

CHAPTER IV

Research Design and Methods

This chapter discusses the research design and methods for an empirical study of the Relationship Spiral model (see Figure 6 and Figure 7). The purpose of this research is to explore the relationship process, between manufacturers and consumers, which encourages consumer participation in the manufacturing process. The researcher uses a mixed design of preexperimental and panel analysis with in-depth interview. For the experiment, a simulated web site was used by individual consumers (i.e., participants) to order two pairs of shoes that were customized according to each consumer's preference for size and color. The panel analysis was used to collect data from the same consumers over time. The major research question is:

- What will happen in the Relationship Spiral Model when the consumer becomes a part of the manufacturer /consumer relationship?

Specific research questions to investigate the Relationship Spiral Model are:

- What does a consumer expect from the relationship?
- How does distance, within the encounter, between manufacturer and consumer change?
- What are the keys to maintaining the relationship with consumers?
- How do consumer characteristics affect the Relationship Spiral model?
- Why does the consumer end the relationship?

This section discusses (a) research design, (b) experimental procedure, (c) instrument, and (d) data analysis.

Research Design

Much research has investigated consumer behaviors concerning environmental factors, shopping orientations, demographics, and before-and-after consumption behaviors (e.g., Kincade, Redwine, & Hancock, 1992; LaBarbera & Mazursky, 1983; Shim & Bickle, 1994; Shim & Kotsiopoulos, 1991; Swan & Combs, 1976; Swan & Trawick, 1981); however, only a few studies pursued the consumer's consumption

process in a longitudinal study of purchases because of such limitations as recruiting a sample, cost, and time of the research (e.g., Mittal, Kumar, & Tsiros, 1999; Swan & Trawick, 1981). Also, experimental research in apparel consumer behavior is limited (e.g., Chen-Yu, 1995).

To investigate the shopping and consumption process between a manufacturer and consumers under realistic shopping circumstances, qualitative research, specifically a simulated web site, was used. Although some compromises must be made, such as generalizability of results, qualitative research has the advantage of providing much information and insights from interviews (Churchill, 1996; Creswell, 1994, 1997; Malhotra, 1996). Some researchers have used qualitative methods to develop new models or to provide details for conceptual models (e.g., Parasuraman et al., 1991). Another advantage of using qualitative methods for the experimental aspect of this research is cost. The present research design requires a small sample size because of the cost for the customization process. Timing for measuring consumer reactions is the other advantage of qualitative methods for this type of research (LaBarbera & Mazursky, 1983). Because consumers' feelings and attitudes can change quickly, researchers should measure data at the most appropriate times in an experiment. In an experiment, consumer reactions can be measured during and immediately after an experience so that problems of recall and generalization of experience are minimized. This research incorporates laboratory experiments (i.e., simulated web site shopping) and in-depth interviews (i.e., pre expectation question, post experience question) to explore the participants' expectation and perception of the relationship process in detail. Some sources (e.g., Babbie, 1999) describe this procedure as a preexperimental design because there is no control group (i.e., participants without treatment) and no variation in level of treatment (e.g., same website for all participants) were used.

This exploratory qualitative research utilizes a longitudinal study (see Figure 8), primarily using panel analysis. A panel analysis investigates the same sample in each experiment phase (Babbie, 1999). Panel analysis is the most powerful tool to examine a social system's dynamics over time (Hessler, 1992). Hessler describes panel analysis as "a whole series of snapshots over time" (p.179). Specific data collection for the panel

analysis can be a mix of techniques (Babbie). Interviews with open and fixed questions were used.

Validity of the Research Design

The validity of the research design was improved by following some previous and similar research. The fundamental design of this research process was adapted from Gronroos' model (1983b, 1990). The specific design of the study was based on the research of Chen-Yu (1995); Mittal, Kumar, and Tsiros (1999); and Swans and Combs (1976).

Most interviews and web site views were conducted in Wallace Hall on the campus of Virginia Polytechnic Institute and State University in the experimental procedure using standardized computers on the university system. In the opinion of the researcher, the web site appeared the same at each interview and no difference was observed in the quality of the visual display.

