

CHAPTER 5

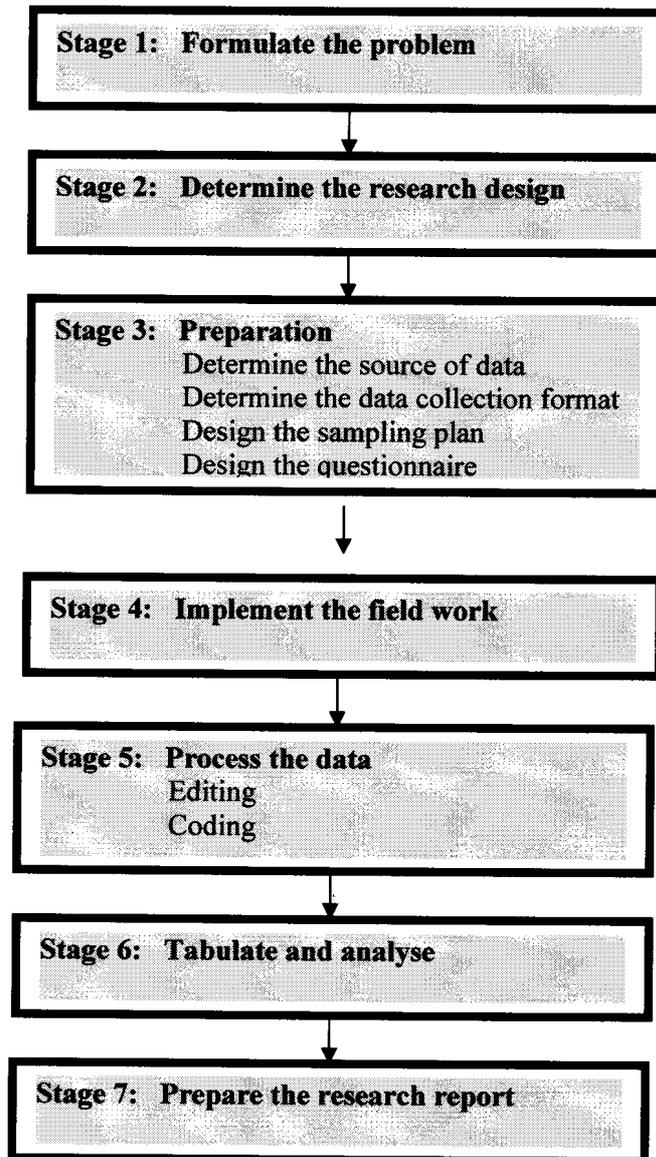
DEFINING THE PROBLEM AND DEVELOPMENT OF PROPOSITIONS

5.1 Introduction

An extensive literature review was undertaken in chapters 1-4. Chapter 5 and 6 will therefore specifically focus on the research process. The research process can be defined as a sequence of stages that provides a general framework to follow when implementing a research study (Dillon, Madden & Firtle, 1993: 24). Although various research textbooks use different formats to describe the research process (Dillon et al, 1993, Churchill, 1996, Cooper and Schindler, 1998), the basic steps to be followed are the same. The headings and discussion in chapter 5 and chapter 6 will however follow the research process identified in Dillon *et al.* (1993: 24).

Figure 5.1 provides a summary of the stages in the research process. Stage 1 of the research process depicted in figure 5.1 will be discussed in chapter 5. Stage 2 –7 will be highlighted further in chapter 6.

FIGURE 5.1: THE RESEARCH PROCESS



Source: Dillon et al (1993: 24)

5.2 Problem formulation

Stage one of the research process is to formulate the problem. The definition of the problem to be researched is therefore the most important step in a research project (Martins, Loubcher & van Wyk, 1996: 82) and also one of the most difficult (and least discussed) aspects of research (Trochim, 1997).

Problem definition, according to Malhotra (1996: 36) involves stating the general problem and identifying the specific components of the research problem. Only then can the research be designed and conducted properly. Malhotra (1996: 36) is also of the opinion that inadequate problem definition is a leading cause in the failure of research projects.

The end result of problem formulation, according to Dillon, Madden & Firtle (1993: 25), should be a precise statement of the objectives of the research to be conducted and a set of research questions. The first fundamental derivative resulting from problem definition is the research objective, which provides the focus of everything to follow. The second component is made up of a set of research questions that immediately flow from the objective and will be answered by the research to be conducted.

The problem statement was derived from the background discussion in the chapter 1 making it clear that future organisations need to structure themselves to gain an advantage in the new competitive landscape by revising standard management thinking and rethinking strategic actions and organisation structure.

The background discussion in chapter 1 also highlighted the fact that disagreement might still exist about the structural architecture of the public relations functions. Although suggestions have been made as to how the communication function should be structured to be most effective, the lack of agreement on a viable organisational structure has been identified as one of the issues derailing integrated marketing communication. It has therefore been given a new life as the concept of integrated communication.

The various issues identified in the background discussion were used to formulate the research problem. Organisations need to re-evaluate the way in which the communications function was previously organised and structured and focus on a more integrated approach that will ensure maximum effectiveness. No framework exists which incorporates all communication in an organisation as no research has been done and published that investigated organisations in South Africa with regard to the integration of communication.

It is therefore necessary to investigate the concept of integrated communication further and then propose a framework for structuring integrated communication that can be applied by different organisations.

The rest of this chapter will focus on the research objectives as well as the propositions that were derived from the objectives.

5.3 Objectives of the study

5.3.1 *The primary objective of this study is:*

To investigate empirically how successful South African organisations are addressing the issue of integrated communication in terms of organisational structures. This, together with the extensive investigation into the relevant literature, will be used to develop a framework for structuring the communication function within South African organisations to encourage integration and enhance organisational effectiveness.

5.3.2 *The secondary objectives of this study are:*

- (a) To ascertain whether there is a dominant public relations model (advanced by Grunig & Hunt 1982) favoured by most of successful South African organisations;
- (b) To establish what the relationship is between the marketing and public relations function in successful South African organisations;
- (c) To determine the viewpoints of marketing and communication managers on integrated communications in successful South African organisations;
- (d) To investigate how public relations/communication departments compare with the criteria prescribed by Grunig and Grunig (1998) for public relations to remain excellent within the IC framework.
- (e) To ascertain how successful South African organisations are using their corporate websites for communications purposes.

- (f) To determine if successful South African organisations integrate dialogic public relations, that is needed to build relationships with publics, through their websites.

5.4 Research propositions

As mentioned in chapter 1 the study will not test hypothesis. The study will comprise of exploratory research with the purpose to propose a framework based on the literature review and the research findings that can be applied by managers, practitioners, academics and scholars.

Cooper and Schindler (1998: 43) define a research proposition as “...a statement about the concepts that may be judged as true or false if it refers to observable phenomena”. The study will therefore only test propositions due to the exploratory nature. The following research propositions were derived from the objectives and formulated in chapter 1 and will be explained further in the next section:

5.4.1 Proposition 1

Proposition 1 address the primary objective (5.3.1) as well as the following secondary objective.

5.3.2d. To investigate how public relations/communication departments compare with the criteria prescribed by Grunig and Grunig (1998) for public relations to remain excellent within the IC framework.

Grunig and Grunig (1998: 141-162) have developed a list of the criteria that must be satisfied in order for public relations to remain excellent within an integrated communications framework. The list contains four principles:

- The public relations function should be located in the organisational structure so that it has ready access to key decision makers of the organisation – the dominant coalition – and thereby contributing to the strategic management processes of the organisation.

