IMPACT OF BRAND IDENTITY ON

PERCEIVED BRAND IMAGE OF THE

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千里之行，始于足下

A thousand mile journey begins with the first step

– the highest eminence is to be gained step by step.

Lao Zi

Chinese philosopher

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ABSTRACT

Since 1994, South Africa has witnessed the fundamental transformation and restructuring of its Higher Education Sector. The restructuring of Higher Education Institutions in the Eastern Cape Province is manifested by *inter alia* the incorporation of the Port Elizabeth branch of the Vista University into the University of Port Elizabeth as a first phase and, as the final phase, the merger between the University of Port Elizabeth and the Port Elizabeth Technikon. A new, comprehensive university, the Nelson Mandela Metropolitan University (NMMU), emerged from this merger on 1 January 2005. The previous institutions each had its own unique brand identity, brand image and brand name. With reference to the newly established NMMU, the question can be raised whether the brand identity of this newly established institution impacts on its perceived brand image among all stakeholders who have an interest in the institution.

Given the merger background, the purpose of this research project is twofold: firstly, to analyse the impact of independent variables ('reputation', 'relevance', 'personality', 'performance' and 'relationship') on brand identity (moderating variable) and the impact of brand identity on brand image (dependent variable); and secondly, to gauge the perceptions of NMMU stakeholders of the brand image of the University in terms of both expectations and actual experiences. In order to give effect to the above, a conceptual model on brand identity and brand image based on secondary sources on branding, was empirically tested.

Given the purpose and nature of the research in question, a positivistic research paradigm was adopted. By means of a Likert seven-point scale, primary data was sourced from 1 092 respondents, who shared their perceptions on the expectations and actual experiences of using the NMMU brand.

The statistical analysis of the data comprised six phases. Initially, the data was subjected to an exploratory factor analysis to assess the discriminant validity of

the research instrument. This was followed by an assessment of the reliability of the research instrument through an internal consistency measure (Cronbach alpha reliability coefficients). The items that remained were included in the multiple regression model to assess the impact of brand identity variables on brand identity. The next phase comprised a regression analysis of the impact of brand identity on brand image. Fifthly, to assess any differences between stakeholders' expectations and actual experiences when using the NMMU brand, pair-wise t-tests were performed. Finally, to gauge the level of satisfaction of NMMU stakeholders when using the brand, a "gap" analysis was conducted by converting the mean scores into relative percentage ratings.

The empirical findings did not fully support the conceptual model. The testing of the conceptual model revealed that the independent variable 'relevance' did not demonstrate sufficient discriminant validity and, as a result, no evidence of construct validity. This variable therefore had to be removed from the conceptual model before it was subjected to further empirical assessment by means of the multiple linear regression analysis. Based on this finding on 'relevance', NMMU marketing communication strategists could perform an in-depth investigation on the positioning of the brand.

Further, it was found that the dependent variable 'brand image' was not a uni-dimensional construct as suggested in the conceptual model. Ideally, images (in this case, brand images of the NMMU) should feed into strategic vision, serving as a mirror in which a university can reflect on its true standing. This implies that instead of using stakeholder images as exact assessments of brand performance compared with strategic vision, images held by stakeholders of who the university is and what it stands for (e.g. personality and relevance comparisons) should become part of the strategic envisioning process. The linkage between strategic intent and brand image should be evident.

The results of the pair-wise t-tests revealed that significant statistical differences

existed between stakeholders' perceptions of the expected and actual experiences when using the NMMU brand. To assess the magnitude of a possible 'gap' between stakeholders' expectations and actual experiences of the NMMU brand, mean score differences were converted into relative percentage ratings.

The most significant findings on actual experiences (on which the level of satisfaction is based) of the NMMU brand are as follows:

➢ All relative rating scores were below 92.05%. These relative satisfaction percentages imply that respondents were not satisfied with the NMMU brand, because their expectations were not fully met.

➢ The highest rating percentage (92.05%) was obtained in respect of the statement regarding "The NMMU slogan ('*for tomorrow*') reflects the NMMU brand identity".

➢ The lowest rating percentage (78.33%) was given to the statement "The NMMU brand exceeds expectations in terms of promises".

➢ The second lowest rating percentage (79.67%) was found for the statement "The NMMU brand delivers on promises".

The principal recommendations emanating from this study are summarised in three groups of recommendations, namely:

➢ Recommendations pertaining to the strategic implications of the findings for the NMMU marketing communication strategists.

➢ Recommendations pertaining to the interpretation of secondary sources on brand literature, and

➢ Recommendations for future research.

KEY WORDS: Brand communication; Brand identity; Brand image; Brand performance; Brand personality; Brand relationship and associations; Brand relevance; Brand reputation; Brands; Corporate branding.

CHAPTER ONE

INTRODUCTION AND PROBLEM DEFINITION

1.1 INTRODUCTION AND BACKGROUND TO RESEARCH

South Africa is currently (2005) engaged in the fundamental transformation and restructuring of its Higher Education Sector. The main thrust of this transformation/restructuring is to integrate Higher Education Institutions into a coherent and coordinated system that will promote social equity by enabling the advancement of the historically disadvantaged groups of the South African society. Other priorities of this new institutional landscape are developing high-level human resources; addressing the pressing socio-economic challenges facing South Africa; and building the country's economy (Transformation and restructuring: A new institutional landscape for higher education, Ministry of Education 2002).

The restructuring of Higher Education Institutions in the vast Eastern Cape Province of South Africa is manifested by *inter alia* the incorporation of the Port Elizabeth branch of Vista University into the University of Port Elizabeth as a first phase and, as the final phase, the merger between the University of Port Elizabeth and the Port Elizabeth Technikon. A new comprehensive university, the Nelson Mandela Metropolitan University (NMMU), emerged from this merger and came into existence on 1 January 2005.

It is a reality that each of the aforementioned previous institutions had its own unique brand identity, brand image and brand name. With reference to the newly established NMMU, the question can be raised whether the new brand identity of the newly established NMMU impacts on the perceived brand image of the NMMU among all stakeholders who have an interest in the institution.

Key stakeholders of the NMMU include students; academic, administrative and technical staff; parents of students; alumni; the national and provincial governments; and the local business community at large.

FIGURE 1.1:   Comprehensive theoretical model on brand identity and brand image
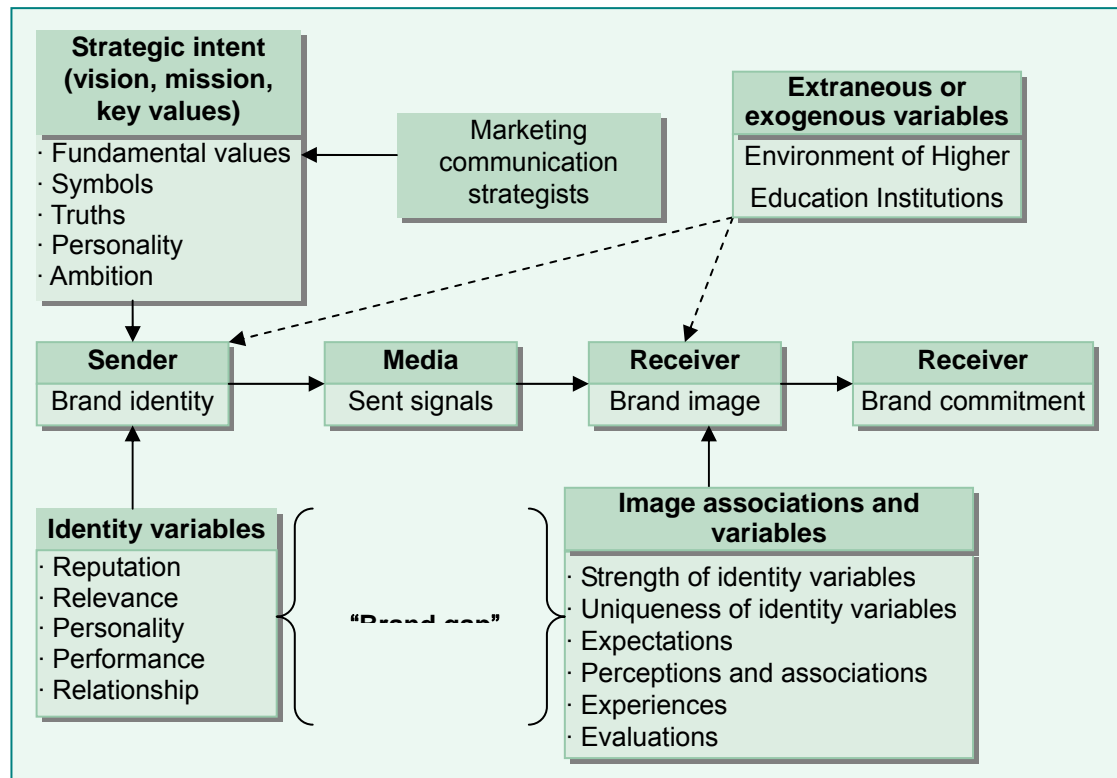
Sources: Adapted from Coop (2004); Kapferer (1997)

The question raised is illustrated in Figure 1.1, which presents a comprehensive theoretical model depicting certain brand identity and brand image relationships. From Figure 1.1, it is evident that marketing communication strategists are responsible for the creation of the NMMU brand identity (via various channels of communication), where the brand image needs to be established among various receiver groups (such as students and other stakeholders). Also shown in Figure 1.1 is a potential (theoretical) "brand gap", which may have various causes. Possible causes of this "brand gap" may be related to the inadequate and ineffective brand identity launch by the NMMU

marketing communication strategists (the sender). On the receiver's side, insufficient brand image associations may apply, which in turn may have a psychological grounding. The variables that impact on brand identity and brand image require an in-depth investigation in the context of the NMMU. It is important to note that, as shown in Figure 1.1, brand identity precedes brand image (Kapferer 2004:98).

For the purpose of this research, brand identity is seen as the visual and verbal expression of a brand. Identity supports, expresses, communicates, synthesises and visualises the brand (Wheeler 2003:4). Brand identity is described by Coop (2005:36) in terms of the psychological and emotional associations that the brand aspires to maintain in the minds of consumers. The role of the vision, mission and value statements of the NMMU (strategic intent) must also be acknowledged in shaping the brand identity.

Brand identity in general is shaped by the laminating (bonding) effect of the strategic intent, as well as by five key variables, namely the reputation; relevance; personality; performance; and relationship of the brand. Ideally, the corporate profile, vision, mission, key values and principles should be bonded with the brand identity variables. These variables are associated with a number of attributes that the marketing communication strategists should communicate, either implicitly or explicitly. The core brand identity building attributes are listed in Table 1.1.

To have a better understanding of the above concepts, and to further explain Figure 1.1, it is appropriate to introduce the concept 'brand knowledge'. Brand knowledge (for the research in question, brand knowledge of the NMMU specifically), is determined by brand awareness and brand image (Shimp 2003:38; Keller 1993:7). Brand awareness relates to brand recall and brand

recognition, whilst brand image is determined by the strength and uniqueness of the brand associations (Shimp 2003:38; Keller 1993:7).

Building a reputable brand image is particularly relevant when the organisational or corporate brand plays a prominent role in the branding strategy that is adopted. The NMMU brand image may be reflected by the associations and perceptions of students and other stakeholders about what the NMMU stands for as a provider of educational services to the community at large.

TABLE 1.1:   Core brand identity variables and attributes

Variables	Attributes
Brand reputation	Trust in the brand Reliability of the brand Honesty of the brand communication strategists Heritage, legacy and tradition of the brand Clear communication message Consistency – a clear brand identity to be communicated Credibility in advertising (marketing communication media)
Brand relevance	Needs to be satisfied – and values addressed Meaning fit of the brand (relevance to the institution, e.g. NMMU) Innovation and originality of the brand Academic value in harmony with stakeholders' needs The brand is well accepted by stakeholders
Brand personality	Sincerity of the brand Level of excitement created by the brand Competence reflected by the brand Sophistication and superiority of the brand Ruggedness and resilience of the brand
Brand performance	Exceeds expectations Delivers on promises Delivers tangible benefits Reflects value for money
Brand relationship	Understand how stakeholders feel Stakeholders will use this brand for a long time Actively investigate what is important to stakeholders Stakeholders have to enjoy using the brand Probability of non-usage of the brand

Source: Adapted from Coop (2004:114)

Figure 1.1 further shows that the brand image is established via media signals, such as printed marketing communication material. As indicated in the previous paragraph, brand image can be defined as a reflection of brand associations and perceptions (Keller 2003:66; Shimp 2003:52). In the case of the NMMU, the brand associations and perceptions are those held by students and other stakeholders. The brand image is more specifically shaped by six clusters of associations and variables, namely strength; uniqueness; expectations; perceptions; experiences; and evaluations of the brand.

➢ *Strength*: The strength of a brand image (brand association) is determined by the magnitude and complexity of the brand identity signals to which the students and other stakeholders are exposed, as well as the complexity of the processing of the signals.

➢ *Uniqueness*: It is important to associate unique, meaningful attributes with the NMMU brand in order to provide a competitive advantage and "reason why" students and other stakeholders should use it (Keller 2003:730). The uniqueness of the NMMU brand identity should be communicated by the marketing communication strategists.

➢ *Expectations*: Brand expectations are linked to how brand users expect the brand to perform. NMMU brand expectations are determined by *inter alia* generic educational service attributes and benefits, such as the quality of educational services and the innovativeness of programme offerings.

➢ *Perceptions and associations*: In this research, a strong brand image association would involve the creation of student and stakeholder perceptions (awareness) that the NMMU provides tertiary educational services of the highest quality. An innovative brand association would involve the creation of student and stakeholder perceptions that the NMMU is developing new and unique academic programmes or improving existing programmes (Keller 2003:545). For example, it may be that the former

University of Port Elizabeth's brand image was that the University was Eastern Cape based and even apartheid created, whereas the newly established NMMU image could be regarded as that of a true African university and a real global player, with an innovative brand association.

➢ *Experiences*: Brand image associations can be shaped directly from students' and stakeholders' actual experiences and contact with the NMMU educational services and brand (Keller 2003:83).

➢ *Evaluations*: Evaluations refer to how brand users interpret and evaluate the NMMU brand and related marketing information. The brand image evaluation is determined by the perceptions, expectations and, most importantly, by the experiences of the brand in question (Coop 2004:235; Keller 2003: 450).

Brand identity creates perceptions among stakeholders about brand image. Linked to brand image is the concept 'brand commitment'. In the context of the NMMU, brand commitment relates to what stakeholders (for example, students and the general public) feel and think about the NMMU. Hofmeyr and Rice (2000:3) state that brand commitment reflects a state of mind, while Keller (2003:474) is of the opinion that brand commitment is a dedication to continued brand association and betterment of the relationship.

Also shown in Figure 1.1 is one group of extraneous or exogenous variables, namely the environment of Higher Education Institutions. The latter may have an effect on the brand identity and brand image of the NMMU. These environmental variables may include competitors (such as other Higher Education Institutions), and social influences, for example peer pressure, the financial and social considerations of students, and their choices of Higher Education Institutions.

Given the brand identity and brand image associations and variables as summarised in Figure 1.1, it is now appropriate to introduce a modified conceptual model that underlies this research and that will also be tested empirically.

FIGURE 1.2: Modified conceptual model on brand identity and brand image
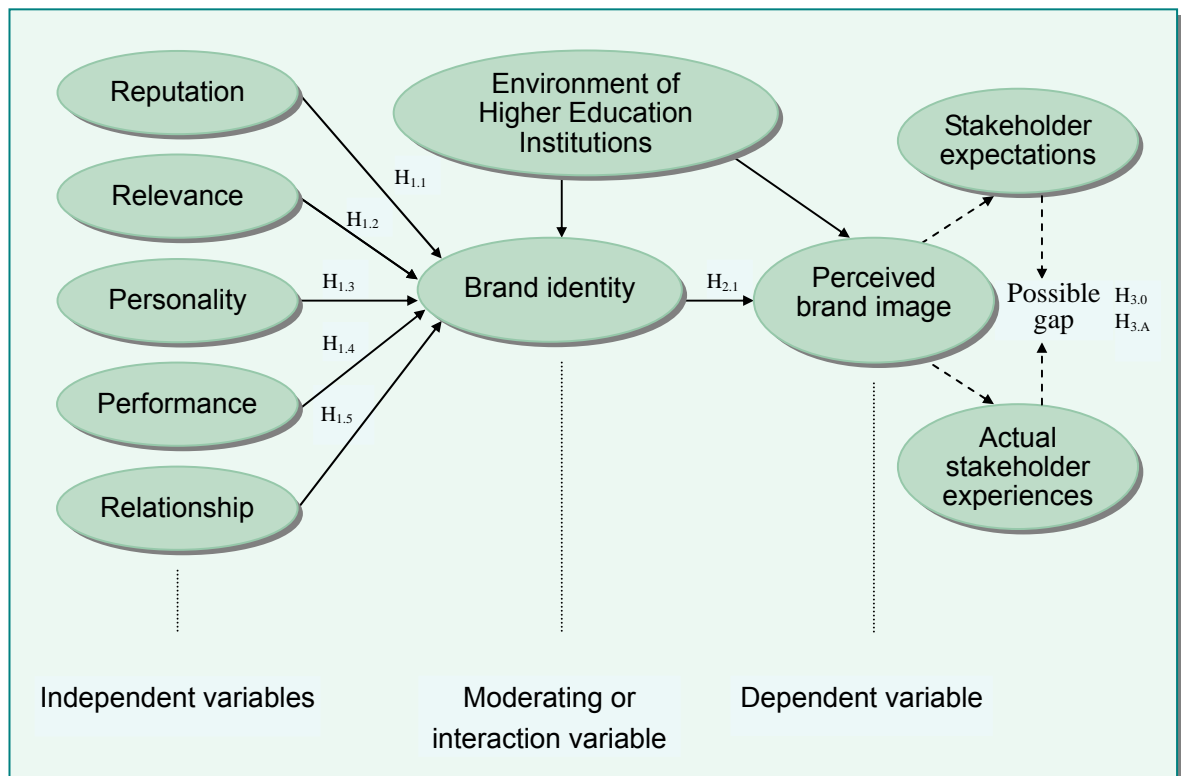
Source: As modified from Figure 1.1

The modified conceptual model (Figure 1.2) is based on the more comprehensive theoretical model, as shown in Figure 1.1. The modification was effected in order to depict the impact of brand identity on the perceived brand image of the NMMU in a more logical manner and to establish a link to the stated research objectives (see Section 1.3).

It is well accepted in brand literature that brand image is probably the single most important asset of any institution (Skinner, Von Essen & Mersam

2001:272). Therefore, the maintenance and enhancement of brand image is of the utmost importance, particularly for an institution of higher education, such as the NMMU. This also implies the necessity of periodic brand image assessments. Given the importance of brand image, the motivation underpinning this research on NMMU brand identity should be clear. The purpose of this research is to analyse the brand identity variables and their impact on perceived brand image, leading to the assessment of stakeholder perceptions of the brand image of the NMMU.

Based on the views of Kapferer (2004:98), Figure 1.2 shows that brand identity precedes brand image. The influence of the independent variables on brand identity and its shaping of brand image is depicted in Figure 1.2, which is the modified conceptual model supporting this research.

Five independent variables that impact on the moderating (interaction) variable, namely brand identity, are listed in Figure 1.2. As mentioned earlier, the strategic intent should ideally be manifested in the brand identity variables. As in Figure 1.1, it is implied in Figure 1.2 that the brand identity is shaped by five key identity variables, namely reputation; relevance; personality; performance; and relationship. The moderating variable, brand identity, is presented as a key driver of brand image. As in the case of the comprehensive theoretical model (Figure 1.1), a group of extraneous or exogenous variables, namely the environment of Higher Education Institutions, are depicted in Figure 1.2. The latter may have an effect on the moderating and dependent variables (see Figure 1.2). Also illustrated in Figure 1.2, linked with dashed lines to perceived brand image, are two ellipsoid (oval-shaped) areas (stakeholder expectations and actual stakeholder experiences). This construct reflects the objective of assessing the perceptions of stakeholders on expectations and actual experience of the NMMU brand image. Further, three sets of hypotheses, which

will be tested empirically, are shown in Figure 1.2. These hypotheses are presented in Section 1.4 of this chapter.

1.2   PURPOSE OF RESEARCH

The modified conceptual model underpinning this research (Figure 1.2) shows that brand identity, which acts as the moderating variable, is shaped by five independent brand identity variables, which further impact on the dependent variable, namely brand image. Brand image may also be influenced by the environmental variables linked to Higher Educational Institutions. This influence, however, will not form part of the focus of this research. The purpose of this analytical research project is twofold: firstly, to analyse the impact of the independent variables on brand identity (moderating variable) and its shaping of brand image; and, secondly, to gauge the perceptions of NMMU stakeholders of the brand image (dependent variable) of the institution, in terms of both expectations and actual experiences. In order to give effect to the above, a modified conceptual model on branding, based on secondary sources, will be empirically tested.

1.3   RESEARCH OBJECTIVES

1.3.1 Primary research objective

This analytical research project will investigate and analyse the impact of brand identity on the perceived brand image of the NMMU, as depicted in Figure 1.2. It is theoretically possible that NMMU stakeholders may have different perceptions of the NMMU brand image, which is the prime focus of this research. Only in a perfect world will all stakeholders have identical perceptions of the brand image of an institution like the NMMU. Thus, the primary research

objective is to test the relationships as depicted in the modified conceptual model (Figure 1.2). In order to achieve this objective, the opinions of stakeholders of the perceived brand image of the NMMU, as shaped by the brand identity, will be canvassed and presented.

1.3.2 Secondary research objectives

Six secondary research objectives are identified, namely:

(i)   To investigate which research paradigms, research methodologies and data collection methods and methods of analysis would be most appropriate to research the problem in question. This objective implies that the appropriate overall research design for the study must be determined.

(ii)   To construct (design) a research instrument that will canvass the opinions of stakeholders of the perceived brand image of the NMMU, as shaped by brand identity. This objective requires an in-depth analysis of secondary sources dealing with brand identity, brand image and related concepts.

(iii)   To source primary data to gauge the opinions of stakeholders of the perceived NMMU brand image.

(iv)   To empirically test the construct and hypotheses as depicted in Figure 1.2.

(v)   To analyse the data and report on possible disparities ("gaps") between the expectations linked to the NMMU's brand image and the actual experience of this brand.

(vi)   To make recommendations regarding which dimensions, if any, of the NMMU brand identity need to be addressed to enhance the image of the institution.

Both Figures 1.1 and 1.2 show the possible impact of the environment of Higher

Education Institutions on the moderating and dependent variables. Although the possible impact of this environment is recognised in the theoretical and modified conceptual models, this group of variables will not be further pursued in this research, due to the potentially confounding (obscuring) effect thereof on the moderating and dependent variables. It must be noted that in terms of the modified conceptual model (Figure 1.2), brand commitment is not included in this research.

1.4 RESEARCH QUESTIONS AND HYPOTHESES

1.4.1 Research questions

Given the purpose of the research and the stated research objectives, a number of research questions present themselves:

➢ What is the impact of the identified independent brand identity variables on the NMMU brand identity?

➢ What is the impact of brand identity (moderating variable) on the dependent variable, perceived brand image?

➢ What are the perceptions of NMMU stakeholders of brand image?

➢ What are the expectations and actual experiences of NMMU stakeholders of brand image?

➢ Are there any disparities ("gaps") between NMMU stakeholders' expectations and actual experiences with regard to the brand image?

➢ Which dimensions of the perceived NMMU brand image, if any, need to be addressed to enhance the image of the institution?

1.4.2 Research hypotheses

Based on the modified conceptual model (Figure 1.2), three sets of hypotheses can be formulated, as substantiated by secondary sources (literature) on

branding, brand identity and brand image. Two sets of hypotheses can be labelled as directional (or relational) hypotheses, whilst the third set represents a null and alternate hypothesis.

❑ **First set of hypotheses: Effect of brand identity variables on brand identity.**

> $H_{1.1}$: *There is a positive relationship between the variable 'reputation' and brand identity.*

> $H_{1.2}$: *There is a positive relationship between the variable 'relevance' and brand identity.*

> $H_{1.3}$: *There is a positive relationship between the variable 'personality' and brand identity.*

> $H_{1.4}$: *There is a positive relationship between the variable 'performance' and brand identity.*

> $H_{1.5}$: *There is a positive relationship between the variable 'relationship' and brand identity.*

❑ **Second set of hypotheses: Effect of brand identity on perceived brand image.**

> $H_{2.1}$: *There is a positive relationship between brand identity and perceived brand image of the NMMU.*

❑ **Third set of hypotheses: Perceptions of stakeholders of expectations and actual experiences of the perceived NMMU brand image.**

> $H_{3.0}$: *There are no perceived differences between stakeholders' expectations and actual stakeholders' experiences of the NMMU brand*

image.