Experimental Equipment – Web Site for Shoes

Today, a few communication tools are used to facilitate relationships between consumers and manufacturers, such as toll-free numbers and letters. Other tools could be used in the near future. For instance, manufacturers could open direct-to-customer stores or factory boutiques in outlet stores or malls to minimize the communication gap (Nakajima & Karasuno, 1996). Web sites may become the basic tool to communicate directly between a manufacturer and a consumer using two-way communication and real-time consumer feedback with e-mail and direct orders (Anders, 1999; McWilliams, 1999; Strassel, 1999). These new shopping tools may combine with more traditional communication tools, such as letters, fax, and toll-free numbers.

This research project involved development of a web site for simulated shopping for shoes. A thorough search of the Internet revealed that, although many clothing related sites offered shoes for sale, few companies provide custom made footwear products through web sites. Most footwear companies with web sites for custom shoes provide only orthopedic shoes. The researcher's web site was developed based on a review of

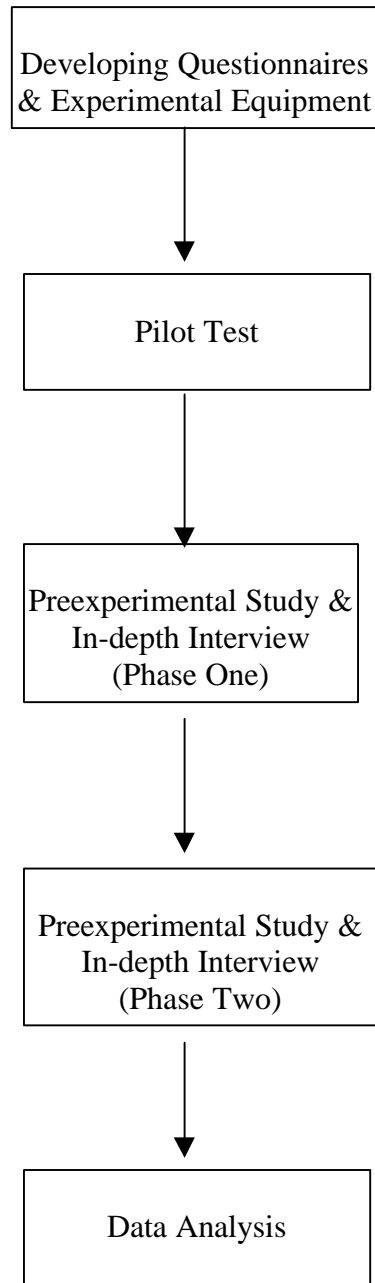


Figure 8. Preexperimental Design

four companies' web sites across the apparel and footwear industries: Grisha (www.customshoes.net), Giorgio Armani (www.armaniexchange.com), Kenneth Cole (www.kennethcole.com), and Lands' End (www.landsend.com). The companies whose web sites were reviewed are well established and maintain a similar ordering system including checking size and other consumer's needs.

The most typical web site for shopping footwear is www.kennethcole.com. First, the company classifies shoe categories: men's and women's, and dress, casual, other accessories. Then, the web site describes the shoes and gives the prices. Consumers select colors, sizes, and quantities. No further selections exist. The Armani web site (www.armaniexchange.com) is the web site that is most similar to the experiment in terms of providing services and products. The company asks the customers to fax or e-mail photos of the tops and bottoms of their feet. Then, the company creates a 3-dimensional rendering extrapolated from the photos and builds the shoe to fit. Consumers can return the shoes if there is a problem. On the other hand, the Grisha web site (www.customshoes.net) produces custom-made shoes for celebrities. The owner asks the customers to visit his store, or a fitter will drive or fly to the customers' locations to measure their feet if multiple pairs of shoes are being ordered; however, the price range is from \$200 to \$2800 per pair of shoes.

The researcher could not find an exact match of existing web sites to the one planned for use in this study; therefore, the simulated web site was a composite of these sites. A web design consultant from Blacksburg, VA was used. The company started business in 1993, and has as clients several local companies, such as a real estate company and Virginia Polytechnic Institute and State University.

The Selection of a Manufacturer

The footwear manufacturing industry was chosen for this research for two main reasons. First, although the industry is one of the most important industries in fashion around the world, few academic studies exist about this industry. Footwear manufacturing exists all over the world. East Asia is the major production area in the world. China, especially, has dramatically increased production since the late 1980s

(Footwear Industries of America, 1998). Western European countries are major producers as well as major markets. China and Brazil are the largest footwear producers (Footwear Technology Center, 1998; Stone, 1999).