- All communication programmes should be integrated into or coordinated by the public relations department.
- Public relations should not be subordinated to other departments such as marketing, human resources or finance.
- Public relations departments should be structured horizontally to reflect strategic publics for it to be possible to reassign people and resources to new programmes as new strategic publics emerge and other publics cease to be strategic.

With regard to these criteria, Grunig and Grunig (1998) make the statement that “all communication functions should be integrated or coordinated by the public relations department.”

Based on these criteria the following proposition was formulated:

Proposition 1: There is a single integrated communication department in successful organisations in South Africa [Supportive to objective 5.3.1 and 5.3.2 (d)].

5.4.2 Proposition 2

Proposition 2 addresses the following secondary objective:

5.3.2a. To ascertain whether there is a dominant public relations model (advanced by Grunig & Hunt 1982) favoured by most of successful South African organisations;

Grunig (1992c) was based partially on the work of Peters and Waterman (1982) and other studies in the field to derive a set of characteristics of excellently managed public relations programmes and departments. These characteristics were identified as applying at the programme, departmental and organisational levels (Grunig 1992a).

A number of the important characteristics that will apply to the proposed study is summarised below:

- Public relations programmes should be managed strategically.
- There should be a single integrated public relations department.
- Public relations should report directly to senior management.
- Public relations should be a separate function from marketing.
- **Communications should adhere to the two-way symmetrical model.**
- The senior public relations practitioner should be a member of, or have access to the organisation's dominant coalition.
- The organisation's "world view" of public relations should reflect the two-way symmetrical model.

Grunig and Hunt (1984: 21) identified four models to describe the different public relations practices that have evolved throughout history:

- press agency;
- public information;
- two-way asymmetrical; and
- two-way symmetrical public relations.

Grunig and Hunt (1984) were the first to define four typical ways in which public relations is practiced – four models of public relations. Since then the four models have been the objects of various research studies by public relations scholars. Grunig and Grunig (*in Grunig 1992b*) reviewed the type of research being done on the models.

They also included in their study the history of the models, the validity and reliability of how public relations is actually being practiced as well as the internal and external conditions that can provide an explanation for this. Based on this review Grunig and Grunig (*in Grunig 1992b*) stated the following proposition:

The two-way symmetrical model of communication is a real as well as a normative model. It is a model that an organisation can use, but often do not use because an authoritarian dominant coalition sees this approach as a threat to its power.

Two-way symmetrical public relations, however, epitomises the professional public relations and reflects the growing body of knowledge in the field. This ethical approach also contributes to organisational effectiveness more than other models of public relations. The two-way symmetrical model as refined here, therefore, is a major component of excellence in public relations and communications management”.

The following proposition was formulated in the context of the view as described above:

Proposition 2: Successful South African organisations practice the two-way symmetrical model of communication. [Supportive to objective 5.3.2 (a)].

5.4.3 Proposition 3

Proposition 3 addresses the following secondary objective.

5.3.2d. To investigate how public relations/communication departments compare with the criteria prescribed by Grunig and Grunig (1998) for public relations to remain excellent within the IC framework

Proposition 1 also addressed secondary objective 5.3.2d but focused only on one of the criteria namely, all communication programmes should be integrated into or coordinated by the public relations department. Proposition 3 addresses most of the criteria identified by Grunig and Grunig for public relations to remain excellent within the IC framework. The criteria addressed by proposition 3 are listed below.

- The public relations function should be located in the organisational structure so that it has ready access to key decision makers of the organisation – the dominant coalition – and thereby contributing to the strategic management processes of the organisation.
- All communication programmes should be integrated into or coordinated by the public relations department.

- Public relations should not be subordinated to other departments such as marketing, human resources or finance.

Based on these criteria the following proposition was formulated:

Proposition 3: Successful South African organisations conform to the criteria prescribed by Grunig and Grunig for public relations to remain excellent within the IC framework.

5.4.4 Proposition 4

Proposition 4 addresses the primary objective as well as the following secondary objective:

5.3.2b To establish what the relationship is between the marketing and public relations function in successful South African organisations;

Kotler & Mindak (1978) postulated five possible models to describe the organisational function between marketing and public relations:

- separate but equal functions;
- separate but overlapping functions;
- marketing as the dominant function;
- public relations as the dominant function; and
- public relations and marketing as the same function.

They predicted that the divisions separating these two functions would continue to break down towards the movement along the path of closer convergence.

The following research proposition was formulated based on the relationship between marketing and public relations:

Proposition 4: The relationship between marketing and public relations in successful South African organisations differ from theoretical models [Supportive to objective 5.3.1 and 5.3.2 (b)].

5.4.5 Proposition 5

Proposition 5 addresses the primary objective as well as the following secondary objective:

5.3.2c. To determine the viewpoints of marketing and communication managers on integrated communications in successful South African organisations;

Hunter (2000b) views integrated communications as follows: “distinctions between the various functions (marketing, internal and corporate communication) of managed communication perpetuate the traditional separation between them; a separation that does not make sense. If we were to follow this strictly in the reality of corporate life, we would end up with structurally and functionally separate silos, each with its own set of tools, goals and objectives”.

Based on his research Hunter (2000b) proposes the following characteristics of IC:

- IC refers to an approach to communication management that no longer separates or divisionalises the communication function and viewed from the stakeholders’ perspective, such a separation is irrelevant.
- A second important characteristic of IC is a stakeholder’s orientation. Organisations need to look at stakeholders and determine what kind of communication they might need to satisfy their interests. The integrated communicator must then manage communication in such a way that it will adhere to the expectation of the stakeholders in terms of communication.
- To do so an integrated communicator must use the instruments that promise the most success in reaching this goal.

Other viewpoints regarding integrated communications were discussed in section 4.3. Based on the discussion on IC the following proposition was formulated:

Proposition 5: Marketing and communication managers in successful South African organisations have different viewpoints with regards to integrated communication [Supportive to objective 5.3.2 (d)].

5.4.6 Proposition 6

Proposition 6 addresses the following secondary objective:

5.3.2e. To ascertain how successful South African organisations are using their corporate websites for communications purposes.

Carroll (2000) conducted a content analysis study on the corporate websites of the top 500 Irish organisations. The core objective was to determine how these organisations used the Internet as a communications tool. Carroll (2000) concluded that the Internet has opened a realm of new communications opportunities for organisations with various stakeholders. It offers a medium, which the organisation has direct control over, is minimal in cost compared to other mediums, and allows stakeholders to interact directly with the organisation and thereby improving relationships with them. These advantages therefore make the Internet a medium, which should be exploited. At present however, organisations have failed to exploit the potential to its fullest.

Based on the above the following proposition was formulated:

Proposition 6: Successful South African organisations' do not exploit the full communication potential provided by their websites. [Supportive to objective 5.3.2 (e)]

5.4.7 Proposition 7

Proposition 7 addresses the following secondary objective:

5.2.2f. To determine, if successful South African organisations integrate dialogic public relations, that is needed to build relationships with publics, through their websites.

The question arises how organisations can use their websites to facilitate more equitable relationships with publics. Kent and Taylor (1998) suggest that organisations should design websites to facilitate real dialogue, as dialogic communication created by the strategic use of the Web is one way for organisations to build relationships with publics. In order to successfully integrate dialogic public relations into the Web, Kent and Taylor (1998) proposed five principles that offer guidelines for the successful integration, namely the dialogic loop, the usefulness of information, the generation of return visits, the intuitiveness/ease of interface, and the rule of conservation of visitors.

Based on these five principles the following proposition was formulated:

Proposition 7: Successful South African Organisations do not create dialogic relationships with their stakeholders through their websites.
[Supportive to objective 5.3.2 (f)]

5.4 Conclusion

The chapter focused on the problem statement and the proposed propositions. This will form the basis of the empirical study to follow. The research design and procedures will be discussed in the next chapter.

