CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

The following chapter contains an exposition of the research design and research methodology used for the present study. The choice of research style, strategy, and data-collection methods and procedures are accounted for in this chapter by taking the various theoretical frameworks, namely a social-cognitive approach as an umbrella perspective for this study and Rogers' (1983, 1995) diffusion of innovation theory, into account. The most important objectivity and trustworthiness considerations are also accounted for in this chapter. This chapter ends with the manner of data analysis.

The research question addresses a real problem in World 1 (W1). World 1 is the world of everyday life in which we live and concerns lay knowledge. World 1 includes the knowledge people have acquired through experience and learned through tradition about their everyday world. World 2 (W2) are the world of science where scientists use phenomena of W1 as objects of research. Scientists attempt to inquire in a systematic and methodological manner about these phenomena in order to examine them and make truthful (epistemic) judgements about them (Babbie & Mouton, 2001:10-11). The researcher is part of both W1 and W2 and disposes of both types of knowledge and uses both in practising scientific research. World 3 (W3) are the world of meta-science and the development of academic disciplines stems from it. These disciplines take W2 (world of science) as the object of investigation and reflect there upon (Mouton, 1996:8-9). In other words all empirical, scientific inquiry begins with a movement from W1 to W2 (Mouton, 1996:64). The researcher thinks and reflects thus upon W1 and W2.

According to Babbie and Mouton (2001:75) new or primary data can be collected to solve a question formulated from W1 in W2. This places the study in an empirical domain.

4.2 RESEARCH DESIGN

The research design refers to the plan according to which the present study was executed. It refers to all the planning involved regarding the study as well as al the decisions that the researcher had to make in order to answer the research question as effectively and efficiently as possible. The researcher's decisions and actions as well as the research question thus determine to a certain extent the type of design that will be followed for the study (de Vos & Fouché, 1998:77-80).

4.2.1 Selection of a qualitative research style for the study

From the research question it seems that the cognitive structures used by professional women to make sense of W1 (adoption of the Internet for the purchase of apparel) forms an integral part of their everyday life. All their decisions and actions are based within these cognitive structures and ultimately direct their purchasing behaviour. According to Miles and Huberman (1994:10) qualitative data is well suited for locating the meaning individuals place on events (apparel purchasing), processes (perception forming and adoption process), and structures (scripts) and connecting these meanings with the social world around them. Taking the research-problem statement, objectives and sub-objectives formulated for the present study into account a qualitative research style was selected as the most suitable research style to explore and describe the role of identified factors in professional women's adoption of the Internet for purchasing of apparel.

According to Schurink (1998:240) a qualitative research style is not exclusive to one discipline and is especially used by researchers who need to examine the quality of human behaviour and making sense of and interpreting the meanings individuals attach to their experiences. A qualitative research style can be made more responsive to the needs of the participants and to the nature of the subject matter (Walker, 1985:3). The following requirements as stated by Babbie and Mouton (2001:270) were taken into account for the selection of the qualitative research style for the present study:

- The research purpose of the study
- The insider perspective
- The ideographic, contextual research strategy that was followed for the study
- An inductive approach
- Inter-subjectivity

A discussion of each of above aspects follows.

4.2.1.1 The research purpose of the study

The primary aim of this research was exploratory-descriptive. The research purpose of the study was to explore and describe human behaviour rather than the explanation and replication thereof (Babbie & Mouton, 2001:270). According to Mouton (1996:101) the research purpose refers to a broad indication of what the researcher wishes to achieve with the present research. The objective of this study was the exploration and collection of insight and understanding regarding the specific phenomenon as well as describing the domain phenomenon.

According to Babbie and Mouton (2001:80) exploratory studies can be undertaken for various reasons. Firstly, exploratory studies are undertaken because the field to be studied is relatively new. From the existing literature apparel-consumer behaviour in terms of the adoption of the Internet for the purchasing of apparel in South Africa has not yet been sufficiently examined. This field can therefore be viewed as being relatively unknown. Secondly, exploratory studies can be undertaken to define the central concepts and constructs in order to get a better understanding of the phenomenon.

Descriptive studies on the other hand contribute by providing reliable descriptions of a phenomenon by describing the actions of the participants and attempting to understand those actions and behaviour in terms of the context and/or situations. Thus instead of focusing on quantifying these patterns the emphasis is on thick descriptions (Babbie & Mouton, 2001:272).

4.2.1.2 The insider perspective

By following a qualitative research style, the researcher is able to develop an insider perspective of analysing everyday life of the respondents (Babbie & Mouton, 2001:270). Furthermore it provides the researcher with the opportunity to reconstruct, describe, and understand the unit of analysis's experience over time (Babbie & Mouton, 2001:271). A qualitative research style makes it possible to elicit the unit of analysis's accounts of meaning, experience, and ideas regarding their decision to adopt or reject the Internet for the purchase of apparel (Schurink, 1998:243).

The qualitative view is that human behaviour is the result of their interpretation of their world. For the researcher to get a better understanding of how professional women view and experience (the insider view) the adoption process of the Internet it was necessary to explore the phenomena from the consumer's point of view, and thus by using a qualitative research style for the inquiry.

4.2.1.3 The ideographic, contextual research strategy that was followed for the study

For this study, an ideographic, contextual research strategy was followed. This strategy emphasizes that a phenomenon should be understood in terms of the specific context in which it took place, rather than the generalisation of the data (Babbie & Mouton, 2001:273). The objective of the present study was to explore and describe a specific decision-making situation, namely the adoption of the Internet for purchasing apparel rather than to obtain representative or replicable information. The emphasis of the present study is therefore on the understanding of the meanings, processes and intentions that underlie the behaviour of the unit of analysis in the specific context in which it happens rather than generalising the findings (Babbie & Mouton, 2001:272).