Second, many consumers complain about shoes (e.g., size, design, fit, comfort); however, no clear solutions are known to satisfy consumers' demands (Baber, 1998; Rossi, 1998). Third, the industry is still important for the United States in terms of employment and market opportunities. Exports of U.S. footwear have increased even though the United States is the largest importer of footwear in the world. The U.S. footwear manufacturing industry (only non-rubber footwear industry) has about 200 manufacturers operating approximately 340 factories throughout 31 states and employing about 40,000 workers (Footwear Industries of America, 1998). These factories are operated in rural areas; therefore, they are very important for local communities because of lack of other available jobs (Footwear Industries of America, 1990, 1998).

The researcher selected one footwear manufacturer. In order to complete the experimental aspect of this research, a well-established Asian footwear manufacturer agreed to participate in this research. The company produces ladies' casual and formal shoes with a volume of approximately 240,000 pairs of shoes per year. The company is located outside of the United States and has a history of exporting to the U.S. market. The company met the criteria of willing to participate, making a product that was central to the focus of the study, and having the skills and equipment to provide custom shoes. Regan, Kincade, and Sheldon (1998) and Vass and Kincade (1999) used similar selection criteria.

The Selection of Sample

The participants were obtained as a judgmental sample because judgmental sampling is proper for exploratory research for developing general ideas (Malhotra, 1996). Although this sampling technique has limitations, such as sample selection bias, it also has some advantages, such as being inexpensive and having subjects who are interested and willing to participate (Malhotra). The initial sample selection criteria were easy access, willingness to participate in experiment over time, a high level of interest in shoes, and a range in demographic characteristic. Willingness to participate is important

in a longitudinal study with interviews. A second set of criteria was used to further screen the sample to ensure the participants computer skills and interest in the study. In order to select participants, these requirements were computer skills, Internet knowledge, and schedule during the experiment.

The twenty female participants were selected from students and acquaintances of the researcher in Blacksburg, VA. A screening questionnaire was used to ensure that these criteria were met. Females were used as participants because the company produces women's footwear, women purchase more footwear than men, also, women do most of the household shopping (Footwear Industries of America, 1998; Ho, 2000). The small sample size was desirable because interviews can be longer and more detailed than with surveys or large samples. The information gathered from these in-depth interviews provided answers to the research questions. The sample size was also restricted to meet the requirements of the participating manufacturer.

To conduct this research, Research Involving Human Subjects protocol package was submitted to the Institutional Review Board at Virginia Polytechnic Institute and State University. The purpose of this approval is to avoid participants' risk during the study; therefore, all information concerning the research, risks, and benefits were provided to participants. Risks were minimal, and benefits included the receipt of two pairs of custom shoes.

The Selection of a Product

One type of shoe was selected for this experiment. The same experiment was conducted twice, and the shoes in each phase had only minor design differences to determine variables, such as consumer satisfaction and quality. The four pairs of shoes shown at each phase were similar in design, from phase to phase, to improve reliability, especially alternative-forms reliability.

Semi-casual shoes were selected for several reasons. This style of shoe: (a) is a popular shoe style in the market (b) has more opportunity for consumer use, and (c) needs comfort as an important criterion (i.e., fit). Basic, popular colors were selected, such as black, brown, and blue, to appeal to all participants. The height of heel was low also to

appeal to a variety of participant ages. The style of the shoes, according to the manufacturing company, appeals to most consumers.

Variables

The variables in the study were based on the variables in the conceptual framework (see Figure 5), the relationship spiral models – Phase One and Two (see Figure 6 and 7), and previous research. The variables include demographics, shopping orientation, expectations, experience, encounter, and direct communication (see Appendix B).