CHAPTER 6

RESEARCH METHODOLOGY

6.1 Introduction

The term methodology, according to the Collins Dictionary (1995), refers to “the system of methods and principles used in a particular discipline”, which in the case of this study are the methods and principles used in the research. The term methodology is also closely related to the term epistemology, which stems from the Greek word *epistēmê*, which, is their term for knowledge and is the philosophy of how we come to know.

While methodology is also concerned with how one comes to know, it is much more practical in nature and is focused on the specific ways or the methods that one can use to understand the world better. “Epistemology and methodology are intimately related: the former involves the philosophy of how we come to know the world and the latter involves the practice” (Trochim, 1997).

This chapter aims to provide an insight into the practical ways and methods that will be employed in gathering the information for the empirical part of this study. First, the research design and methodology will be discussed. The last part of the chapter concerns the data processing, analysis and proposed evaluation of results.

6.2 The research design

After formulating the problem, the researcher must determine an appropriate research design (Dillon *et al.*, 1993: 30). A research design is a framework for conducting a research project (Malhotra, 1996: 86). Churchill (1996: 114) sees it as the blueprint that is followed in the completion of a study. It explains in detail the procedure necessary for obtaining the information needed to solve the research problem. A research design therefore lays the foundation for conducting the research (Malhotra, 1996: 86).

According to Malhotra (1996: 86) a typical research design involves the following tasks:

- Define the information needed.
- Design the exploratory, descriptive, or causal phase of the research.
- Specify the measurement and scaling procedure.
- Construct and pre-test a questionnaire or an appropriate form for data collection.
- Specify the sampling process and sample size.
- Develop a plan of data analysis.

Each task will be discussed further in the rest of the chapter. The research design and different types of designs first need further explanation. Section 6.2.1 provides an overview of the different classifications of research designs, whereas section 6.2.2 highlights exploratory research. The rest of the tasks identified by Malhotra (1996: 86) will be discussed from section 6.3 onwards. The tasks identified by Malhotra (1996: 86) and the stages in the research process depicted in figure 5.1 are the same although the sequence differs. The discussion in this chapter will focus on the tasks and stages identified but will not necessarily follow Dillon *et al.* (1993: 24) or Malhotra's (1996: 86) chronological approach.

6.2.1 Classification

Malhotra (1996: 86) classifies research design as either being exploratory or conclusive. The primary objective of exploratory research is to provide insights into and an understanding of the problem confronting the researcher. Exploratory research is used in cases when the problem must be defined more precisely, relevant courses of action must be clarified or additional insights must be gained before an approach can be developed.

Exploratory research may consist of personal interviews with industry experts. The sample, selected to generate maximum insights, is small and non-representative. The primary data is qualitative in nature and are analysed accordingly. The findings of exploratory research should therefore be regarded as tentative or as an input to further research. Such research is then typically followed by further exploratory or conclusive research (Malhotra, 1996: 88).

The insights gained from exploratory research might be verified by conclusive research because the objective of conclusive research is to test specific hypotheses and examine specific relationships (Malhotra, 1996: 88).

Conclusive research is therefore more formal and structured than exploratory research. It is based on large representative samples, and the data obtained are subjected to quantitative analysis. The findings of this kind of research (conclusive research) are considered to be conclusive in nature and are used as input into managerial decision-making (Malhotra, 1996: 88).

The differences between exploratory and conclusive research are summarised in table 6.1.

TABLE 6.1 DIFFERENCES BETWEEN EXPLORATORY AND CONCLUSIVE RESEARCH

	Exploratory	Conclusive
Objective:	To provide insight and understanding	To test specific hypotheses and examine relationships
Characteristics:	Information needed is defined loosely Research process is flexible and unstructured Sample is small and nonrepresentative Analysis of primary data is qualitative	Information needed is clearly defined Research process is formal and structured Sample is large and representative Data analysis is quantitative
Findings/results:	Tentative	Conclusive
Outcome:	Generally followed by further exploratory or conclusive research	Findings used as input into decision making

Source: Malhotra (1996: 87)

Based on the previous discussion in this section it can be stated that this research will be of an exploratory nature where the primary objective is to provide insights into and an understanding of the research problem. The insights gained from this research will then be used to compile a framework, which can be tested by conclusive research in future studies. Cooper and Schindler (1998: 130) also made it clear that exploratory research relies on loose structures and the immediate purpose is to develop hypotheses or questions for further research (in the case of this research, a framework).

The exploratory nature of this research necessitates a further investigation in section 6.2.2 into exploratory research designs.

6.2.2 Exploratory research

The objective of exploratory research is meaningful in any situation where the researcher does not have enough understanding to proceed with the research project (Malhotra, 1996: 88). Cooper and Schindler (1998: 134) contend that exploration is useful when there is a lack of a clear idea of the problem. Researchers can then, through exploration, develop concepts more clearly, establish priorities, develop operational definitions, and improve the final research design. Exploratory research is characterised by flexibility and versatility with respect to the methods because formal research protocols and procedures are not employed. It rarely involves structured questionnaires, large samples, and probability sampling plans (Malhotra, 1996: 88).

Researchers are rather alert to new ideas and insights as they proceed. Once a new idea or insight is discovered, they may redirect their exploration in that direction. That new direction is pursued until its possibilities are exhausted or another direction is found. For this reason, the focus of the investigation may shift constantly as new insights are discovered. Exploratory research also benefits from methods such as, survey of experts; pilot surveys; analysis of secondary data and qualitative research (Malhotra, 1996: 88).

Churchill (1996: 118) summarises the purposes of exploratory research as follows:

- Formulating a problem for more precise investigation
- Developing hypotheses as a result of the initial investigation
- Establishing priorities for further research
- Gathering information about the practical problems of carrying out research on particular issues
- Increasing the analyst's familiarity with the problem
- Clarifying concepts

According to Churchill (1996: 119) literature searches, experience surveys, focus groups, and the analysis of selective cases are productive in conducting exploratory research. Cooper and Schindler (1998: 135), after considering the scope of qualitative research, propose several approaches that are adaptable for exploratory investigations, namely in-in-depth interviewing, participant observation, videotaping, projective techniques, case studies, street ethnography, elite interviewing, document analysis and proxemics and kinesics. They combine these approaches and focus on four exploratory techniques that support those identified by Churchill, namely, secondary data analysis; experience surveys; focus groups and two-stage designs.

The discussion in section 6.2.2 highlighted the exploratory nature of the research study. This research study adheres to the purposes identified by Churchill (1996) in formulating a framework for testing in other studies and in doing so establish priorities for future research. Furthermore by undertaking an extensive literature survey, information was gathered about the research problem in order to increase readers' familiarity with the problem and to clarify concepts.

Other approaches undertaken to gather more information will be in-depth interviewing of experts and document analysis in the form of a content analysis of organisations' websites. The methodology will be discussed in detail in the next section.

6.3 Methodology

Section 6.2 highlighted stage 2 in the research process (figure 5.1), identified by Dillon *et al.* (1993:24), namely, determining the research design. Section 6.3 will concentrate on stage 3 in the process namely source of data, data collection, design of the sampling plan and the design of the questionnaire.

6.3.1 Source of data

Information sources available to the researcher can be classified as primary or secondary data (Dillon *et al.*, 1993: 78).

(a) Secondary data

According to Cooper and Schindler (1998: 135) the first step in an exploratory study is a search for secondary data. Secondary data involve already published data collected for purposes other than the specific research need at hand. Secondary data may be further classified as either internal or external secondary data. Internal data is the information available within the organisation, whereas external data are those generated outside the organisation. The data exist in the form of published material, on-line databases, or information made available by syndicated services (Malhotra, 1996; Dillon, *et al.*, 1993; and Cooper & Schindler, 1998).