The ideographic, contextual research strategy involves smaller sampling. A smaller sampling strategy gives the researcher the opportunity to focus in an in-depth way on the professional women's decision-making situation and world in order to determine first order constructs. Furthermore it enables the researcher to generate rich descriptions from the participants' perspective by making use of their own words (Mouton, 1996:133).

The present study can be viewed as a cross-sectional synchronic study. The inherent disadvantage of a cross-sectional synchronic study is that it only reflects professional women's behaviour during a specific period and does not represent what their behaviour might be over an extended period of time (Babbie & Mouton, 2001:92).

4.2.1.4 An inductive approach

An ideographic, contextual research strategy, which was followed for this study, also involved an inductive approach. This implies that instead of using existing theory and hypothesis as a point of departure, the researcher attempts to present and develop new syntheses and interpretations of the data (Babbie & Mouton, 2001:273). Miles and Huberman (1994:23) hold that no research study can claim inductive purity, due to the fact that all research begins to a certain extent with existing knowledge and previous research.

In the present study, both an inductive and deductive approach was used. The formulations of the problem statement, objectives, and sub-objectives as well as the selection of suitable theoretical perspective or framework were planned, using a deductive approach. A deductive approach means that existing theory is used to plan and define the study (Mouton, 1996:76-77). An inductive approach was followed during the analysis of the data and the subsequent discussions. Professional women's responses regarding the adoption of the Internet for the purchase of apparel were thus used to develop and build new interpretations and theory inductively. The focus of the study was on rich descriptions of the events and experiences of the participants rather than to approach the participants with deductive derived research hypotheses (Babbie & Mouton, 2001:273).

4.2.1.5 Inter-subjectivity

The primary objective of the qualitative research style is to control the various sources of error that might affect the generation of truthful and reliable results. According to Babbie and Mouton (2001:273) the generation of truthful and reliable results is understood in two different ways. Firstly, the researcher must be viewed as central to the research process.

The researcher is responsible for the collection of primary data (through individual interviews) as well as secondary data (through observations and field notes) and serves as the primary research instrument (Schurink, 1998:258). The researcher attempted throughout the study not to make biased descriptions and interpretations. Secondly, a relationship of trust between researcher and the participants is of utmost importance. This pertains to how the researcher gained access to the participants, the establishing of rapport and the establishing of a relationship of trust with the participants. Objectivity regarding the qualitative approach refers thus more to the generation of trustworthy inter-subjectivity than to the control over all the external variables (Babbie & Mouton, 2001:273).

4.3 OBJECTIVITY AND TRUSTWORTHINESS OF THE STUDY

Neuman (2000:125) holds that the opportunity for prejudice, dishonesty, and unethical research will always exist. Agar in Poggenpoel (1998:348) is of the opinion that there is a need for a different language regarding objective qualitative research. This language must be able to replace the concepts of validity and reliability of quantitative research. Objectivity is an important aspect that should be looked at in qualitative research. The aim of this approach is to allow outsiders from the scientific community to make rational judgements about the research study. For a study to comply with the ideal of objectivity the researcher has to prove that the necessary procedures and methods that were used hold inherent aspects of objectivity. This is achieved by making use of objective procedures and methods so that increased quality results can be obtained (Babbie & Mouton, 2001:10-11).

According to Babbie and Mouton (2001:276) the central considerations regarding objectivity in the qualitative research process is trustworthiness. Trustworthiness refers to whether the instrument used for measuring can provide the same observations or results with different units of analysis under different circumstances (Neuman, 2000:125-126). Although it is not possible to control all the factors that can affect the objectivity and trustworthiness of the present study, it is of utmost importance to marginalize these factors where possible (Trollip, 1991b:102).

The approaches regarding the concept of objectivity and trustworthiness in terms of this study that were followed were credibility, transferability, dependability, and confirmability. Strategies that were followed by the researcher to control and eliminate factors that could reduce the objectivity and trustworthiness of this study were member checks, triangulation, thick description, purposive sampling, prolonged engagement and recording of raw data. The notion of objectivity and trustworthiness in terms of this study will be discussed wherever the researcher applied it in order to enhance the objectivity and trustworthiness of this study.

4.4 CONCEPTUALISATION AND OPERASIONALIZATION OF THE RESEARCH PROBLEM STATEMENT, OBJECTIVES AND SUB-OBJECTIVES

Conceptualisation is the refinement and specification of abstract concepts used in a study (Babbie & Mouton, 2001:128). The central concepts contained in the research-problem statement, objectives, sub-objectives, and schematic conceptual framework were conceptualised by using theoretical definitions. The central concepts as well as other relevant concepts that contribute to a better understanding and clarity of the problem to be studied is defined in **CHAPTERS 1, 2** and **3** and incorporated with relevant theory.

Operationalisation is according to Babbie and Mouton (2001:128) the development of specific research procedures that will result in empirical observations representing the defined concepts in World 1.

The operationalisation of the sub-objectives enabled the researcher to examine the phenomenon and establish the role between the concepts contained in the research-problem statement, objectives and sub-objectives (Mouton, 1996:66).

According to Mouton (1996:66) the best way to operationalise is to list the operations or rules according to which the World 1 phenomenon will be determined. It enables the researcher to be attentive of these aspects during the collection of the data. Operationalisation is in other words the manner in which the research question is connected with the real occurrences of the phenomenon. In this study the research question pertains to the role identified factors (consumers' scripts, indicators/dimensions of apparel products and the characteristics of the innovation) play in South African professional women's adoption of the Internet for online apparel purchasing.

The objectives and sub-objectives formulated for the present study are subsequently operationalised:

4.4.1 Objective 1

To explore, describe and get a better understanding of the role that existing apparel purchasing scripts play in professional women's adoption of the Internet for online apparel purchasing.