> $H_{3.A}$: *There are perceived differences between stakeholders' expectations and actual stakeholders' experiences of the NMMU brand image.*

1.5   ROLE OF SECONDARY SOURCES

The constructs of Figure 1.1 and Figure 1.2 are derived from and built upon an analysis of relevant secondary sources (literature). The purpose of the literature review is to provide proof of scholarship; in other words, to demonstrate understanding of the literature and proof of intellectual capacity to read it, and to use it constructively within the context of this research. A good understanding of the meaning and implications of concepts such as brand, brand identity, brand image, brand knowledge, awareness and commitment was a prerequisite for the construction of Figures 1.1 and 1.2.

Two chapters (Chapters Three and Four) are dedicated to the analysis of the relevant secondary sources, which acquainted the researcher with the branding theories underlying Figures 1.1 and 1.2.

1.6   PROPOSED RESEARCH METHODOLOGY

The positivistic research paradigm is proposed for this research project. One of the prime reasons for adopting a positivistic paradigm can be linked to the relationships and hypotheses to be tested, as illustrated in Figure 1.2.

For postgraduate research, it is necessary to fully motivate the chosen research paradigm. An entire chapter (Chapter Two) is dedicated to the explanation and motivation of the research design and methodology adopted in this study.

1.7   DATA COLLECTION AND ANALYSIS

1.7.1   Data collection

For the purpose of this research, the NMMU key stakeholders comprise only the students; academic, administrative and technical staff members; alumni; and organised businesses who are members of the Port Elizabeth Regional Chamber of Commerce and Industry (PERCCI). The above stakeholder groups represent the total target population of this research.

With regard to data collection, the sampling frames, method of primary data collection, structure of the research instrument (questionnaire) and the strategies followed in administering the research instrument, will be fully explained.

1.7.2   Data analysis

The data analysis will be conducted in six phases. Firstly, the data will be subjected to an exploratory factor analysis to assess the discriminant validity of the research instrument. Secondly, the reliability (internal consistency) of the research instrument will be assessed by means of Cronbach alpha reliability coefficients. Next, a multiple linear regression analysis to assess the impact of brand identity variables on brand identity will be performed. Fourthly, linear regression analysis will be used to establish the relationship between brand identity and brand image. Fifthly, to assess any differences between stakeholders' expectations and actual experiences when using the NMMU brand, pair-wise t-tests will be conducted. Finally, to gauge the level of satisfaction of NMMU stakeholders when using the brand, a "gap" analysis will be undertaken, using the mean scores to find relative percentage ratings.

Activities in terms of these phases will be presented in detail in Chapter Six.

1.8   SCOPE AND DELIMITATION OF RESEARCH

In terms of the modified conceptual model (Figure 1.2), this research focuses on the independent variables impacting on brand identity, and the influence of brand identity on the NMMU brand image. The primary research objective focuses on the relationship between brand identity and brand image, also searching for possible disparities between NMMU stakeholders' perceptions of brand image and their actual experiences with regard to the brand. Although, for the sake of completeness, Higher Education Institution environments were included in both Figures 1.1 and 1.2, this group of variables has been excluded from the research, for the reasons stated.

For cogent reasons, empirical perspectives on the NMMU brand commitment have been excluded from this research. The first motivation for excluding this component relates to the newness of the NMMU brand. Brand commitment needs to be assessed on established brands. The second motivation for excluding brand commitment from this research relates to the use of the conversion model developed by Hofmeyr and Rice (2000, 1995), which would have brought a further, extended dimension to this research. Brand commitment and the implementation of the conversion model may obscure the focus of the relationships identified in Figure 1.2, hence their exclusion.

1.9   PRIOR RESEARCH

The initial step in the research was to undertake a comprehensive international as well as national literature search on branding, with particular emphasis on aspects pertaining to brand identity, brand image and brand commitment. At

international level, the literature search entailed the usage of various library facilities to acquire relevant and appropriate sources of information. Computer searches through online databases such as SABINET, EBSCO host and Google were conducted to obtain relevant indices and international dissertation abstracts. Simultaneously, at national level, an in-depth library search was undertaken. To assist in this regard, an Internet search was conducted for relevant books, articles and other appropriate literature on research *per se*, and on topics related to branding, brand identity and brand image.

It was established that, over the past decade, extensive research has been undertaken on brand image, brand identity and brand commitment as applicable to profit-seeking business enterprises. No stand-alone research has been undertaken that focuses exclusively on Higher Education Institutions in South Africa, except the two studies by Coop (2002, 2004), which both include tertiary institutions such as business schools as a component of the empirical investigations.

Coop (2002) investigated the importance and relevance of brand image and its impact on customer-based brand equity in identified MBA business schools. While a central focus of the thesis by Coop (2004) is the relative importance of brand identity as a driver of brand commitment, the focus of this research is the role of brand identity in shaping brand image, linked further to stakeholders' perceptions of brand image expectations and their actual experiences with regard to the NMMU brand.

1.10 PLAN OF RESEARCH

Chapter One provides the background to the research, leading to the introduction and problem definition of the issues in question. The research

objectives, research questions and hypotheses were generated, linked to a modified conceptual model, to be tested empirically.

In **Chapter Two**, the research design and methodology to be adopted for this research will be explained and motivated.

Chapter Three, the first chapter dealing with the analysis of secondary sources, will focus on brands and new paradigms on branding, as well as brand equity and all theoretical background underlying the construct of Figure 1.2.

Chapter Four, the second chapter dedicated to secondary sources, will provide greater clarify on brand identity, brand image and other related concepts. The outcome of Chapters Three and Four is the modified conceptual model (Figure 1.2), which will be tested empirically.

Chapter Five will focus on primary data collection and primary data sourcing techniques.

The first part of **Chapter Six** contains an analysis of the primary data and explains the data analysis phases and procedures. The empirical findings are presented in the second part of Chapter Six.

Chapter Seven will present a summary of the research, with the emphasis on the empirical findings. Based on the empirical findings, conclusions and recommendations will be presented. These recommendations which will be of a strategic nature, will be submitted for the consideration of the NMMU marketing communication strategists. This chapter will also identify the possible shortcomings of this research and directions for future research.

——————— **II** ———————

CHAPTER TWO

RESEARCH DESIGN AND METHODOLOGY

2.1   INTRODUCTION

This chapter addresses the first secondary research objective, as stated in Section 1.3.2 of Chapter One, namely to investigate which research paradigms, research methodologies and data collection methods and methods of analyses would be most appropriate to the research problem in question. This objective implies that an appropriate overall research design for the study must first be determined.

There is consensus in research literature (Leedy & Ormrod 2005:1; Collis & Hussey 2003:1; Zikmund 2003:5) that the features and purpose of research revolve around the fact that research entails a process of thorough and rigorous enquiry and investigation, systematic and methodical in nature, and aimed at increasing knowledge. The aim of this study is to perform a rigorous enquiry and investigation into the brand identity and brand image of the NMMU, in order to increase knowledge on these issues.

In this study, which focuses on the relationships as depicted in Figure 1.2 (modified conceptual model) of Chapter One, effect will be given to the basic features and purpose of research in general. A specific research problem, as well as primary and secondary research objectives, were identified, as listed in Section 1.3 of Chapter One.

A thorough and rigorous research approach has been adopted in the design and execution of this research project, adhering to requirements of a good

FIGURE 2.1:   Research design framework on NMMU brand identity and brand image
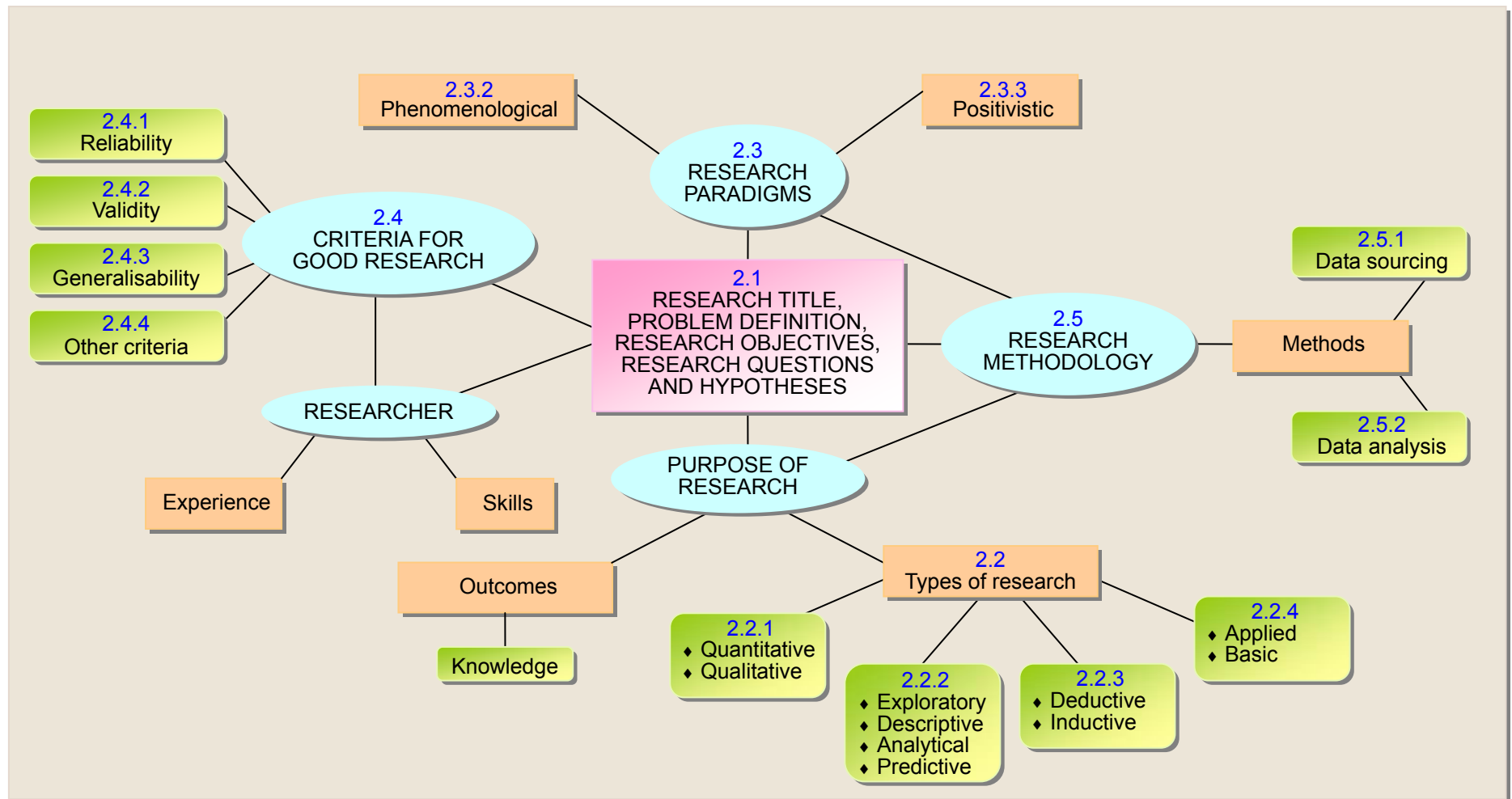
Source: Researcher's own construct. Partly adapted from Collis & Hussey (2003:83)

research project (Collis & Hussey 2003:1; 19).This chapter, which deals with the overall research design, comprises four main sections. In order to elaborate on the research design, a 'research design framework' was constructed, as shown in Figure 2.1.

The centre square block in Figure 2.1 (numbered 2.1, which corresponds with the introductory section of this chapter), reflects the research title, problem definition, research questions, and the hypotheses of this research (the research questions and hypotheses were initially stated in Section 1.4 of Chapter One). This centre block is linked to the purpose and possible outcomes of the research. In Chapter One, the purpose of the research was described as twofold: firstly, to analyse the impact of the independent variables on brand identity (moderating variable) and its shaping of brand image; and, secondly, to gauge the perceptions of NMMU stakeholders of the brand image (dependent variable) of the institution in terms of both expectations and actual experiences of using the NMMU brand. The above implies the empirical testing of the modified conceptual model (Figure 1.2 of Chapter One).

Research can be classified into different types (see Section 2.2 of this chapter). An important pre-condition and requirement for any research project is a motivated decision on the research paradigms and research methodologies to be adopted. Section 2.3 of this chapter presents the different research paradigms, as also shown in Figure 2.1, in which the same numbering as the headings of this chapter is used.

The criteria for well-designed research are presented within the research design framework, indicating that effect must be given to these requirements. Section 2.4 elaborates on the criteria that will be considered and implemented in this research (see Figure 2.1). The experience and skills of the researcher

are also accounted for in the research design and overall execution of this project. Finally, the methodologies on data sourcing and data analysis will be presented (Section 2.5).

2.2 TYPES OF RESEARCH

Different categories have been identified in which to classify research projects and research in general. As bases of classification, Collis and Hussey (2003:10) have distinguished between the purpose, the process, the logic and the outcome of the research. Table 2.1 lists the main types of research and the bases of classification.

TABLE 2.1: Classification of main types of research

Type of research	Basis of classification
Quantitative or qualitative research	Purpose of the research
Exploratory, descriptive, analytical or predictive research	Process of the research
Deductive or inductive research	Logic of the research
Applied or basic research	Outcomes of the research

Source: Adapted from Collis & Hussey (2003:10)

Each of the above types of research will now be examined and contextualised to this research on the NMMU brand identity and brand image.

2.2.1 Quantitative and qualitative research

Generally speaking, it is possible to distinguish between two main research approaches, namely the quantitative approach and the qualitative approach (Blumberg, Cooper & Schindler 2005:124; Leedy & Ormrod 2005:94). The outstanding features of quantitative and qualitative research can be

summarised as follows:

➢ The quantitative approach to research is deemed to be objective in nature, as it focuses on seeking the facts or causes of social phenomena (Lancaster 2005:67; Collis & Hussey 2003:13). According to Leedy and Ormrod (2005:94), quantitative research is undertaken to answer questions about relationships between variables with the purpose of explaining, predicting and controlling phenomena. Quantitative research is based on positivistic methodologies, for developing knowledge (i.e. cause-and-effect relationships; reduction of specific variables in the analysis; and the use of statistical measurement and observation) (Creswell 2003:18; De Vos, Strydom, Fouché & Delport 2002:79). Further, quantitative research employs strategies of inquiry, such as experiments and surveys, and collects data, using research instruments that yield statistical data. A quantitative approach therefore involves collecting and analysing data that can be mathematically and/or statistically interpreted and analysed (Collis & Hussey 2003:13).

➢ Qualitative research is typically used to answer questions about the complex nature of phenomena, often with the purpose of describing and understanding such phenomena from the participants' point of view (Leedy & Ormrod 2005:94). Lancaster (2005:67) argues that the qualitative research approach is mainly used when the researcher needs to gather and analyse detailed data that cannot be mathematically or statistically interpreted and analysed, such as ideas, attitudes or feelings. Creswell (2003:17) states that the qualitative researcher collects data using a research instrument, or gathers information by means of a behavioural checklist. Qualitative research is, therefore, fundamentally interpretive. This implies that the researcher interprets the data and then draws conclusions

about its meaning (Creswell 2003:182; De Vos et al. 2002:79).

The question now arises into which category the research in question should be classified. Given the relationships shown in Figure 1.2 of Chapter One and the fact that the primary data on brand identity and brand image will be of a quantitative nature, it is evident that this research should be classified as quantitative. The quantitative approach is a more appropriate choice for a study with this type of objective, namely to gain a deeper understanding of the relationship between brand identity variables on brand identity and its shaping of the brand image (cause-and-effect relationships). Further, when searching for possible disparities ("gaps") between the expectations linked to the NMMU's brand image and the actual experience of this brand, quantitative data is better suited.

2.2.2 Exploratory, descriptive, analytical and predictive research

The concepts *exploratory, descriptive, analytical* and *predictive* must first be briefly explained before a decision can be motivated on how the research in question should be classified.

➢ Exploratory research is undertaken to reveal the issues related to the problem definition (Jankowicz 2005:199). An outstanding characteristic of exploratory research is that it is ideally undertaken when few or no earlier studies have been conducted on a research problem that may serve to verify findings (Collis & Hussey 2003:10; Zikmund 2003:54-55). Gaining insights and a better understanding of the research problem, which ensures a more rigorous investigation, is a further feature of exploratory research. This type of research looks for patterns, ideas or hypotheses, rather than testing or confirming the hypotheses. As stated in Section 1.6 of Chapter

One, a substantial amount of prior research on brand identity and brand image has been undertaken, implying that this study will not carry strong exploratory features.

➢ Descriptive research characteristically describes phenomena as they exist. It is used to identify and obtain information on the characteristics of a specific problem or issue (Zikmund 2003:55). The aim of descriptive research is to describe or define a problem, often by creating a profile of a group of problems, people or events (Blumberg *et al.* 2005:10). Descriptive research examines problems more intensively than exploratory research, since it also ascertains and describes the characteristics of the pertinent issues (Collis & Hussey 2003:11). The variables of brand identity and brand image associations were described in Chapter One and will be further discussed in Chapters Three and Four.

➢ Analytical or explanatory research goes beyond merely describing the characteristics of phenomena; it also analyses and explains *why* or *how* events are happening. The aim of analytical research is to understand phenomena by discovering and measuring cause-and-effect relationships between them (Collis & Hussey 2003:11; Zikmund 2003:56). In analytical research, theories or hypotheses need to be constructed and formulated to account for the forces that caused a certain phenomenon (Blumberg *et al.* 2005:10). An important element of analytical research is identifying and, possibly, controlling the variables in the research activities, since this allows for a better explanation of the critical variables or the causal links between the characteristics. The characteristics of analytical research feature prominently in a decision on how this study on NMMU brand identity and brand image should be classified.

> According to Blumberg *et al.* (2005:12), predictive research goes even further than analytical research and is rooted equally in theory and explanation. Predictive research generalises from the analysis by predicting certain phenomena on the basis of hypothesised relationships. If the predictive research can provide a valid, robust solution based on a clear understanding of the relevant causes, the solution to a problem in a particular study will be applicable to similar problems elsewhere (Collis & Hussey 2003:12). This type of study often calls for a high level of inference. Once a phenomenon can be explained and predicted, a capability to control it is expected (Blumberg *et al.* 2005:12).

As explained in Section 1.2 of Chapter One, the purpose of this research is firstly to analyse the impact of the independent variables on brand identity (moderating variable) and its shaping of brand image (dependent variable); and, secondly, to gauge the perceptions of NMMU stakeholders of the brand image of the institution. Taking the purpose of the study and the objectives of the research into account, this research can at best be defined as analytical. Further, the modified conceptual model (Figure 1.2) of Chapter One reflects that three sets of hypotheses will be tested. All these cause-and-effect features clearly indicate that the current study should be classified as an analytical research.

2.2.3 Deductive and inductive research

The concepts *deductive* and *inductive* pertain to the type of methodological reasoning that takes place during the research process. Deductive research is undertaken when a conceptual and theoretical structure is developed and then tested by empirical observations (for example, the conceptual model as depicted in Figure 1.2 of Chapter One). This reasoning implies that particular

instances are deduced from general inferences (Collis & Hussey 2003:15).

Deductive and inductive research is further characterised by the following features:

> Deductive research reasoning develops theories or hypotheses about a problem and then tests these theories or hypotheses through empirical observations (Lancaster 2005:22). A deduction is valid if it is impossible for the conclusion to be false if the underlying premises in question are true (Blumberg *et al.* 2005:22; Zikmund 2003:47-56). Deductive research is further characterised by cause-and-effect relationships, which are clearly associated with the positivistic research paradigm.

> Inductive research reflects a reasoning process through which a general proposition is established on the basis of the observation of particular facts (Zikmund 2003:47). This mental process of inductive research implies that general inferences are induced from particular instances. Therefore, inductive research essentially reverses the process found in deductive research and is a key feature of qualitative research (Lancaster 2005:25).

The research in question can evidently be labelled as deductive. As explained in Chapter One, general theories on brand identity and brand image (from secondary sources) were applied in developing the conceptual model, as presented in Figure 1.2. The conceptual model, which depicts cause-and-effect relationships, will also be tested by means of empirical observations, using statistical data. As stated, the underlying deductive methodological assumption clearly points towards a positivistic research paradigm, which will be discussed further in Section 2.3 of this chapter.

2.2.4 Applied and basic research

It is possible to classify research into either applied or basic research. The distinguishing features of applied and basic research are the following:

> Applied research is characterised by the usage of the research findings to solve a specific, existing problem (Collis & Hussey 2003:13; Zikmund 2003:7). Therefore, this type of research has a practical problem-solving emphasis, which means that it is conducted in order to find answers to specific questions (particularly business-related questions), related to action, performance or policy needs (Blumberg *et al.* 2005:13).

> Basic research, on the other hand, is sometimes also referred to as fundamental or pure research. When the research problem is of a less specific nature, and when the research is conducted primarily to improve the understanding of general issues, without emphasis on immediate application, basic research is undertaken (Collis & Hussey 2003:14; Zikmund 2003:7). Blumberg *et al.* (2005:13) are of the opinion that basic research is also problem-solving based. It aims to solve a perplexing question of a theoretical nature that has little direct impact on action, performance or policy decisions.

The aim of applied research is, as stated above, to apply its findings to solve specific and existing problems, as also presented in the research questions on the NMMU brand identity and brand image. Therefore, the nature of the research in question does carry strong application and practical useful features.

2.2.5 Conclusions on types of research

Based on the discussion above, the following may be concluded: Firstly, the research in question will be of a quantitative nature. This categorisation is based on the relationship depicted in Figure 1.2 (Chapter One), which shows that specific data will be sourced on independent brand identity variables, the moderating variable (brand identity) and the dependent variable (brand image), which will require statistical analysis. Secondly, the research clearly carries typical analytical features, because the impact of the independent variables on the moderating variable and the dependent variable will be assessed. Thirdly, this research can be labelled as deductive, because general theories (statements in the research instrument) on brand identity and brand image with regard to the NMMU will be developed and then tested empirically. Finally, this research may be classified as applied, because the findings of the research in question may be useful to marketing communication strategists to enhance the NMMU brand image.

2.3   DIFFERENT RESEARCH PARADIGMS

2.3.1 Introduction of two main research paradigms

Among the various basic research approaches that exist, two main research paradigms or philosophies may be distinguished, despite considerable overlapping, respectively referred to as "positivist" and "phenomenological" (Collis & Hussey 2003:47). Some authors (Blumberg *et al.* 2005:18; Jankowicz 2005:111) prefer to use the philosophical perspective towards research to prevent confusion with a methodology known as phenomenology. The phenomenological paradigm is also known as the qualitative, subjectivist, humanistic or interpretive research paradigm (Collis & Hussey 2003:47). The

positivistic paradigm is alternatively known as the quantitative, objectivist, scientific, experimentalist or traditionalist research paradigm.

The methodological assumption underlying research is concerned with the research process. Positivists usually apply a deductive reasoning process, looking for cause-and-effect relationships, and their research is deemed to be accurate and reliable, through validity and reliability. Phenomenologists, on the other hand, apply the inductive process, searching for patterns that may be repeated in other similar situations (Collis & Hussey 2003:50).

The two main paradigms will now be examined in greater detail to reach a motivated decision regarding the adoption of an appropriate research paradigm for this study.

2.3.2 Positivistic (quantitative) paradigm

Positivistic paradigms comprise several beliefs about how a researcher can make sense to others. These paradigms are based on the assumption that nobody is perfect; all human beings are fallible. Positivism is based on realism: it searches for the truths 'out there'. Truth can be recognised in only two ways: by seeing that an assertion makes sense by itself and is consistent with deductions made from it; or by recognising that it is supported by empirical evidence (Jankowicz 2005:110).

The positivistic paradigm is founded on the belief that human behavioural studies should be conducted in the same way as studies in the natural sciences. This belief is based on the assumption that social reality is independent of research objectives and exists regardless of whether or not we are aware of it. Therefore, the ontological debate of what constitutes the nature of reality can

be kept distinct from the epistemological question of how a researcher can obtain knowledge of that reality. The act of investigating reality has no effect on that reality (Blumberg *et al.* 2005:18-19; Collis & Hussey 2003:52).

Positivists' response to the question regarding the nature of the relationship between the researcher and the problem is based on three fundamental principles:

➢ The social world exists externally and is viewed objectively.
➢ Research is value-free.
➢ The researcher is independent, taking the role of an objective analyst.

The above principles may be seen as the epistemological assumption (i.e. the relationship of the researcher to what is researched) underlying the quantitative approach (Blumberg *et al.* 2005:18).

2.3.3 Phenomenological (qualitative) paradigm

The phenomenological paradigm or mindset towards research is concerned with understanding human behaviour from the participants' own frame of reference. Phenomenological mindsets focus on the meaning rather than on the measurement of social problems (Collis & Hussey 2003: 53). Phenomenological research describes the meaning several individuals attach to the actual experiences related to a concept or a phenomenon (Miller & Salkind 2002:51). This paradigm essentially searches for the care or central underlying meaning of the experience related to the problem. This implies that researchers who have adopted the phenomenological approach have to interact personally with the objects (units of analysis) being investigated. They would often seek an expert opinion to answer their research questions, rather

than sample a large group within the research population.

