unlikely ○ Unlikely ○ Likely ○ Very likely

8-3. After finding clothes at clothing websites that you especially like to visit, how likely are you to buy those clothes at places other than the Internet in the next 6 months?
○ Very unlikely ○ Unlikely ○ Likely ○ Very likely

If you'd like to win a drawing for answering the questionnaire ($200), please type your e-mail address in the space below.

_____

Appendix E

Tables on

Item Deleted for Clothing Website Characteristics,

Frequencies of Responses,

MANOVA Cell-level Effects and

Regression Diagnostics

Table 33

Deleted Items of General and Favorite Clothing Website Characteristics

Deleted Items (15)
1. I can easily browse the website.
2. I can shop and place orders quickly.
3. It offers many different brands.
4. It offers many different products.
5. I can easily find what I want.
6. It gives information about the fabrics and care instructions for the product.
7. It tells the policy for shipping and handling of products.
8. Paying for products is easy.
9. I can quickly receive items I order.
10. It gives detailed written descriptions of products.
11. It has the brands I like.
12. I can see and hear new things on the website.
13. I can get to the website quickly.
14. It tells about follow-up services.
15. It has a sizing chart.

Table 34

Frequencies of Responses for Shopping Orientation

Items	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I like to buy popular brands of clothing.	9	52	276	77
2. I try to keep my wardrobe up to date with fashion trends.	14	81	242	77
3. When I find clothes I like, I usually buy them without hesitation.	49	158	195	12
4. I don't mind paying high prices for clothes.	18	94	220	80
5. I put a high value on convenience when shopping for clothes.	4	119	244	46
6. Once I find a brand I like, I stick with it.	5	78	244	86
7. Shopping for clothes puts me in a good mood.	12	59	221	121
8. I shop for clothes where it saves time.	17	204	172	20
9. I feel confident in my ability to shop for clothes.	3	26	239	144
10. I shop around before deciding to buy clothes.	10	129	209	65
11. A well-known brand means good quality.	24	175	184	29
12. I pay a lot of attention to clothing prices.	3	37	199	172
13. I enjoy spending time browsing for clothes.	14	81	227	88
14. I usually buy my clothes at the most convenient place.	19	214	163	16
15. I'm interested in fashion.	9	57	244	102
16. I don't pay much attention to brand names.	20	104	242	47
17. I think I'm a good clothing shopper.	2	32	277	100
18. I don't like to spend much time shopping for clothes.	40	106	217	48
19. I shop a lot for special deals on clothing.	6	82	211	112
20. I prefer to shop for clothes at malls.	20	97	237	59
21. I can save a lot of money on clothes by shopping around for bargains.	1	36	236	141
22. I try to stick to certain brands and stores when I buy clothes.	8	116	230	59
23. I like to shop for clothes by mail, telephone or the Internet.	33	153	195	31
24. I enjoy shopping for clothes.	7	46	224	135
25. I am able to choose the right clothes for myself.	3	8	278	124
26. I watch advertisements for sales on clothing.	14	109	229	61
27. I like to shop from home.	26	155	207	26

Note. Each number indicates frequency of responses.