- **Sub-objective 1:** What do professional women's existing apparel purchasing practices look like and what is the nature of their apparel purchasing scripts?

Scripts contain knowledge on how apparel should be purchased (Shoemaker, 1996:43). Scripts are almost like production rules (Anderson in Shoemaker, 1996:43). It also contains complex, sequenced steps, actions as well as typical procedures on how to purchase apparel. Consumers' scripts manifest in their prior or existing apparel purchasing practices and in the typical steps, actions and procedures that they follow or use when they purchase apparel or make a decision.

- **Sub-objective 2:** How do professional women experience their existing apparel purchasing practices?

Experience refers to the knowledge an individual has acquired through practical participation in certain activities and events. It also pertains to specific events that an individual has live through (Gouws *et al.*, 1984: 207). The way that consumers experience their apparel purchasing practices would relate to the typical activities they engaged in when purchasing apparel and how they think, feel and talk about them. Consumers' experiences in terms of apparel purchasing manifest itself in their references regarding how they think, feel and talk about their existing apparel purchasing practices.

- **Sub-objective 3:** What are the perceptions of professional women of the Internet in general and in particular for online apparel purchasing?

Consumers' perception result from the information (stimuli) they receive from the environment and their interpretation thereof. To form perceptions, the consumer first becomes aware of the Internet via information from the environment, such as recommendations by friends or advertisements, or their own experience of it. To make sense of the information, it is processed in the brain and stored in the memory. This process of making sense from the information takes place against the background of consumer socialisation. Consumers' perceptions of the Internet as a medium for purchasing apparel manifest itself in the information they receive and their interpretation thereof. Consumers' perceptions of the Internet as a medium for the purchasing of apparel were formed from what they read, hear and experience.

- **Sub-objective 4**: What are the expectations of professional women of apparel purchasing on the Internet?

Baron and Byrne (1998:119) hold that when people have a specific expectation how they will react in a new situation or with a new stimulus, the expectation will direct their perceptions and feelings. Expectations are the result of consumers' scripts. Consumers' use their knowledge and previous experience with the Internet and apparel purchasing to form expectations.

Consumers' expectations will manifest in all elements and aspects that consumers would expect in a traditional store and which they translate to the Internet. Consumers' expectations are expressed as various products, the presentation of apparel, the information they obtain and the type of products in comparison to traditional shops. It is also expressed in terms of the functions and elements they expect from the Internet or the web page, such as safety and security of their credit cards, privacy of personal information, interactive functions (audio-visual presentations), a larger variety and the possibility to compare products and prices.

4.4.2 Objective 2

To explore, describe and get a better understanding of the role that the dimensions (physical and performance properties) of apparel products play and how these are evaluated in professional women's adoption of the Internet for online apparel purchasing.

- **Sub-objective 5**: What role does the evaluation of the physical properties of apparel products play in professional women's adoption of the Internet for the purchase of apparel?

- **Sub objective 6**: What role does the evaluation of the performance properties (aesthetics and functional aspects) of apparel products play in professional women's adoption of the Internet for the purchase of apparel?

Apparel consists of physical and performance properties (aesthetic and functional aspects) (Brown & Rice, 1998:38). Consumers' use of the dimensions of apparel in the evaluation and assessment of apparel products manifests itself in the physical and performance (aesthetic and functional aspects) properties of apparel products. Consumers' use of the dimensions of apparel when evaluating apparel products over the Internet are related to:

- The physical properties such as the design and construction of the apparel product as well as the textiles.
- The performance properties - the way in which it satisfies their needs. This refers more to the aesthetic and functional aspects of the apparel.
- The aesthetic aspects of apparel refer to the attractiveness of it. This can be subdivided into formal, emotional and cognitive qualities. Formal aspects refer to the design principles used in apparel, for example line, colour, texture, balance, form and proportion. These formal aspects can be perceived sensory. Emotional qualities refer more to the satisfaction of consumer's social needs, for example to impress others. Cognitive qualities refer to consumer's social cognitive needs, such as creating their own realities (Brown & Rice, 1998:38-39).
- Functional aspects refer to fit, comfort, care instructions, durability and end-use of the apparel (Brown & Rice, 1998:38-39). This refers for instance to how the product conforms to the consumer's body (Kadolph, 1998:545).

4.2.3 Objective 3

To explore, describe and get a better understanding of the role that the characteristics of the innovation namely perceived risks, relative advantages and compatibility with existing apparel purchasing practises play in professional women's adoption of the Internet for online apparel purchasing.

- **Sub-objective 7:** What are the perceived risks professional women associate with the adoption of the Internet for the purchase of apparel?

The uncertainty consumers experience when they are not able to predict the outcomes of their purchasing decisions is viewed as their perception of risks. The perceived risks are not necessarily connected to reality but rather the consumer's personal experience of the uncertainty. The uncertainty consumers experience relates to their use of credit cards, their inability to evaluate the apparel or the delayed reception of the product. Perceived risk can be categorized into five types, namely: functional risk, physical risk, financial risk, social risk, psychological risk, and time risk (Schiffman & Kanuk, 2000:153; Sproles & Burns, 1994:202).

Consumers' perception of the risks involved in the adoption of the Internet is apparent in aspects such as the functional, physical, financial, socio-psychological and time constraints they experience.

- **Sub-objective 8:** What relative advantages do professional women perceive in terms of the Internet for online apparel purchasing?

Relative advantage is the degree to which customers perceive an innovation as superior to existing alternatives or substitutes (Schiffman & Kanuk, 2000:414; Sproles & Burns, 1994:71). According to Whiteley (2000:155) the acceptance of the Internet depends on the consumer's perception of the benefits attached to the innovation.