The principles of the phenomenological paradigm can be summarised in terms of the following:

➢ The social world is constructed and is given meaning subjectively by people.
➢ The researcher is part of what is observed.
➢ Research is driven by the interests of the researcher (Blumberg *et al*. 2005:19).

Collis and Hussey (2003:53-55) are of the opinion that the phenomenological paradigm developed as a result of criticism levelled against the positivistic paradigm.

The phenomenological paradigm has the following features, namely:

➢ It tends to produce qualitative data.
➢ It is concerned with generating theories, using the inductive approach.
➢ Data is rich and subjective.
➢ It generalises from one setting to another.
➢ It uses small samples.

2.3.4 Comparison between positivistic (quantitative) and phenomenological (qualitative) paradigms

Table 2.2 recapitulates the key features of the two main research paradigms.

TABLE 2.2: Comparison between positivistic (quantitative) and phenomenological (qualitative) approaches

Positivistic (quantitative) paradigm	Phenomenological (qualitative) paradigm
Epistemological roots in positivism	Epistemological roots in phenomenology
Purpose is to test predictive and cause-and-effect hypotheses about social reality	Purpose is to construct detailed descriptions of social reality
Concerned with hypotheses testing	Concerned with generating hypotheses
Reasoning process utilises deductive logic	Reasoning process utilises inductive logic
Suitable for a study of phenomena that are conceptually and theoretically well developed; seeks to control phenomena	Suitable for a study of a relatively unknown terrain; seeks to understand phenomena
Concepts are converted into operational definitions; results appear in numeric form and are eventually reported in statistical language	Participants' natural language is used in order to come to a genuine understanding of their world
The research design is standardised according to a fixed procedure and can be replicated	The research design is flexible and unique and evolves throughout the research process; there are no fixed steps that should be followed and the design cannot be exactly replicated
Data are obtained systematically and in a standardised manner	Data sources are determined by the information richness of settings; types of observations are modified to enrich understanding
Data are obtained systematically and in a standardised manner	Data sources are determined by the information richness of settings; types of observations are modified to enrich understanding
Tends to produce quantitative data	Tends to produce qualitative data
Uses large samples	Uses small samples
Data is highly specific and precise	Data is rich and subjective
Location is artificial	Location is natural
Reliability is high	Reliability is low
Validity is low	Validity is high
Generalises from sample to population	Generalises from one setting to another
The unit of analysis is variables that are atomistic (i.e. elements that form the whole)	The unit of analysis is holistic, concentrating on the relationships between elements, contexts, etc.; the whole is always more than the sum

Sources: Adapted from Collis & Hussey (2003:55) and De Vos *et al.* (2002:81)

2.3.5 Conclusions: motivation for adopted research paradigm

Table 2.3 is further instrumental in providing final, convincing arguments in favour of the positivistic paradigm as the appropriate research approach for this study. Questions are posed in the first column of Table 2.3 and answered in terms of both the positivistic and phenomenological approaches (second and third columns). These questions must also be linked to the research problem, research objectives, research questions and hypotheses of this study. It is evident that the responses given in terms of the quantitative approach (second column) mirrors the best when testing the modified conceptual model pertaining to the brand identity and brand image of the NMMU.

TABLE 2.3: Motivation for the decision on positivistic (quantitative) approach

Question	Positivistic (quantitative)	Phenomenological (qualitative)
What is the purpose of the research?	• To explain and predict • To confirm and validate • To test theory	• To describe and explain • To explore and interpret • To build theory
What is the nature of the research process?	• Focused • Known variables • Established guidelines • Predetermined methods • Somewhat context-free • Detached view	• Holistic • Unknown variables • Flexible guidelines • Emergent methods • Context-bound • Personal view
What is the data like, and how is it collected?	• Numeric data • Representative, large sample • Standardized instruments	• Textual and/or image-based data • Informative, mall sample • Loosely structured or non-standardised observations and interviews
How is data analysed to determine its meaning?	• Statistical analysis • Stress on objectivity • Deductive reasoning	• Search for themes and categories • Acknowledgment that analysis is subjective and potentially biased • Inductive reasoning
How are the findings communicated?	• Numbers • Statistics, aggregated data • Formal voice, scientific style	• Words • Narratives, individual quotes • Personal voice, literary style

<u>Source</u>: Adapted from Leedy & Ormrod (2005:96)

Besides the above arguments, the questions posed in Table 2.3 can collectively be answered as follows:

Given the nature of the problem definition of the research in question, the positivistic approach seems most appropriate to gauge the opinions (perceptions) of the respondents on NMMU brand identity and brand image. The construct of Figure 1.2 (Chapter One) shows a relationship between the independent variables on the brand identity (moderating variable) and the impact of brand identity on brand image (independent variable). Further, quantitative data will also be sourced from different sampling frames. This implies that large samples of respondents will be drawn to source primary data that must be suitable for statistical analysis. The decision to employ the positivistic paradigm requires the researcher to use a large sample, so that the findings from a representative sample may be taken to be true for the entire population.

As depicted in Figure 1.2 of Chapter One, stakeholder perceptions on brand image must be assessed in this study. The positivistic research paradigm and its associated data collection and data analysis methodologies are therefore regarded as suitable to give effect to the research objectives and test the hypotheses of this research, as stated in Section 1.4.2 of Chapter One.

The phenomenological paradigm is not relevant for this research, because a modified conceptual model is to be tested empirically. Further, the research in question will focus on testing hypotheses rather than generating theories, as would apply in terms of the phenomenological paradigm.

2.4   CRITERIA FOR A WELL-DESIGNED RESEARCH PROJECT

Having explained why the positivistic paradigm has been identified as the appropriate research methodology for this study, it is important to ensure that the criteria for a well-designed research project are imbued in the overall design framework of this study (see Figure 2.1 of this chapter). Three basic sets of criteria are widely used to evaluate a well-designed research project. They are: reliability; validity; and generalisability. Besides the above, a collection of other criteria may be added. It is important to demonstrate how this research project accommodates the above-mentioned criteria.

2.4.1   Reliability

According to Blumberg *et al.* (2005:385), reliability means many things to many people, but in most contexts the notion of consistency emerges. Reliability pertains to the accuracy and precision of a measurement procedure. Collis and Hussey (2003:58) argue that reliability is concerned with the credibility of the research findings. Research findings are supposedly reliable if another researcher obtains the same results on replicating the research.

A research instrument is deemed to be reliable to the extent that it contributes towards consistent results. A typical example is a bathroom scale that consistently overweighs a person with five kilograms. If the scale erratically overweighs from day to day, it is not reliable and can therefore not be regarded as valid. Reliability is a necessary contributor to validity but is, however, not a sufficient condition for validity (see Section 2.4.2 of this chapter) (Blumberg *et al.* 2005:385).

The reliability of the findings of a research project is closely linked to the

methods of data sourcing and the design of the research instruments. Positivists can follow a number of reliability estimates to ensure the authenticity of their findings. Several experts (Blumberg *et al.* 2005:385-389; Leedy & Ormrod 2005:93; Collis & Hussey 2003:186-187; Zikmund 2003:300-301) are of the opinion that the reliability of research responses (and the research instrument) can be enhanced in the following three ways:

- ➢ *Test re-test method*: In this method, the same questionnaire is administered *twice* to the same respondents, but on two separate occasions. The responses for the two 'tests' are correlated and a correlation coefficient for the two sets of data is computed, thus providing an index of reliability. The interpretation of correlation coefficients (zero, negative, positive) is well-known in statistical literature.
- ➢ *Split-halves method or parallel forms*: The questionnaires are divided into two equal halves (numbers) and the correlation coefficient of the two sets of data is then computed and interpreted.
- ➢ *Internal consistency*: The aim of this method is to establish which items on the research instrument are homogenous and reflect the same underlying constructs, for example, the constructs on which the research in question is founded (see modified conceptual model, Figure 1.2 of Chapter One). Every item in the questionnaire (research instrument) is correlated with every other item across the entire sample and the average inter-item correlation is used as the index of reliability. The outcome of the calculations is the Cronbach alpha reliability coefficients (Cooper 1983:141-146). For the research in question, Cronbach alpha reliability coefficients will be calculated to assess the reliability of the research instrument.

In addition to testing for acceptable Cronbach alpha coefficients, the reliability

of the research instrument was enhanced in several ways. Firstly, the research instrument was extensively pilot tested, followed by a Cronbach alpha reliability coefficients calculation to ensure that the items in the research instrument actually were associated with each other. This was done before the research instrument was administered. Secondly, the research instrument (questionnaire) was administered in a consistent manner; in other words, a standardised procedure was used to administer the questionnaire to the respondents. Thirdly, specific criteria were established for this research, e.g. the choice of an appropriate research design with appropriate data collection and analysis methodologies. Fourthly, the research assistants who helped to administer the research instrument were all well trained (Leedy & Ormrod 2005:93).

Measures taken to ensure the reliability of this research, included designing a relevant and contextualised questionnaire (research instrument); using secondary data sources (literature on brands, branding, corporate branding, brand identity and brand image); and selecting appropriate methods of choosing a sample and sample size. The choice and drawing of the sample, as well as the statistical procedures used, will be described in Chapter Five.

2.4.2 Validity (internal validity)

It is important that research findings reflect accurately what is actually happening 'out there', for example, the environment of the research (Collis & Hussey 2003:58-59). A research instrument must have the ability to measure what it intends to measure before claims of validity can be made (Blumberg *et al.* 2005:380). Validity can also be defined in terms of the absence of self-contradiction (Lancaster 2005:71).

Validity is closely linked to the research instrument used. As stated, the validity

of a research instrument is the extent to which it measures what it is supposed to measure (Leedy & Ormrod 2005:28). Validity takes on different forms; each form is important in different situations (Blumberg *et al.* 2005:380; Leedy & Ormrod 2005:28; Zikmund 2003:301-304).

The various forms of validity include:

- *Face validity*, which is the extent to which, on the surface, an instrument appears to be measuring a particular characteristic. An example would be when subjective agreement exists among professionals that a scale logically appears to reflect accurately what it intends to measure (Zikmund 2003:302).
- *Content validity*, which is the extent to which a research instrument is able to reflect the findings in respect of a representative sample of the content area (domain) being measured.
- *Criterion validity*, which reflects the success of the measure used for prediction or estimation.
- *Construct validity*, which, according to Zikmund (2003:303), is established by the degree to which a measure confirms a network of related hypotheses generated from a theory based on the concepts. Construct validity implies that the empirical evidence generated by a measure is consistent with the theoretical logic about the concepts. When researchers ask questions (or make statements) as a way of assessing an underlying construct, they should have obtained some kinds of evidence that their approach does, in fact, measure the construct in question (Leedy & Ormrod 2005:92). For this research, the construct as presented in Figure 1.2 of Chapter One is based on an extensive analysis of secondary sources on brands and brand concepts. Construct validity is established during the statistical analysis of the data. The related concept, discriminant validity,

can be assessed only during the data analysis phase. This will be done in Section 6.3.1 of Chapter Six.

As mentioned in previous sections, the positivistic paradigm focuses on the precision of measurement and the ability to repeat the experiment. Research errors, such as faulty research procedures, poor samples and inaccurate or misleading measurement, can undermine validity (Collis & Hussey 2003:59). Jankowicz (2005:111) also argues that measurement should be accurate, reflecting the information contained in the data in an unbiased way, to ensure validity.

For this research, it is imperative that validity be ensured. To meet this requirement, preconditions are that the overall research design of the study must be sound; that the most relevant research procedures be adopted; that appropriate samples be drawn; and that suitable statistical procedures be followed. More information on the primary data sourcing and statistical analysis procedures followed in this study will be provided in Chapters Five and Six.

2.4.3 Generalisability (external validity)

Generalisability can be defined as the extent to which the researcher can come to conclusions about one thing (often a population), based on information on another (often a sample). In other words, generalisability is the ability to generalise beyond the data of an experiment to other subjects or other groups in the population under study (Zikmund 2003:273). Generalisability is concerned with the application of research findings to cases or situations beyond those examined in the study (Collis & Hussey 2003:59). With regard to the research in question, generalisability implies that the findings of the NMMU stakeholders' sample can be applied to the entire population of stakeholders of

the NMMU who have certain perceptions of the brand image of the University.

2.4.4 Other criteria for a well-designed research project

In addition to reliability, validity and generalisability as important basic research requirements, a good research project should display attributes such as the following (Jankowicz 2005:55-56; Collis & Hussey 2003:19):

- ➢ *Originality*: This requirement implies the capacity to act or to think independently regarding the research and not to simply copy someone else's work. Originality is therefore an important attribute when research is conducted. In this research, originality was *inter alia* demonstrated by the construct of Figure 1.2 of Chapter One, as well as the research design framework of this chapter (Figure 2.1).
- ➢ *A scientific theoretical base*: This criterion refers to a critical and contextualised literature review on which the research is founded. For the research in question, an analysis of the relevant secondary sources will be undertaken in Chapters Three and Four. This analysis of secondary sources will be used to generate the statements in the research instrument (questionnaire).
- ➢ *Purposiveness*: This requirement pertains to the precondition that the researcher should have a clear aim or objective in mind with the research, as was demonstrated in Section 1.2 of Chapter One.
- ➢ *Logical research framework*: This criterion is underpinned by Figure 2.1 of this chapter, which depicts the research design framework of this research.
- ➢ *An analytical approach*: The meaning and context of analytical research was explained in Section 2.2.2 of this chapter.
- ➢ *Underpinned by conceptual framework*: A conceptual framework that will be tested empirically was presented in Figure 1.2 of Chapter One.

➢ *Integration between research methodology, literature review, data analysis and conclusions*: This holistic requirement will be demonstrated in Chapter Seven, where the conclusions of the research, which follow logically from the findings, will be presented. The research findings have to contribute towards the existing body of knowledge on the field of branding. Further, the implications will be explained and the recommendations made will be robust in terms of practicality.

2.5 METHODS OF DATA SOURCING AND ANALYSIS

In Figure 2.1, 'research methodology' (numbered 2.5) is shown on the right-hand side of the research title block. Methodology refers to the overall approach to the research process, as explained in this chapter. Methods, on the other hand, refer to the various means through which data can be collected (sourced) and/or analysed.

Two types of data will be sourced in this study, namely secondary and primary data. In this research, secondary data will be sourced from existing sources by means of an extensive literature review of research methodologies, branding and literature on related concepts (Chapters Three and Four), while primary (raw) data will be sourced by means of a survey. A survey follows a positivistic methodology, in terms of which a sample of subjects is drawn from a population and studied to make inferences about the population. When the population is large, as in the case of NMMU stakeholders, it would be too time-consuming and expensive to collect data about all the members of the population, and therefore only a sample of the whole population is used. The sample to be drawn will be representative, to make it possible to use statistical techniques to demonstrate the likelihood that the characteristics of the sample will also be found in the whole population. In another words, it will be possible to generalise

from the research findings (Jankowicz 2005:221; Collis & Hussey 2003:63-64).

The primary data sourcing methods and the data analysis for this research will be discussed in the following sections.

2.5.1 Primary data sourcing

As stated in Section 1.1 of Chapter One, the NMMU key stakeholders comprise students; academic, administrative and technical staff members; parents of the students; alumni; the national and provincial governments; and the business community at large. The above stakeholder groups represent the total population of this research.

For the purpose of this research, the sampling frame is limited to students, all staff members, alumni and organised business. This limitation of the sampling frame is based solely on practical considerations in sourcing the required data from different stakeholder groups. Non-probability (convenience) and judgmental (purposive) samples were drawn by administering the research instrument to the identified sampling frames. The desired sample response is a function of the number of statements in the research instrument times five (5), in order to perform the required statistical analysis. Chapter Five will elaborate on the sample size and response rates obtained.

2.5.2 Research instrument (questionnaire)

The research instrument comprises two sections. Section A consists of 60 statements on perceptions about expectations and actual experiences linked to the NMMU brand. Respondents were requested to use a Likert seven-point interval scale to indicate their perceptions about the NMMU brand. This interval

scaled instrument will enable the researcher to perform the inferential statistical data analysis, as described in Section 2.5.3 of this chapter (Leedy & Ormrod 2005:26-27; Cooper & Schindler 2003:227-228).

Section B of the questionnaire canvasses biographical data of the respondents, such as the designated sampling frame group (e.g. students, staff, gender and level of study).

The design and compilation of the research instrument was based on an intensive analysis of secondary sources on brands, branding, corporate branding, brand identity and brand image. This analysis served to address the important dimension of the validity of the research instrument. The newly designed research instrument was first tested in a pilot study before it was finally administered to respondents. All required steps were taken to ensure the reliability, validity and generalisability of the research instrument (Leedy & Ormrod 2005:27-29; Collis & Hussey 2003:58-60; Cooper & Schindler 2003:231-239).

The questionnaire was administered using several strategies. Students' opinions were sourced by means of hard copies distributed during contact lecture sessions. For staff and alumni, the research instrument was made available on the NMMU Intranet. For organised businesses, the questionnaire was included in a business journal, together with a reply-paid envelope.

A dedicated chapter (Chapter Five) deals with the primary data sourcing. A complete explanation will be offered in Chapter Five on the methods of data sourcing, the sample size, usable questionnaires, and other related considerations.

2.5.3 Data analysis

As already indicated in Chapter One, the data analysis consisted of six phases. Firstly, the data will be subjected to an exploratory factor analysis to assess the discriminant validity of the research instrument. Secondly, the reliability (internal consistency) of the research instrument will be assessed by means of Cronbach alpha reliability coefficients. This phase will be followed by a multiple linear regression analysis to assess the impact of brand identity variables on brand identity. Fourthly, a linear regression analysis will be undertaken to establish the relationship between brand identity and brand image. Fifthly, to assess any differences between stakeholders' expectations of and actual experiences when using the NMMU brand, pair-wise t-tests will be conducted. Finally, to gauge the level of satisfaction of NMMU stakeholders when using the brand, a "gap" analysis will be done by using the mean scores to find relative percentage ratings.

Chapter Six presents the data analysis and empirical findings. As in the case of data sourcing, the methods of data analysis followed in this research will be discussed.

2.6 SUMMARY AND CONCLUSIONS

This chapter described the overall research design and methodology to be used in this study. The questions *why, what, when, where, how* and *on to whom* the research was conducted, were answered in this chapter. At the beginning of this chapter, a research design framework for the research on brand identity and brand image was presented (Figure 2.1).

It was motivated that the research in question carries outstanding quantitative

features; it is labelled analytical due to the relationships to be researched, as shown in Figure 1.2 of Chapter One; the method of reasoning is deductive and the research findings have a strategic implication, which is a feature of applied research.

An analysis of the research problem, the unit of analysis, research questions, hypotheses and the type of data to be sourced collectively suggested that a positivistic research methodology should be adopted. The criteria for a well-designed research project were described, with an indication how these requirements would be addressed in this research. Finally, a brief overview of the strategies dealing with primary data sourcing and data analysis was provided.

By presenting the research design framework, it is evident that the researcher is aware of the:

➢ types of research and how the research in question should be classified;
➢ different research paradigms and the necessity to motivate the choice of the adopted paradigm;
➢ criteria for a good research project and the implementation thereof; and
➢ methods of data sourcing and analysis.

The following chapter will present an analysis of secondary sources dealing with brands, branding, corporate branding and brand equity.

––––––– II –––––––

CHAPTER THREE

PERSPECTIVES ON BRANDS, BRANDING AND BRAND EQUITY

3.1   INTRODUCTION

This chapter and the next chapter address the second secondary research objective as stated in Section 1.3.2 of Chapter One, namely to construct (design) a research instrument that will canvass the opinions of stakeholders of the perceived brand image of the NMMU, as shaped by brand identity. To give effect to this objective requires an in-depth analysis of secondary sources dealing with brand identity, brand image and all related issues. Secondary sources refer to all related literature published on the research topic, and on research *per se.* This research objective implies that the researcher must explore and perform an analysis and scrutiny of secondary data dealing with the research problem.

The fundamental purpose of sourcing and analysing secondary sources, which is part of the overall data sourcing activity related to the research, is to become more knowledgeable, gaining a holistic insight into the problem to be researched. Only through acquiring a holistic understanding of the problem, will it be possible to construct a theoretical model on brand identity and image of the NMMU. The research objectives and research questions could not be phrased without an in-depth understanding of the related terms, concepts, knowledge of the field of marketing communication, brand identity variables, brand image, brand equity, brand knowledge, brand awareness and brand loyalty, to name a few. Further, the prime motivation for undertaking a thorough and systematic analysis of secondary sources was to design an effective research instrument, i.e. the questionnaire that will be administered to the respondents.

From the above, the important role and function of the systematic sourcing and analysis of literature should be evident. An analysis of secondary sources must be done with great care in an effort to condense the meaning of the various business management models and theories (like marketing models on branding) underlying the research. Before using any secondary sources, the credibility of such sources must first be assessed. In respect of previously published research on brands and related concepts, the following must be ascertained:

➢ What was the purpose of the study, and how does it differ from other studies and the research in question?
➢ How was the research conducted, and how does it differ from other studies and the research question?
➢ What were the findings, and how do they differ from the findings of other similar studies?
➢ What were the limitations and weaknesses of the previous studies?

In addition to the above pertinent questions, the following should also be assessed to further gauge the credibility and relevance of previously published research:

➢ The objectivity in the case of research reports.
➢ Is the unit of analysis properly demarcated?
➢ Are the hypotheses or research questions unambiguously stated?
➢ Were appropriate research methodologies used?
➢ How was the data collection done? How? When? By whom?

Secondary data quality is of great importance to any researcher. Books, journals, research publications, government statistics and business publications should be screened in terms of data quality. In this respect, issues

such as the following should be considered:

➢ What was the purpose of the publication? (Why? For whom? How?)

➢ Who has written it? Is the author knowledgeable?

➢ Who has funded the publication?

➢ Overall relevancy of the sources?

The purpose of assessing secondary data quality is to ensure validity, reliability, accuracy and relevance (Collis & Hussey 2003:84-86).

To obtain the best data quality for the research in question, all of the above probing questions were asked to assess the credibility of the secondary sources.

Chapters Three and Four will present a synthesis of the literature dealing with concepts such as brands, corporate brands, branding, corporate branding, brand equity, brand identity, brand image, brand perceptions and association, brand knowledge, brand awareness and brand loyalty and brand commitment. The role of brand communication will also be investigated. Collectively, the analysis of all the relevant concepts will be instrumental in the construct of the conceptual framework of this research and the design of the research instrument, which should be seen as important outcomes of the analysis of secondary sources.

This first chapter dealing with secondary sources, focuses on relevant key concepts such as brands, corporate brands, traditional and contemporary perspectives on branding and the concept brand equity. The chapter concludes with indications how the concepts described, are linked to the conceptual model underpinning the research.

3.2 THE CONCEPTS 'BRANDS' AND 'CORPORATE BRANDS'

In Chapter One, mention was briefly made of the merger that resulted in the establishment of the NMMU. It was also indicated that each of the pre-merger institutions, namely the University of Port Elizabeth, the Port Elizabeth Technikon and the Port Elizabeth Branch of Vista University, had its own distinctive brand, brand identity and brand image. Against this background, the concepts 'brands' and 'corporate brands' will now be explained.

Increasingly, both profit- and non-profit seeking institutions are realising that among their most valuable assets are the brand names associated with their services and products (Keller 2003:2). Institutions experience and appreciate the numerous benefits offered by a strong brand. Firstly, a strong brand name simplifies consumer/client decision-making (in the case of the NMMU, the students and other stakeholders); it reduces risk; and sets expectations. Creating strong brands that deliver on those expectations, and maintaining and enhancing the strength of those brands over time, is therefore a management imperative.

In literature on branding, a distinction is made between the concepts 'brands' and 'corporate brands'. In this section, the similarities and principal differences between these concepts will be investigated, and the relevance of the concepts to the research on the NMMU.

3.2.1 Brands defined

A traditional definition of a brand is: "… the name, associated with one or more items in the product line, that is used to identify the source of character of the item(s)" (Kotler 2000:396). A brand can also be defined as a contract, one

which is implicit in nature and which governs the relations between a given organisation and its customers (Chevalier & Mazzalovo 2004:15).

For the purpose of the proposed research, it is important to note that a branded product may be a physical good, a service, a store, a place, an organisation, or an idea. A brand is a name that influences buyers. This definition captures the essence of a brand: a name with power to influence buyers or, as in the case of the NMMU, users of educational services (Kapferer 2004:11).

Given the above interpretation, a good contemporary definition of a brand has been provided by the American Marketing Association (AMA). The AMA defines a brand as a name, term, sign, symbol, or design, or a combination of these, intended to identify the goods and services of one seller or group of sellers (and service providers) and to differentiate them from those of the competition (Keller 2003:3). This view, technically speaking, reflects that whenever a marketer (such as a Higher Education Institution like the NMMU) creates a new name, logo, or symbol for a new product or service, it creates a 'brand'. This is exactly what transpired from the incorporation of the Port Elizabeth branch of Vista University into the University of Port Elizabeth and, finally, the merger between the University of Port Elizabeth and the Port Elizabeth Technikon, to form the NMMU. From the above, it should be evident that the NMMU is a new brand.