Table 35

Frequencies of Responses for Evaluation of General Clothing Websites

Items	Not Important	Somewhat Important	Important	Very Important
1. I can easily browse the website.	3	17	170	223
2. I can shop and place orders quickly.	2	50	179	180
3. It offers many different brands.	73	130	136	72
4. It offers many different products.	21	80	203	106
5. I can easily find what I want.	1	13	172	227
6. It gives information about the fabrics and care instructions for the product.	48	169	151	43
7. It shows all the sizes available for each product.	1	18	163	232
8. It shows all the colors available for each product.	0	9	153	250
9. It gives up-to-date information about products.	7	46	200	158
10. It tells the policy for shipping and handling of products.	1	41	162	209
11. Paying for product is easy.	1	24	208	180
12. I can track the status of my order.	10	43	159	202
13. I know that information I give about myself is kept confidential.	1	13	64	334
14. I can quickly receive items I order.	0	24	183	207
15. It gives detailed written descriptions of products.	4	46	212	151
16. It has the brands I like.	9	69	202	133
17. I can see and hear new things on the website.	40	127	200	45
18. It's fun to visit.	32	152	170	59
19. The different screens come up quickly.	8	34	195	177
20. The screens are not cluttered.	9	64	197	143
21. I can easily follow the search path on the screen.	8	42	250	111
22. I can easily compare competitors' products.	53	159	141	57
23. I can get personal sales assistance by e-mail or 1-800 phone numbers.	30	96	170	115
24. I can re-check that my order is correct.	0	24	196	192
25. I know my credit card number won't be stolen.	1	5	30	376
26. If I want to return a product I've bought on the website, I will get my money back quickly.	4	18	124	265
27. It uses sound to describe products.	273	99	33	6
28. It tells the prices of products.	0	5	69	339
29. It has good quality photos of products.	0	4	103	305
30. I can get to the website quickly.	0	27	190	196
31. I can return products if I am not happy with them.	3	9	106	292
32. Information I provide is confidential.	0	7	59	344
33. It tells about follow-up services.	21	98	218	74
34. It plays music.	321	75	14	3
35. It truthfully shows the color of the products.	2	7	128	275
36. It has a sizing chart.	5	54	156	196

Note. Each number indicates frequency of responses.

Table 36

Frequencies of Responses for Perception of Favorite Clothing Websites

Items	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I can easily browse the website.	1	3	234	174
2. I can shop and place orders quickly.	0	7	224	180
3. It offers many different brands.	100	151	109	52
4. It offers many different products.	2	16	249	146
5. I can easily find what I want.	0	8	236	165
6. It gives information about the fabrics and care instructions for the product.	13	128	221	48
7. It shows all the sizes available for each product.	0	10	208	195
8. It shows all the colors available for each product.	0	8	194	211
9. It gives up-to-date information about products.	0	58	236	115
10. It tells the policy for shipping and handling of products.	0	14	217	177
11. Paying for product is easy.	0	6	232	175
12. I can track the status of my order.	2	48	234	125
13. I know that information I give about myself is kept confidential.	2	19	182	207
14. I can quickly receive items I order.	1	23	254	135
15. It gives detailed written descriptions of products.	2	36	255	118
16. It has the brands I like.	0	8	228	177
17. I can see and hear new things on the website.	21	96	245	49
18. It's fun to visit.	1	30	274	107
19. The different screens come up quickly.	2	41	265	103
20. The screens are not cluttered.	2	27	269	113
21. I can easily follow the search path on the screen.	1	7	281	121
22. I can easily compare competitors' products.	86	207	95	24
23. I can get personal sales assistance by e-mail or 1-800 phone numbers.	7	52	259	95
24. I can re-check that my order is correct.	0	8	270	132
25. I know my credit card number won't be stolen.	1	18	173	220
26. If I want to return a product I've bought on the website, I will get my money back quickly.	4	34	243	130
27. It uses sound to describe products.	155	189	50	16
28. It tells the prices of products.	0	2	179	231
29. It has good quality photos of products.	0	10	198	204
30. I can get to the website quickly.	1	4	225	181
31. I can return products if I am not happy with them.	2	12	225	171
32. Information I provide is confidential.	0	13	189	211
33. It tells about follow-up services.	7	84	253	64
34. It plays music.	156	183	53	20
35. It truthfully shows the color of the products.	0	15	244	155
36. It has a sizing chart.	5	30	237	138

Note. Each number indicates frequency of responses.

Table 37

Frequencies of Reponses for Previous Online Shopping and Purchasing Experience

Items	Never	Seldom	Occasionally	A lot
1. Over the past 12 months, about how much did you search the Internet for information about clothes you might buy?	1	51	224	135
2. Over the past 12 months, about how much did you buy clothes on the Internet?	70	173	141	29
3. Over the past 12 months, about how many items of clothing did you buy on the Internet?	72	192	119	26

Note. Each number indicates frequency of responses.