Consumers' perception of the relative advantages involved in the adoption of the Internet for online apparel purchasing manifests itself in their identification of positive aspects that they compare with and perceive as better then their existing apparel purchasing practices. Consumers' perception of the relative advantages involved in the adoption of the Internet is apparent when they refer to positive aspects about it in comparison to existing aspects. It relates to aspects that are better such as costs, time saving and performance.

- **Sub-objective 9**: How do professional women evaluate the compatibility of the Internet as an apparel-purchasing medium with regards to their existing apparel purchasing practices?

The compatibility of the innovation with the potential consumer's values, needs and previous practices is one of the characteristics of the innovation that determines the speed of diffusion (Hawkins *et al.*, 2001:251; Sproles & Burns, 1994:72). The implication is that when purchases are not compatible with the female consumer's expectations, perceptions or scripts, the innovation will diffuse slowly or not at all amongst a specific segment. A more compatible innovation can lead to a reduction in uncertainty (Rogers, 19995:224).

Consumers' perception of the compatibility manifests it self in the comparisons the consumers make between online purchases and present purchases of apparel. Consumers' perception of the compatibility of the Internet with their current apparel purchasing practices will emerge from references made regarding differences, similarities, and possible solutions in terms of the Internet and current apparel purchasing practices.

4.5 THE UNIT OF ANALYSIS AND SAMPLING

4.5.1 Selection of target population

Professional women were selected as unit of analysis for this study. Professional women are viewed as persons pursuing certain professions as means of earning income. Callahan (1988:31) defines a profession as follows: "A profession delivers esoteric services – advice or action or both – to individuals, organizations or government; to whole classes or groups of people or to the public at large." To render a professional service to society, extensive academic training that includes an intellectual component is required. The selection of the target population and the purposive sampling for this study is justified below.

4.5.2 Purposive sampling

According to Babbie and Mouton (2001:288), sampling in the qualitative paradigm is often purposeful. Therefore purposive sampling was selected for this study (Babbie & Mouton, 2001:166). Purposive sampling increases the scope of the specific information collected because participants can be selected purposefully on the grounds of predetermined characteristics. Transferability is enhanced through purposeful sampling (Babbie & Mouton, 2001:277). According to Babbie and Mouton (2001:277) transferability refers to the extent to which the findings can be applied in other contexts or with other respondents. Purposive sampling and rich/thick descriptions are used in this study to enhance the transferability of the study.

Babbie and Mouton (2001:287) recommend a sampling framework of between five-25 participants for qualitative research studies conducted in South Africa. The number of participants is dependent on the scope of the study as well as the number of times the data collection will be repeated.

For an ideographic, contextual research strategy as followed in the present study a smaller sampling framework is recommended in order to conduct an in-depth inquiry. The researcher decided to include a sampling framework of between five to eight participants, because the scope of the study was to understand and describe the phenomenon rather than to find representative data, the data-collection methods were repeated three times on separate occasions with each participant, and the ideographic, contextual strategy required a smaller sample framework. There was decided that eight participants would suffice for this study.

According to Schurink (1998:262) one way of increasing the trustworthiness of a study is by stopping the collection of data the moment the data reaches theoretical saturation. In practice this means that when the researcher starts to get the same information over and over from the participants and no new information is generated, then theoretical saturation is reached (Morse in Schurink, 1998:262). Furthermore, this means that new participants should be recruited when new information still keeps emerging from the interviews. New participants should then be recruited until no more new information emerges.

During the data-collection phase the researcher was sensitive and attentive to data reaching theoretical saturation. After three interviews with the identified eight participants the same type of answers and patterns began to emerge. The researcher and the study leaders agreed that data saturation was reached and therefore there was no need to recruit further participants.

An criterion for inclusion that directed the purposive sampling was developed from the theory and used to motivate the selection of the participants for this study. This also enhanced the transferability of the study. In order for the identified participants to qualify for the present study they had to comply with the following criteria:

TABLE 1: THE CRITERIA FOR INCLUSION FOR THE PURPOSIVE SAMPLING

Criteria	Motivation for the criteria
Participants had to be female	Female Internet users are currently the consumer group with the fastest growth rate in South Africa (www.southafrica.co.za/survey/).
Participants had to be between the ages of 25 and 35 years	According to ASOM (1999:19-20) the average age of Internet users in South Africa is 35 years. Innovators are generally younger (Schiffman & Kanuk, 2000:426-427).
Participants had to practice fulltime or part-time professional careers	Professional women's apparel purchasing patterns differ from that of non-working women. Their involvement with time-saving behaviour as well as their evaluation of suitable work clothes also differs from non-working women (Shim & Drake, 1988:7-9).
Participants had to have at least 3 years tertiary education	Innovators are characterised by their high levels of academic training in comparison to their peers (Schiffman & Kanuk, 2000:426-427). Trained people are more apt to accept or try innovations.
Participants had to have access to the Internet and use the Internet on a regular base for e-mailing, information searching, entertainment or banking.	Participants need to be familiar with the Internet before they would be able to answer questions and talk meaningfully about the Internet. According to Mostert (2002), the regular use of the Internet could lead to purchases amongst South African consumers. Citrin *et al.* (2000:297) also determined that consumers using the Internet for communication, entertainment and/or education have a greater tendency to adopt it for purchasing.

4.5.3 Gaining of access to the unit of analysis

According to Hammersley and Atkinson (1995:54), the gaining of access to suitable participants is often a practical issue and researchers have to rely on their own resources and strategies to get access. In some cases, the gaining of access to suitable participants can be a sensitive issue (Schurink, 1998:258).

This is especially true when informants are not convinced of the researcher's intentions about the aims and scope of the research. Therefore it is imperative that ethical standards and procedures are adhered to when achieving access to participants. A negotiating process precedes the access to the participants. The way in which the researcher gained access to the unit of analysis in the present study is discussed below.