Churchill (1996: 192) views the most significant advantage of secondary data to be savings in time and money. It is therefore necessary to start with secondary data and then proceeds to primary data. Secondary data might however not fit the research problem as it was collected for other purposes. Also, the accuracy of secondary data might be questionable as there are a number of possible sources of error (Churchill, 1996: 196). This needs to be kept in mind when using secondary data sources. However, data from secondary sources, according to Cooper & Schindler (1998: 135), can be used in deciding what needs to be done as well as in formulating the hypotheses or propositions.

An extensive literature study was therefore done as part of the exploration stage of the study. Various authors' viewpoints were explored as well as a vast array of Internet sources. Based on the literature review various objectives were identified from which the propositions were derived.

(b) Primary data

Dillon *et al.* (1993: 132) view primary data as "...data collected from potential customers in relevant target markets in cases where secondary and syndicated sources are not sufficient to solve the marketing research problem at hand".

According to Malhotra (1996: 116) a researcher originates primary data for the specific purpose of addressing the problem at hand. Malhotra's (1996: 116) comparison between primary and secondary data is depicted in table 6.2.

TABLE 6.2 A COMPARISON OF PRIMARY AND SECONDARY DATA

	Primary Data	Secondary Data
Collection purpose	For the problem at hand	For other problems
Collection process	Very involved	Rapid and easy
Collection cost	High	Relatively low
Collection time	Long	Short

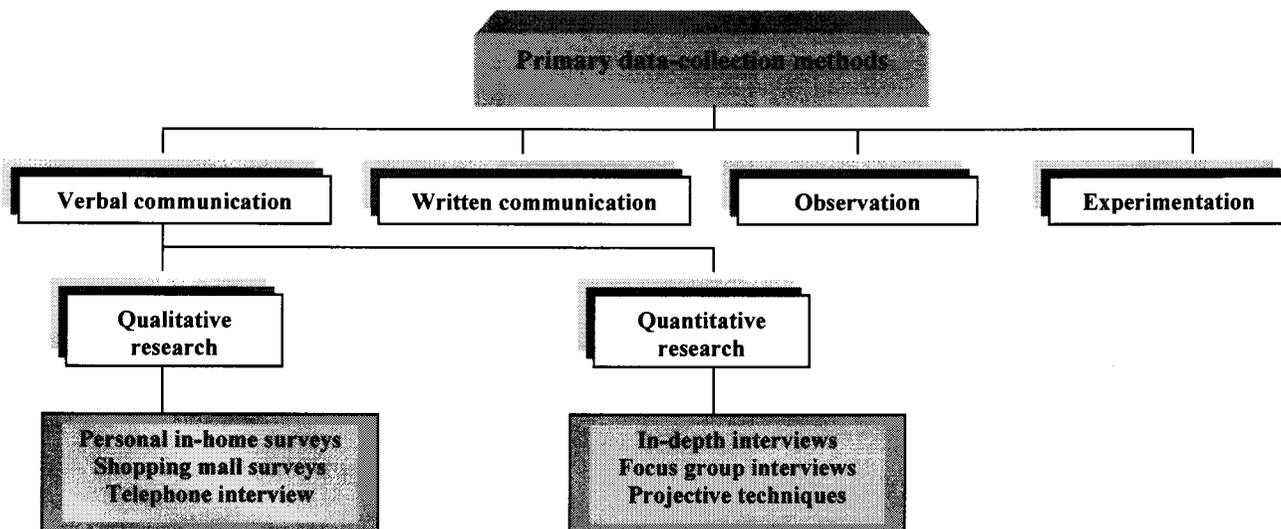
Source: Malhotra (1996: 117)

Primary data still needs to be collected from respondents to address the problem at hand. Section 6.3.2 will therefore investigate the various data collection methods further.

6.3.2 Data collection format

Martins *et al.* (1996: 123) provide a break down of primary data collection methods and this is illustrated in figure 6.1.

FIGURE 6.1 PRIMARY DATA COLLECTION METHODS



Source: Martins *et al.* (1996: 123)

Primary data may be qualitative or quantitative in nature as depicted in figure 6.1. Qualitative research provides insights and standing of the problem setting, where quantitative research seeks to quantify the data and apply some form of statistical analysis.

The research will mostly be qualitative in nature. The empirical part of the study can be divided into three methods: a questionnaire; in-depth interviewing; and content analysis. In-depth interviewing and content analysis are qualitative in nature whereas the questionnaire represents the quantitative part of this study. The questionnaire will however only be used because time and money prohibited the researcher from conducting in-depth interviews with all the organisations identified. It was therefore decided to distribute questionnaires to the organisations but because of the exploratory nature of this study a number of open questions will be used to gain more insight into the research problem. Qualitative and quantitative research will now be discussed further.

(a) Qualitative research

The primary objective of the research, namely, how successful South African organisations are addressing the issue of integrated communication in terms of organisational structures to develop a framework for structuring the communication function within South African organisations to encourage integration, compels the researcher to make use of qualitative research to obtain the needed information. It will be difficult to obtain accurate information from merely structured and quantitative questions.

In-depth interviewing will be used to obtain various expert opinions and a content analysis will be executed to gain insight into two of the research propositions. These two methods will now be elaborated further.

(i) In-depth interviews

According to Malhotra (1996: 174) an in-depth interview is 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.

In-depth interviews attempt to, according to Dillon *et al.* (1993: 143), uncover the content and intensity of respondents' feelings and motivations beyond straightforward or simplistic responses to structured questions. In-depth interviews can therefore uncover greater in-depth of insight than focus groups and can attribute the response directly to the respondent. It results in a free exchange of information that might not always be possible in focus groups (Malhotra 1996: 174).

The lack of structure however, makes the results of in-depth interviews susceptible to the interviewer's influence, and the quality and completeness of the results depend heavily on the interviewer's skills. Data obtained are difficult to analyse and interpret. The length and cost of an in-depth interview also limits the amount of interviews for a specific project (Malhotra 1996: 174). These objections proved to be limitations to the study at hand.

In-depth interviews, despite their limitations have some valuable applications. The primary use of in-depth interviews is to gain insights and understanding through exploratory research. According to Malhotra (1996: 177) they can be effectively employed in special situations such as the following (1, 2, 4 and 5 are applicable to this research):

1. Detailed probing of the respondent.
2. Discussion of confidential, sensitive or embarrassing topics.
3. Situations where strong social norms exist and where the respondent may be easily swayed by group response.
4. Detailed understanding of complicated behaviour.
5. Interviews with professional people.
6. Interviews with competitors, who are unlikely to reveal the information in a group setting.
7. Situations where the product consumption experience is sensory in nature, affecting states and emotions.

(ii) Content Analysis

Content analysis is used in various types of communication research, such as the analysis of mass media content, transcripts of group discussion, or in organisational communication by analysing memos, electronic mail, transcripts of meetings and policy documents (Du Plooy, 2001: 191).

A common use of content analysis is to record the frequency with which certain symbols or themes appear in messages. Content analysis can use the following units of analysis (Du Plooy, 2001: 191):

- Physical units, such as the medium of communication, the number of pages, size and space in print media, time duration in broadcast media and nonverbal codes in interpersonal communication.
- Syntactic units, such as paragraphs, sentences, phrases, clauses or words.
- Thematic units, which are repeating patterns of propositions or ideas related to issues such as sex, violence and AIDS.
- Propositional units, such as questions, answers, statements, assertions or arguments.