Table 38

Frequencies of Responses for Intentions

Items	Very Unlikely	Unlikely	Likely	Very Likely
Intentions to search for information at favorite clothing websites	5	21	211	176
Intentions to purchase from favorite clothing websites	18	139	203	54
Intentions to purchase from channels other than Internet	13	72	210	115

Note. Each number indicates frequency of responses.

Table 39

Cell Level Effects for Perception of Favorite Clothing Websites' Product Information Construct

	Cell 1	Cell 2	Cell3	Cell 4	Cell 5	Cell 6
Cell 1		0.5886	0.0466*	0.9441	0.5446	0.0494*
Cell 2	0.5886		0.0723	0.5348	0.7403	0.0014**
Cell 3	0.0466*	0.0723		0.0371*	0.2725	0.0013**
Cell 4	0.9441	0.5348	0.0371*		0.5434	0.0066**
Cell 5	0.5446	0.7403	0.2725	0.5434		0.0796
Cell 6	0.0494*	0.0014**	0.0013**	0.0066**	0.0796	

Note.
Cell 1: Hesitant In-home Shoppers/Online Information Searchers
Cell 2: Hesitant In-home Shoppers/Online Purchasers
Cell 3: Practical Clothing Shoppers/Online Information Searchers
Cell 4: Practical Clothing Shoppers/Online Purchasers
Cell 5: Involved Clothing Shoppers/Online Information Searchers
Cell 6: Involved Clothing Shoppers/Online Purchasers
Each number indicates p-value.
*p < .05. **p < .01. ***p < .001

Table 40

Cell Level Effects for Perception of Favorite Clothing Websites' Customer Service Construct

	Cell 1	Cell 2	Cell3	Cell 4	Cell 5	Cell 6
Cell 1		0.0923	0.7829	0.0007***	0.8904	0.0001***
Cell 2	0.0923		0.2090	0.0317*	0.2666	0.0001***
Cell 3	0.7829	0.2090		0.0271*	0.9133	0.0003***
Cell 4	0.0007***	0.0317*	0.0271*		0.0390*	0.0008***
Cell 5	0.8904	0.2666	0.9133	0.0390*		0.0005***
Cell 6	0.0001***	0.0001***	0.0003***	0.0008***	0.0005***	

Note.
Cell 1: Hesitant In-home Shoppers/Online Information Searchers
Cell 2: Hesitant In-home Shoppers/Online Purchasers
Cell 3: Practical Clothing Shoppers/Online Information Searchers
Cell 4: Practical Clothing Shoppers/Online Purchasers
Cell 5: Involved Clothing Shoppers/Online Information Searchers
Cell 6: Involved Clothing Shoppers/Online Purchasers
Each number indicates p-value.
*p < .05. **p < .01. ***p < .001

Table 41

Cell Level Effects for Perception of Favorite Clothing Websites' Privacy/Security Construct

	Cell 1	Cell 2	Cell3	Cell 4	Cell 5	Cell 6
Cell 1		0.3136	0.0106*	0.5076	0.0957	0.0540
Cell 2	0.3136		0.0330*	0.0306*	0.2348	0.0002***
Cell 3	0.0106*	0.0330*		0.0020**	0.4781	0.0002***
Cell 4	0.5076	0.0306*	0.0020**		0.0317*	0.0897
Cell 5	0.0957	0.2348	0.4781	0.0317*		0.0043**
Cell 6	0.0540	0.0002***	0.0002***	0.0897	0.0043**	

Note.
Cell l 1: Hesitant In-home Shoppers/Online Information Searchers
Cell 2: Hesitant In-home Shoppers/Online Purchasers
Cell 3: Practical Clothing Shoppers/Online Information Searchers
Cell 4: Practical Clothing Shoppers/Online Purchasers
Cell 5: Involved Clothing Shoppers/Online Information Searchers
Cell 6: Involved Clothing Shoppers/Online Purchasers
Each number indicates p-value.
*p < .05. **p < .01. ***p < .001