In this study, demographics included age, work status, shoe expenditure per year, shoe expenditure per pair of shoes, number of shoes owned, computer skill, Internet knowledge, Internet surfing activities, and general shopping time. These variables were selected because they have been shown in previous literature to be significant factors in influencing shopping behavior and computer usage (e.g., Chen-Yu, 1995; Endo & Kincade, 2000; Ko, 1995; Moye, 1998). For this study, shopping orientation is defined as the shopper style or preferred shopping activities of the consumer. These personal shopping characteristics are known to influence the time spent shopping, the products selected, and the price the consumer will pay. Shopping orientation was examined using a 7 point Likert-type scale based on research by (Ko, 1995, Moye, 1998; Shim & Kotsiopoulos, 1993). Three types of orientation were expected from the data: brand oriented, convenience oriented, and price oriented. A 7-point scale measurement was used ranging from Disagree (1) to Agree (7). Other open-ended questions were developed based on previous services research (De Toni, Nassimbeni, & Tonchia, 1994; Endo & Kincade, 1997; Gronroos, 1997).

For this study, expectations are defined as a set of predictions that the consumer holds about products and services that they bring to an encounter. Expectations are developed based on previous experience, word-of-mouth, advertising, and consumer needs. Questions for the variable expectation were developed based on previous research (e.g., Endo & Kincade, 2000; Parasuraman et., 1991). Both open ended and fixed response questions were asked to measure expectations.

Experience is the summation of past activities that a consumer would have in an encounter with a goods and/or services provider. Experience has been measured by previous research, and these studies were used to guide the formation of the experience questions (e.g., Kincade, Redwine, & Hancock, 1992). Both open ended and fixed response questions were asked to measure expectations.

In services literature, the encounter is defined as the interaction between the consumer and the service provider (e.g., Shostack, 1985). For this study, the services encounter definition is applied to the consumer interaction with a manufacturer through the Internet. The encounter in this instance is place-free and includes both goods and services. Encounters for this study were controlled and limited by the researcher. The term encounter was used in the questionnaire and was used by the researcher to identify the events when the participants had an interaction with the manufacturer and the associated services and products.

Direct communication between providers and customers can occur through various channels. For this study, direct communication is defined as web site on the Internet. This method of communication has been identified as a potential communication tool for future commerce (e.g., Hoffman & Novak, 1996). In the study, questions about direct communication were asked with open-ended questions and fixed responses, which provided the participant with communication tool choices. Questions were based on previous research (e.g., Endo & Kincade, 2000).

Procedure

For the study, a web site was developed for direct communication between manufacturers and consumers. Twenty female consumers were selected in Blacksburg, VA. They were asked to be involved twice in the study over several months, and to view the web site twice (see Figure 9). Based on each order, a footwear manufacturer produced a pair of shoes for each participant (20 participants x a pair of shoes x two selections) and delivered the shoes in approximately three weeks. In this study, shoes were delivered directly to the researcher to eliminate lost products and to control the consumption stage. Manufacturing and shipping costs were not charged to participants. The period of production and delivery (i.e., three weeks) was longer than average for customized