Another application for content analysis that has emerged is to apply it to the Web. Content analysis will be done on the organisations' websites that participated in this study.

McMillan (2000) analysed nineteen studies that applied content analysis to the World Wide Web and concluded that such a stable research technique can indeed be applied to the dynamic environment of the Web. McMillan (2000) suggests to future researchers that want to apply content analysis techniques to the Web to consider five primary research steps.

The steps are: formulating the research question and/or hypotheses, sampling, data collection and coding, training coders and checking the reliability of their work, and analysing and interpreting the data.

- **Formulating the research question.** The Web differs from print media because it combines text, audio, still images, animation and video. These characteristics may lead to unique research questions. In some fundamental ways the first step in the research process remains similar and should build on earlier theoretical and empirical work in defining their web-based research. Two secondary objectives based on the literature review were formulated for this research (see section 5.3.2(e) and (f)).
- **Sampling.** A key concern in sampling is that each unit must have the same probability as all other units to be represented. One challenge for the researcher might be to identify the units to be sampled. A researcher has two primary sources from which to develop a sampling frame - offline and online sources. In determining the sample units the researcher must be driven by the research questions. The same sampling frame and sampling units used for the completion of the questionnaire will be used for the content analysis part of this research.
- **Data collection and coding.** The fast-based Web demands that data be collected in a short time frame in order for all the coders to analyse the same content. Web-based analysis must therefore specify the time frame of the analysis. Researchers must also be careful in defining the units of analysis. In this study use will be made of a code sheet to specify the units of analysis. A glossary of the content analysis instrument will be used to explain the units that were analysed. The coding sheet was developed by adapting the instrument used by Carrol (2000) (This instrument was used to conduct a content analysis of the top 500 Irish organisations corporate websites).
- **Training coders and checking the reliability** of their work will not apply to this study as the researcher will be the only coder of the websites and the need to test for inter-coder reliability will not be necessary.
- **Analysing and interpreting the results.** The Web poses no new challenges to this part of content analysis. The elements identified on the coding sheet will be analysed and percentages will be reported.

In applying content analysis the specified procedure followed must be systematic, validity must be ensured, the content must be quantified as numeral values or percentage frequencies and the meaning has to be interpreted in the context in which the research problem originated

(Du Plooy, 2001: 192). This research study adheres to these requirements because a systematic procedure will be followed, inter-code reliability will be addressed and the percentages and frequencies will be reported in chapter 7.

The distributed questionnaire represents the quantitative research part of this study and will be entertained further.

(b) Quantitative research

Some of the proposed propositions will be tested statistically. A structured approach to data gathering and analysing will therefore be followed. The survey method of obtaining information is such an approach and will be discussed further.

The survey method of obtaining information is based on the questioning of respondents. Respondents are asked a variety of questions regarding their behaviour, intentions, attitudes, awareness, motivations, and demographic and lifestyle characteristics. Questions may be asked verbally, in writing, or via computer. The questions are typically structured and in this type of research a formal questionnaire is used and the questions are asked in a pre-arranged order (Malhotra, 1996: 197).

In a structured direct survey the most popular data collection involves the administering of a questionnaire. Most of the questions are fixed-response alternative questions that require the respondent to select from a predetermined set of responses. In a survey the questionnaire is simple to administer and the data obtained are reliable because responses are limited to the alternatives stated.

The use of fixed-response questions reduces the variability in the results that may be caused by the differences in interviewers. It also simplifies the coding, analysis, and interpretation of data. Respondents may however, be unable or unwilling to provide the desired information if the information requested is personal and sensitive. Fixed-response alternatives may also result in loss of validity of certain data such as beliefs and feelings (Malhotra 1996: 197).

Researchers' choices of survey techniques can change over time. According to Dillon *et al.* (1993: 154), the two data-collection methods used most often were telephone surveys and mall-intercept surveys. The use of the Internet has however changed that. Sheehan & Hoy (1999) are of the opinion that the Internet's potential for academic and applied research has recently begun to be acknowledged and assessed. They contend that the growth rate of the Internet presents on-line users and researchers with a growing potential for interaction. The Internet offers both web page based surveys and e-mail for researchers to use in their data collection.

The empirical part of this study consisted of a structured questionnaire distributed via e-mail. E-mail as a data collection method however, has its advantages as well as disadvantages. Sheehan & Hoy (1999) have identified certain advantages and limitations to the use of e-mail namely:

1. **Penetration of e-mail.** As many as 100 million people world wide have access to e-mail (Sheehan & Hoy, 1999). This number of individuals using the media and the ease and frequency with which they can be contacted makes e-mail a viable research method. All the top organisations in South Africa (sample of study) have web pages, and therefore access to e-mail.
2. **Accessibility of names.** A lack of a national directory of e-mail addresses could be seen as a limitation to this study. Although the organisations that form part of the sample have e-mail addresses available through the Share Date website, some of them are outdated or does not give the researcher the right contact person for this specific study (Sheehan & Hoy, 1999).
3. **Anonymity and confidentiality.** E-mail surveys can guarantee anonymity through the use of encryption technology, and confidentiality can be guaranteed through confidentiality assurances (Sheehan & Hoy, 1999).
4. **Identifying duplicate responses and non-response.** E-mail presents a benefit over postal mail since e-mail can be tracked and previous respondents can be eliminated from follow-up e-mail. It also allows the researcher to develop a profile of non-respondents (Sheehan & Hoy, 1999).
5. **Cost benefits.** Cost savings, compared to traditional mail and telephone surveys, are based on low transmission costs and the elimination or reduction of paper costs.

6. **Ease and flexibility of responding.** When respondents perceive new technology as easy to use, they seem more likely to respond. All the organisations that form part of this study have access to e-mail. An inference can therefore be drawn that all the respondents are familiar with the use of new technologies such as e-mail (Sheehan & Hoy, 1999).
7. **Response rate.** According to Sheehan & Hoy (1999), the evidence on whether new technologies produces a higher response rate or not is still unclear. Niewenhuizen (2000) however, indicated in his unpublished Masters Dissertation that he sent out 100 questionnaires via e-mail and only 19 responded. This could pose as a possible limitation to this study.
8. **Response time benefits.** Data can be collected more quickly using e-mail than with postal mail methods (Sheehan & Hoy, 1999).

The above discussion highlighted the advantages as well as the disadvantages of using the Internet as a data collection method. Section 6.3.1 and 6.3.2 focused on the sources of data and data collection methods. Section 6.3.3 will provide an insight into the design of the sampling plan.

6.3.3 Sampling plan

Martins *et al.* (1996: 252) identified five distinctive steps in sampling, namely:

- Step 1: Defining the population
- Step 2: Identifying the sample frame
- Step 3: Selecting the sample method
- Step 4: Determining the sample size
- Step 5: Selecting the sample elements

These five steps as applied to the research study will now be discussed further.

(a) Defining the population

The first step in the sampling process is defining the universe (Sudman & Blair, 1998: 334). The universe or population is the total group that is studied (Blankenship & Breen, 1993: 167) and is the aggregate of all the elements (Martins *et al.*, 1996: 251).

According to Sudman & Blair (1998: 334), the first step in defining the population is to define the population units. Trochim (1997) notes that it is very important to define the unit of analysis, which refers to the major entity that the researcher is analysing in the study. According to him, the analysis one does in the study determines what the unit is and not the sample one is selecting.

Martins *et al.* (1996: 251) define a population in terms of elements, sample units, time, and size. In context of this research scope these are specified as follows:

Element: Financial Mail's top performers

Sample unit: Financial Mail's top performers

Time: 2001

Size: Organisations listed on the Johannesburg Securities Exchange in South Africa

The top organisations in South Africa were chosen on the assumption that these organisations are likely to have a communication (PR) and/or a marketing department. Due to the exploratory nature of the study the researcher envisaged to explore the current de facto situation at top South African organisations regarding communication practices.