Table 42

Cell Level Effects for Perception of Favorite Clothing Websites' Navigation Construct

	Cell 1	Cell 2	Cell3	Cell 4	Cell 5	Cell 6
Cell 1		0.0632	0.0981	0.3111	0.7936	0.2141
Cell 2	0.0632		0.4923	0.2499	0.4298	0.0001***
Cell 3	0.0981	0.4923		0.2306	0.2703	0.0140*
Cell 4	0.3111	0.2499	0.2306		0.7717	0.0028**
Cell 5	0.7936	0.4298	0.2703	0.7717		0.3274
Cell 6	0.2141	0.0001***	0.0140*	0.0028**	0.3274	

Note.
Cell 1: Hesitant In-home Shoppers/Online Information Searchers
Cell 2: Hesitant In-home Shoppers/Online Purchasers
Cell 3: Practical Clothing Shoppers/Online Information Searchers
Cell 4: Practical Clothing Shoppers/Online Purchasers
Cell 5: Involved Clothing Shoppers/Online Information Searchers
Cell 6: Involved Clothing Shoppers/Online Purchasers
Each number indicates p-value.
*p < .05. **p < .01. ***p < .001

Table 43

Cell Level Effects for Perception of Favorite Clothing Websites' Sensory Experience Construct

	Cell 1	Cell 2	Cell3	Cell 4	Cell 5	Cell 6
Cell 1		0.4380	0.3253	0.2377	0.7997	0.6927
Cell 2	0.4380		0.5505	0.6243	0.8604	0.6109
Cell 3	0.3253	0.5505		0.687	0.5636	0.4084
Cell 4	0.2377	0.6243	0.6987		0.6942	0.2962
Cell 5	0.7997	0.8604	0.5636	0.6942		0.9618
Cell 6	0.6927	0.6109	0.4084	0.2962	0.9618	

Note.
Cell 1: Hesitant In-home Shoppers/Online Information Searchers
Cell 2: Hesitant In-home Shoppers/Online Purchasers
Cell 3: Practical Clothing Shoppers/Online Information Searchers
Cell 4: Practical Clothing Shoppers/Online Purchasers
Cell 5: Involved Clothing Shoppers/Online Information Searchers
Cell 6: Involved Clothing Shoppers/Online Purchasers
Each number indicates p-value.
*p < .05. **p < .01. ***p < .001

Table 44

Collinearity Diagnostics for Hypothesis 9

Variance Inflation Analysis

Variable	Variance Inflation (VIF)
Intercept	
Brand/Fashion Consciousness	1.447
Shopping Enjoyment	1.529
Price Consciousness	1.129
Time/Convenience Consciousness	1.187
Shopping Confidence	1.264
In-home Shopping Tendency	1.062
Brand/Store Loyalty	1.159

Note. Dependent variable is Intention to Search for Information at Favorite Clothing Websites.

Eigenvalue Analysis

Variable	Eigenvalue	Condition Index
Intercept	7.786	1.000
Brand/Fashion Consciousness	0.073	10.329
Shopping Enjoyment	0.047	12.815
Price Consciousness	0.038	14.322
Time/Convenience Consciousness	0.021	19.057
Shopping Confidence	0.016	21.960
In-home Shopping Tendency	0.013	24.298
Brand/Store Loyalty	0.005	41.075

Note. Dependent variable is Intention to Search for Information at Favorite Clothing Websites.

Table 45

Collinearity Diagnostics for Hypothesis 10

Variance Inflation Analysis

Variable	Variance Inflation (VIF)
Intercept	
Brand/Fashion Consciousness	1.448
Shopping Enjoyment	1.529
Price Consciousness	1.129
Time/Convenience Consciousness	1.188
Shopping Confidence	1.267
In-home Shopping Tendency	1.064
Brand/Store Loyalty	1.163

Note. Dependent variable is Intention to Purchase Clothing Items from Favorite Clothing Websites.