Informants were used in the present study to gain access to suitable participants. The researcher approached three informants that were identified by the researcher as professional women. The researcher knew the informants. The informants were informed about the type of study, the way in which the research would be conducted as well as the objective of the study. They were asked to identify three to four suitable participants that would be willing to participate in the study, comply with the criteria of inclusion for the sampling framework and who were unknown to the researcher. The informants identified twelve candidates, from whom the researcher selected eight to participate in the study.

A prerequisite was that the researcher and participants did not know each other in order to reduce researcher effects, such as prejudice and subjectivity. Researcher effects refer to the characteristics of the researcher (such as gender, race, age, socio-economic status and education level) and orientation (attitudes, values, opinions, preference and expectations) that could possibly influence his/her judgement (Mouton & Marais, 1991:82-83). Because the researcher forms such an integral part of qualitative research, it is of utmost importance that he/she is free of any prejudice in terms of the research process. Schurink (1998:258) suggests that the researcher prepares himself or herself emotionally for the interview. This proceeds from the assumption that the researcher goes into the interview with an open mind, without reservations and with the required objectivity. Because the researcher knew none of the participants, it contributed to objectivity towards them.

The researcher contacted each participant personally. Participants were informed about the theme and aim of the research as well as what their participation would involve namely three interviews of between 40 to 60 minutes each. After the introduction, the participant's permission was asked and the first interview was arranged with each participant. A suitable date, time and place in accordance with each participant's schedule were arranged. The next interviews were arranged at the end of previous interviews.

The type of compensation that the participants would receive wasn't initially discussed with them. Participants were only compensated after the last interview. Each participant received a gift to the value of R60 as compensation for their participation, time and willingness to share their experiences with the researcher.

4.5.4 The way in which the participants complied with the criteria for inclusion

From the knowledge-base and relevant literature, certain aspects were identified that directed the selection of the purposeful sampling framework. Criteria for inclusion were set with which participants had to comply (Babbie & Mouton, 2001:288). Purposive sampling (Babbie & Mouton, 2001:167) was employed, choosing volunteers that complied with the criteria for inclusion.

All eight participants were female, between the ages of 25 and 35 years and with at least three years of tertiary education. They were all practising their respective careers at the time of the study. They all had access to the Internet at work, at home or both. Three of the eight participants preferred to gain access to the Internet at home because of time pressure at work. The participants used the Internet for information searches, e-mail and electronic banking facilities. In some cases the participants used the Internet for the purchasing of books and/or groceries. The participants were thus familiar with the Internet.

A description of the way in which the identified female participants complied with the criteria for inclusion, is given in Table 2.

TABLE 2: DESCRIPTION OF THE FEMALE PARTICIPANTS ACCORDING TO THE CRITERIA FOR INCLUSION (N=8)

Participant	Age	Career	Internet use and purchases
a	29	Medical doctor	e-mail and books
b	31	Medical doctor	sunglasses and books
c	25	Lawyer	e-mail and information searches
d	25	Engineer	e-mail and information searches
e	35	Accountant	e-mail, books, CD's, groceries
f	28	Accountant	e-mail, books, CD's, groceries
g	28	Civil engineer	e-mail, registration of studies, information searches
h	27	Accountant	e-mail and information searches

4.6 DATA-COLLECTION METHODS

The objective of the study (exploratory-descriptive), the nature of the research problem statement, and the resources available determines to a certain extent the data-collection methods to be used in a study (Morse in Schurink, 1998:253). Sellitz in Mouton and Marais (1991:43) emphasizes three methods of data collection applicable to exploratory research studies, such as the present study, namely (1) an overview of existing and relevant literature (**CHAPTER 2** and **3**), (2) the interviewing of persons with practical experience of the problem (interviewing of professional women) and (3) the analysis of insight-stimulating examples. From the objective of the study (exploratory-descriptive) qualitative data-collection methods, such as conducting interviews were selected as being the most suitable for the study to explore, describe and understand the phenomenon.

4.6.1 Interviewing

According to Miles and Huberman (1994) interviewing forms an integral part of a qualitative research style. Interviewing involves the face-to-face interaction between participant and researcher, with the main objective to get insight into the everyday world of participants, expressed in their own words (Schurink, 1998:299). For the researcher to understand the everyday world (W1) of the participant, the researcher needs to immerse him/herself in the participant's symbols, terminology, and constructs. This implies that data should be collected in the participant's own words and from his/her frame of reference (Schurink, 1998:260-261)

Individual interviews were used as the primary data-collection method for the present study. Unstructured interviewing is typical used in exploratory-descriptive studies (Schurink, 1998:299). The types of interviews used in the present study were unstructured, individual interviewing according to a schedule and semi-structured individual interviewing.

4.6.1.1 Unstructured, individual interviewing according to a schedule

Unstructured, individual interviewing according to a schedule takes place in a conversation format. The interviewer determines the direction of the discussion by using a general plan or schedule (Trollip, 1991b:75). The schedule provides only a guideline for the researcher and contains themes and open questions relevant to the research. Because questions are not asked in a specific order, an interview schedule ensures that all the relevant themes are covered during the interview (Schurink, 1998:299). It also helps to get the conversation going (Trollip, 1991b:76).

The interview schedule as used was designed according to the objectives, the social-cognitive perspective and the diffusion of innovation theory of Rogers (1983; 1995). Unstructured, individual interviewing according to a schedule was used in the first and second interviews held with the participants.

The advantages of unstructured interviewing according to a schedule are that data is collected in a systematic manner while important and rich data are still collected. Unstructured interviewing provides the interviewer with the flexibility to immediately follow up themes mentioned by the participants (Trollip, 1991b:75). The interviewer can suit herself to the situation and thus modify questions she can ask, or participants to clarify answers as required (Loudon & Della Bitta, 1993:617).