To compile a list of the top South African organisations, the Financial Times' 2001 survey on top organisations were used. The Top Performers table in this survey is being regarded as the most meaningful measure - the table ranks organisations on a five-year return to shareholders. The Market Value Added (MVA) and Economic Value Added (EVA) tables indicate shareholder returns and whether or not organisations are adding value for shareholders. It must be kept in mind however, that historical performance is not a predictor of the future as too many of the Top Performers have failed to reproduce their five-year performance.

The list compiled on the 2001 survey was based on the Top Performers table. To qualify for this ranking, organisations need to be listed for at least five years. The long-standing size-based criteria used in past surveys have fallen away. Previously, organisations had to be of sufficient substance to qualify for the Top Performers ranking based on total assets and had to have a market capitalisation of at least R100m. This has however allowed a surfeit of "small cap" organisations to qualify for the Top Performers ranking. The only contenders excluded from the Top Performers sample for 2001 were investment trusts, property trusts, property loan, stock organisations and cash organisations (Hasenfuss 2001).

The new criteria for 2001 produced a sample of 250 organisations, which is more than double the sample size of the previous two years. The universe or population is the total group that is studied: thus the 250 organisations identified in the 2001 survey as the top performers. An alphabetical list of the organisations based on the 2001 survey is included in Appendix 3.

(b) Identify the sample frame

Once the population is defined, the next step is to obtain a frame of the population (Sudman & Blair, 1998: 338). "This is a record of all the sample units available for selection at a given stage of the sampling process" (Martins *et al.*, 1996: 252).

The availability of a sampling frame is one of the most critical factors in determining a sample design. "If such a frame is available, the task of sample selection is significantly reduced. If no frame is available, researchers will essentially need to construct their own frames, a difficult, costly, and time-consuming task" (Sudman & Blair, 1998: 338).

The sample frame that will be used in this study is the organisations listed as the Financial Mail's 2001 Top Performers. A list was compiled that contained the names of these organisations. The researcher used Sharedata, the electronic version of the top selling Profile's JSE Handbook, South Africa's leading JSE reference to gain access to the organisations' general information. An e-mail request was sent to the e-mail addresses provided for general questions. The researcher requested details of the necessary contact person(s). From the responses the researcher then compiled a list of contact people, telephone numbers, fax

numbers and e-mail addresses, based on this information. Some of the e-mail addresses gave an error message and a fax with the same wording as the e-mail was sent to the organisation's fax number. A follow-up was also done in the form of a telephone enquiry.

(c) Selection of the sampling method and sample size determination

Martins *et al.* (1996: 253) divide sampling methods into two broad categories: probability and non-probability sampling. In a probability sample every element has a known non-zero probability of being selected. It is unnecessary to have an equal chance of being selected, but each element must have a chance and that chance must be known so that the sampling results can be applied to the universe (Martins *et al.*, 1996: 253). In non-probability sampling the samples are chosen based on the judgement of the researcher and are only as representative as the researcher's luck and skill permit. In non-probability sampling there is no way of estimating the probability that any element will be included in the sample, and therefore there is no method of finding out whether the sample is representative of the population (Martins *et al.*, 1996: 253).

Probability and non-probability sampling are however used where the population size exceeds 500 elements. If the population size is 500 elements or less, Hair, Bush and Ortinau (2000: 343) advocate that a census should be done of the population elements rather than estimating the correct sample size. The population identified in section 6.3.3(a) comprised the 250 organisations identified as the top performers in Financial Mail's 2001 survey. A census was therefore done of the population elements and all 250 organisations were included in this study.

After identifying the source and collection of data and designing the sampling plan the questionnaire must be designed. An insight is however needed into the different measurement scales available to the researcher before the process of questionnaire design can be further explained. Measurement and measurement scales will therefore be entertained in section 6.3.4.

6.3.4 Measurement and measurement scales

Cooper and Schindler (1998: 159) contend that measurement is the assigning of numbers to empirical events in compliance with a set of rules. Dillon *et al.* (1993: 302) describe it as a process of assigning numbers to objects to represent quantities of attributes.

(a) Measurement scales

Cooper and Schindler (1998: 160) characterise the most accepted base for scaling as follows:

- Numbers are ordered. One number is greater than, less than or equal to another number.
- Differences between numbers are ordered. The difference between any pair of numbers is greater than, less than, or equal to the difference between any other pair of numbers.
- The number series has a unique origin indicated by the number zero.

Cooper and Schindler (1998: 161) summarise the classification of measurement scales as follows in table 6.3:

TABLE 6.3: CLASSIFICATION OF MEASUREMENT SCALES

<i>Types of Data</i>	<i>Characteristics of Data</i>	<i>Basic Empirical Operation</i>
Nominal	No order, distance or origin	Determination of equality
Ordinal	Order but no distance or unique origin	Determination of greater or lesser values
Interval	Both order and distance but no unique origin	Determination of equality of intervals or differences
Ratio	Order, distance, and unique origin	Determination of equality of ratios

Source: Cooper and Schindler (1998: 161)

Sudman & Blair (1998: 448) classify scale types as follows:

- *Ratio scale* variables have properties of order among scale points, equal distances among all adjacent scale points, and an absolute zero.

- *Interval scale* variables do not have the property of an absolute zero but have the properties of order among scale points and equal distances among scale points.
- *Ordinal scales* variables have only the property of order among scale points.
- *Nominal scales* are simply names for the categories and do not have the property of order among them.

The scale types used in a survey will affect the applicability of the various summary measures as described in table 6.4.

TABLE 6.4: SCALE TYPES

Scale type	Mathematical Properties	Applicable Summary Statistics
Nominal	None	Mode
Ordinal	Order	Median
Interval	Order, equal intervals	All (mean, median, mode, variance, standard deviation, interquartile range)
Ratio	Order, equal intervals, absolute zero	All

Source: Adapted from Sudman & Blair (1998: 460)

Cooper and Schindler (1998: 184) define scaling as “...a procedure for the assignment of numbers (or other symbols) to a property of objects in order to impart some of the characteristics of numbers to the properties in question”. Cooper and Schindler (1998: 186) differentiate between rating and ranking scales. Only rating scales and open-ended questions will be used in the questionnaire for this research. The rating scales used in the questionnaire will be discussed next.

- **The multiple choice, single response scale:** Appropriate when there are multiple options and only one answer is sought. The primary alternatives should encompass 90 percent of the range with the “other” category completing the respondent’s list. This scale produces *nominal data*.

- **The Likert scale:** This scale is the most frequently used variation of the summated rating scale. Summated scales consist of statements that express either a favourable or unfavourable attitude toward the object of interest. The respondent is asked to agree or disagree with each statement. Each response is given a numerical score to reflect its degree of favourableness. This scale produces *interval* data.

Cooper and Schindler (1998: 190) however, also highlight the problems that need to be considered as possible sources for errors. They identified three of the most common tendencies to cause errors namely, the errors of leniency, central tendency, and halo effect. The **error of leniency** occurs when a respondent is an “easy rater” or a “hard rater”. **Central tendency** can occur if a respondent is reluctant to give extreme judgements. The **halo effect** can occur when a rater introduces systematic biases by carrying over a generalised impression of the subject from one rating to the other (Cooper and Schindler, 1998: 191).

A standard five-point Likert-scale, which is often referred to as a summated-ratings scale (Churchill, 1992: 405), will be used in some of the questions of the research at hand to ensure consistency and ease of completion. A nominal scale will be used for the questions on demographics of the organisations, which were in the form of multiple-choice questions with single answers.