Eigenvalue Analysis

Variable	Eigenvalue	Condition Index
Intercept	7.786	1.000
Brand/Fashion Consciousness	0.073	10.342
Shopping Enjoyment	0.047	12.813
Price Consciousness	0.038	14.310
Time/Convenience Consciousness	0.021	19.090
Shopping Confidence	0.016	21.960
In-home Shopping Tendency	0.013	24.338
Brand/Store Loyalty	0.005	41.003

Note. Dependent variable is Intention to Purchase Clothing Items from Favorite Clothing Websites.

Appendix F

Vita

Yoo-Kyoung Seock

EDUCATION

Ph.D., 2003, Virginia Polytechnic Institute and State University – Conferred December 2003

Major area: Clothing and Textiles, with Business and Economics concentration
Dissertation: Analysis of Clothing Websites for Young Customer Retention based on A Model of Customer Relationship Management via the Internet

M.S., 1998, Yonsei University, Seoul, Korea
Major area: Clothing and Textiles, with Fashion Marketing concentration
Thesis: Effects of Situation on Consumers' Self-image, Perceived Risk and Brand Evaluation

B.S., 1995, Yonsei University, Seoul, Korea
Major area: Clothing and Textiles
Graduation paper: Differences between Consumer Buying Behavior in Department Stores and Discount Stores

B.S., 1989, Sook Myoung Women's University, Seoul, Korea
Major area: Physics

PROFESSIONAL EXPERIENCE

Guest lectures, Virginia Polytechnic Institute and State University (Virginia Tech):
2003 "Consumer Attitude as one Characteristic of Individuals," in NECT 3624, Clothing Behavior Patterns, March 13, 2003
2002 "The Clothing and Textiles Field: The Subject Matter and Issues Addressed," in NE 5944, Graduate Seminar, April 14, 2002

2002-2003 Graduate Student Representative, Clothing and Textiles Advisory Board, Virginia Tech: reported to the Board on the specialization of the clothing and textiles graduate program, as well as the research and other professional activities of the graduate students.

1999-2002 Graduate Teaching Assistant, Clothing and Textiles, Virginia Tech

NE 5004, Orientation to Research (graduate level); prepared lecture materials by summarizing information on qualitative and quantitative research methods and by making handouts and visuals using Word or PowerPoint, participated in a panel discussion of research procedures

NECT 4614, Economics of the Textile and Apparel Industry (dual level; seniors and graduate students); graded thesis-governed papers and related assignments on manufacturers and retailers, gave a lecture, prepared a handout on the American Psychological Association citation system and assisted students in using the system

NECT 4984, Global Apparel Production and Trade (junior/senior level); graded written assignments, evaluated students' oral presentations

NECT 3624, Clothing Behavior Patterns (junior level); graded exams and group discussions, evaluated students' oral presentations, assisted students with preparing and submitting forms for the use of human subjects in mini research projects

NECT/AAEC 2244, Food and Clothing: Cultural Traditions, Conflicts & Possibilities (sophomore level); graded papers on ethical issues

1999-2002 Graduate Research Assistant, Clothing and Textiles, Virginia Tech; assisted with library and web literature search, the writing of literature reviews for journal manuscripts, development of survey measures of variables, administration of a survey, and data analysis

1998 Part-time Instructor, Department of Fashion Design, An -Yang Technical College, An -Yang, Korea; taught the Principles of Design course

1995-96 Graduate Teaching Assistant, Clothing and Textiles, Yonsei University, Seoul, Korea; prepared visual materials (slides and transparencies), kept attendance records

Introduction to Clothing (freshman level)
History of Western Costume (sophomore level)
Introduction to Social Psychology of Clothing (junior level)
Research Methods (senior level)

1995 Project Assistant, for a project funded by the Interfashion Planning Co., Seoul, Korea; assisted in market analysis of fashion and color trends in 1995, and in forecasting fashion and color trends for 1996, which resulted in publication of *Apparel Forecasting for 1996, Korea*

PUBLICATIONS

Papers in Refereed Journals

Chen-Yu, J. H., & Seock, Y. (2002). Adolescents' clothing purchase motivations, information sources, and store selection criteria: A comparison of male/female and impulse/nonimpulse shoppers. *Family and Consumer Sciences Research Journal, 31*(1), 50-77.