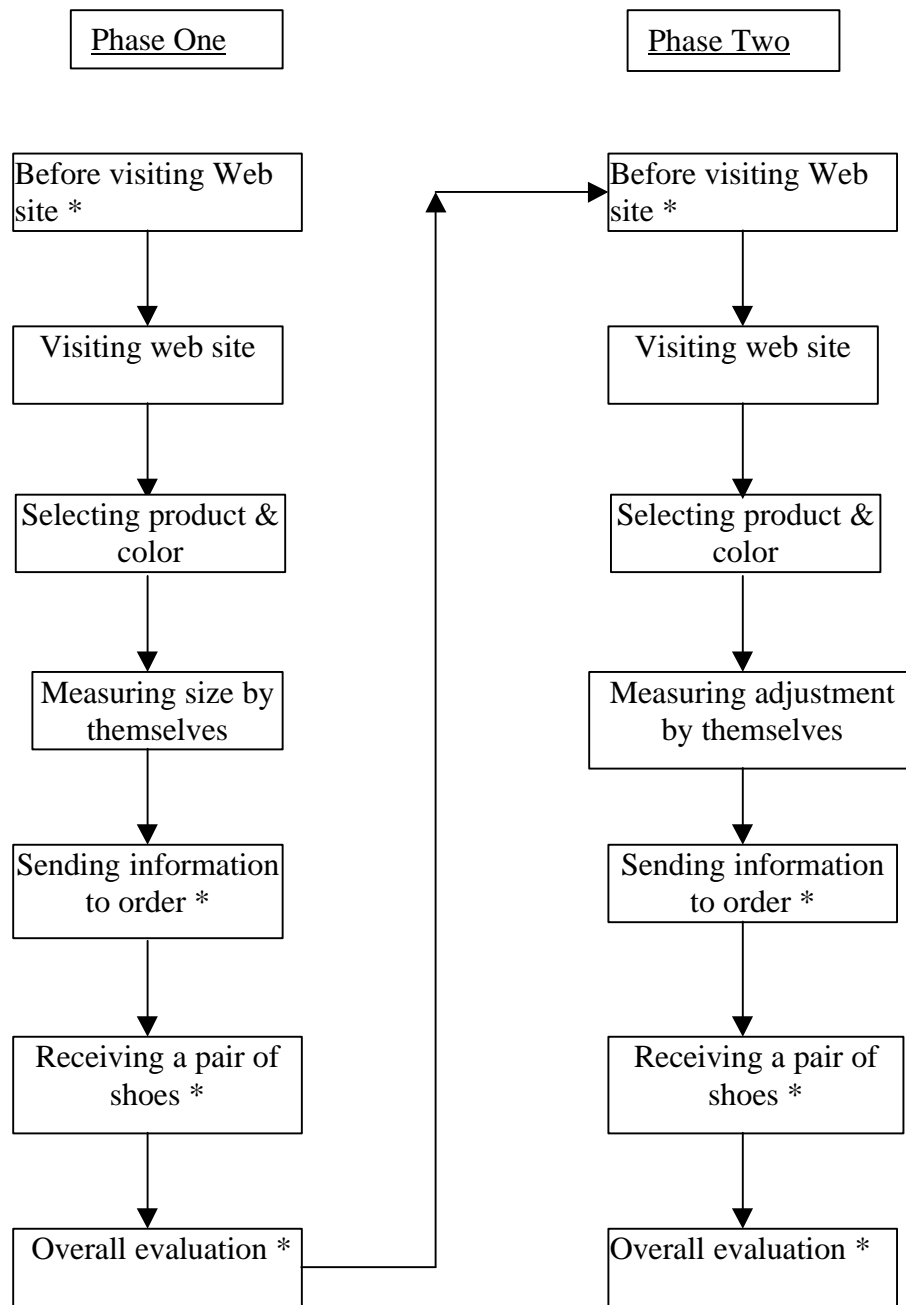
products because of limitations of technology, cost, and seasonal time of this research. Some apparel manufacturers and retailers for custom-made suits and knit wear take only one to two weeks to provide products to consumers (Nakajima & Karasumo, 1996; Order suite, 1999).

Four in-depth interviews were conducted throughout one phase or cycle of the study (see Table 2). The interviews took place at the commencement of the experiment, after ordering, after receipt of the product, after wearing the product for a specified time (i.e., 10 – 20 minutes), and at the completion of the experiment. The same procedure was conducted twice with a separate but similar style of shoes (Phase One and Phase Two) to know if the same participants change their expectations for goods and services, and how the experiment affected the reorder stage. The questionnaires used for the interviews are in Appendix B. The experimental procedure in the web site is presented in Figure 9. Data for the study was collected from the responses in the interviews and the researcher's field notes from observing the participants.

In-depth Interview

Berg (1989) defined interviewing as “a conversation with a purpose” (p.13). Malhotra (1996) defined the in-depth interview as “an unstructured, direct personal interview in which a single respondent is probed by a highly skilled interviewer to uncover underlying motivations, beliefs, attitudes and feelings on a topic” (p.174). The purpose is to seek the interviewee's thoughts (Patton, 1990). The in-depth interview is advantageous even though it has some disadvantages (Creswell, 1994; Hessler, 1992). Nachmias and Nachmias (1987) propose four advantages: great flexibility, control of the interview situation, high response rate, and collection of supplementary information; and three disadvantages: high cost, interviewer bias, and lack of anonymity.