Open-ended (unstructured) questions will also be used to investigate the respondents’ personal views in regards to certain aspects. Each question will be discussed in detail in section 6.3.5 under questionnaire design and testing.

6.3.5 Questionnaire design and testing

Dillon *et al.* (1993: 302) contend that question wording is a crucial element in maximising the validity of survey data. They therefore propose three general guidelines to keep in mind when constructing a questionnaire.

- Specific questions must only be written down after the research objectives and propositions have been thought through.

- When working on the questionnaire one needs to refer back to the objectives and propositions.
- Consider how the information obtained from response will help answering the research objectives and propositions before a question is formulated.

(a) Response formats

Dillon *et al.* (1993: 309) identified two response formats, namely open-ended and close-ended questions. Both response formats will be used in the questionnaire and will therefore be discussed further.

(i) Open-ended questions

The respondent is allowed to choose any appropriate response within the limits implied by the question (Dillon *et al.*, 1993: 309). Reasons for using open-ended questions that apply to the research include the fact that it is useful to check and/or corroborate the results of quantitative or closed-ended questions. Open-ended questions may also be used to develop a wider range of response than is possible using quantitative or structured questions (Dillon *et al.*, 1993: 310).

Limitations associated with open-ended questions that the researcher should keep in mind are the fact that open-ended questions are not well suited for self-administered questionnaires and answers to open-ended questions may only be more of an indication of the respondents' knowledge about or interest in the issue being investigated. Interview bias can also be a serious problem with the use of open-ended questions and they must be coded or categorised for analysis, which can be a tedious task laden with ambiguities (Dillon *et al.*, 1993: 310).

(ii) Itemised (close-ended) questions

This kind of question requires respondents to select from specified numbers or descriptions the one that best describes their feelings. The obvious advantages of close-ended question format according to Dillon *et al.* (1993:310) relate to their ease of use in the field, their ability to reduce interview bias, and their ability to reduce bias based on differences in how articulate respondents are.

(b) Constructing the questionnaire

The questionnaire was divided into six sections as can be observed in the final questionnaire on pages 1 – 7 in Appendix 1:

- **Section A:** Classification questions.
- **Section B:** Business environment questions.
- **Section C:** Questions related to the communication function in an organisation.
- **Section D:** Viewpoints on integrated communications.
- **Section E:** The relationship between marketing and public relations.
- **Section F:** Open questions related to integration of communications.

(i) Questions in Section A

Question 1 is a classification question formulated to be able to distinguish between marketing and communication managers as well as to determine if one person is responsible for both.

(ii) Questions in section B

Questions 2-3 were included to distinguish between the various industries and sizes of communication and marketing departments for the formulation of hypotheses to test in a future study.

(iii) Questions in Section C

Question 4 was formulated to determine how communications (PR and marketing communications) were structured in the organisation. Question 5 also relates to structuring approaches followed.

Question 6 is an open-ended question to determine if an organisation follows a completely different approach with regard to structuring policies. Question 5 and 6 were included to address the primary objective of structuring in the organisation. Question 7 relates to the different models of public relations identified by Grunig and Hunt (1984). Statements were derived from the descriptions in the literature that focused on the models. Question 8 relates to ways in which organisations communicate to all stakeholders and also address the primary objective (as databases might form part of the proposed framework).

(iv) Questions in Section D

Question 9 is a probing question to determine the familiarity of the respondents with the concept of integrated communications. Explanations on the concepts and terms used are given after the question to eliminate bias. Question 10 aims to test the viewpoints of the respondents on integrated communications in general and not how it is performed in their organisation. Statements were again extracted from the literature discussion on integrated communications. Question 11 attempts to establish if the respondent's organisation integrates their communication efforts. Question 12 and 13 are open-ended questions endeavouring to determine the approach used to integrate all communications.

(v) Questions in Section E

Question 14 is based on the models of Kotler and Mindak (1978) where they attempt to explain the relationship between marketing and public relations. Although the models might be dated they still describe the essence of the debate centring on the relationship between these two functions. Question 15 is an open-ended question and might indicate if the models are totally dated and whether respondents have a completely different perception on the relationship.

(vi) Questions in Section F

Question 16 and 17 (and question 6 previously mentioned in Section C) are open-ended questions formulated to gain a deeper insight into how marketing and communication managers view integrated communication in terms of reporting structure and responsibility.

According to Sudman & Blair (1998: 300), however, there is always a possibility that some questions in a questionnaire could cause problems and questionnaire testing is needed to identify and eliminate these problems.

- **Testing of the questionnaire**

The questionnaire was tested by distributing a copy of the questionnaire to 10 respondents in different fields ranging from academics to communication and marketing managers. Interviews were personally conducted afterwards with the respondents to determine the underlying weaknesses of the questioning and how to go about correcting them. The questionnaire was adapted after the pilot phase and some statements, which proved to be unclear, were deleted.

The findings and recommendations based on the questionnaire and the interviews will be discussed in chapter 7.

(vii) Code sheet

A similar code sheet used by Carroll (2002) to do a content analysis of the top 500 Irish organisations' corporate websites will be employed in this research (Appendix 2). The code sheet was tested and can be used to replicate the study. The codes in categories 1-7 and 12 were based on the codes used by Carroll (2002). The codes in categories 8-11 were based on the five principles identified by Kent and Taylor (1998) that offer guidelines for the successful integration of dialogic public relations via the Web.

Category 9 on the coding sheet that addresses the responses sent by an organisation was included to determine if organisations have organisational members who are trained to respond to electronic communication. Trained members are necessary to ensure the completeness of the dialogic loops incorporated into the organisations' web sites.

A glossary of the content analysis document was also compiled to explain the coding used and to ensure that the study could be replicated (Appendix 2).

Table 6.5 indicates the linkage between the questions, research objectives and research propositions.

TABLE 6.5: THE LINKAGE BETWEEN THE QUESTIONS, RESEARCH OBJECTIVES AND PROPOSITIONS

Questions linked to secondary objectives		Questions
(a)	To ascertain whether there is a dominant public relations model (advanced by Grunig & Hunt 1982) favoured by most of successful South African organisations.	7
(b)	To establish what the relationship is between the marketing and public relations function in successful South African organisations.	14,15
(c)	To determine the viewpoints of marketing and communication managers on integrated communications in successful South African organisations.	1, 9, 10, 16 & 17
(d)	To investigate how public relations/communication departments compare with the criteria prescribed by Grunig and Grunig (1998) for public relations to remain excellent within the IC framework.	4, 11, 12 & 13
(e)	To ascertain how successful South African organisations are using their corporate websites for communications purposes.	Code Sheet
(f)	To determine if successful South African organisations integrate dialogic public relations, that is needed to build relationships with publics, through their websites.	Code Sheet
Questions linked to propositions		Questions
Proposition 1:	There is a single integrated communication department in successful organisations in South Africa [Supportive to objective (d) & primary objective].	4, 5, 6, 8, 11, 12 & 13
Proposition 2:	Successful South African organisations practice the two-way symmetrical model of communication. [Supportive to objective (a) & primary objective].	4, 5, 6, 7, 8, 11, 12 & 13
Proposition 3:	Successful South African organisations conform to the criteria prescribed by Grunig and Grunig for public relations to remain excellent within the IC framework. [Supportive to objective (d) & primary objective].	4, 5, 6, 8, 11, 12 & 13
Proposition 4:	The relationship between marketing and public relations in successful South African organisations differ from theoretical models [Supportive to objectives (b) & primary objective].	4, 5, 6, 8, 11, 12 & 13
Proposition 5:	Marketing and communication managers have different viewpoints with regards to integrated communication in successful South African organisations [Supportive to objective (c)].	1, 9, 10, 11, 16 & 17
Proposition 6:	Successful South African organisations' do not exploit the full communication potential provided by their websites. [Supportive to objective (e)]	Code sheet: Categories 1 - 11
Proposition 7:	Successful South African organisations do not create dialogic relationships with their stakeholders through their websites.[Supportive to objective (f)]	Code sheet: Categories 7, 8, 9, 10, 11

Table 6.6 illustrates the linkage between the sections, questions, question formats and the different scale types used in the questionnaire.