It is important to note that a brand is a name that influences buyers. This definition captures the essence of a brand: a name with power to influence buyers or users of services (Kapferer 2004:11). In terms of this research, the NMMU is the brand that was created in the minds of its stakeholders (Wheeler 2003:2).

Given the above interpretation, the main prerequisites for the establishment of successful brands can be summarised as follows (Melewar & Walker 2003:168):

➢ Brands should be linked to business strategy.

➢ Brands should reflect a shorthand summary of their business.

➢ Brands should be constantly manifested through the marketing mix.

➢ Brands should be consistently positioned across markets.

➢ Brands should deliver value, which should be expressed in consumer/client terms.

➢ Brands should portray a continuous relationship between the business and its brand users.

➢ Good brands should provide a platform for innovation and differentiation.

➢ A Higher Education Institution such as the NMMU should understand its micro market and macro business environments. Equally important are considerations such as competitive forces, cultural dynamics and national identity.

From the above, it is clear that a brand exists when a name has acquired power to influence the market. What makes a name acquire the power of a brand is the product or service, together with the people at points of contact with the market, the price, the places, the communication and all the sources of cumulative brand experience. This is why brands as active systems comprise three dimensions: products or services; name; and concept, as illustrated in Figure 3.1.

The brand system, as presented in Figure 3.1, relates to a concept with inherent value to products and services that are identified by a name and set of proprietary signs (that is, the logo and other symbols). This system reflects the

conditional nature of the brand asset: it exists only if products and services also exist. Further, differentiation is summarised by the brand concept, which is a unique set of attributes (both tangible and intangible) that constitutes the value proposition of the brand.

FIGURE 3.1: The brand system
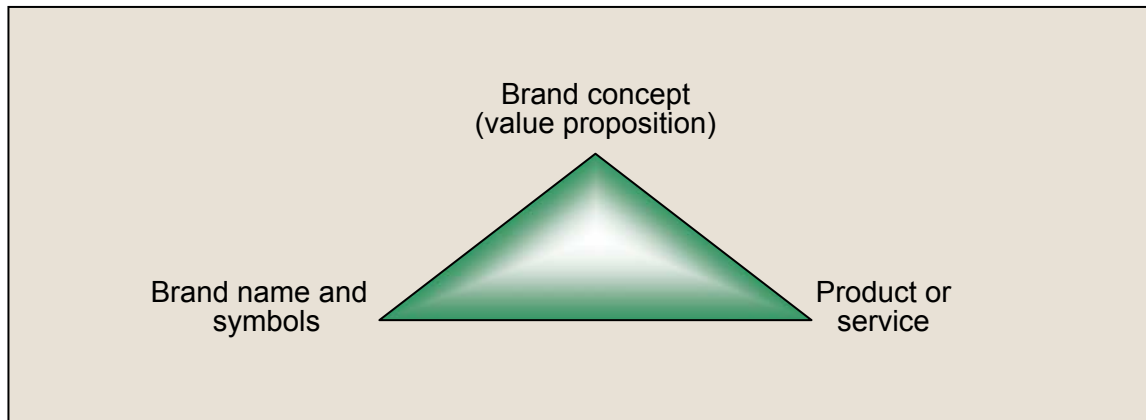
Source: Adapted from Kapferer (2004:12)

3.2.2 Comparison between product and corporate brands

With reference to contemporary brand management, it is possible to differentiate between the concepts "product brands" and "corporate brands". Product brands can be seen as the name, term, sign, symbol, design, or some combination of these elements, that helps to identify the products of one firm and to differentiate them from competitors' offerings (Boone & Kurtz 1996:390; Schoell, Dessler & Reinecke 1993:408). Corporate brands, on the other hand, are defined at the level of the business. At this level, the brand defines that the business will deliver and stand behind the offering. Therefore, the corporate brand is defined primarily by business associations (Aaker 2004:7). Corporate brands can also be seen as an informal contract, in the sense that the business needs to articulate its accord with its key stakeholders by demonstrating unceasingly and over time that it has kept true to its corporate branding pledge.

Corporate brands differ from product brands in several respects. The distinctions between corporate and product brands are summarised in Table 3.1.

TABLE 3.1:   Comparison between product and corporate brands

Dimensions	Product brands	Corporate brands
Focus attention on	The product	The organisation
Values	Contrived	Real
Managed by	Middle manager	CEO
Attract attention and gain support of	Customers	Multiple stakeholders
Functional responsibility	Marketing	Whole organisation
Communication mix	Marketing communication	Total corporate communication
Brand gestation	Short (life of product)	Long (life of organisation)
Importance to company	Functional	Strategic
Commitment	Consumer commitment	Stakeholder commitment (internal and external constituencies)
Emphasis on	Product performance	Identity (Corporate attributes/sub-cultures)

Sources: Adapted from Hatch & Schultz (2003:1044); Balmer (2001)

From Table 3.1, it is evident that, when the functional responsibility rests on the entire business, the focus of the branding effort shifts from the product brand to the corporate brand. In fact, many businesses that traditionally based their success on product brands, have now adopted a corporate brand in an effort to make business actions, values and missions more salient. This adoption of a corporate brand focus can also diffuse specific added values.

A second outstanding difference in conceptualisation is that corporate brand values tend to be grounded in the values and affinities of business founders (entrepreneurs), owners, management and personnel, whereas product brand values tend to be contrived in the product itself, which does not require considerable skills of invention by marketing and advertising specialists (Kapferer 2004:29; Balmer & Gray 2002:8). A third difference is that a corporate brand is an important element of a business strategy and is clearly a senior management concern. In contrast, a product brand is primarily a middle management concern and falls largely within the domain of marketing only (Balmer & Gray 2002:8).

The fourth difference between product and corporate brands relates to the attraction and support of the brand. While product brands mainly target customers or clients, corporate brands also contribute to the images formed and held by all organisational stakeholders (Hatch & Schultz 2003:1045). A fifth difference between a product and a corporate brand concerns the entity that is responsible for the branding effort. Corporate branding requires much more complicated and sophisticated business practices than product branding (Balmer 2001). Corporate branding requires business-wide support, whereas product branding could be handled within the marketing department of a business (Hatch & Schultz 2003:1045).

A sixth difference between product brands and corporate brands relates to the channel of communication used. Balmer (2001) argues that the deliberate and orchestrated communication of a corporate brand depends on the total corporate communication mix, as corporate branding requires the integration of internal and external communication, as well as the creation of coherence of expression across a multiplicity of channels and news media. Finally, the temporal or permanency dimension constitutes another difference between

product and corporate brands. Product brands live in the present. They are short term in their ambitions to attract potential customers and help deliver sales. In contrast, corporate brands live both in the past and the future. Corporate brands stimulate associations with heritage and articulate strategic visions of what is to come. A typical example of a long-lived corporate brand is General Motors, with Chevrolet as one of its product brands.

This research on the brand identity and brand image of the NMMU will therefore concern itself with the corporate brand. To build and entrench the NMMU corporate brand, stakeholder commitment from both internal and external constituencies is vital, in contrast to product brands, which thrive on consumer commitment only. Further, to shape the NMMU brand, the University staff must understand the brand's vision and mission, and be totally committed to delivering it. It follows that great emphasis should be placed on effective internal communication in the University. This reality implies that the NMMU needs to pay attention to its culture, ethos and core values, since these encompass the values of staff and assumptions that affect their behaviour and eventually influence stakeholders' perceptions (Mottram 1998). Should the above be achieved, the NMMU should show progress in terms of shaping its corporate identity.

3.3   PERSPECTIVES ON BRANDING

Branding is about identity. It is about creating, communicating and maintaining an identity that appears value-based and credible in the long run (Ramlau 2002:5). Branding can also be seen as the process through which the product or service is given a name, logo or symbol to distinguish it from the range of other products or services offered by competitors or even by the same organisation (Needle 2004:492; Griffin & Ebert 1999:311).

With reference to the meaning of the concept 'branding', in this research, the newly merged University (on 1 January 2005) was given a name, the NMMU (Nelson Mandela Metropolitan University), a logo, and a slogan ('*for tomorrow*'). The purpose of this branding process was to distinguish the NMMU from other Higher Education Institutions.

An analysis of the literature on branding points to a significant shift in emphasis in brand building over the last decade, namely from the traditional paradigm to a contemporary paradigm.

3.3.1 Traditional perspectives on branding

Traditionally, brands were just another step in the overall marketing of products or services, with the aim of selling these. In terms of the traditional mindset, brands were treated in an off-hand fashion, as a part of the product (Urde 1999:119). With the traditional branding model, the goal was to build brand image, which represented a tactical approach, focusing only on driving short-term results (Aaker & Joachimsthaler 2000:7). Brands served to identify products (or services) and to distinguish these from the offerings of competitors. The challenge was to create a strong and distinctive brand image (Kohli & Thakor 1997:208). In terms of the traditional branding model, the brand management team was responsible for creating and coordinating the brand's management programme. The brand manager did not figure high in the hierarchy of the business. The focus was merely on the short-term financial results of single brands and single products in single markets. The basic objective was to achieve efficient coordination with the manufacturing and sales departments in order to prevent or solve problems concerning sales and market share.

3.3.2 Contemporary perspectives on branding

In recent years, four different contemporary perspectives (or mindsets) on branding have emerged, namely brand orientation; brand leadership; brand asset management; and the Logman model, as discussed below.

(i) Brand orientation

Given the importance of strategic imperatives within a business and an industry, a new approach to branding gradually emerged. In terms of the contemporary views on branding, brand orientation as a brand building model emerged, focusing on brands as strategic resources of the business or institution in question (Keller 2003:730-732; Urde 1999:117-118). Brand orientation is an approach in which the processes of the organisation revolve around the creation, development and protection of brand identity in an ongoing interaction with target customers, with the aim of achieving lasting competitive advantages. In terms of the brand orientation model, the starting point in brand building is to create a clear understanding of the internal brand identity. The brand then becomes a strategic platform that provides a framework for the satisfaction of customers' needs and wants (Urde 1999:129). Applied to the research in question, the NMMU brand should support the needs and wants of stakeholders, and lead to the fulfillment of the dreams and aspirations of its students stakeholder group in particular.

(ii) Brand leadership

Another contemporary development relates to the brand leadership model developed by Aaker and Joachimsthaler (2000). The brand leadership model emphasises business strategy as well as tactics.

FIGURE 3.2: Brand leadership – the evolving paradigm

BRAND LEADERSHIP – THE EVOLVING PARADIGM		
	CLASSIC BRAND MANAGEMENT MODEL	**BRAND LEADERSHIP MODEL**
FROM TACTICAL TO STRATEGIC MANAGEMENT		
PERSPECTIVE	Tactical and reactive	Strategic and visionary
BRAND MANAGER STATUS	Less experienced, shorter time horizon	Higher in the organization, longer time horizon
CONCEPTUAL MODEL	Tactical and reactive	Brand equity
FOCUS	Tactical and reactive	Brand equity measures
FROM LIMITED TO BRAND FOCUS		
PRODUCT-MARKET SCOPE	Single products and markets	Multiple products and markets
BRAND STRUCTURES	Simple	Complex brand architectures
NUMBER OF BRANDS	Focus on single brands	Category focus – multiple brands
COUNTRY SCOPE	Single country	Global perspective
BRAND MANAGER'S COMMUNICATIONS ROLE	Coordinator of limited options	Team leader of multiple communication options
COMMUNICATION FOCUS	External/customer	Internal as well as external
FROM SALES TO BRAND IDENTITY AS DRIVER OF STRATEGY		
DRIVER OF STRATEGY	Sales and share	Brand identity

Source: Adapted from Aaker & Joachimsthaler (2000)

In this model, the brand management process acquires different characteristics, namely strategic and visionary perspectives. Further, the brand manager occupies a senior position within the organisational hierarchy and, as a strategist as well as the leader of the communications team, has a longer job horizon. The prime objective is to build brand equity and develop brand equity measures. In short, brand identity and creating brand value become the drivers of strategy.

As summarised in Figure 3.2, the brand leadership model comprises three distinctive parts, namely from tactical to strategic management; from a limited to brand focus; and from sales to brand identity as driver of strategy. The model emphasises strategy as well as tactics, its scope is broader, and it is driven by brand identity as well as sales. The brand leadership paradigm is based on the premise that brand building not only creates assets, but is necessary for the success (and often the survival) of the enterprise. It is possible that building brands results in a competitive advantage that will pay off financially. Applied to this research, it may be assumed that the NMMU brand should reflect a value-driven university, transformation for equity, and a people-centred institution.

(iii) Brand asset management

Brand asset management is another relevant contemporary concept related to brand management (Davis 2000). Brand asset management may be defined as a balanced investment approach for building the meaning of the brand, communicating it internally and externally, and leveraging it to increase brand profitability, brand asset value, and brand returns over time (Davis & Dunn 2002:15). Davis and Dunn (2002) argue that brands, along with people, are an organisation's most valuable asset. This becomes relevant given that the top three strategic goals for brand strategy are increasing customer loyalty; differentiating the brand from the competition; and establishing market leadership. With regard to the above strategic roles, it is important for any organisation to revolutionise its thinking on brand asset management. In order to adopt this perspective, brand management have to report all the way to the executive management of the organisation and have to involve every functional area (Davis & Dunn 2002:9).

FIGURE 3.3: Brand asset management process

Phase 1: Developing brand vision

Step 1
Elements of a brand vision

Phase 2: Determining brand picture

| Step 2 | Step 3 | Step 4 |
| Determining brand image | Creating brand contract | Brand-based customer model |

Phase 3: Developing a brand asset management strategy

| Step 5 | Step 6 | Step 7 | Step 8 | Step 9 |
| Positioning the brand | Extending the brand | Communicating brand's positioning | Leveraging the brand | Pricing the brand |

Phase 4: Supporting a brand management culture

| Step 10 | Step 11 |
| Measuring return on brand investment | Establishing a brand-based culture |

Source: Adapted from Davis (2000:18)

The brand asset management process, as shown in Figure 3.3, involves four distinct phases and eleven steps in totality. The first phase involves developing a brand vision, which consists of a single step: developing the elements of a brand vision. The basic objective of this step is to clearly state what the branding efforts must achieve to meet the goals of the organisation. The second phase involves determining the organisation's "brand picture" by understanding consumer/client perceptions of the brand and competitors' brands. This phase consists of three steps, namely determining the brand's image; creating the brand's contract, for example, a listing of customers/clients' perceptions of all the current promises the brand makes; and crafting a brand-based customer/client model, which allows for understanding how

consumers/clients act and think, and how and why they make their purchase decisions.

The third phase entails developing a brand asset management strategy for achieving goals according to the brand vision. This phase comprises five steps: positioning the brand; extending the brand; communicating the brand's positioning; leveraging the brand; and pricing the brand. Finally, the fourth phase involves supporting a brand asset management culture. This final phase consists of two steps: creating a measure of the return on brand investment; and establishing a brand-based culture.

From the above discussion, it is evident that brand asset management is a proven process for managing brands as assets in order to maximise their value. The brand asset management perspective is extremely relevant to this research. For example, it could be important for the NMMU brand:

➢ to reflect an academic value in line with stakeholder needs;
➢ to reflect value for money;
➢ to act as a strategic resource of the institution;
➢ to reflect the competitive advantages of the institution ('reasons why' stakeholders should use the brand); and
➢ to reflect strong values of the institution.

(iv) LOGMAN model

With reference to contemporary brand management, the logical brand management or LOGMAN model needs to be introduced (Logman 2004:98). The LOGMAN model combines insights from Kaplan and Norton's balanced scorecard method, the Boston Consulting Group's brand value creation method,

the path analysis method, the gap analysis method, and the house of quality method (Kaplan & Norton 1996).

The LOGMAN model proposes a logical brand consistency audit by presenting the following questions:

➢ Is there a logical interaction between the organisation's brand drivers?
➢ Are the organisation's brand drivers perceived by customers/clients the way the organisation wants them to be?
➢ Are the organisation's brand drivers perceived by customers/clients the way the customers/clients want them to be?
➢ Are the external brand drivers perceived by customers/clients the way the organisation wants them to be?
➢ Is there a logical consistency between the organisation's brand drivers across the different customer/client segments addressed?
➢ Is there a logical consistency between the organisation's brand objectives at different perspective levels?
➢ Is there a logical consistency between the brand drivers over time?

According to Logman (2004), answering these questions helps to identify real problems and key drivers to find solutions and analyse brand policy in a specific context.

With reference to the Logman model, it could be important for the NMMU brand to:

➢ be well-accepted by stakeholders;
➢ exceed expectations in terms of promises; and
➢ reflect the diversity of stakeholders.

In concluding this section, it can be stated that the outstanding feature of the contemporary paradigms on branding is the strategic dimensions incorporated into branding. The branding process has become a top level business strategy.

3.3.3 Corporate branding

Given the contemporary perspectives on branding, a further development has been the shifting of focus in businesses from product branding to corporate branding (Hatch & Schultz 2003:1041; De Chernatony 1999:158). Corporate branding is currently seen as one of the most fashionable management trends (Morsing 2002:33). The corporate branding perspective is a consequence of the strategic approach towards brands and branding.

In Section 3.2.2 of this chapter, the concepts product and corporate brands were introduced. It was also pointed out (at the beginning of Section 3.3) that branding was the process through which a product or service was given a name, logo or symbol to distinguish it from the range of other products or services offered by competitors or even by the same organisation. The emergence of the NMMU brand was also discussed.

This section explores the literature on corporate branding, seeking for further relevant linkages to the NMMU as a corporate brand.

It is logical to say that corporate branding is based on the same principles as product branding, but with the difference that the focus is on the business itself, and not on the product or service as the prime object of the branding (Morsing 2002:36). Corporate branding implies that the aim of the branding activities is to communicate a clear message to the world about the business as well as its products or services. This message should convey what the business stands for, and to which kind of values the business subscribes. The main goal of

corporate branding is to create a uniform perception of the business identity among all its stakeholders.

FIGURE 3.4: Linkage between corporate branding, strategic vision, mission and key values, organisational culture and corporate image
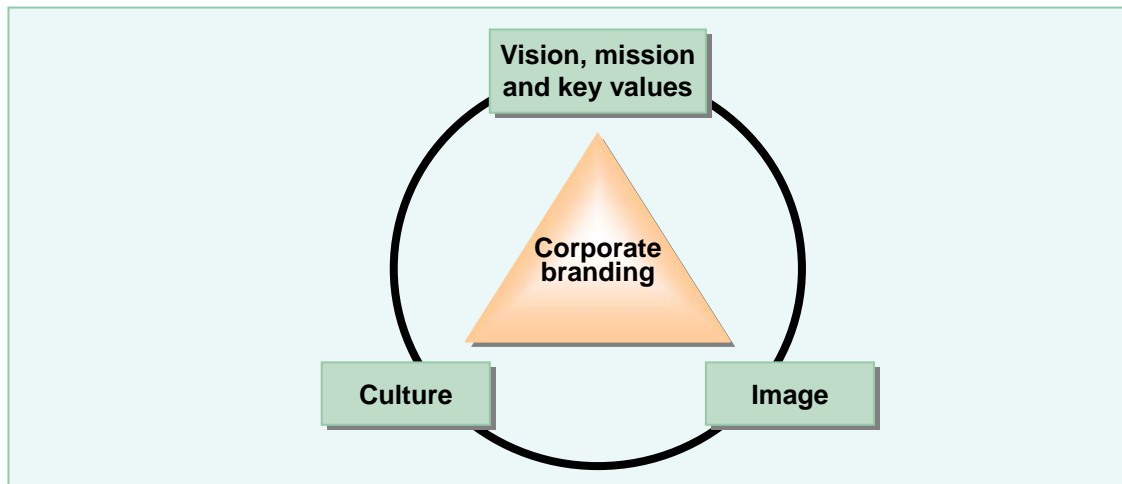
Source: Adapted from Hatch & Schultz (2003:1047)

A useful linkage between corporate branding, vision, culture and image is given by Hatch and Schultz (2003:1047-1051). This relationship is depicted in Figure 3.4, which shows a framework linking corporate branding to strategic vision, mission and key values, organisational culture and corporate image. These three dimensions form the foundation of corporate branding:

➢ *Strategic vision, mission and key values* –

  • *Strategic vision* relates to the future orientation of the institution that embodies and expresses executive management's aspirations for what the institution will achieve in the future.

  • *Mission* is a statement of key (or core) values that defines the purpose of the institution and its distinctive competitiveness.

➢ *Organisational culture* – the internal values, beliefs and basic assumptions that embody the heritage of the institution (if any) and communicate its

meanings to its members; culture manifests itself in the ways employees feel about the institution they are working for.

> *Corporate image* – views of the institution developed by its stakeholders; the outside world's overall impression of the business, including the views of customers, shareholders, the media, the general public; and so on.

Although vision can stretch the business toward new goals and levels of achievement, it must also connect authentically with the heritage of the institution, where applicable. By implication, strategic vision, mission, key values and organisational culture are strongly linked and there is a need for perceived long-term mutual support between them. Further, when brand values are consistent with organisational culture and business values, they will create credibility in the eyes of key stakeholders (e.g. an innovative and trustworthy university). Corporate images feed into strategic vision, serving as a mirror in which executive managers can reflect on who they are. This implies that, instead of using stakeholder images as exact assessments of brand performance compared with strategic vision, images held by stakeholders of who the business is and what it stands for (for example, personality comparisons) can become part of the strategic envisioning process.

From the preceding analysis of literature on corporate branding, a number of potential relevant statements on NMMU branding were identified. They include the following:

> The NMMU brand reflects a true 'African' university.
> The NMMU brand reflects the University's vision and mission.
> The NMMU brand is differentiated from those of other Higher Education Institutions.
> The NMMU brand reflects a visual expression of the institution.

> The NMMU brand is a verbal expression of the institution.

> The NMMU brand reflects the University's lingual identity (official languages are Xhosa, Afrikaans and English).

> The NMMU brand creates high levels of awareness.

> The NMMU logo reflects the NMMU brand identity.

> The NMMU slogan (*'for tomorrow'*) reflects the NMMU brand identity.

> The NMMU brand reflects a values-driven university.

> The NMMU brand reflects transformation for equity.

> The NMMU brand reflects a people-centred institution.

> The NMMU brand is nationally recognised.

> The NMMU brand reflects the leadership qualities and vision of Nelson Mandela.

> The NMMU has a strong brand image.

The above statements will be incorporated in the research instrument (questionnaire) that will first be pilot tested for validity.

3.4   BRAND EQUITY

3.4.1 Defining brand equity

From the literature, it is evident that brand equity has been examined and presented from financial and customer-based perspectives (Keller 2003; Kim, Kim & An 2003; Shimp 2003; Aaker & Joachimsthaler 2000; Aaker 1996b; Simon & Sullivan 1993). Financial perspectives on brand equity focus on the value of the brand to the business activities, whilst the customer-based perspectives relate to the value of the brand for the customer.

Outstanding features of the customer-based and financial based perspectives

on brand equity are:

➢ From a customer based perspective, brand equity can be seen as brand assets linked to a brand's name and symbol that add to, or subtract from, a product or service (Aaker & Joachimsthaler 2000:17; Shimp 2003:33). Keller (2003:60) has explicated the concept customer-based brand equity, defining it as the differential effect that brand knowledge has on consumer responses to the marketing of the specific brand. There are three key ingredients to this definition: differential effect; brand knowledge; and consumer response to marketing. Customer-based brand equity occurs when the consumer has a high level of awareness of and familiarity with the brand and has some strong, favourable and unique brand associations (Keller 2003:67). The customer-based perspective to brand equity is part of the marketing decision-making process (Kim *et al.* 2003).

➢ From the financial perspective, brand equity can be viewed in terms of incremental free cash flows that are added by the brand itself to the overall organisation's value as an entity (Shimp 2003:33; Simon & Sullivan 1993:29). According to Aaker (1996b:109), brand equity comprises a set of assets (or liabilities) linked to a brand's name and symbol that adds to (or subtracts from) the value provided by the product or service to a firm and/or that firm's customers. The incremental value of the brand is higher the stronger the brand is established. This statement has the following implications. Firstly, strong brands usually give the opportunity for successful brand extensions and for brand licensing. Secondly, strong brands are able to stabilise and even grow profits during periods of recession.

To illustrate the financial perspective towards brand equity, Table 3.2 presents the most valuable global brands (listed in terms of value):

TABLE 3.2: Top ten global brands

2005 Brand Rank	Brand Name	Parent Company	Country	2005 Brand value ($Mil)
1	Coca-Cola	Coca-Cola	U.S.	67 525
2	Microsoft	Microsoft	U.S.	59 941
3	IBM	International Business Machines Corporation	U.S.	53 376
4	General Electric	General Electric	U.S.	46 996
5	Intel	Intel	U.S.	35 588
6	Nokia	Nokia	Finland	26 452
7	Disney	Walt Disney Company	U.S.	26 441
8	McDonald's	McDonald's Corporation	U.S.	26 014
9	Toyota	Toyota Motor Corporation	Japan	24 837
10	Marlboro	Altria Group	U.S.	21 189

Source: Adapted from Top 100 global brands scoreboard
(http://bwnt.businessweek.com/brand/2005/index.asp)

The brand equity of, for example the Coca-Cola and Microsoft brands, was driven over time by means of incremental free cash flows. These incremental free cash flows were transformed into corporate values, given the riskiness of the free cash flows. From the examples (Table 3.2), the importance of creating brand equity should be evident. The same basic principle is applicable to service rendering institutions like universities. Educational services rendered over time create intrinsic values (i.e. values based on facts), which shape the brand equity of the institution.