For this research, the in-depth interview was conducted using a semi-structured approach, which is somewhere between a structured and unstructured interview (Berg, 1989; Hessler, 1992). The structured interview asks prepared questions and follows a formal schedule (Nachmias & Nachmias, 1987). Berg (1998) called this the formal interview. The unstructured interview does not use prepared questions. The



* Conducting Interview

Figure 9. Preexperimental Design Process.

interviewer talks to the participants in order to uncover the respondents' feelings and attitudes. So, the unstructured interview is more dynamic, and both the interviewer and participant may respond and develop questions based on their conversation. For the semi-structured interviews, a basic set of open-ended questions with some fixed questions provided structure for the process (Appendix B). However, flexibility in questioning and responding was permitted. The participants were encouraged to provide feelings, attitudes, suggestions, or other concerns to the researcher.

For this study, interviews were conducted before and/or after each experiment stage (see Table 2 & Table 3). Each interview took 20-30 minutes. The interview for the initial stage in Phase One took approximately one hour. The interviews were tape - recorded and the interviewer took field notes. Therefore, the total interview time for each participant averaged 4-6 hours.

Validity and Reliability of the Interviews

Personal interview is a very flexible method to obtain information; however, it allows for the bias of the interviewer (Nachmias & Nachmias, 1987). To reduce or eliminate the interview bias and personal influence, a researcher's interview guide was employed following the recommendation of Berg (1989), Hesseler (1992), Nachmias and Nachmias, and Patton (1990). Hesseler summarized the interview techniques as "learning to talk as little as possible, maintaining control of the interview, taking the role of the other and establishing rapport, ensuring confidentiality, and rehearsing mentally the interview, and anticipating possible problems before actually conducting the interview" (p.157). Berg suggested conducting a pilot test to improve validity and reliability. Moreover, he mentioned that a pilot test could prevent waste in terms of time and cost. To improve the interview, he proposed two steps. The first step is to examine the schedule of the interview, verifying wording, questions, and blind spots. The second step is to evaluate whether the interview can elicit the information a researcher wants to know.

Table 2. Interview Process and Time: Phase One

Interview Stage	Before	After
Initial and order stage	X (20~30minutes)	X (20~30 minutes)
Consumption stage	X (20~30 minutes)	
Overall evaluation stage		X (20~30 minutes)
Reorder stage		X (20~30 minutes)
Total time (x 20 participants)	(60~90) x 20 minutes	(60~90) x 20 minutes

Note. X indicates the conducting Interview

Table 3. Interview Process and Time: Phase Two

Interview Stage	Before	After
Initial and order stage	X a (20~30minutes)	X (20~30 minutes)
Consumption stage	X (20~30 minutes)	
Overall evaluation stage		X (20~30 minutes)
Reorder stage		X (20~30 minutes)
Total time (x 20 participants)	(60~90) x 20 minutes	(40~60) x 20 minutes

Note. X indicates the conducting Interview

In addition to an interview guide, Patton (1990) recommended tape-recording and taking notes during the interview to prevent missing important information, to keep up the interviewer's pace, and to avoid recall problems. He emphasized that tape-recording is necessary for a successful interview. Taking notes allows an interviewer to capture keywords that the researcher recognizes as important during the conversations (Patton). The process of note taking begins the data analysis process. In qualitative research, data collection and data analysis are partially integrated (Creswell, 1994).

Reliability was improved by using the interview guides. The interview guides encouraged the researcher to be consistent in data collection. Documenting the interview process allows future research to replicate the process (Creswell, 1994).

Pilot Test of Experimental Procedure

Before the experiment was undertaken, two participant pilot tests were conducted to validate the experimental procedure and the interview guide. The pilot test was restricted to two participants because of the cost to produce the shoes. The communication between the researcher and the shoe manufacturer was also tested at this stage so that any problems were addressed before the full experiment began. The pilot test participants were interviewed using the questionnaire. They were assessed on pre-expectation and post-experience for each stage. Several factors of the experiment were evaluated, specifically, the interview process and questionnaire. In the pilot test, the simulated web site was evaluated in terms of viewing criteria (i.e., ease of viewing, ease of measuring size and ordering). Feedback and recommendations from the participants were integrated into the final experiment. Delivery time and production processes were evaluated in the pilot test.

Preexperimental Design (Phase One)

From the web site, all participants purchased a pair of shoes. They were restricted to one shoe category and only four styles of shoes; however, they were allowed to select a color from three choices and to measure their own foot size. Each foot was measured in foot length, and width and height of arch by centimeters. The researcher sent this

information to the footwear manufacturer. Using this information, the manufacturer made wooden last for each participant, for one foot. A last is a model of the foot used for forming the shoe. This last was sent to a last vendor, who made a plastic version of the last and duplicated the last for the other foot for each participant. The pair of plastic lasts was returned to the footwear manufacturer, for production of the shoes. For Phase One, the entire process from ordering to evaluating took approximately four weeks, which included ordering and receiving the product, and evaluating the product and services.