TABLE 6.6: THE LINKAGE BETWEEN THE SECTIONS, QUESTIONS, QUESTION FORMATS AND DIFFERENT SCALE TYPES

Section	Question	Question format	Scale type
Section A	1	Closed-ended	-
Section B	2	Open-ended	
	3	Closed-ended	
Section C	4	Open-ended	-
	5	Closed-ended	-
	6	Open-ended	-
	7	Closed-ended	3 point Likert scale
	8	Open-ended	-
Section D	9	Closed-ended	5 point Likert scale
	10	Closed-ended	5 point Likert scale
	11	Closed ended	
	12	Open-ended	
	13	Open-ended	
	14	Closed-ended	
Section E	15	Open-ended	
	16	Open-ended	
Section F	17	Open-ended	

It is eminent from table 6.6 that a great deal of open-ended questions were included in the questionnaire. This can be attributed to the exploratory nature of the study.

After the data has been collected the data must be analysed and interpreted. The data analysis used in this study will be discussed in the next section.

6.4 Data Analysis

Due to the exploratory nature of this study, exploratory data analysis will be used. An important attribute of this type of data analysis lies in its flexibility to respond to the patterns revealed by successive iterations in the discovery process (Cooper & Schindler, 1995: 426).

The first step however in data analysis is to edit the raw data. Before discussing the data analysis techniques used in this study editing and coding will first be explored.

6.4.1 Editing and coding

According to Martins *et al.* (1996: 295) “*editing entails a thorough and critical examination of a completed questionnaire in terms of compliance with the criteria for collecting meaningful data and in order to deal with questionnaires not duly completed*”. All questionnaires, once received, will be edited and checked for completeness and accuracy. Although it is quite legitimate for an editor to complete a missing answer (Martins *et al.* 1996: 298) in this empirical study the researcher will not complete any incomplete answers as it could bias the responses.

Coding refers to the process whereby codes are assigned to the answers of respondents (Martins *et al.*, 1996: 299). A coding frame was drawn up where every answer will be coded in order to simplify the capturing of the data. Numerical values were assigned to the close-ended questions during questionnaire design. Responses to open-ended questions will be written down and grouped together according to categories.

6.4.2 Data processing, basic analysis and evaluation of results

The responses from the questionnaire will be directly captured from the questionnaire using software packages at the Department of Statistics at the University of Pretoria. Some basic calculations will be made to check the reliability of the data.

Finally, the data will be imported into the statistical software programme where the final analysis will be made. The answers from the coding sheet used in the content analysis part of this research will be captured in Microsoft excel and basic calculations will be done. The personal interviews will be recorded and interpreted. The results from the questionnaire and content analysis as well as the interpretations from the personal interviews will be discussed in chapter 7.

This study does not attempt to test hypotheses and adopts a descriptive focus. With a descriptive focus the aim is to provide a summary picture of the sample in terms of the variables of interest. Descriptive statistics are used to undertake a descriptive analysis (Diamantopoulos & Schlegelmilch, 2000: 65).

In descriptive statistics the starting point is the construction of a frequency distribution for each variable of interest. Absolute (simple counts) or relative (percentage) terms are used to show how often the different values are encountered in the sample. This indicates how “popular” the different values of the variable are among the units of analysis. Absolute (simple counts) and relative (percentages) frequencies can be used to describe the data. Cumulative frequency distributions can also be constructed with ordinal-, interval- and ratio-level variables. Cumulative frequencies result in the adding of the frequencies associated with a particular value to the sum of the frequencies corresponding to all preceding values. (Diamantopoulos & Schlegelmilch, 2000: 65).

Due to the exploratory nature of this study frequency distribution will mostly be used to describe the data resulting from both the questionnaire and the coding sheet. The frequency distribution used will provide a summary picture of the sample in terms of the variables of interest and will be used to address the various propositions formulated.

Proposition 5 however, involve comparing different groups across the same measure variable and non-parametric testing in the form of a Kruskal-Wallis one-way ANOVA test will be used to address this proposition. Non-parametric testing will be explored further in the next section.

(a) Nonparametric tests

Nonparametric tests are used to test propositions with nominal and ordinal data. The relatively small sample size of this study necessitates the use of nonparametric tests as they have fewer and less stringent assumptions. Normally distributed populations or homogeneity of variance are not a requirement.

Nonparametric tests are also the only tests usable with nominal data and are the only technically correct tests to use with ordinal data, although parametric tests are sometimes employed (Cooper & Schindler, 1995: 479).

Proposition 5 requires that different groups are being compared across the same measure. Three groups will be compared on an interval scale through the Kruskal-Wallis one-way ANOVA. This nonparametric test will therefore be entertained further.

(i) Kruskal Wallis one-way ANOVA

A Kruskal Wallis one-way analysis of variance (ANOVA) will be used in comparing an ordinal variable across three or more independent groups. The test statistic associated with the K-W one-way ANOVA is based on an approximation of the chi-square distribution with $k-1$ degrees of freedom, where k is the number of groups compared (Diamantopoulos & Schlegelmilch, 2000: 65).

The Kruskal-Wallis test is appropriate for data that are collected on an ordinal scale or for interval data that do not meet F-assumptions, that cannot be transformed, or that for some other reason prove to be unsuitable for a parametric test. K-W is a one-way analysis of variance by ranks. It assumes random selection and independence of samples, and an underlying continuous distribution. Data are prepared by converting ratings or scores to ranks for each observation being evaluated.

The ranks range from the highest to the lowest of all data points in the aggregated samples. The ranks are then tested to decide if they are samples from the same population (Cooper & Schindler, 1995: 501). The Kruskal Wallis test will be used by comparing the groups identified in question 1 with the statements in question 10 to address proposition 5. The interpretation of the test results will be presented in chapter 7.

6.5 Summary

This chapter provided a description of the research methodology used in this study. This research study can be classified as exploratory research in order to provide insights into the research problem. In proposing a framework for structuring integrated communication, priorities for future research will be identified. The literature review increased the understanding and familiarity with the concepts identified and discussed. The researcher will make use of secondary and primary data as a source of data. The data collection was divided into a questionnaire, in-depth interviews and a content analysis of organisations' websites. The population to be researched consists of the top South African organisations identified by the Financial Mail. Various measurement scales will be used in the questionnaire. Open-ended questions will also be used as a way of collecting more information. The various questions in the questionnaire were discussed and explained. The coding sheet used for the content analysis was also discussed.

The study does not aim to test hypothesis and descriptive statistics will mainly be used. Due to the sample size and the exploratory nature of this study frequency distribution will be used to describe the data resulting from the questionnaire and the data sheet. The frequency distribution provides a summary picture of the sample in terms of the variables of interest and will be used to address the various propositions formulated. A Kruskal-Wallis one-way analysis of variance (ANOVA) will be used to address proposition 5 as it involved the comparison of different groups among the same measure variable.

The next chapter will provide a discussion on the results and interpretation thereof together with the outcomes of the different research propositions as formulated in the introductory chapter and substantiated in chapter five.