Abstracts in Refereed Conference Proceedings

Seock, Y., & Norton, M. J. T. (2003). Attitudes toward Internet apparel shopping and related factors. *Proceedings of the International Textile and Apparel Association* [online]. (based on the paper that will be presented at the International Textile and Apparel Association annual meeting, Savannah, Georgia, November 6-12, 2003) (in process)

Chen-Yu, J. H., Hong, K., & Seock, Y. (2001). Adolescents' clothing motives: A cross-national study. *Proceedings of the International Textile and Apparel Association* [online]. (based on the paper presented at the International Textile and Apparel Association annual meeting, Kansas City, Missouri, November 9-13, 2001).

Chen-Yu, J. H., & Seock, Y. (2001). Adolescents' clothing buying behavior: Comparisons of male/female and impulse/non-impulse shoppers. *Proceedings of the Korean Society of Clothing and Textiles/International Textile and Apparel Association*, 269. (based on the poster presented at the KSCT/ITAA Joint World Conference, Seoul, Korea, June 12-15, 2001).

PRESENTATIONS AT PROFESSIONAL MEETINGS

Seock, Y., & Norton, M. J. T. (2003). Attitudes toward Internet apparel shopping and related factors. Submitted for presentation at the 2003 annual meeting of the International Textile and Apparel Association (ITAA), Savannah, GA. (accepted for oral presentation)

Seock, Y. (2003). Economic Development of South Korea and Clothing and Textile Industry. Oral presentation, sponsored by the International Division of AAFCS, to be given at the annual convention of the American Association of Family and Consumer Sciences (AAFCS), Washington, D.C.

Seock, Y., Chen-Yu, J., & Hong, K. (2001, November). Adolescents' clothing motives: A cross-national study. Paper presented at the annual meeting of the International Textile and Apparel Association, Kansas City, MO.

Chen-Yu, J., & Seock, Y. (2001, June). Adolescents' clothing buying behavior: Comparisons of male/female and impulse/non-impulse shoppers. Poster presented at the KSCT/ITAA Joint World Conference, Seoul, Korea.

SCHOLARSHIPS AND GRANTS

2003 AAFCS Apparel & Textiles Travel Scholarship; the graduate award winner, $500 from the Apparel & Textiles Division of the American Association of Family and Consumer Sciences.

2003 AAFCS Annual Convention Travel Grant; $600 from the International Division of the American Association of Family and Consumer Sciences to support my attendance at the meeting.

2003 Graduate Research Development Project Grant; $500 from the Graduate Student Assembly at Virginia Tech to support my dissertation.

PROFESSIONAL MEETINGS ATTENDED

2003 American Association of Family and Consumer Sciences (AAFCS) annual convention, Washington, D.C.

2001 International Textile and Apparel (ITAA) annual meeting, Kansas City, Missouri

2001 KSCT / ITAA Joint World Conference, Seoul, Korea

2000 International Textile and Apparel (ITAA) annual meeting, Cincinnati, Ohio

1998 Korean Society of Clothing and Textiles biannual conference (Spring), Seoul, Korea

1997 Korean Society of Clothing and Textiles biannual conference (Fall), Seoul, Korea

1995 Korean Society of Clothing and Textiles biannual conference (Fall), Seoul, Korea

1995 Korean Society of Clothing and Textiles biannual conference (Spring), Seoul, Korea

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

2002- present American Association of Family and Consumer Sciences

2000-present International Textile and Apparel Association

1995-98 Korean Society of Clothing and Textiles