3.4.2 Managing brand equity

Brand equity has been defined as assets (liabilities) linked to a brand's name and symbol that add to, or subtract from, a product or service. According to Aaker and Joachimsthaler (2000:17), these assets (brand equity), as shown in Figure 3.5, can be grouped into four dimensions, namely brand awareness, perceived quality, brand associations, and brand loyalty.

> Brand awareness is an often undervalued asset; however, awareness has been shown to affect perceptions and even taste.

> Perceived quality is a special type of association, partly because it influences brand associations in many contexts and partly because it has been empirically shown to affect profitability.

> Brand associations can be anything that connects the customer to the brand. It can include user imagery, product attributes, use situations, organisational associations, brand personality, and symbols.

> Brand loyalty is at the heart of any brand's value. The concept is to strengthen the size and intensity of each loyalty segment.

FIGURE 3.5: Managing brand equity
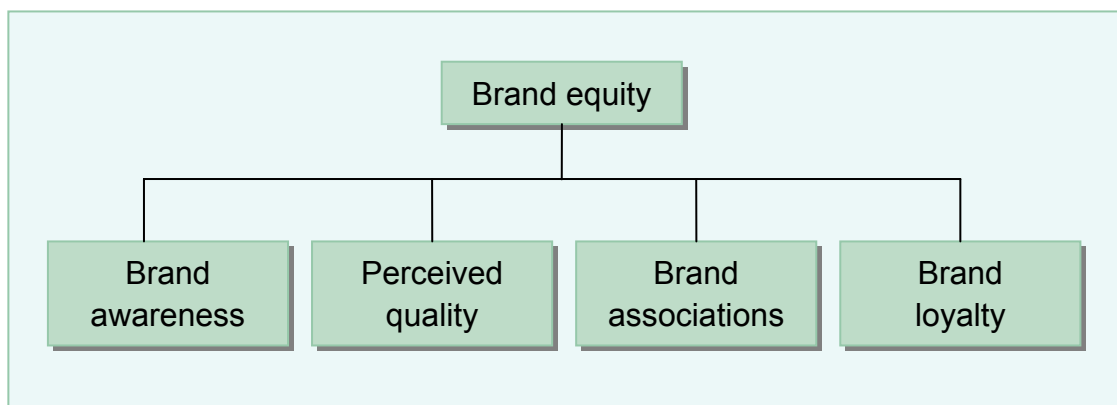
Source: Adapted from Aaker & Joachimsthaler (2000:17)

The four dimensions guide the overall development, management, and measurement of the brand.

3.5   SUMMARY AND CONCLUSIONS

This chapter presented an analysis of secondary sources on brands, branding and brand equity. At the beginning of this chapter, the concepts 'brand' and 'corporate brand' were introduced. The two concepts opened the discussion on

the process of branding by all types of organisations, which interacts with consumers who have a need for the products or services. It was ascertained that through a branding process, the NMMU brand was given a name, logo and slogan to distinguish itself from other Higher Education Institutions.

From the analysis of the perspectives (paradigms) on branding, the importance of the strategic approach towards branding emerged. From this section it was possible to phrase certain statements dealing with the NMMU brand, which will be tested empirically.

The analysis of corporate branding, introducing the vision, mission and key values, and the culture and image of the organisation as building blocks towards corporate branding contributed towards an even better understanding of branding *per se*.

The theories embedded in corporate branding will contribute towards the phrasing of statements applicable to the NMMU brand. Likewise, the underlying theories on brand equity will contribute towards the design of the research instrument to be administered in this research project.

The next chapter investigates brand identity, brand image, brand perceptions and association, brand knowledge, brand awareness, brand loyalty, brand commitment and brand communication.

———— **II** ————

CHAPTER FOUR

UNDERSTANDING BRAND IDENTITY,

BRAND IMAGE AND OTHER RELATED CONCEPTS

4.1 INTRODUCTION

Chapter Four constitutes a continuation of the analysis of secondary sources, with the objective of gaining a holistic understanding of brands and related concepts. As stated in Chapter Three, the desired outcomes of the extensive literature analysis are twofold: firstly, to identify possible statements/questions to be included in the research instrument and tested empirically; and, secondly, to design a conceptual model on brand identity and brand image applicable to the NMMU.

This chapter takes a closer look at brand identity and brand image, as well as other related concepts such as brand knowledge, brand awareness, brand loyalty, brand commitment and brand communication. The chapter concludes with the presentation of a conceptual model applicable to this research, which will be tested empirically.

4.2 BRAND IDENTITY

4.2.1 Brand identity defined

The identity of a brand provides the direction, purpose and meaning of the brand, and as such is central to the brand's strategic vision. It is the driver of one of the four principal dimensions of brand equity, which are the heart and soul of the brand (Aaker 1996a:68). Aaker (1996a) describes brand identity as the cornerstone of brand strategy and brand building. It is therefore critical to the long-term sustainability of any brand.

De Chernatony (1999) suggests that in passing from brand management to

brand identity management, special attention should be paid to the internal aspect of brand building. He argues that more emphasis needs to be placed on brand identity. Identity, he contends, comprises the ethos, aims and values that present a sense of individuality, differentiating the brand from its competitors (De Chernatony 1999:165). This author further conceptualises brand identity in terms of the vision and culture that drive positioning, personality, and any other subsequent relationships of the brand. In this sense, employee and staff members' vision and culture affect the brand building process. This implies that more focus should be placed on internal aspects of branding, such as the role staff members play in shaping a brand's values. De Chernatony's (1999) view that staff members play a vital role in the shaping of a brand's values is of particular relevance to the NMMU, being a people-centered institution, as explained in Section 3.3.3 of Chapter Three.

Aaker and Joachimsthaler (2000:43) define brand identity in terms of a unique set of brand associations that the brand strategist aspires to create or maintain. These associations imply a promise to customers/clients from the organisation's members who are building the brand. Brand identity should help establish a relationship between the brand and the customer by generating a value proposition potentially involving functional, emotional, or self-expressive benefits or by providing credibility for endorsed brands (Aaker & Joachimsthaler 2000:43).

The views of Kapferer (2004:96) on brand identity are also noteworthy. Brand identity means being true to yourself, driven by a personal goal that is both different from others' and resistant to change. Brand identity will be clearly defined once the following questions have been answered:

➢ What is the brand's particular vision and aim?
➢ What makes it different?
➢ What need is the brand fulfilling?
➢ What is its permanent nature?
➢ What is/are its value or values?

➢ What are its fields of competence and of legitimacy?

➢ What are the signs that make the brand recognisable?

In the brand building activities of the NMMU, clear responses to the above questions are of pivotal importance. The purpose of brand identity is to specify the brand's meaning, aim and self-image. In terms of brand management, identity precedes image (Kapferer 2004:98).

An explicit elaboration of the concept brand identity has three goals. Firstly, it should reduce ambiguity by adding interpretation and detail to the elements of the brand identity, thereby making it easier to define decisions and programmes that will strengthen the brand. Secondly, it should enhance decision-makers' ability to assess the capacity of identity dimensions to resonate with customers and differentiate the brand. Thirdly, elaboration can introduce ideas and concepts that are useful in developing on-target, effective brand-building efforts (Aaker & Joachimsthaler 2000:43).

Aaker and Joachimsthaler (2000:43) have identified twelve categories of brand identity elements, as shown in Figure 4.1, organised around four perspectives. These four perspectives are: brand as product (product scope, product attributes, quality/value, use experience, users and country of origin); brand as organisation (organisational attributes, local versus global); brand as person (brand personality, customer/brand relationships); and brand as symbol (visual imagery/metaphors and brand heritage). Further, the same authors are of the opinion that the brand identity structure includes a core identity, an extended identity, and a brand essence. The core identity is most likely to remain constant as the brand is extended to new markets and products/services. If customers/clients perceive the brand according to the core identity, the objective will be achieved. The extended identity includes all of the brand identity elements that are not in the core, organised into meaningful groupings. The brand essence should have several characteristics and, most importantly, it should resonate with customers and drive the value proposition. It should also be ownable, providing differentiation from competitors that will persist through

time. Finally, brand identity should be compelling enough to energise and inspire the employees and owners of the business (Aaker & Joachimsthaler 2000: 43-45).

FIGURE 4.1: Brand identity system

Brand as product
1. Product scope
2. Product attributes
3. Quality/Value
4. Uses
5. Users
6. Country of origin

Brand as organisation
7. Organisational attributes (e.g. innovation, consumer concern, trustworthiness)
8. Local versus global

Brand as person
9. Personality (e.g. genuine, energetic, rugged)
10. Customer/Brand relationship

Brand as symbol
11. Visual image and metaphors
12. Brand heritage
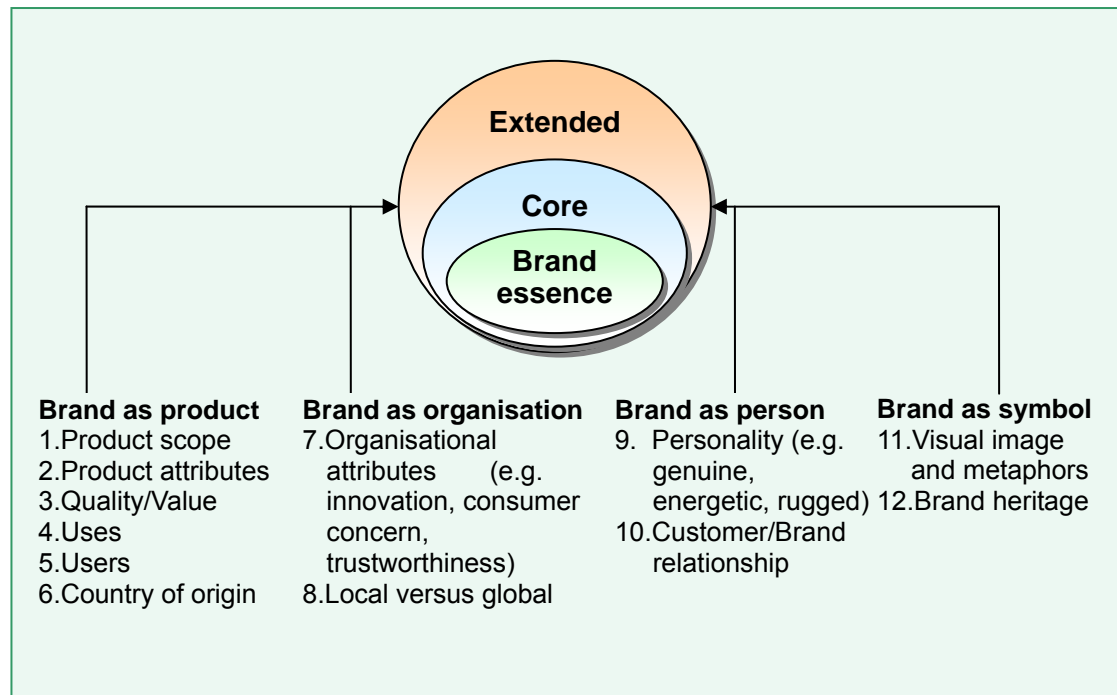
<u>Source</u>: Adapted from Aaker & Joachimsthaler (2000:44)

From the above overview of the literature on brand identity, it should be clear that brand identity is tangible and appeals to the senses. Truly, brand identity can be seen as the visual and verbal expression of a brand. According to Wheeler (2003:4), brand identity is the shortest, fastest, most ubiquitous form of communication available. It increases awareness and builds businesses. Identity supports, expresses, communicates, synthesises and visualises the brand. The role of brand identity will be illustrated within the context of this research.

4.2.2 Brand identity variables

There is consensus amongst leading researchers that brand identity is shaped by five key brand identity variables, namely the reputation; relevance; personality; performance; and relationship of the brand (Coop 2005; Ind 2003;

Perry & Wisnom 2003; Dowling 2001; Aaker 1997). As explained in Section 1.1 of Chapter One, ideally, the strategic intent of a Higher Education Institution like the NMMU must be manifested in the brand identity variables. These variables are associated with a number of attributes that the marketing communication strategists should communicate, either implicitly or explicitly. The core brand identity building attributes were listed in Chapter One to describe the research problem and are reproduced in Table 4.1 for ease of reference.

TABLE 4.1: Core brand identity variables and attributes

Variables	Attributes
Brand reputation	Trust in the brand Reliability of the brand Honesty of the brand communication strategists Heritage, legacy and tradition of the brand Clear communication message Consistency – a clear brand identity to be communicated Credibility in advertising (marketing communication media)
Brand relevance	Needs to be satisfied – and values addressed Meaning fit of the brand (relevance to the institution, e.g. NMMU) Innovation and originality of the brand Academic value in harmony with stakeholders' needs The brand is well accepted by stakeholders
Brand personality	Sincerity of the brand Level of excitement created by the brand Competence reflected by the brand Sophistication and superiority of the brand Ruggedness and resilience of the brand
Brand performance	Exceeds expectations Delivers on promises Delivers tangible benefits Reflects value for money
Brand relationship	Understand how stakeholders feel Stakeholders will use this brand for a long time Actively investigate what is important to stakeholders Stakeholders have to enjoy using the brand Probability of non-usage of the brand

Source: Adapted from Coop (2004:114)

Each of the identified brand identity variables will now be briefly explained:

 ➢ Brand reputation is defined as a collective representation of a brand's past actions and results that describes the brand's ability to deliver valued outcomes to multiple stakeholders (Fombrun & Rindova 1996). The attributed values of brand reputation (such as honesty, trustworthiness and integrity) are evoked from an institution's brand image (Dowling 2001:19).

 ➢ Brand relevance can be described as how well the brand 'speaks' to individual audiences. The articulation of a brand should be relevant to those audience's needs and desires, not merely differentiated (Perry & Wisnom 2003:9). Brand relevance, for example, does what it says on the label of a product. By ensuring that the values that drive a brand are those that best unite its stakeholders, organisations lay the foundations of their own future (Ind 2003:80). With regard to this research, brand relevance can be seen as how well the NMMU brand communicates to stakeholders in terms of their needs.

 ➢ Brand personality reflects the brand's emotional characteristics. These characteristics are represented by the metaphor of personality, which, amongst other sources, evolves from the brand's core values (Harris & De Chernatony 2001:444). According to Aaker (1997:347), brands often serve a symbolic or self-expressive function, because consumers imbue brands with human personality traits. Brand personality can also be viewed as the set of human characteristics associated with a brand and can be measured along five dimensions, namely sincerity, level of excitement, competence, sophistication, and ruggedness.

 ➢ Brand performance is directly related to the levels at which consumers perceive that the primary and actual characteristics of a brand will operate. Performance contains an element of perceived quality on the part of the product/service or brand. Perceived quality, according to Keller (2003:238), can be defined as customers' perception of the overall quality or superiority of a product or service relative to relevant alternatives and with respect to its intended purpose.

 ➢ Brand relationship evolves as a relationship between the brand and its

customers, which is characterised by the values inherent in the brand's personality (Harris & De Chernatony 2001:444). Fournier (1998:344) contends that through the interaction of relationship and personality, employees significantly affect a brand's relationship with its consumers. Therefore, marketing communication strategists need to help employees understand the types of relationships that are appropriate among other employees, consumers and other stakeholders, based on the brand's core values.

The aforegoing presentation of the brand identity variables was useful in identifying at least 36 statements to be used in the research instrument relating to brand reputation, relevance, personality, performance and relationship. Some examples of the above are:

- *Brand reputation*
  - The NMMU brand signifies trustworthiness.
  - The NMMU brand signals legitimacy.
- *Brand relevance*
  - The NMMU brand reflects my educational needs.
  - The NMMU brand fulfills specific stakeholders' needs.
- *Brand personality*
  - The NMMU brand conveys sincerity.
  - The NMMU brand creates a degree of excitement.
- *Brand performance*
  - The NMMU brand offers tangible academic benefits.
  - The NMMU brand delivers on promises.
- *Brand relationship*
  - The NMMU brand is strongly preferred by stakeholders.
  - The NMMU brand reflects what is important to stakeholders.

4.2.3 Benefits of creating a brand identity

Given the definition of brand identity and the interpretation of brand identity

variables, there are compelling reasons to invest in brand identity. According to Wheeler (2003:13) a clear brand identity is associated with specific benefits.

Brand identity:

➢ *Makes it easy for stakeholders to use the brand*. Compelling brand identity presents any business, any size, anywhere, with an immediately recognisable, distinctive, professional image that positions it for success. An identity helps manage the perception of a business and differentiates it from its competitors. A smart system conveys respect for the customer and makes it easy to understand the brand's features and benefits. An effective identity encompasses elements such as a name (logo) that is easy to remember or a package design that wants to be owned.

➢ *Makes it easy for the sales force to sell*. Strategic brand identity works across diverse audiences and cultures to build an awareness and understanding of a business and its strengths. By making intelligence visible, effective identity seeks to clearly communicate a business's unique value proposition.

➢ *Makes it easy to build brand equity*. A brand, or a business's reputation, is considered to be one of the most valuable business assets. Higher Education Institutions such as the NMMU also need to build brand equity. Their future relevance is dependent on building public awareness, preserving their reputations, and upholding their values. A strong brand identity will help build brand equity through increased recognition, awareness and stakeholder loyalty, which in turn will help make the University more relevant to the country's development needs.

4.2.4 Some views on corporate identity

Over the past decade, corporate identity has become a prominent paradigm and has been increasingly linked to the strategic management of organisations (Balmer & Gray 2000:256). In line with the contemporary perspective of branding, corporate identity may be seen as a visual system for controlling how

the business is perceived to be. In essence, corporate identity is the reality and uniqueness of an organisation that is integrally related to its external and internal image and reputation through corporate communication.

Corporate identity is formed by the aggregate of messages and experiences received about a business's products and services by an individual, group or groups over a period of time (Balmer 1998:970). The question now is: What are the distinguishing features of corporate identity? Balmer (1998:979-980) responds to this question as follows:

➢ The concept of corporate identity is fundamentally concerned with reality, 'What an organisation is,' i.e. its strategy, philosophy, history, business scope, the range and type of products and services offered and its communication, both formal and informal;
➢ Corporate identity is multi-faceted and draws on several disciplines; and
➢ Corporate identity is based on the corporate personality, i.e. it is based on the values present within the organisation.

4.3   BRAND KNOWLEDGE

Brand knowledge (for the research in question, brand knowledge of the NMMU), as shown in Figure 4.2, is determined by brand awareness and brand image (Shimp 2003:38; Keller 1993:7). Brand awareness is shaped by brand recognition and brand recall, whilst brand image is determined by the types of brand associations, and the favourability, strength and uniqueness of the brand associations. Brand image will be discussed in Section 4.5 of this chapter.

The brand knowledge model (Figure 4.2) presents a logical structure and approach from which to begin and, secondly, visually demonstrates the complexity surrounding the study of branding.

The basic premise of the brand knowledge model is that the power of a brand lies in what customers have learned, felt, seen, and heard about the brand as a

result of their experiences (Keller 2003:59). Contextualised to the research in question, understanding the content and structure of the NMMU brand knowledge is important, because it may influence what comes to mind when NMMU stakeholders think about the NMMU brand (Keller 1993:7).

FIGURE 4.2: Dimensions of brand knowledge
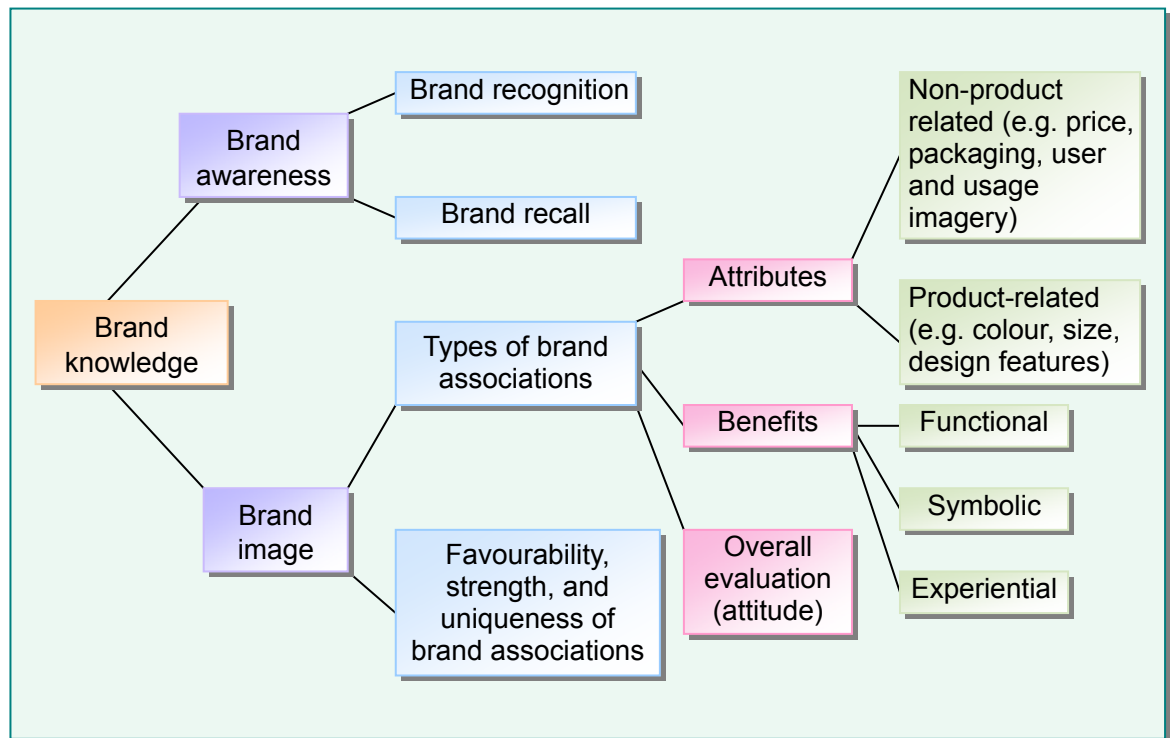
Sources: Adapted from Shimp (2003:38); Keller (1993:7)

4.4   BRAND AWARENESS

Brand awareness has been achieved when a brand name comes to mind when consumers think about a particular product/service category and the ease with which the name is evoked. Figure 4.2 shows that brand awareness is determined by brand recognition and brand recall. Brand awareness relates to brand equity. From the vantage point of stakeholders, the NMMU brand has no equity unless stakeholders are at least aware of the existence of the brand (Shimp 2003:34-35).

Brand awareness can affect both consumer perceptions and attitudes towards the brand. It is possible to differentiate between different levels of brand

awareness, namely: brand recognition, spontaneous brand recall, brand dominance, brand knowledge and brand opinion (Aaker 1996a:114). Since the recognition is usually 'attached' to new brands, the brand knowledge is appropriate for well-established brands.

According to Keller (2003:68), brand awareness plays an important role in consumer decision-making, for three main reasons:

➢ *Learning advantages*: Brand awareness influences the formation and strength of the brand associations that make up the brand image.
➢ *Consideration advantages*: It is important that consumers think of and consider the brand whenever they are making a purchase for which the brand could potentially be acceptable.
➢ *Choice advantages*: Brand awareness can affect choices among brands in the consideration set, even if there are no other associations with those brands.

The above views are particularly applicable within the context of the NMMU brand scenario: it can enable students to foster brand association and contribute towards decision-making to study at the NMMU.

4.5 BRAND IMAGE

4.5.1 Brand image defined

Brand image has long been recognised as an important concept in marketing (Keller 2003:64). Keller (2003:66) defines brand image as the perceptions of a brand as reflected by the brand associations held in consumer memory (see Figure 4.2). The brand associations may be described in terms of attributes, benefits and attitudes (based on experience of the brand).

According to Park, Jaworski and MacInnis (1986:135), brand image is the understanding consumers derive from the total set of brand-related activities

engaged by the organisation (see Figure 4.2). Image research focuses on the way in which certain groups perceive a product or service, a brand, a politician, an organisation or a country or, for the research in question, an university. The image refers to the way in which these groups decode all the signals emanating from the products, services and communication covered by the brand (Kapferer 2004:98-99). An image is a synthesis presented to the public of all the various brand messages, for example, brand name, visual symbols, attributes, products or service, and the benefits of advertisements, sponsoring, patronage and promotion articles. An image results from decoding a message, extracting meaning, and interpreting signs (Nandan 2005:268). From the above, it seems that brand image may be described as a holistic impression of the relative position of a brand by its users, compared with that of its perceived competitors (Coop 2004:1). See also Figure 4.2 for a summary of the variables that shape brand image.