The participants were not told the price of the shoes. There are two reasons for this omission. First, the researcher wanted to know the consumer's expected price range before and after using the product. In other words, what they thought custom shoes will cost and if they thought the cost is acceptable. Price is known to affect expectation and satisfaction with other products (e.g., Berry & Yadav, 1996; Gotlieb, 1989; Guiltinan, 1987; Parasuraman, Berry, & Zeithaml, 1991). Second, it is difficult to estimate price in this experiment. Other manufacturing costs are not investigated, and can be investigated in future research.

Preexperimental Design (Phase Two)

The second phase was basically the same procedure as Phase One. None of the original participants chose not to participate in the second phase. Attrition could have occurred for the following reasons: dissatisfaction with products or services, time limitations, unfamiliarity with purchasing through a web site, or other personal reasons. The researcher predicted a small attrition loss for several reasons. Once consumers provide their information and experience the procedure, ordering a second time will be easier because the company already has the individual consumer data, such as size (Knitting International, 1996). Reordering of the same product should be easy. Also, the consumers are expected to be more efficient users of the web site once they have experienced the process (Mittal, Kumar, & Tsiros, 1999). With the judgmental sample, participants are less likely to quit because they are interested and willing to participate in this experiment.

In Phase Two, the participants observed the web site again. In the second phase, the site was the same except for the selection of the product. The participants were given

the opportunity to measure their feet again and provide the manufacturer with a new set of measurements. The researcher conveyed this measurement information to the footwear manufacturer. If changes were needed, the manufacturer adjusted the lasts according to the new measurements, within production tolerances. Conducting Phase Two of the experiment was useful to determine why consumers are willing to reorder or not, how consumers change their expectations of goods and services, and whether direct communication with the manufacturer is satisfactory to the consumer.

Instruments

Instruments for this project include a participant questionnaire, the scenario for each phase, and the interview guide.

Questionnaire. In the questionnaire package, open-ended and closed-ended questions were asked (Appendix B). Open-ended questions provide chances for participants to express their concerns (Touliatos & Compton, 1988). These questions allowed the researcher to probe for in-depth information about the relationship process. Closed-ended questions force participants to select from provided answers (Malhotra, 1996). These questions were used to collect background and demographic information and to evaluate product categories and overall evaluation.

The questionnaire package contains two categories of questions about the relationship between a manufacturer and consumers: consumers' expectations and experience. Questionnaire 1 (Phase One) and Questionnaire 4 (Phase Two) were mainly concerned with expectations. In Questionnaire 4 (Phase Two), participants were asked about their previous overall experience (Phase One). Questionnaire 2 (Phase One) and Questionnaire 5 (Phase Two) were about the web site shopping experience and other feelings. Questionnaire 3 (Phase One) and Questionnaire 6 (Phase Two) were about the repurchase process and final questions.

Scenario of the Experiment. One scenario was provided for each cycle of ordering a pair of shoes. A scenario enables the researcher to concentrate on the relationship cycle of consumer feelings and to minimize variables. In Phase One, participants selected one pair of casual shoes as appropriate for the current fashion season from a simulated web (Appendix C). In Phase Two, they chose a second pair of shoes for the same season as in

Phase One (Appendix C). Four different pairs of shoes were shown for each phase; therefore, a total of eight pairs of shoes were shown in this study.

Interview Guide. The researcher developed a framework for the interview (Nachmias & Nachmias, 1987). Patton (1990) defined the interview guide as “a list of questions” (p. 283), and mentions that the interview guide proposes a framework during the interview to gather as much information as possible. Interview guides provide direction for the interview process. The interview guide also helps the researcher save time by estimating available time (Patton). The interview guide for this experiment was developed based on the Marshall and Rossman (1999), and Patton interview guides. For the personal interview, collaboration with participants is necessary. Nachmias and Nachmias suggested three factors for participants’ collaboration:

- The respondents need to feel that their interaction with the interviewer will be pleasant and satisfying.
- The respondents need to see the study as being worthwhile.
- Barriers to the interview in the respondents’ minds need to be overcome. (p. 242)

The researcher, therefore, explained the experiment’s purpose, procedure, and benefits to reduce barriers and ease fears about the experiment. One major benefit, for participants, was that they received two complimentary pairs of custom-made shoes. The interview guide is in Appendix D.