Unstructured interviewing can be demanding on the researcher, which could be one of the main disadvantages of the technique. The interviewer's abilities and training in conducting interviews are at stake (Schurink, 1998:300).

4.6.1.2 Semi-structured individual interviewing

In general, semi-structured individual interviewing contains pre-formulated questions, which were asked in a similar sequence to all the participants. This type of interviewing was followed during the last or third interviews with the participants.

The advantage of this type of interview is that data are collected systematically. This was especially helpful in the comparison of data between the participants. The disadvantage of this type of interviewing is that relative little information regarding the participants' everyday world (in-depth experience) can be collected (Schurink, 1998:299).

4.6.2 Data-collection procedure

Schuman (in Seidman 1998:11) proposes a three-phase in-depth, phenomenological interview approach. The main focus of this approach is the exploration of a phenomenon by conducting in-depth interviews with each participant on at least three occasions. According to Schuman (in Seidman, 1998:11-12) this enables the researcher to contextualise the participant's experiences. It also enables the participant to construct the detail of his/her experience and to reflect on the meaning of the experience. Although in-depth interviews were not conducted in the present research, Schuman's (in Seidman, 1998:11-12) structure of the three interviews was adapted for this study. Three interviews were conducted with each of the eight participants.

4.6.2.1 The first interview

The first interviews were conducted at the beginning of October 2002 and lasted between 40 and 90 minutes. The first interviews were arranged telephonically with each participant.

According to Babbie and Mouton (2001:292) interviews should be held in a relaxed atmosphere. In order to reduce the influence of possible context effects the researcher should be sensitive regarding the time during which and place where the interview will be conducted. Context effects refer to all the factors influencing the objectivity of the data in terms of the environment or time of the interview (Mouton & Marais, 1991:91). The researcher was especially sensitive regarding these factors because professional women are pressed for time and have hectic work schedules. To minimize the effect of the context, the participants were allowed to suggest a suitable venue and time for the interviews. The participants preferred the first interview to be held in their offices or place of work.

The quality of the data collected is directly related to the relationship established between the researcher and the participants. This sound relationship determined the willingness of the participants to share their experiences or range of perceptions (Schurink, 1998:262). Establishing a relationship of trust is important to reduce subject effects and to enhance the objectivity of the research. Participant or subject effects refer to the characteristics of the participants that could possibly influence the objectivity and trustworthiness of the study. These refer to the characteristics (gender, race, age, socio-economic status and education level) and orientation (attitudes, values, opinions, preferences, expectations and predispositions towards the topic) of the participant (Mouton & Marais, 1991:82-83).

During the first interview, rapport was established by informing the participants of the aim of the research, what was expected of them, the duration and scope of the interviews as well as to the extent that the information provided by them would be kept confidential. Participants were assured that the information received from them would be used in such a way that their anonymity would be respected. They were also assured that there are no right or wrong answers. The fact that the researcher is also a professional woman, allowed the participants to relate to her and fostered trust.

The participants were encouraged to talk freely. Although the discussions sometimes went off track, allowance was made for the ease of the conversation and the schedule ensured that all the themes were covered. Because the researcher could not keep notes of all the aspects and opinions, which came up during the interview, the interview was tape-recorded to preserve the original data. Field notes were made after each interview to supplement the interview. It was checked with the participants whether they found the tape-recorder intrusive, but this was not the case. All three the interviews were tape-recorded and supplemented by field notes.

The first interview was an unstructured, individual interview, using the interview schedule. The schedule consisted of themes resulting from the objectives and sub-objectives. The schedule was used to facilitate the discussion, without leading or limiting it. The discussion was continued until the researcher felt sure that all the relevant information was obtained. Trustworthiness, according to various authors (Babbie & Mouton, 2001:277; Schurink, 1998:262), is dependent on the fact that all the relevant information is obtained. Trustworthiness is a prerequisite for credibility.

Credibility implies that the participant's view of the topic is compatible with that of the researcher (Babbie & Mouton, 2000:277). Credibility was further strengthened by the prolonged engagement of the researcher in the field (three interviews) until saturation of the data was obtained and member checks and triangulation were completed.

The themes for the interview schedule for the first interview were the following:

- The participant's present purchasing practices regarding the purchase of apparel (to study her script in terms of the steps, actions, procedures followed)
- The participant's evaluation of apparel (to study the indicators/dimensions used to evaluate apparel)
- The participant's impression or experience of the Internet (to study her perceptions and expectations with regards to the Internet)
- Participant's use of the Internet (to determine possible perceived risks, relative advantages and compatibility with present purchasing practices)

The researcher was sensitive for possible effects that the interview schedule, as measuring instrument, could have on the objectivity and trustworthiness of the study as well as the researcher's experience of conducting interviews.

According to Schurink (1998:258), it is vital that the researcher is prepared as the research instrument. This suggests the researcher's competence with regards to interpersonal and data-analysis skills. Because the researcher was inexperienced as an interviewer, background reading was done on the topic and the expertise of the study leader was invaluable.

4.6.2.2 The second interview

A second interview was arranged with each participant immediately after the first interview. The participants were informed that the second interview would entail their use of the Internet and evaluation of clothing web sites. Five of the eight participants agreed that the second interview could be at their offices because of convenience and easy Internet access. Two other participants preferred the second interview to be held at the Department of Consumer Science of the University of Pretoria. The remaining participant chose to have the second interview at home. The researcher was sensitive for the time and place that suited the participants, and in so doing, minimized context effects.