A positive brand image is created by marketing communication programmes that link strong, favourable and unique associations of the brand to the relevant receivers of the brand. Brand associations can also be created in a variety of other ways: by direct experience; from information communicated about the brand by the organisation or other commercial or nonpartisan sources (e.g. consumer reports or other media vehicles) and word-of-mouth; and by assumptions or inferences from the brand itself (for example, its name or logo); or from the identification of the brand with a company, country, channel of distribution, or some particular person, place or event (Keller 2003:70).

Developing a set of brand beliefs by consumers/customers about where each brand stands according to various attributes is also important (Kotler 2003:206). The set of beliefs about a brand eventually comprises the brand image. A consumer's brand image will vary according to his/her experiences of the brand, as filtered by the effects of selective perception, selective distortion, and selective retention.

To summarise views on the concept brand image, the contributions by Dobni

and Zinkhan (1990) are relevant:

➢ Brand image is the concept of a brand that is held by the users of the brand.

➢ Brand image is largely a subjective and perceptual phenomenon that is formed through the interpretation of users, whether reasoned or emotional.

➢ Brand image is not inherent in the technical, functional or physical concerns of the product/service or brand. Rather, it is effected and moulded by marketing activities, by context variables, and by the characteristics of the perceiver.

4.5.2 Brand image associations and variables

Literature on brand communication indicates that the brand image is established via media signals such as printed marketing communication material (Nandan 2005). As indicated in the previous section, brand image can be defined as a reflection of brand associations and perceptions (Keller 2003:66; Shimp 2003:52). In the case of the NMMU, the brand associations and perceptions are those held by students and other stakeholders.

From the literature on brand image, it was possible to identify a number of associations and variables (Coop 2004; Keller 2003; Smith 2003; Van Gelder 2003; Nilson & Surrey 1998). As presented in Chapter One, the brand image is more specifically shaped by six associations and variables, namely strength, uniqueness, expectations, perceptions, experiences and evaluations of the brand. These brand image associations and variables are repeated here but contextualised to the research in question.

➢ *Strength*: The strength of a brand image (brand association) is determined by the magnitude and complexity of the brand identity signals to which the NMMU students and other stakeholders are exposed, as well as the complexity of the processing of the signals (Keller 2003:730).

➢ *Uniqueness*: It is important to identify unique, meaningful attributes of the NMMU brand in order to provide a competitive advantage and "reason why" students and other stakeholders should use it (Keller 2003:730). The

uniqueness of the NMMU brand identity should be communicated by the marketing communication strategists.

➢ *Expectations*: Brand expectations are linked to how brand users expect the brand to perform. NMMU brand expectations are determined by *inter alia* generic educational service attributes and benefits, such as the quality of educational services and the innovativeness of programme offerings (Smith 2003:97-111).

➢ *Perceptions and associations*: A strong brand image association involves the creation of student and stakeholder perceptions (awareness) that the NMMU provides tertiary educational services of the highest quality. An innovative brand association involves the creation of student and stakeholder perceptions that the NMMU develops new and unique academic programmes, especially with respect to new programme introductions or improvements to existing programmes (Keller 2003:545; Van Gelder 2003 176-179; Nilson & Surrey 1998:64-66). For example, it may be that the former UPE brand image was that the institution was an Eastern Cape based and even apartheid created university, whereas the newly established NMMU image could now be seen as a true African university and a real global player, with an innovative brand association.

➢ *Experiences*: Brand image associations can be shaped directly from students' and stakeholders' actual experiences and contact with the NMMU educational services and brand (Keller 2003:83; Nilson & Surrey 1998:64-66).

➢ *Evaluations*: Evaluations refer to how brand users interpret and evaluate the NMMU brand and related marketing information. The brand image evaluation is determined by the perceptions, expectations and, most importantly, the experiences of the brand in question (Coop 2004:235; Keller 2003: 450).

4.5.3 Some views on corporate image

Corporate image is the totality of stakeholders' perceptions of the way an organisation presents itself, either deliberately or accidentally. It is the net result

of the interaction of all the experiences, beliefs, feelings, knowledge and impressions that each stakeholder has about an organisation (Melewar 2003:214; Balmer 1998:966-967).

Corporate image is the impression created by 'how you look, what you say, and what you do'. A business with a good corporate image enjoys the following advantages:

> The public is more likely to assume that it produces good products or services.
> The public is more likely to pay more for its products or services and buy its new products or services.
> The public is more likely to consider the intrinsic assets of an institution, such as the knowledge value of the NMMU, to be valuable.

The above advantages of a solid corporate image should be real drivers for the NMMU to establish itself as a Higher Education Institution with a strong image amongst its stakeholders.

4.6   COMPARISION OF BRAND IDENTITY AND BRAND IMAGE

Having focused on the meaning and content of brand identity and brand image, it is appropriate to summarise the differences between these two concepts and provide a contextualisation to the research on the NMMU brand identity and brand image.

Table 4.2 summarises the differences between the brand identity and brand image of the NMMU. Firstly, brand identity is focused on the University, whereas brand image is focused on the stakeholders. Secondly, brand identity is created by executive managers or marketing communication strategists, whilst brand image is created by perceptions of stakeholders. Thirdly, the message is 'packaged' or 'wrapped' in terms of brand identity, and it is 'unpackaged' or 'unwrapped' by stakeholders in the form of brand image. Finally,

brand identity is established by marketing communication strategists, which represents the institution's reality, while brand image is received or perceived by the stakeholders, which represents the perceptions of the stakeholders. These differences between brand identity and brand image are noteworthy, and are further amplified by the view of Kapferer (2004:98) that brand identity precedes brand image.

TABLE 4.2: Differences between brand identity and brand image of the NMMU

Brand identity	Brand image
NMMU focused	Receiver or stakeholder focused
Created by CEO and marketing communication strategists	Created by perceptions of the NMMU stakeholders
The message is designed and 'packed' by 'brand originator', the NMMU	Decoded by 'brand receivers' or stakeholders, such as students
NMMU brand identity is sent to stakeholders	NMMU brand image is received or perceived by stakeholders

Source: Adapted from Nandan (2005:268)

4.7   BRAND PERCEPTIONS AND ASSOCIATIONS

The concept 'perception' needs clarification within the context of this research. According to Schiffman and Kanuk (1997:146), perceptions can be described as how we see the world and events around us. Two individuals may be subject to the same stimuli under the same apparent conditions, but how each recognises, selects, organises, and interprets them is a highly individual process based on each person's own needs, values and expectations. Schiffman and Kanuk (1997:146) further define perception as the process through which an individual selects, organises and interprets stimuli into a meaningful and coherent picture of the world.

Perceptions about the NMMU brand, its identity and image play an important role in this research. Perceptions of the NMMU brand image are formed in the

mindsets of students and various other stakeholders. It is an inescapable reality that diverse individuals tend to see (perceive) the world and events in their own special way. Reality for an individual (and, for the purpose of this research, the NMMU stakeholders) is merely the reflection of that individual's perception of what is 'out there', or of what has taken place. Individuals usually act and react on the basis of their perceptions, not on the basis of objective reality (Schiffman & Kanuk 1997:146).

The above observations were important considerations when phrasing statements dealing with the NMMU brand image.

4.8   BRAND LOYALTY

Brand loyalty is a behavioural criterion that must be encouraged. When consumers are loyal to a particular brand, the competitive position of the marketer is strengthened (Cronjé, Du Toit, Marais & Motlatla 2004:302). Oliver (1999:34) describes brand loyalty as a deeply held commitment to re-buy or re-patronise a preferred product or service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour. This definition highlights the two distinct aspects of brand loyalty, namely behavioural and attitudinal dimensions. Behavioural or purchase loyalty consists of dispositional commitment in terms of some unique value associated with the brand.

Brand loyalty is the desired outcome of successful branding strategies; it manifests itself when consumers make repeat purchases of the same branded product or service (Needle 2004:494). Brand loyalty is at the heart of any brand's value. The concept behind brand loyalty is to strengthen the size and intensity of each loyalty segment (Aaker & Joachimsthaler 2000:17).

Brand loyalty can be measured on different levels. The first level relates to brand awareness, which means that people are likely to buy a product or

service because they are familiar with (aware of) and recognise the object. It has been indicated that brand awareness is closely related to brand recall and brand recognition. The next level pertains to brand preference. At this level, people purchase the product or service, if it is available, from among competing brands. Customers will be willing to experiment with alternatives only if they cannot find the preferred brand. The ultimate level of brand loyalty is characterised by brand insistence. Customers who insist on a brand will accept no substitute for a preferred brand (Mescon, Bovee & Thill 1999:399; Boone & Kurtz 1996:392).

In terms of the research in question, it is imperative that brand identity and brand image be in harmony in order to build and maintain brand loyalty. Value for the NMMU, as well as for all the stakeholders involved, can be created only when the stakeholders fully understand and appreciate the brand message. The NMMU brand also has to be perceived to address stakeholder needs in a manner superior to the competing brands of other Higher Education Institutions. Alumni of Higher Education Institutions and organised businesses are key contributors of funds to further provide for facilities and, bursary funds and to enhance the growth of the institution. Brand loyalty plays an important role, particularly for alumni. From a communication perspective, there are cogent reasons to believe that a strong link between brand identity and brand image will lead to enhanced brand loyalty (Nandan 2005:270-271).

4.9   BRAND COMMITMENT

Brand commitment follows from brand image. Brand commitment is defined by Hofmeyr and Rice (2000:21) as being psychological rather than behavioural in nature, implying a cognitive process involving thoughts and feelings. According to Hofmeyr and Rice (2000:2), the key to successful marketing is knowing what's in the consumer's mind and managing the relationship appropriately. They refer to the above as commitment-led marketing. It is about understanding that customer satisfaction is a poor predictor of behaviour, but that commitment is an excellent predictor. It is important to differentiate between brand commitment and brand loyalty. Brand loyalty refers to what consumers do,

while brand commitment refers to what consumers think and feel (Hofmeyr & Rice 2000:3).

The distinction between brand loyalty and brand commitment is also explained by Jacoby and Chestnut (Ceurvorst 1993), who define commitment as a psychological bond between a brand and a consumer, whilst loyalty is the behavioural response (usually manifested as a purchase or use of a service) arising as a consequence of commitment. Thus, brand commitment provides an essential basis for distinguishing between brand loyalty and other forms of repeat purchasing behaviour. In summary, commitment is the psychological cause, and loyalty is the behavioural result.

From the above, it is clear that commitment is more than simply 'loyalty'. It includes a psychological attachment. Committed people usually willingly act in a loyal manner. Loyal people, on the other hand, may be grudging in their loyalty and behaviourally at risk (Hofmeyr & Rice 1995). If Higher Education Institutions like the NMMU have truly committed stakeholders, the 'ultimate' outcome of the branding activity will have been achieved.

4.10 ROLE OF BRAND COMMUNICATION

Integrated brand communication refers to activities where various communicational tools, strategies and media sources are used, such as event sponsorships, the Internet, corporate communication, and personal selling. Together with advertising, integrated brand communication has to build and maintain brand identity, brand awareness, brand image and brand preference in a coordinated manner. When marketing communication strategists use advertising in conjunction with other marketing communication tools, as in the case of the NMMU, they create an integrated brand communication that highlights brand features and brand equity. Over the past 30 years, the advertising and marketing communication industry has evolved to recognise that the integration and coordination of marketing communication elements is the key to effective communication and lasting brand identity (O'Guinn, Allen & Semenik 2005:41).

In the context of brands, the communication between the NMMU and its stakeholders can be examined in terms of brand identity and brand image relationships (Nandan 2005:265). Communicating a brand identity to a target segment has long been regarded as an important marketing activity. A well-communicated identity should help to establish brand image, insulate the brand from competition, and therefore enhance the brand's market performance.

Figure 4.3 presents a model for the NMMU brand communication process. The figure also shows that the key difference between brand identity and brand image pertains to the fact that brand identity stems from the source or institution, whereas brand image is perceived by the receivers or the stakeholders. The brand message is 'packaged' or 'wrapped' in terms of brand identity, and it is 'unpackaged' or 'unwrapped' by the NMMU stakeholders in the form of brand image. Brand identity represents the NMMU's reality, whilst brand image represents the perceptions of the stakeholders (Nandan 2005:268).

Figure 4.3 depicts the pivotal roles and mutual relationships of the three components of the brand communication process. The inseparability of brand identity, brand communication, and brand image must collectively ensure a competitive advantage for the owner of the brand. It can be seen that brand communication forms a tripartite bridge between brand identity and the resultant brand image.

4.11 CONCLUSIONS: CONSTRUCT OF COMPREHENSIVE THEORETICAL AND MODIFIED CONCEPTUAL MODELS ON BRAND IDENTITY AND BRAND IMAGE

Based on the analysis of secondary sources, specific conclusions can be made

FIGURE 4.3: A model for the NMMU brand communication process

Primary communication

Stakeholders

Creates

Exogenous factors

NMMU BRAND IDENTITY

Through

Tertiary communication

NMMU BRAND IMAGE AND BRAND REPUTATION

Can lead to

COMPETITIVE ADVANTAGE

Secondary communication

Stakeholders

Creates

Feedback

Feedback

POLITICAL	ECONOMIC	ETHICAL	SOCIAL & TECHNICAL	ENVIRONMENTAL FORCES
NMMU brand identity • Values and purposes • Corporate strategy • Organisational culture • Organisational structure	**Primary communication** • Products and services • Marketing behaviour • Behaviour towards employees • Employees' behaviour to other stakeholders • Non-market behaviour **Secondary communication** • Formal, corporate and communications (advertising, PR, graphic design, etc.). • Visual identification systems	**Tertiary communications** • Word-of-mouth • Media interpretation and spin • Competitors **Stakeholders** • Students • Academic, administrative and technical staff • Parents of students • Alumni • National and provincial governments • Local business community • General public	**NMMU brand image** The immediate mental picture that individuals or individual stakeholder groups have of the NMMU **NMMU brand reputation** Evolves over time as a result of consistent performance reinforced by the three types of communication shown above	**Competitive advantage** The reputation of the NMMU in the eyes of individuals and stakeholder groups will influence their willingness to either provide or withhold support for the NMMU **Exogenous factors** Perceptions of the NMMU and therefore the strength of competitive advantage can be influenced by a number of factors including: • Environment of Higher Education Institutions • Industry image and reputation, etc.

Source: Adapted from Balmer & Gray (2000:260)

for the research in question. Being informed about the meaning and context of the concepts 'brands' and 'branding', the contemporary perspectives on branding, brand equity, brand identity, brand knowledge, brand awareness, brand image, brand loyalty, brand commitment and the role of brand communications, enabled the researcher to give effect to two groups of research objectives, namely, to construct the research instrument that will assess the relationships as depicted in the modified conceptual model; and to construct two theoretical models (see Section 1.3.2 of Chapter One).

Based on the analysis of secondary sources, it was possible to identify 60 contextualised statements on the NMMU brand variables, which were included in the research instrument. The 60 statements on the brand variables are subdivided as follows:

➢ Brand reputation: 7 statements;

➢ Brand relevance: 7 statements;

➢ Brand personality: 7 statements;

➢ Brand performance: 9 statements;

➢ Brand relationship: 6 statements;

➢ Brand identity: 14 statements;

➢ Brand image: 10 statements.

The structure of the research instrument is described in Section 5.2.2 of Chapter Five. The complete research instrument is attached to this study as Annexure A. In addition the actual design of the research instrument, the constructs of the two models and their application will be presented as the main conclusions and outcomes to Chapters Three and Four.

The first model was labelled in Chapter One as the 'comprehensive theoretical

model on brand identity and brand image' (Figure 1.1), and was simplified and then named the modified conceptual model on brand identity and brand image (Figure 1.2).

FIGURE 4.4: Comprehensive theoretical model on brand identity and brand image
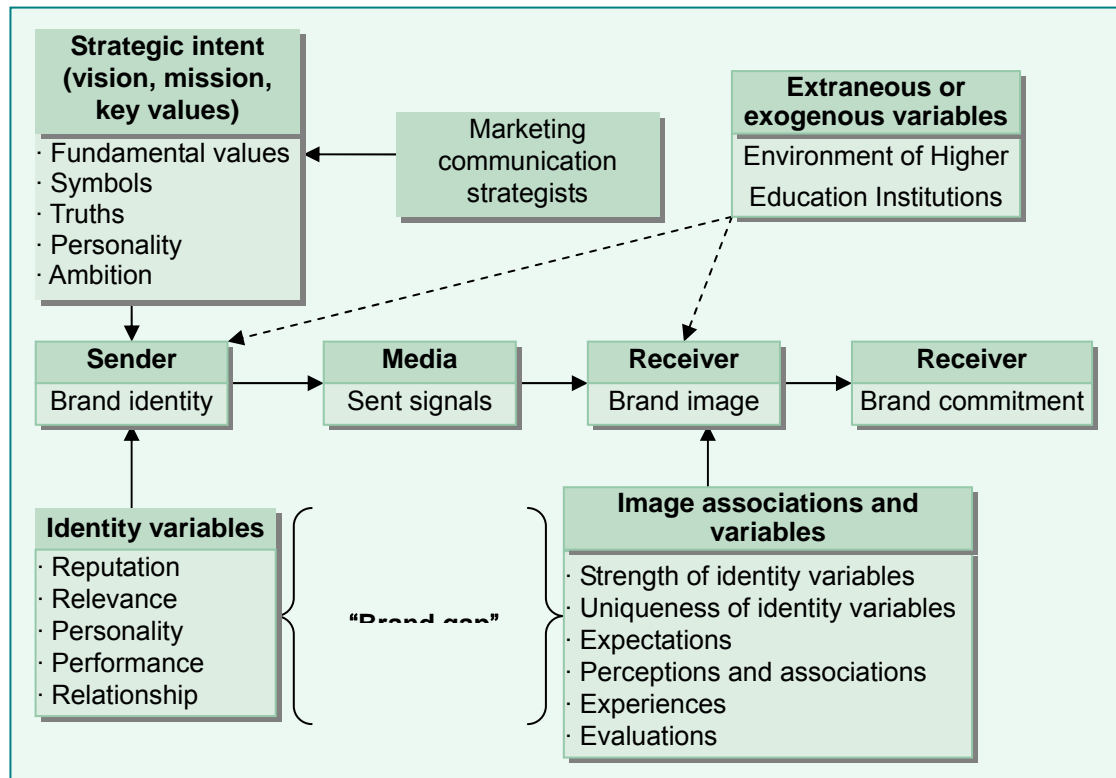
Sources: Adapted from Coop (2004); Kapferer (1997)

One of the major outcomes of the analysis of secondary sources is Figure 1.1 of Chapter One, here reproduced for ease of reference as Figure 4.4. Figure 4.3 (A model the NMMU brand communication process) precedes Figure 4.4, the former emphasising the pivotal role of marketing communication strategists in the overall brand communication process. The sender of the brand message has to be aware of the contemporary strategic branding paradigms communicating the strategic intent of the institution (vision, mission, key values) to stakeholders. The analysis of secondary sources further enabled the identification of the brand identity variables, as shown in Figure 4.4. From the

literature, it became clear that brand image is receiver (stakeholder) audience focused. Brand image is created by the perceptions of stakeholders and thus decoded by brand receivers. Brand image is thus a consequence of stakeholders' perceptions of the brand. The brand image associations and variables are shown in Figure 4.4. In Section 4.9 of this chapter, the implications of brand commitment were explained.

A simplification was done by reconstructing Figure 1.1, culminating in Figure 1.2 (reproduced here as Figure 4.5). This simplification, leading to the modified conceptual model on brand identity and brand image, is better suited to give effect to the research objectives and to test the hypotheses as stated in Section 1.4.2 of Chapter One. The modified conceptual model is also better suited to illustrate the expected and actual experience of using the NMMU brand.

FIGURE 4.5: Modified conceptual model on brand identity and brand image
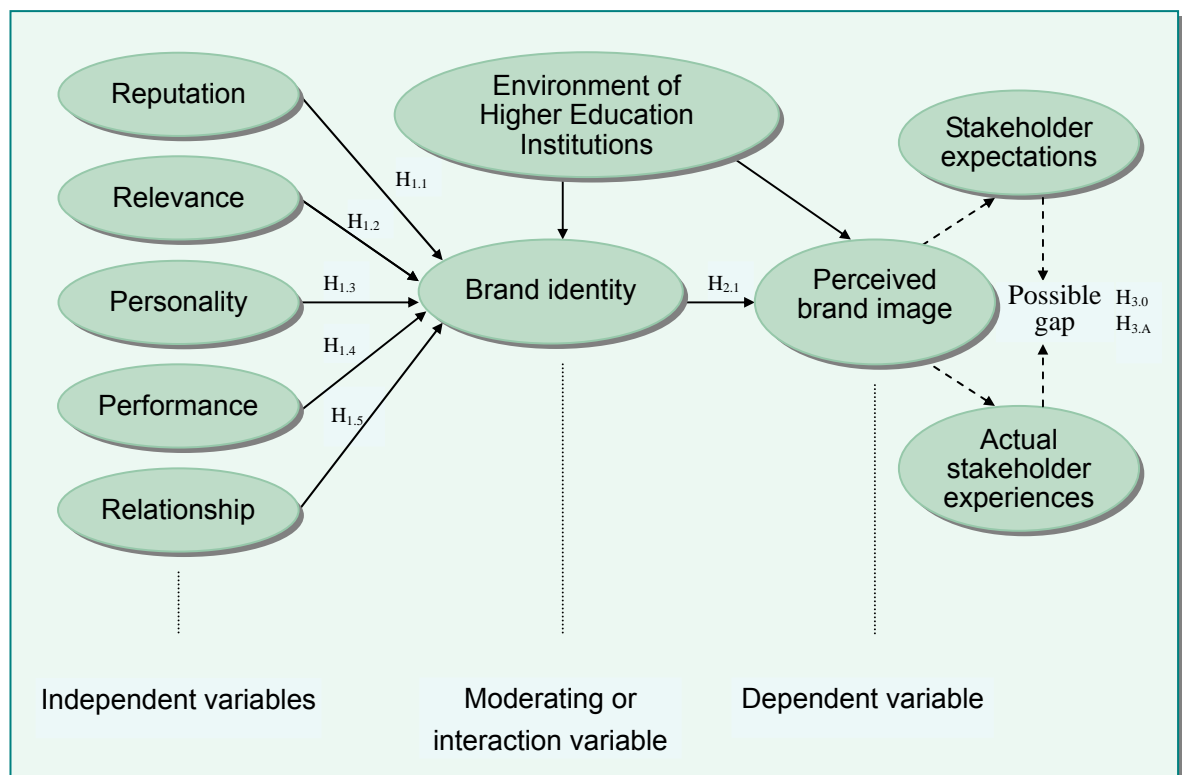
Source: As modified from Figure 4.4

The constructs of Figure 4.4 and Figure 4.5 were not possible without the analysis and understanding of the relevant secondary sources. One of the most important observations is that brand identity precedes brand image, an observation which is the cornerstone of the model depicted in Figure 4.5.

———— **II** ————
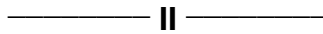
CHAPTER FIVE

PRIMARY DATA SOURCING

5.1 INTRODUCTION

This chapter gives effect to the third secondary research objective, as stated in Section 1.3.2 of Chapter One, namely to source primary data to gauge the opinions of stakeholders on the perceived NMMU brand image. This objective implies that an appropriate overall survey design for sourcing the primary data of this research must firstly be planned and then executed. The correct planning and execution of the data sourcing phase according to prescribed guidelines would contribute to the validity, reliability, credibility and relevancy of the data to be used for eventual statistical analysis.

This chapter on primary data sourcing consists of three main sections. Firstly, the overall design and structure of the research (measuring) instrument will be explained. A motivation why the Likert seven-point interval scale was adopted will be given. Secondly, the *modus operandi* followed in the pilot study will be explained, after which the findings of the pilot study (to assess the reliability of the research instrument) will be reported. Finally, information will be supplied on the target population (N), and the sampling frames and sampling units, which led to the actual sample (n). An explanation will also be offered on the sampling methods used. Based on all of the above, various conclusions will be presented.

5.2 DESIGN AND STRUCTURE OF RESEARCH INSTRUMENT

5.2.1 Background to the design of the research instrument

Questionnaires as research or measuring instruments to source primary (raw)

data are associated with both positivistic and phenomenological methodologies. Collis and Hussey (2003:173) describe a questionnaire as a list of carefully structured questions, chosen after considerable testing, with a view of eliciting reliable responses from a chosen sample. In the research in question, the purpose of the questionnaire was to source primary data in order to ascertain what NMMU stakeholders' perceptions were about the NMMU brand. The statements contained in the questionnaire were all sourced from secondary sources on branding, as explained in Chapters Three and Four. In phrasing the statements on the NMMU brand, the requirements of a well-designed questionnaire were considered, such as:

- ➢ Statements should be as short as possible;
- ➢ The logical structure of the questionnaire is important;
- ➢ The statements should be as simple as possible (for example, jargon, or an over-complex language or question structure should be avoided);
- ➢ Ambiguous statements should be avoided (for example, linked statements in the questionnaire);
- ➢ Leading statements should not be included (statements that anticipate a particular response); and
- ➢ The wording of the covering letter should give clear instructions to the respondents on how they should complete the questionnaire. The purpose of the research should also be explained in the covering letter.