Reliability and Validity of the Instrument

Reliability requires consistent results for measurement (Churchill, 1996). For the standardized open-ended interview, Patton (1990) suggested that questions be well prepared before the interview takes place. To evaluate reliability, repetition or replication of the experiment is necessary (Touliatos & Compton, 1988). The instruments were pilot tested before the final experiment was conducted. The interview guide, questionnaire, and written scenarios aided the researcher in achieving consistency across interviews. In addition, the researcher had training in qualitative data collection and had participated as an interviewer in previous interview research.

Validity requires that instruments properly measure research concepts by research questions (Rubin, 1983). To increase instant validity, the researcher adapted questions from related studies in the literature. Faculty in the Department of Near Environments at Virginia Polytechnic Institute and State University, who have expertise in consumer behavior and retail technology, also reviewed the questionnaire.

In addition, the questionnaire was delivered to five selected clothing and textiles graduate students and other faculty at Virginia Polytechnic Institute and State University. They evaluated for clarity of meaning and coverage of the shopping process to improve content validity. Their feedback and recommendations were utilized to improve the interview process and the questionnaire.

Data Analysis

Rubin (1983) defined data analysis of qualitative research as “an effort to categorize, summarize, and seek patterns and relationships within the information collected” (p.20). Marshall and Rossman (1999) proposed the following sequential process of data analysis for qualitative research: (a) organizing the data, (b) generating categories, themes, and patterns, (c) coding the data, (d) testing the emergent understandings, (e) searching for alternative explanations, and (f) writing the report. This qualitative research employs interpretative analysis. Qualitative research has two features: data segmenting and data categorizing based on the segmented data. Interpretative research focuses on discovering common characteristics based on the categories. Tesch (1990) indicated data collection for interpretative analysis should be based on the following procedure: (a) interviewing the subjects, (b) transcribing tapes and field notes, (c) segmenting data, (d) decontextualizing data, (e) coding data, and (f) recontextualizing data. Kang (1999), Regan, Kincade and Shelton (1998), and Vass and Kincade (1999) have used similar techniques for research in the apparel industry.

This study utilized a mix of Marshall and Rossman’s (1999) sequential process and Tesch’s (1990) interpretative analysis process. Creswell (1997) suggested that a researcher, as a part of data analysis, summarize all information from the tape-recording and notes. The specific recommended data transcribing procedure utilized Patton’s (1990) method. The data analysis process had the following specific steps: (a)

interviewing the subjects, (b) transcribing tapes and field notes, (c) organizing the data, (d) segmenting data, (e) decontextualizing data, (f) coding the data, (g) recontextualizing data, (h) testing the emergent understandings, (i) searching for alternative explanations, and (j) writing the report.

After interviewing the participants, field notes and tapes were transcribed into written documents. In organizing the data, a researcher is required to read carefully a couple of times to become familiar with and clean up the data (Marshall & Rossman, 1999). After transcription, the data were segmented into meaning units or analysis units to decontextualized data. Decontextualizing data was done to separate relevant portions of data from its context. Coding data is the next step. The coding of data was conducted based on Marshall and Rossman's (1999) technique. They indicate three forms of coding: abbreviations of key words, colored dots, and numbers. The researcher employed the three forms of coding in this experiment. After the data were coded, recontextualizing data were conducted. In recontextualizing, each segmented data unit was gathered into a category and/or theme. Then, the researcher evaluated the data and decided how the data were categorized for this research, based on the conceptual framework. After developing categories and identifying patterns from the data, the researcher searched for alternative explanations. Marshall and Rossman (1999) said that "alternative explanations always exists" (p.157). This searching process provided the most reasonable explanation for the research. Finally, the researcher wrote the report, which was summarized and interpreted from the large amounts of raw data. Demographic and background information for shoes were coded and analyzed by frequency and means, and incorporated into the search for explanations.