The second interviews lasted between 40 and 90 minutes. A schedule was used to guide the interview. From the literature it was clear that professional women's scripts result in certain perceptions and expectations regarding the adoption of the Internet for online apparel purchasing. When they are thus stimulated or asked about the subject they will try to make sense about the stimuli and revert to their cognitive structures (scripts) in order to react to it. For this reason a stimulus technique was used so that the participants' experience of the adoption process could be examined more comprehensively. The stimulus technique entailed the participants visiting clothing web sites of their choice. The participants visited between 3 and 5 web sites in the second interview. The participants were asked to evaluate the web sites. They were questioned about their experiences, what they thought about the web sites, the Internet as well as the presentation of the apparel items and the online purchasing process.

The interview schedule was drafted beforehand including the themes from the objectives and sub-objectives. The interview schedule was then used to facilitate the discussion without leading or limiting it.

The themes for the interview schedule for the second interview were the following:

- The participants were asked to discuss their impressions or experiences of the apparel web sites.
- Participants were asked to evaluate the apparel on the web site.
- Participants were asked to describe their feelings when making a purchase in order to find out what their perceptions and expectations were.
- Participants were asked to discuss (during the stimulus technique) their experiencing of risks, relative advantages and compatibility of online shopping compared to their current practices.

The same strategies, followed in the first interviews to ensure the objectivity and trustworthiness, were again applied in the second interview.

4.6.2.3 The third interview

A third interview was arranged immediately after the second interview with each participant. The third interviews lasted approximately 40 minutes. Six of the eight participants agreed to have the third interview at their place of work. Two participants chose to have the third interview at the Department of Consumer Science of the University of Pretoria. Semi-structured interviews were conducted to fill in the data that were still needed for this study. The data of the previous interviews were studied carefully to identify the information that was still lacking or unclear. These aspects were formulated into questions and asked in the same sequence to all the participants.

The questions asked in the third interview were about the participants' evaluation and assessment of apparel products. The researcher attempted to examine the role of the dimensions of apparel product in the adoption of the Internet. The questions were used to guide the interview, but also allowed the researcher the opportunity to respond to the answers of the participants.

The questions asked to the participants, were:

- How do you evaluate the quality of an apparel item?
- How do you determine the durability of an apparel item?
- How do you determine the end use of an apparel item?
- What does good fit and comfort mean to you?
- What type of image do you want to create with your clothes?
- What is your favourite apparel item and why?

All the strategies followed in the first and second interviews to enhance the objectivity and trustworthiness of the study were again applied in the third interview.

4.6.3 Data processing

Data processing was done immediately after each interview. Tape-recordings were transcribed verbatim and were checked for accuracy. Tape-recordings contribute to the reliability of the data, because it allows for the confirmation of the data. Conformability refers to the extent to which the findings of the study are the product of the focus of the inquiry and not of the biases of the researcher (Babbie & Mouton, 2001:278). Usually this entails the tracing of the data to their original sources. The study leaders were responsible for the auditing of the data.

The audit comprised the revision of the raw data from the tape-recordings, the transcriptions, the coding of the data as well as the interpretations, suggestions and recommendations of the researcher.

The researcher, noting the course of the interview, took field notes. Field notes not only serve as a means to capture data, it also serves as a means to enhance trustworthiness of the research. Babbie and Mouton (2001:275) suggested that these field notes be studied on a regular basis to develop the study in a way of an emergent design. Only methodological notes (regarding the methods, processes, interpretations and deductions) were made to help the researcher in describing the adoption process during the drawing of conclusions. Hard copies of the corrected, transcribed interviews were used to gain understanding. Coding as well as notes was recorded on them.

The objectivity and trustworthiness of the data was further enhanced through member checks. Member checks are when the transcripts and analysed texts were taken back to the participants for them to verify the accuracy and interpretations of what they have said (Babbie & Mouton, 2001:276). For this study the transcriptions of all three interviews were e-mailed to each participant to verify the accuracy. Participants confirmed via e-mail that the transcriptions were accurate and correct.

"Everything seems to be all right. Only my language was not of the best."

"It seems to be accurate. I am glad that I did not have to do all the typing. Let met know if there is something else."

"Everything seems to be accurate."

4.7 DATA ANALYSIS

Various researchers emphasize the challenging nature of data analysis in the qualitative paradigm (Poggenpoel, 1998:334). Clear guidelines and step-by- step examples of the analysis of qualitative data are extremely scarce. Although no single tested recipe exists regarding the analyses of qualitative data, different approaches can be followed to ensure the trustworthiness of the findings (Poggenpoel, 1998:335).

The data-analysis process suggested by Miles and Huberman (1994:10) was followed in this study. It consists of three phases, namely the data-reduction phase, the data-display phase and the drawing of conclusions and verification of data phase. Although the data analysis process is presented step-by-step, this does not really happen that way in reality (Poggenpoel, 1998:335). A comprehensive presentation of how the data-analysis was done for the present study is explained in **APPENDIX A.**

4.7.1 Reduction and classification of data

Miles and Huberman (1994:428-430) emphasize the importance of data management. Data management forms an integral part of data analysis and consists of all the activities by which data is systematically and coherently collected, stored and recalled. Data management takes place simultaneously with data collection. Data needs to be organised in files or on the computer as soon as possible (Poggenpoel, 1998:335). Mouton (1996:107) refers to the recording of data as a form of quality assurance. As part of the observational field notes, the researcher made notes of the date, time, participant, and length of the interview in order to record the factual aspects of the research process.

The format of the data posed problems for the researcher. Because of the large volume of transcripts the researcher had to deal with (Poggenpoel, 1998:335), it is suggested by Miles and Huberman (1994:428) that the first phase of the data analysis process should be the reduction and organisation of the data. The reduction and organisation of the data actually entails that the scope of the data is reduced to fit the conceptual framework, the objectives, sub-objectives and instruments of the study. Whilst processing the field notes and the transcripts during coding and identifying the themes, the data is further reduced (Miles & Huberman, 1994:428-444).