5.2.2 Structure of research instrument

The broad structure of the research instrument was already introduced in Section 2.5.2 of Chapter Two. The covering letter explained the purpose of the research as well as instructions on how to respond to the statements. The survey was conducted under the auspices of the Centre for Applied Business

Management, a registered research centre at the NMMU.

The research instrument itself comprised two sections. Section A consisted of 60 statements (items); respondents were requested to give their opinions/perceptions, using a Likert seven-point interval scale on the NMMU brand. The statements contained in the questionnaire dealt with stakeholders' perceptions of expectations as well as actual experiences linked to the NMMU brand. This interval scaled research instrument enabled the researcher to perform the inferential statistical data analysis, as described in Section 5.2.3 of this chapter (Leedy & Ormrod 2005:26-27; Cooper & Schindler 2003:227-228).

As indicated, Section A, which dealt with stakeholders' perceptions of the NMMU brand identity and brand image, assessed the stakeholders' rating of their expectations and actual experiences of the NMMU brand. According to Churchill (1997:67), it is expedient to assess expectations at the time of purchase, and actual experience at some point after the purchase. The structure of the research instrument enabled the researcher to give effect to the view of Churchill. Next to the statements, two columns were provided; the first column catered for expectations of the NMMU brand, using a Likert seven-point scale. The second column made provision for the actual experiences of respondents, also according to a Likert seven-point scale. To summarise: the research instrument gauged both the NMMU stakeholders' expectations (perceptions) and actual experiences of the NMMU brand.

The respondents were requested to express their opinions/views/perceptions by interpreting the Likert seven-point interval scale (1 = strongly disagree; 7 = strongly agree). The heading of Section A of the research instrument is reproduced in Table 5.1. The complete research instrument is included in Annexure A.

TABLE 5.1: Heading of research instrument

STATEMENTS ON NMMU BRAND IDENTITY AND BRAND IMAGE	Expectations of NMMU brand							Actual experiences of NMMU brand						
	Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable	Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable

The 60 statements on the NMMU brand can be subdivided in terms of the identified research variables. Table 5.2 provides the subdivision and number of statements per research variable.

TABLE 5.2: Brand variables and number of statements per variable

Statements on	Number of statements
Brand reputation	7
Brand relevance	7
Brand personality	7
Brand performance	9
Brand relationship	6
Brand identity	14
Brand image	10
Total	**60**

Section B of the questionnaire canvassed biographic data of the respondents, such as the designated sampling frames (for example, students, staff, gender and level of study). The biographical information provided in Section B assisted in classifying the data in terms of the different sampling frames.

5.2.3 Operationalisation of variables of research instrument

The modified conceptual model (Figure 1.2 of Chapter One) shows five independent variables impacting on brand identity (moderating variable). It further hypothesises a relationship between brand identity and brand image (dependent variable).

Based on the interpretation of secondary sources, each of the seven variables was defined and described in Chapters Three and Four. Previous research has not been replicated in this study, in the sense that all statements used in the research instrument were newly generated by the researcher, based on secondary sources.

More particularly in Chapter Four, each of the seven variables was defined for the proposed conceptual model. For ease of reading, the definitions of these variables as used in this research are repeated:

➢ *Brand reputation* is defined as a collective representation of a brand's past actions and results that describes the brand's ability to deliver valued outcomes to multiple stakeholders.

➢ *Brand relevance* is defined as how well the brand 'speaks' to individual audiences. With regard to this research, brand relevance is seen as how well the NMMU brand communicates to stakeholders in terms of their needs.

➢ *Brand personality* reflects the brand's emotional characteristics and is defined as the set of human characteristics associated with a brand, such as the level of excitement, competence, sophistication, and ruggedness.

➢ *Brand performance* is directly related to the levels at which consumers perceive that the primary and actual characteristics of a brand will operate.

Performance contains an element of perceived quality on the part of the product/service or brand.

➢ *Brand relationship* is defined as a relationship between the brand and its customers, which is characterised by the values inherent in the brand's personality.

➢ *Brand identity* is defined as the direction, purpose and meaning of the brand, and as such is central to the brand's strategic vision, and the cornerstone of brand strategy and brand building.

➢ *Brand image* is defined as the perception of a brand, as reflected by the brand associations held in consumer memory. The brand associations may be described in terms of attributes, benefits and attitudes (based on experience of the brand).

Before the research instrument was administered, it was extensively pilot tested for reliability. The pilot testing procedure and results will be reported in Section 5.3 of this chapter.

5.2.4 Measurement scales

The decision on the measurement scales (nominal, ordinal, interval or ratio) used in a research instrument to collect the data has important implications for the type of statistical analysis that a researcher may perform. As indicated earlier, a decision was taken to use the Likert seven-point interval scale. Before motivating this decision in this research, it is necessary to briefly introduce the four scales of measurement.

(i)   Nominal scale of measurement

Leedy and Ormrod (2005:25) provide a fitting description of the nominal scale

of measurement by explaining that the word 'nominal' comes from the Latin *nomen*, which means 'name'. Data can thus be 'measured' by assigning names to it. This scale allows researchers only to classify data, which allows inferences on equality or difference, but nothing else (Collis & Hussey 2003:161). For example, a sample of objects, such as staff members, can be classified (named) according to a variable 'function', which allows the researcher to count the number of directors, executive managers, financial managers, and the like.

Because nominal measurement is elemental and unrefined, allowing only a few statistics appropriate for analysing nominal data, this scale was judged to be inappropriate for the statistical data analysis requirements of the research in question.

(ii)   Ordinal scale of measurement

An ordinal scale arranges objects or alternatives according to their magnitude in an ordered relationship (Zikmund 2003:297). In such an event, the researcher may argue in terms of > (greater than) or < (less than). This scale allows the researcher to rank-order data, hence the name 'ordinal' (Leedy & Ormrod 2005:26).

An ordinal scale allows an extension of the range of statistical techniques that can be used for data analysis, such as the median and percentile rank. The extent of the relationship between two characteristics can also be determined by means of Spearman's rank order correlation (Leedy & Ormrod 2005:26).

To summarise, a typical ordinal scale allows respondents to rate, for example, the brand image of the NMMU as 'excellent', 'good', 'fair', or 'poor', but such a

rating does not specify how much better is 'good' in relation to 'fair'.

Despite the greater statistical data analysis possibilities associated with ordinal data, its inherent weaknesses make it unsuitable as a measurement scale for the research in question.

(iii) **Interval scale of measurement**

Interval scales of measurement have the power (abilities) of nominal and ordinal scales, plus one additional strength: they incorporate the concept of equality of interval (the distance between 1 and 2 equals the distance between 2 and 3, 3 and 4, and so on) (Blumberg *et al.* 2005:376). Besides the equality described above, interval scales also have a zero point that has been established arbitrarily (Leedy & Ormrod 2005:26).

The rating scales employed in survey research are assumed to be interval scales. For the research in question, it was decided to use a Likert seven-point interval scale, as shown in Figure 5.1. As also indicated in Figure 5.1, the 'equidistances' between the numbers are the same.

FIGURE 5.1: Illustration of a Likert seven-point scale
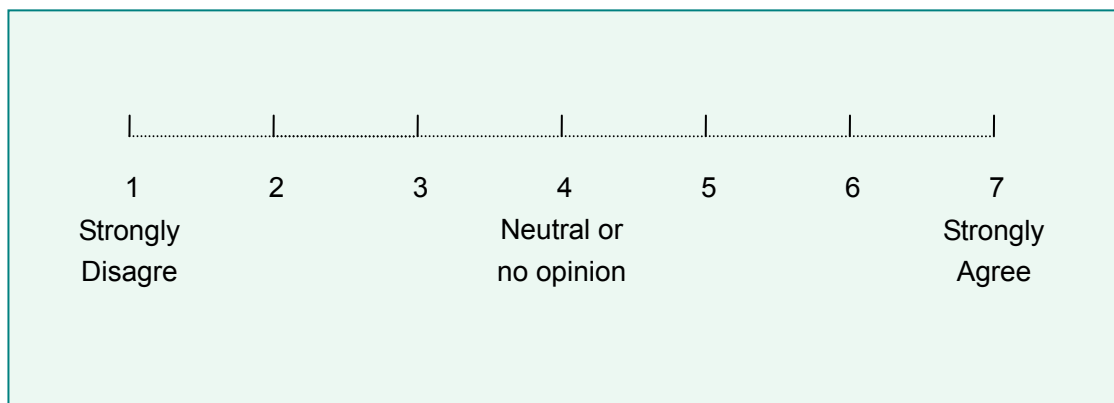
Source: Adapted from Leedy & Ormrod (2005:26)

The question arises why a Likert seven-point interval scale was used, and not, for example, a five-point scale. A seven-point scale was selected, because it was considered that such a scale would allow the knowledgeable target population (students, staff members, alumni and organised business) to specify their responses more accurately than if a five-point scale were used.

Interval measurement scales allow for more advanced statistical procedures. Besides the arithmetic mean as a measure of central tendency and the standard deviation as a yardstick of dispersion, product moment correlation, t-tests, F-tests and other parametric tests are the statistical procedures of choice (Blumberg *et al.* 2005:376). These statistical abilities were a strong motivation for using the interval scale.

(iv)   Ratio scale of measurement

The ratio scale of measurement incorporates all of the powers of the previous data types, plus provision for absolute zero or origin (Blumberg *et al.* 2005:377). Using a thermometer that measures temperature on either the Celsius or Fahrenheit scale, the conclusion that 80°F is twice as warm as 40°F would be invalid. The reason should be obvious: these scales do not originate from a point of absolute zero: a substance may have some degree of heat even though its measured temperature falls below zero (Leedy & Ormrod 2005:27). The ratio scale concept can better be described by stating that a ratio scale has two characteristics: (1) equal measurement units, and (2) an absolute zero point of origin, i.e. 0 (zero) on the scale reflects a total absence of the quantity being measured (Leedy & Ormrod 2005:27).

Ratio scales are different from the other three scales, because a ratio scale can express values in terms of multiples as well as fractional parts. Because the

usage of ratio scales outside the physical sciences is relatively rare, such scales were not considered to be a prerequisite for this research.

TABLE 5.3: Summary of measurement scales

	Measurement scale	Characteristics of the scale	Statistical possibilities of the scale
Non-interval scales	**Nominal scale**	A scale that 'measures' in terms of names or designations of discrete units or categories	Enables one to determine the mode, the percentage values, or the chi-square
	Ordinal scale	A scale that 'measures' in terms of such values as 'more' or 'less', ' larger' or 'smaller', but without specifying the size of the intervals	Enables one also to determine the median, percentile rank, and rank correlation
Interval scales	**Interval scale**	A scale that measures in terms of equal intervals or degrees of difference but whose zero point, or point of beginning, is arbitrarily established	Enables one also to determine the mean, standard deviation, and product moment correlation; allows one to conduct most inferential statistical analyses
	Ratio scale	A scale that measures in terms of equal intervals and an absolute zero point of origin	Enables one also to determine the geometric mean and the percentage variation; allows one to conduct virtually any inferential statistical analysis

Source: Adapted from Leedy & Ormrod (2005:28)

The outstanding features of the four scales of measurement are as follows (Leedy & Ormrod 2005:27):

➢   A nominal scale: One object is different from another;

➢   An ordinal scale: One object is bigger or better or more of anything than

another;

➢ An interval scale: One object is so many units (degrees, inches) more than another;

➢ A ratio scale: One object is so many times as big or bright or tall or heavy than another.

Table 5.3 provides a summary of measurement scales, their characteristics and statistical implications. Of decisive importance is the statistical possibilities associated with the measurement scales. An interval scale allows the researcher to conduct the inferential statistical analysis required for this study.

5.3   PILOT TESTING OF RESEARCH INSTRUMENT

The data gathering phase of the research process actually begins with a pilot study or pilot testing. In this phase, the objective is to test the research instrument, to ascertain whether the instrument actually meets its purpose. The crucial question is whether the research instrument really sources the data that it is designed (or intended) to source. A pilot study is an excellent way to determine the feasibility of a research project. Pilot testing of the research instrument can reveal weaknesses in its design. Basically, pilot testing is a simulation before the start of the actual primary data collection phase.

In this study, a pilot test was conducted to assess the reliability of the measuring instrument. The questionnaire was administered to 252 students doing their second semester course in Business Management at the South Campus of the NMMU. The purpose of the research was explained to the students when the questionnaire was administered.

To verify the consistency of the inter-item reliability of the questionnaire,

Cronbach alpha reliability coefficients were calculated. Reliability coefficients lower than 0.60 were deemed to be questionable; those close to 0.70 as acceptable; while coefficients larger that 0.80 were regarded as good (Sekaran 1992: 174, 284, 287). The Cronbach alpha coefficients for the student pilot study respondents are presented in Table 5.4. The SPSS programme was used for the calculation of the Cronbach alpha reliability coefficients for the pilot testing phase.

TABLE 5.4: Cronbach alpha reliability coefficients for pilot study

Brand variables	NMMU brand	
	Expectations	**Actual experiences**
Reputation	0.878	0.852
Relevance	0.832	0.850
Personality	0.858	0.848
Performance	0.886	0.877
Relationship	0.849	0.856
Identity	0.897	0.896
Image	0.862	0.890

Table 5.4 shows that, for the pilot study, all Cronbach alpha coefficients were in excess of 0.80 for all the variables, both for expectations and actual experiences of the NMMU brand. Given this favourable result, it was decided to proceed with the administering of the questionnaire without further changes.

5.4 PHASES IN SAMPLING DESIGN

The phases leading towards the sampling design include concepts such as population, target population, sampling frames, sampling units, sampling and sample size. The sampling methods used are another relevant set of

information that needs to be reported. For the purpose of primary data sourcing, it is important to have a common understanding with regard to the abovementioned concepts.

5.4.1 Population and target population

A population or universe is any complete group or body of people or any collection of items under consideration for the research purpose (Collis & Hussey 2003:155; Zikmund 2003:369). For the research in question, the population refers to the diverse NMMU stakeholder groups, i.e. students, all staff members, parents of students, alumni, national and provincial governments, and the business community at large. Apart from the registered students, NMMU staff, parents of students, alumni and the business community, it is difficult to physically count all the units in order to arrive at the population (N) for this research.

The above broad definition of the population was narrowed down to the target population, which comprises the complete group of specific population elements relevant to the research project (Blumberg *et al.* 2005:209-210; Zikmund 2003:373). This narrowing down was done solely for pragmatic reasons. The target population included as stakeholder groups registered students, all staff members, those alumni whose electronic mail addresses were available, and members of the Port Elizabeth Regional Chamber of Commerce and Industry (PERCCI), the latter representative of the business community.

The above delimitation of the target population was important in order to identify the source from which the primary data was obtained.

FIGURE 5.2: Target population, sampling frames and sampling units of research
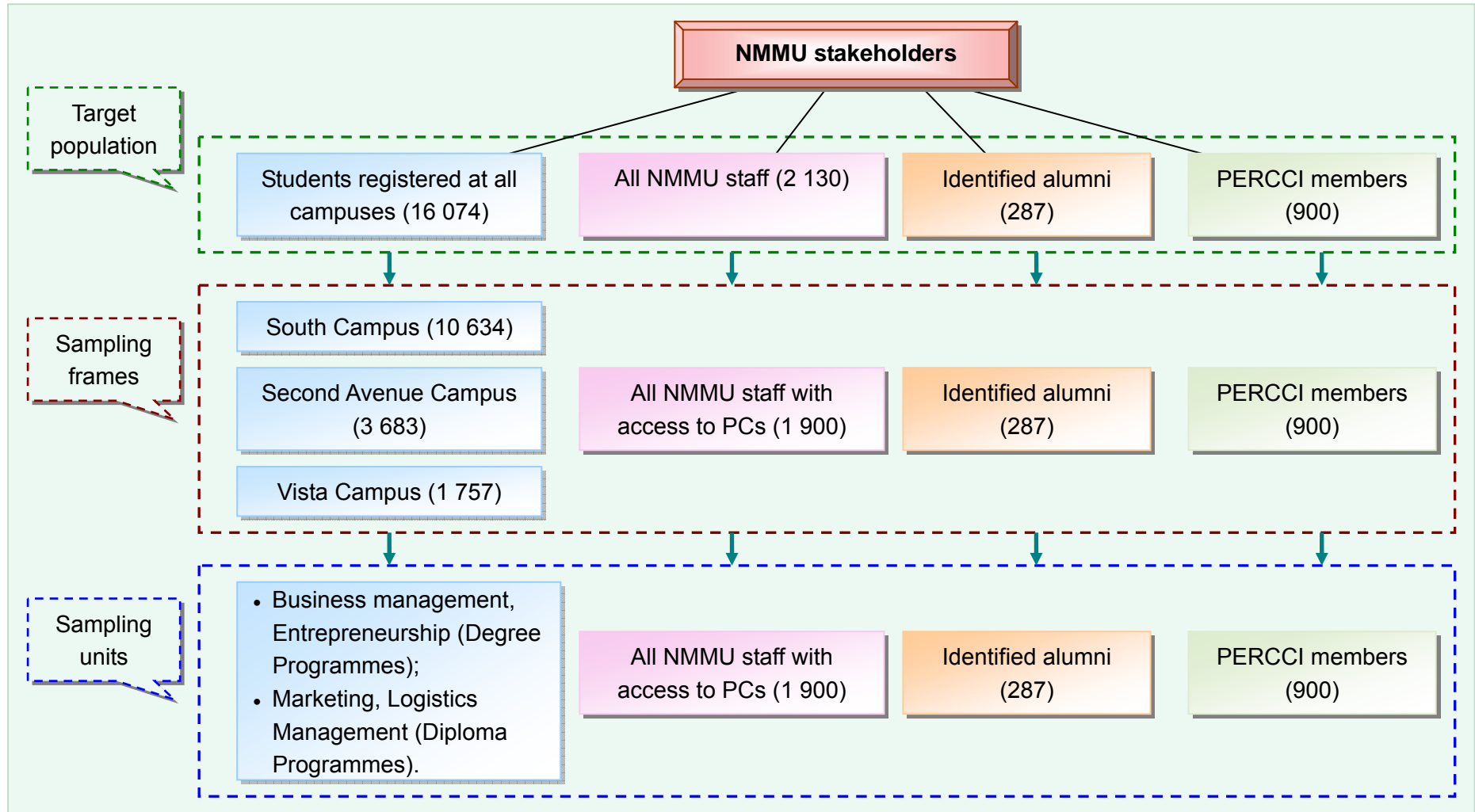
Figure 5.2 presents an overall picture of the four target population subsets:

➢ Contact students registered at the various NMMU campuses (excluding distance education enrolments) (N =16 074);

➢ All NMMU staff (N = 2 130);

➢ Alumni with electronic mail addresses available (N = 287); and

➢ Members of PERCCI (N = 900).

5.4.2 Sampling frames

The sampling frame is closely related to the target population. The sampling frame is the list of elements from which the sample is actually drawn. In actual practice, the sample will be drawn from a list of population elements that is often somewhat different from the target population that has been defined (Zikmund 2003:373).

For this research, the sampling frames for the target student subset comprised only three NMMU campuses, namely South Campus (N = 10 634), Second Avenue Campus (N = 3 683), and Vista Campus (N = 1 757). Practical considerations limited the sampling frames to only three of the NMMU campuses where Business Management and associated fields of study were presented.

Because the research instrument was made available electronically to NMMU staff, the staff sampling frame comprised only those staff members with access to PCs (N = 1 900). For alumni, the same line of argument was followed: only alumni whose e-mail addresses were available (N = 287) were judged to be the relevant alumni sampling frame. For organised businesses, 900 questionnaires were distributed (N = 900).

5.4.3 Sampling units

Zikmund (2003:375) is of the opinion that during the actual sampling process, the elements of the target population must be selected according to a certain procedure. The sampling unit is a single element or group of elements subject to selection in the sample. For the research in question, and as shown in Figure 5.2, the sampling units comprised the identified groups of students at the South, Second Avenue, and Vista Campuses taking courses in Business Management and associated disciplines. These sampling units represented the units of analysis for the research.

The identification of sampling units among staff members, alumni and PERCCI members was complicated by the structure of the overall population. In the case of the students' sampling frames, it was possible to perform a finer classification into sampling units (only students doing Business Management and associated disciplines).

For NMMU staff, alumni and PERCCI members, no further subdivision was done: All staff members with access to PCs were invited to share their opinions on the NMMU brand, and likewise, the alumni on the address list supplied by the Alumni Office of the NMMU and the members on the PERCCI membership list. Therefore, the sampling frames and sampling units for these three target population groups were deemed to be the same.

5.4.4 Sampling and sample size

A sample is a subset from a target population is which the researcher is interested (De Vos *et al.* 2002:199). The process of sampling involves any procedure using a small number of parts of the whole population to draw

conclusions regarding the whole population. The purpose of sampling is to enable researchers to estimate some unknown characteristic of the population, for example, stakeholders' perceptions of the NMMU brand (Collis & Hussey 2003:155; Zikmund 2003:369).

For the student sampling units, the sample comprised groups of students enrolled for similar types of Business Management courses on the three NMMU campuses. Several decisions had to be made to secure a sample. Figure 5.3 presents these decisions as a series of sequential stages, even though the order of decisions did not always follow this particular sequence. These decisions are generally highly interrelated (Blumberg *et al.* 2005:208-209; Collis & Hussey 2003:155-156; Zikmund 2003:372).

FIGURE 5.3: Selecting a sample
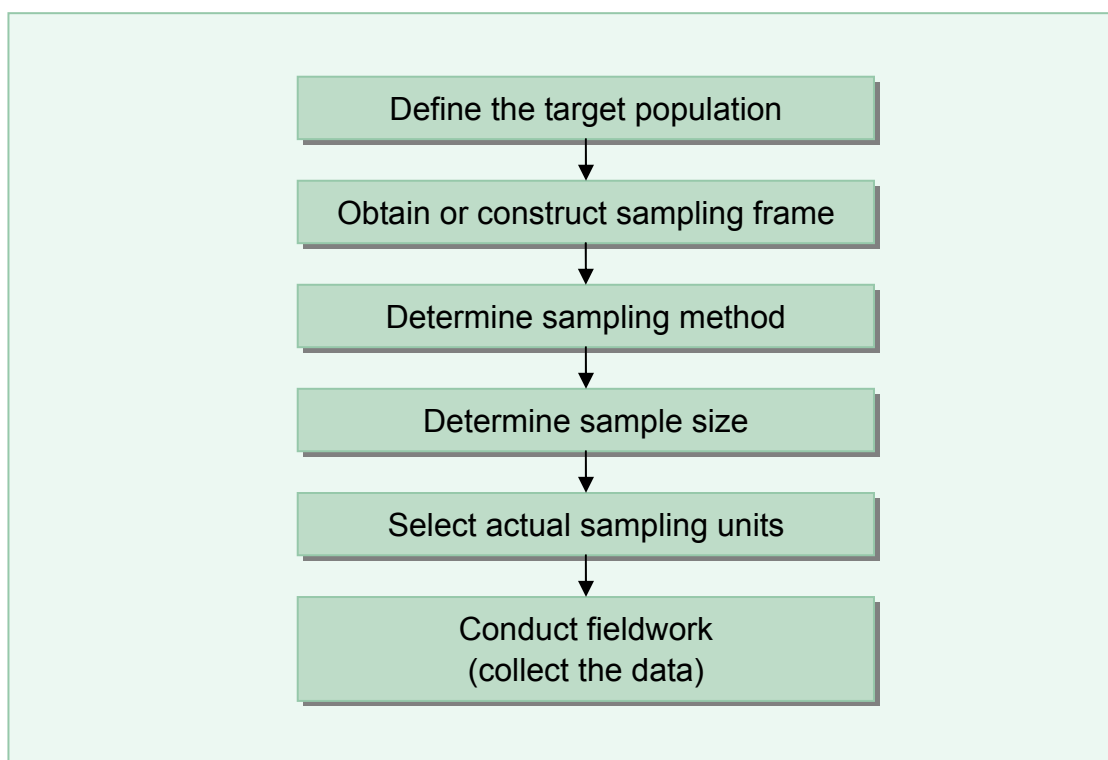
Sources: Adapted from Blumberg *et al.* (2005:208-209); Collis & Hussey (2003:155-156); Zikmund (2003:372)

As discussed in Section 2.3 of Chapter Two, the research in question can be labelled as positivistic. In a positivistic study, a representative or good sample can be taken to be true for the whole population. In other words, the results can be generalised to the whole population.

A good sample must be:

- chosen at random (every member of the population must have a chance of being chosen);
- large enough to satisfy the needs of the investigation being undertaken; and
- unbiased and representative of the population from which it is drawn (Collis & Hussey 2003:155).