The reduction and organising of data was done in the following three stages:

- **Stage 1:** During the verbatim transcriptions of the data, the tape-recordings were continuously played back for accuracy and this helped the researcher to memorise and intimately know the data. People, events and quotes are therefore constantly milling around in the mind of the researcher (Poggenpoel, 1998:337). The transcripts were coded and themes identified. Coding implies the identification of words, paraphrases and themes within the set of data (Poggenpoel, 1998:335). Coding was done according to the objectives and sub-objectives. (see **CHAPTERS 1** and **4**). Highlighters were used to code the data, as suggested by Poggenpoel (1998:336). Paraphrases were highlighted in different colours. Three themes were identified according to the objectives and sub-objectives. They were: (1) data concerning the professional woman's purchasing practices and scripts (the steps, actions, and procedures followed), data concerning the perceptions and expectations of the professional women in connection with the Internet and their perceptions of apparel purchases and previous experiences with the Internet [marked in green]; (2) data concerning the dimensions the professional women uses when evaluating apparel products in general and on the Internet [marked in blue]; (3) data concerning the professional women's perceptions of the characteristics of the Internet namely risk perception, relative advantages, and compatibility [marked in pink]. Irrelevant data for the study were ignored in stage 2.

- **Stage 2:** The second stage was mainly done using a word processing programme on the computer. Electronic files were created of the highlighted or chosen data from the transcripts. The three identified themes (objectives) served as headings for the tables. Tables for each aspect under each heading were created. Identical files for each participant were created. Further coding of data was done according to identified categories from available literature, objectives and sub-objectives. In this process certain new categories and sub-categories also emerged. Data were moved to the correct tables (categories and sub-categories) using the cut and paste functions of the programme. This process was repeated for each of the eight participants. The organising of the data took place according to the objectives and sub-objectives. The study leaders and the researcher then studied the tables independently and added coding where as appropriate. The information in the tables was checked for correctness and relevancy.

- **Stage 3:** All the changes and refining of the tables were made, ignoring data not applicable or relevant for the present study.

4.7.2 Data-display

Data-display involves the organised, summarised and systematic presentation of the data in order to draw conclusions. This phase involved the synthesis of the coded and analysed data. This phase is considered as the heart of qualitative data analysis (Poggenpoel, 1998:336). The presentation and discussion of the findings were done according to the objectives and sub-objectives formulated for the study.

Themes were identified and systematically brought in relation with the categories and sub-categories. The researcher then attempted to synthesize the data in new ways. Identifying the concepts, themes and ideas, which were the same or differed for the various participants, disclosed patterns. According to Poggenpoel (1998:336) this synthesis of data may lead to theory building or the development of a new conceptual model.

This phase, of Miles and Huberman's (1994: 428-430) data analysis process, leads to the classification, description, and discussion of the data. Relevant verbatim extracts from the transcribed interviews were used to give rich descriptions of the data. This was done to reflect the objective and context of the study in order for the reader to assess the transferability of the data (Poggenpoel, 1998:337).

4.7.3 Drawing of conclusions and verification of data

The drawing of conclusions regarding the findings forms part of the last step in Miles and Huberman's (1994:428-444) data analysis approach. The comparisons, contrast, patterns and themes occurring in the findings were used to reach conclusions about the data. Miles and Huberman (1994:429-444) recommend the use of a schematically conceptual framework for the organising, presentation and drawing of conclusions.

Verification of the data is important in enhancing the notion of objectivity and trustworthiness of the study. Triangulation and member checks were strategies followed to enhance the trustworthiness and objectivity of the study.

Member checks at this stage refer to the verification of interpreted data by the participants in order to determine whether the data was described accurately enough and to control the correctness of the interpretations and conclusions (Babbie & Mouton, 2001:276). The results, discussions, interpretations, and conclusions were sent via e-mail to the participants for verification. The participants had to verify if the findings were described accurately and whether the interpretations and conclusions were correct.

Triangulation in general refers to the use of multiple methods, sources and techniques to increase the objectivity (credibility) of the research (Babbie &

Mouton, 2001:275; Neuman, 2000:124). Triangulation of theory was done in the present study. The triangulation of theory involves the use of multiple theoretical perspectives in the initial stages of the research or during the interpretation of the data. The use of more than one theory can be difficult but it may enhance the creative synthesis and development of new theory (Neumann, 2000:125). In the present study an umbrella social-cognitive approach as perspective as well as Rogers' (1983, 1995) diffusion of innovation theory was used to direct the study. This perspective and theory was also used in the interpretation of the data.

Construct validity forms part of the triangulation of the study and refers to the logical relationship between variables in qualitative studies (Babbie & Mouton, 2001:123). The correct, clear, and unambiguous description of concepts and the systematic ordering thereof in a conceptual framework are important to ensure construct validity (Babbie & Mouton, 2001:123). In the light of the qualitative research style that was followed to study relevant apparel consumer behaviour, social-cognitive and adoption theory was used to conceptualise the constructs for the study (see **CHAPTERS 2** and **3**). It was then related to applicable literature and theory. Defining and delimiting the concepts in the objectives, sub-objectives and schematic conceptual framework enhanced construct validity.

4.8 CONCLUSION

The research design, which is basically the plan according to which the research was executed, was discussed in this chapter. The selection of the target population and sampling frame, data-collection methods and procedures, as well as the data analysis was also accounted for. The strategies followed to enhance the objectivity and trustworthiness of the study was discussed and elucidated where applied by the researcher. The display of the data was organised according to the research objectives and sub-objectives in such a way that it allows for the drawing of conclusions. The data analysis and discussion of findings are provided in **CHAPTER 5**.