Certain principles that influence sample size include (Blumberg *et al*. 2005:213):

- The greater the dispersion or variance within the population, the larger the sample must be to provide estimation precision;
- The greater the desired precision of the estimate, the larger the sample must be;
- The narrower the interval range, the larger the sample must be, for example, using a Likert seven-point scale against a five-point scale;
- The higher the confidence level required in the estimate, the larger the sample must be;
- The greater the number of sub-groups of interest within a sample, the greater the sample size must be, as each sub-group must meet minimum sample size requirements;
- If the calculated sample size exceeds five per cent of the population,

sample size may be reduced without sacrificing precision.

Larger samples enable researchers to draw more representative and more accurate conclusions and to make more accurate predictions than do smaller samples. Table 5.5 presents an indication of what the size of a sample ought to be, given the size of the population (De Vos *et al.* 2002:200-201).

TABLE 5.5: Guidelines for sampling

Population	Percentage suggested	Number of respondents (actual sample)
20	100%	20
30	80%	24
50	64%	32
100	45%	45
200	32%	64
500	20%	100
1 000	14%	140
10 000	4,5%	450
100 000	2%	2 000
200 000	1%	2 000

Source: De Vos *et al.* (2002:201)

In this study, the research instrument (as described in Section 5.2) comprised 60 statements contextualised to the NMMU brand. To perform the required statistical analysis and to test the hypotheses formulated, a target minimum of 300 respondents was required.

5.4.5 Sampling methods employed

According to Figure 5.3, the construct of the sampling frame is followed by the determination the sampling method. Research literature (Blumberg *et al.* 2005:214-225; Zikmund 2003:376-398) describes a wide variety of sampling

methods. Sampling methods can be divided into two main categories, namely probability and non-probability samples. Probability sampling may be described as a sampling method in which every member of the population has a known in advance, non-zero probability of selection. Non-probability sampling, on the other hand, represents a sampling method in which units of the sample are selected on the basis of personal judgment or convenience (Zikmund 2003:379).

TABLE 5.6: Main features, advantages and disadvantages of sampling methods used

Sampling method	Main features	Advantages	Disadvantages
Convenience sampling	• Approach population • Talk to randomly chosen respondent • Check target group • Unrestricted	• Simple • Fast • Low non-response • Acceptable in research to obtain an initial impression	• Impossible to calculate mathematical sample margins • Not very reliable • Not a representative sample
Judgment sampling	• Approach experts in a certain field • Purposive	• Simple • Fast • Acceptable in research to obtain an initial impression	• Impossible to calculate mathematical sample margins • Not very reliable • Not a representative sample
Quota sampling	• Population in sub-population • Sample from each sub-population (at random) • Indicate number in advance (quota) • Purposive	• More reliable than the two methods above • Important population characteristics are included	• The cells are selectively filled in • May not be representative with regard to characteristics left out • Chance of fraud by pollsters

<u>Source</u>: Adapted from Zikmund (2003:379-398)

From the description of the sampling frames and sampling units (see Figure 5.2), it is clear that non-probability sampling methods were used in this

research. More specifically, a combination of convenience sampling, judgment (purposive) and quota sampling was employed. The motivation for this decision will be clear once the main features, advantages and disadvantages of the three sampling methods are explained, as summarised in Table 5.6.

From Table 5.6, it is evident that convenience sampling pertains to sampling by obtaining units or people who are most conveniently available (Zikmund 2003:280). For example, in this study, the students were present in the Business Management classes and were willing to share their opinions on NMMU brand identity and brand image. The respondents were randomly selected to participate, leading to low non-responses (refusal to participate). Convenience sampling does not always lead to representative samples.

Judgmental or purposive sampling is a non-probability sampling technique in which an experienced individual selects the sample, based on his or her judgment about some appropriate characteristic required of the sample members (Zikmund 2003:382). For the research in question, Business Management students were selected on purpose, because, given their field of study, were expected to have prior knowledge on brand issues and to be in a better position to express a view on branding, as compared to, for example, students in Chemistry. Judgmental sampling as a stand-alone sampling method is not very reliable and also not representative of the population.

Quota sampling is a non-probability sampling procedure. The purpose of quota sampling is to ensure that the various subgroups in a population are represented on pertinent sample characteristics to the exact extent that the investigators desire (Zikmund 2003:383). Because the purpose of this survey was to gauge students' perceptions (as one group of stakeholders) of the NMMU brand, it was decided to focus primarily on students doing courses in

Business Management and Entrepreneurship as respondents. This basically implied that the overall student population was broken down into sub-populations at different levels of study, which is one of the main features of quota sampling. Important population characteristics were included in terms of different levels of study. Collectively, the end result was that a more knowledgeable sample of students responded to the brand statements in the questionnaire.

5.4.6 Administering research instrument and actual samples (responses)

The overall structure of the research instrument was presented in Section 5.2.2 of this chapter. The procedures through which the questionnaire was administered to the students, NMMU staff members, alumni and PERCCI members will now be described.

> **Administering questionnaire to student sampling units**

The student sampling units on the three NMMU campuses were identified. Because the research topic was Business Management, more particularly marketing related, students taking modules in the field of study comprised the planned sample. Lecturers knowledgeable in the field of Business Management/Marketing administered the questionnaire. The purpose of the research was briefly explained and the students received a copy of the questionnaire. The same procedure was followed on the three campuses involved.

As shown in Figure 5.2, the South and Vista Campuses of the NMMU offer the Baccalaureus Commercii degree, with Business Management/Marketing as one of the majors. The Second Avenue Campus offers a range of programmes

ranging from Diplomas to the Baccalaureus Technologiae (Marketing) qualification. Students on different year levels participated in the survey. The response in terms of usable questionnaires is listed in Table 5.7. Altogether 1 015 usable questionnaires were returned from students. Given the sampling methods employed, it was impossible to calculate the mathematical sample margins (response rates).

TABLE 5.7: Level of study and location of student respondents

	South Campus	Second Avenue Campus	Vista Campus	Total
First year	283	110	41	**434**
Second year	181	61	79	**321**
Third year	107	41	86	**234**
Post-graduate	21	4	1	**26**
Total	**592**	**216**	**207**	**1 015**

➢ **Administering questionnaire to staff, alumni and PERCCI member sampling units**

- The research instrument was placed on the NMMU Intranet, and electronic mail requests were sent to all staff with access to PCs to respond. Only 46 staff members responded to the invitation to share their views on the NMMU brand.
- For alumni, only 287 electronic mail addresses were available. A mere 20 alumni responded.
- Of the 900 questionnaires mailed to PERCCI members, only 11 questionnaires were returned.

The total number of usable questionnaires fit for analysis comprised n = 1092.

The breakdown is summarised in Table 5.8.

TABLE 5.8: Actual samples of research

	Number of actual samples	Percentage (%)
Students	1 015	93.0
Staff members	46	4.2
Alumni	20	1.8
PERCCI members	11	1.0
Total	**1 092**	**100.0**

The question arose whether the respondents (actual sample) were adequate for performing inferential statistical analysis to give effect to the research problem and to test the stated hypotheses. At least two guidelines point to the affirmative. Table 5.2, which is based on the views of De Vos *et al.* (2002:201), indicates that a population of 10 000 require an actual sample of 450. Should a linear relationship be assumed and applied to the numbers of Table 5.2, a student population of 20 000 require an actual sample of 900. Given the 60 statements in the research instrument, a target minimum actual sample of 300 was specified. According to Table 5.7, the actual number of student respondents was 1 015, significantly in excess of the minimum specified.

With a staff complement of 1 900, no valid conclusions could be made from the 46 staff respondents. The same applied for the alumni (n = 20) and PERCCI member (n = 11) respondents.

Viewed against the primary objective of this research, namely to investigate and analyse the impact of brand identity on the perceived brand image of the NMMU, a sufficient number of responses were sourced to arrive at valid and credible findings.

As the questionnaire probed the expectations and actual experiences of stakeholders using the NMMU brand, it can be argued that the students were the only stakeholder group who could really express their actual experiences. Alumni and PERCCI members were possibly too far removed from the realities transpiring at the newly established NMMU to express a serious opinion.

5.5   SUMMARY AND CONCLUSIONS

The design of the research instrument used in this study was based on secondary sources, and a questionnaire was designed. The Likert seven-point interval measuring scale was adopted, as it met the statistical data analysis requirements of the research.

Secondly, the pilot testing of the research instrument yielded favourable results in terms of the Cronbach alpha reliability coefficients. This finding provided a clear signal to proceed with the research. Thirdly, the target population, sampling frames and sampling units were identified. Suitable sampling methods were described. A yield of 1 092 usable questionnaires was obtained, significantly in excess of the minimum specified to test the conceptual model on brand identity and brand image.

———— II ————

CHAPTER SIX

DATA ANALYSIS AND EMPIRICAL FINDINGS

6.1   INTRODUCTION

This chapter reports on the data analysis and empirical findings. More specifically, effect is given to research objectives (iv) and (v), as stated in Section 1.3.2 of Chapter One, namely to empirically test the construct and three sets of hypotheses, as depicted in the modified conceptual model on brand identity and brand image (Figure 1.2 of Chapter One); and to analyse the data and report on possible disparities ("gaps") between the expectations linked to the NMMU's brand image and the actual experience of this brand.

This chapter consists of three main sections. Firstly, the procedures for the data cleaning will be explained, followed by a description of the statistical procedures used in the research. Particular emphasis will be placed on the validity and reliability of the research instrument, the types of regression analyses performed, pair-wise t-tests, and the calculation of mean scores and relative percentage ratings of the NMMU brand performance. Thirdly, the empirical findings will be reported on, comprising the findings on the discriminant and construct validity of the research instrument, and the hypothesised relationships of the modified conceptual model will be assessed.

6.2   DATA INSPECTION

Table 5.7 of Chapter Five summarises the responses from the four samples as derived from the sampling units. A decision was taken to aggregate the responses of the four sample groups, which produced 1 092 usable responses suitable for statistical analysis. The decision to aggregate the samples was based on the objective to test a theoretical construct, namely the modified conceptual model (Figure 1.2 of Chapter One). For this reason, all of the stakeholders' responses were retained for further statistical analysis.

On the completed questionnaires, some respondents marked the N/A (not applicable) column for some statements (items) only. The mean values for these items were entered which is an acceptable way to deal with missing data. After the completion of the data cleaning exercise, the per item mean and standard deviation values were calculated, with the objective to visually inspect the data.

The actual statistical analysis of the data consisted of six phases. Initially, the data was subjected to an exploratory factor analysis to assess the discriminant validity of the measuring instrument. Items that did not load to a significant extent (loadings ≥ 0.35) and on a unique factor were deleted. This was followed by an assessment of the reliability of the research instrument by means of an internal consistency measure (Cronbach alpha reliability coefficients). The items that remained, were included in the multiple regression model to assess the impact of brand identity variables on brand identity. The next phase comprised a regression analysis of brand identity on brand image. Fifthly, to assess any differences between stakeholders' expectations and actual experiences when using the NMMU brand, pair-wise t-tests were performed. Finally, to gauge the level of satisfaction of NMMU stakeholders when using the brand, a "gap" analysis was performed by using the mean scores to find relative percentage ratings (to be explained in Section 6.3.6).

6.3   STATISTICAL PROCEDURES

6.3.1 Validity of research instrument

The first phase of data analysis entailed an assessment of the discriminant validity of the research instrument. The validity of a research instrument refers to the extent to which a measure or set of measures correctly represents the concept of study. Validity is therefore concerned with how well the concept is defined by the measure(s) (Hair, Anderson, Tatham & Black 1998:90).

As described in Section 2.4.2 of Chapter Two, it is possible to differentiate

between the construct and discriminant validity of a research instrument. Construct validity refers to the ability of the research instrument to measure the statements (items) posed and the extent to which the research instrument confirms the stated hypotheses. As explained in Section 2.4.2 of Chapter Two, construct validity is established by the degree to which a research instrument confirms a network of related hypotheses generated from a theory based on the concepts. In other words, construct validity for the research in question determines whether the empirical evidence is consistent with the theoretical logic about aspects of the brand identity and image of institutions like the NMMU. Discriminant validity in this context refers to the ability of the research instrument to assess the uni-dimensionality of underlying brand dimensions. A research instrument has discriminant validity when it has low correlation with measures of dissimilar concepts (Zikmund 2003:302-304).

The multivariate technique of exploratory factor analysis was used in this study to assess the discriminant and construct validity of the research instrument. The main purpose of exploratory factor analysis is to identify the substructures in the data matrix. The computer program BMDP4M was used to conduct the exploratory factor analysis (Frane, Jennrich & Solomon 1990).

Factor analysis is a technique that enables a researcher to analyse data of a relatively large number of variables and generate a smaller group of factors, based on linear combinations of the original data (Parasuraman 1991:757; Lee 1985:79-80). Data reduction is also achieved by performing a factor analysis. By means of a factor analysis, the variables that are associated with each other are identified (for this research, variables such as 'reputation', 'relevance', 'personality', 'performance', 'relationship', 'identity' and 'image') and brought together with those variables that measure or evaluate the same aspect (Cooper 1983:141-146). Such a group of variables that adjudicate or measure the same aspect, form a factor (Gombola & Ketz 1983:46). In this study, each factor represents independent, moderating or dependent variables in the modified conceptual model (Figure 1.2 of Chapter One).

By using the intercorrelations of the responses, factor analyses were performed on the data, with the objective of identifying possible communalities, patterns and extracting factors, hereby also assessing the discriminant and construct validity of the research instrument.

Principal component analysis was the technique used by the BMDP-program for the initial iterations to extract the factors (Lee 1985:889-892). A direct oblimin rotation was specified to allow for probable intercorrelations between the factors. When the data approached a normal distribution around the mean, and to improve the eigenvalues, the principal component factor analysis was discarded. Thereafter, maximum likelihood was specified as the method of factor extraction, and a direct quartimin oblique rotation of the original matrix was used (Jennrich & Sampson 1996). The method of maximum likelihood was preferred, due to the fact that all factors extracted were expected to be correlated with each other. A direct quartimin oblique rotation was used, since the latent variables (factors) are usually correlated in a study of this nature.

6.3.2 Reliability of research instrument

In this research, Cronbach alpha reliability coefficients were used to assess the internal consistency of the entire scale. This phase of the data analysis focused on the assessment of the reliability (internal consistency) of the research instrument by means of a reliability analysis. In each step of this procedure, Cronbach alpha reliability coefficients of the research instrument were computed so that individual variables (items) could be removed to improve the reliability of the research instrument, if necessary. The computer program SAS PROC CORR (SAS Institute 1998) was used for this purpose.

The generally agreed lower limit for Cronbach alpha reliability coefficients is 0.70, although the requirement may be lowered to 0.60 in the case of exploratory research (Hair *et al.* 1998:118). Generally speaking, reliability coefficients lower than 0.60 are deemed to be questionable; those close to 0.70 as acceptable; and coefficients larger than 0.80 as good (Bernardi, 1994:767;

Sekaran, 1992:174, 284, 287).

6.3.3 Multiple linear regression analysis (brand identity variables on brand identity)

Multiple linear regression analysis was performed to assess whether the identified brand identity variables impacted on brand identity. Multiple linear regression analysis is an extension of bivariate regression analysis, which allows for the simultaneous investigation of the effect of two or more independent variables on a single interval-scaled or ratio-scaled dependent variable (Blumberg *et al.* 2005:743; Zikmund 2003:576). Multiple linear regression analysis was performed to assess whether the identified independent variables exerted a significant influence on brand identity. The computer program SAS PROC CORR (SAS Institute 1998) was used for this procedure.

For the purpose of this research, the first of the three sets of hypotheses will be tested by using multiple linear regression analysis.

❑ **First set of hypotheses: Effect of brand identity variables on brand identity.**

➢ $H_{1.1}$: *There is a positive relationship between the variable 'reputation' and brand identity.*

➢ $H_{1.2}$: *There is a positive relationship between the variable 'relevance' and brand identity.*

➢ $H_{1.3}$: *There is a positive relationship between the variable 'personality' and brand identity.*

➢ $H_{1.4}$: *There is a positive relationship between the variable 'performance' and brand identity.*

➢ $H_{1.5}$: *There is a positive relationship between the variable 'relationship' and brand identity.*

6.3.4 Linear regression analysis (brand identity on brand image)

According to the construct of the modified conceptual model, brand identity impacts on brand image. Linear regression analyses were performed to establish the relationships as formulated in the relevant set of hypotheses. Linear regression analysis is a technique for measuring the linear association between an independent and a dependent variable. Linear regression analysis assumes that the dependent variable is predictively linked to the preceding variable (Zikmund 2003:556).

❑ **Second set of hypotheses: Effect of brand identity on perceived brand image.**

➢ $H_{2.1}$: *There is a positive relationship between brand identity and perceived brand image of the NMMU.*

6.3.5 Pair-wise t-tests

A t-test is a technique used to test the hypothesis that the mean scores on some interval-scaled variables are significantly different for two independent samples or groups (Blumberg *et al.* 2005:664; Zikmund 2003:524). Pair-wise t-tests were conducted to assess any differences in perceptions between expectations and actual experiences of the stakeholders of the perceived NMMU brand image.

For this purpose, the third set of hypotheses was tested.

❑ **Third set of hypotheses: Perceptions of stakeholders of expectations and actual experiences of the perceived NMMU brand image.**

➢ $H_{3.0}$: *There are no perceived differences between stakeholders' expectations and actual stakeholders' experiences of the NMMU brand image.*

➢ H$_{3.A}$: *There are perceived differences between stakeholders'*
expectations and actual stakeholders' experiences of the NMMU brand
image.

6.3.6 Mean scores and relative percentage ratings

To further explore the third set of hypotheses, which deals with expectations
and actual experiences of using the NMMU brand, an analysis of the mean
scores was performed and the resultant statistics were expressed in terms of a
possible "gap". Besides the above, this analysis was further extended by
expressing the mean scores in terms of relative levels of satisfaction by using
the NMMU brand. Such relative levels of satisfaction may also be interpreted as
the actual performance of the NMMU brand.

The methodologies of the above-mentioned analyses will be described together
with the relevant tables in Section 6.4.4 of this chapter.

6.4   EMPIRICAL FINDINGS

6.4.1 Discriminant and construct validity findings (exploratory factor analysis)

The following procedures were followed when performing the exploratory factor
analysis for the 60 statements (items) on both expectations and experiences of
the NMMU brand. Initially, the scores of the respondents on the brand
statements (items) were fed into the programme with no restriction specified on
the number of factors. Kaiser's rule was used to establish the number of factors,
i.e. factors with eigenvalues of ≥ 1 were retained (Green, Tull & Albaum,
1988:577).

In each of the further iterations of the exploratory factor analysis, individual
items were removed from the research instrument to improve the discriminant
and thus the construct validity of the research instrument, if necessary. The
procedure was repeated until all the items demonstrated acceptable levels of

discriminant validity (all the items loaded on one common factor only) and construct validity (all the measurements of each item had factor loadings of at least 0.35, which was considered to be significant, based on the reality of the large sample size).

(i)   Discriminant validity of brand expectation items

Exploratory factor analysis was used to assess the discriminant validity for the brand expectation items. For brand expectations, the exploratory factor analyses procedures were repeated several times until the most interpretable factor solution emerged. Several solutions were considered, but the most interpretable solution (iteration result) is the one reported in Table 6.1. The seven factors in Table 6.1 explain 58.48% of the variance in the brand expectation data. All items loaded to a significant extent (loadings of ≥ 0.35), and loaded on a single factor only. Table 6.1 also shows the Cronbach reliability coefficients, ranging from 0.805 to 0.902. Given the interpretation of the Cronbach alphas and the alpha values empirically found, the reliability of the research instrument can be regarded as good.

Although the eigenvalues of two of the seven factors were marginally below the customary cut-off point of 1, both were retained because the items which loaded on them implied an interpretable factor. Further, the result is in harmony with opinions as reported in the literature on branding. The actual testing for the reliability of the research instrument confirmed the good initial results obtained from the pilot testing (see Section 5.3 of Chapter Five).

Of the 60 brand statements of the research instrument, gauging stakeholders' expectations of the NMMU brand, only 36 items loaded on the seven factors. The seven factors to emerge from the exploratory factor analysis were named as follows (see also Table 6.1):

Factor one: 'Identity'

Fourteen brand identity statements were included in the research instrument.

Of these, 10 items (Table 6.1: items 39, 41, 42, 43, 44, 45, 46, 48, 49 and 50) loaded, as expected, onto one factor only. One item (Table 6.1: item 52), which was expected to measure brand image also loaded onto this factor. Because the respondents interpreted this 'image' item as such, it was regarded as an additional measure of the variable 'identity'. Factor one supports the modified conceptual model (Figure 1.2 of Chapter One).

Factor two: 'Reputation'

Of the statements in the research instrument used to measure the variable 'reputation', all seven items (Table 6.1: items 1, 2, 3, 4, 5, 6 and 7) loaded onto factor two, as expected. Factor two supports the modified conceptual model (Figure 1.2 of Chapter One).

Factor Three: 'Performance'

Nine statements on 'performance' were included in the research instrument, of which six items (Table 6.1: items 23, 24, 25, 26, 27 and 28) loaded onto the same factor, as expected. Factor three supports the modified conceptual model (Figure 1.2 of Chapter One).

Factor Four: 'Image: Academic'

The exploratory factor analysis revealed that the variable 'image', as measured by the items on the research instrument, was not a uni-dimensional construct. Table 6.1 shows these items split into two distinct sub-dimensions, namely 'image: academic' and 'image: recognition'. The following emanated: of the ten statements on brand image, three items (Table 6.1: items 57, 58 and 59) loaded as image statements related to academic matters such as teaching and research at the NMMU. Thus, factor four is named 'image: academic'. Factor four therefore does not support the modified conceptual model (Figure 1.2 of Chapter One).

TABLE 6.1: Rotated factor matrix for brand expectations

Item number *	Factor 1 Identity	Factor 2 Reputation	Factor 3 Performance	Factor 4 Image: Academic	Factor 5 Image: Recognition	Factor 6 Personality	Factor 7 Relationship
39	**0.444**	0.043	0.030	0.024	0.038	-0.065	0.098
41	**0.479**	0.020	0.025	0.044	0.021	0.062	0.201
42	**0.596**	0.107	-0.018	0.062	0.045	-0.034	0.040
43	**0.500**	0.024	-0.022	0.049	0.001	0.059	0.150
44	**0.538**	-0.009	-0.023	0.145	0.029	0.140	0.092
45	**0.752**	-0.035	0.101	-0.027	-0.038	0.002	-0.003
46	**0.774**	-0.006	0.030	-0.063	-0.043	0.072	-0.033
48	**0.475**	0.000	0.039	0.021	0.134	0.057	0.089
49	**0.429**	0.077	0.029	0.049	0.154	0.063	0.026
50	**0.585**	0.084	-0.009	0.040	0.078	0.014	-0.106
52	**0.437**	0.059	0.067	0.096	0.058	-0.005	-0.013
1	0.018	**0.629**	0.016	0.026	0.007	0.064	0.018
2	0.090	**0.615**	0.013	0.070	-0.085	0.052	-0.050
3	0.038	**0.644**	-0.010	0.043	-0.011	-0.066	-0.036
4	0.005	**0.758**	0.059	-0.088	0.043	-0.074	0.002
5	-0.028	**0.757**	0.003	-0.034	0.027	0.031	0.058
6	-0.012	**0.672**	0.030	0.023	0.000	0.035	0.000
7	-0.024	**0.658**	-0.041	-0.010	0.034	0.155	0.110
23	0.023	0.134	**0.575**	-0.008	0.051	0.072	0.001
24	0.011	0.079	**0.509**	0.063	-0.025	0.080	0.063
25	0.015	-0.059	**0.846**	-0.049	-0.031	0.019	0.072
26	0.072	0.006	**0.744**	-0.018	0.035	-0.001	-0.050
27	0.017	0.105	**0.406**	0.239	0.062	0.034	0.002
28	-0.002	0.061	**0.447**	0.275	0.032	-0.017	0.042
57	0.000	0.007	0.008	**0.786**	0.072	0.070	0.028
58	0.066	0.012	0.047	**0.669**	0.069	0.073	0.009
59	0.145	0.037	0.094	**0.501**	0.106	-0.022	0.112
54	0.095	0.013	-0.016	0.025	**0.796**	0.028	-0.065
55	-0.031	-0.013	0.024	0.079	**0.750**	-0.008	0.089
17	0.035	0.148	0.076	0.144	-0.011	**0.473**	0.081
18	0.072	0.043	0.052	0.107	-0.024	**0.643**	0.001
19	0.142	0.063	0.062	0.006	0.114	**0.542**	-0.000
20	-0.026	0.044	0.211	-0.120	0.239	**0.403**	0.155
35	0.001	0.052	0.042	0.029	0.082	0.092	**0.620**
36	0.165	0.062	0.090	0.092	-0.034	-0.014	**0.584**
37	0.214	0.054	0.088	0.014	0.130	0.011	**0.428**
Variance explained	14.282	1.586	1.077	0.949	0.704	0.542	0.473
Eigenvalues	14.764	2.083	1.568	1.249	1.111	0.909	0.887
Cronbach alpha	0.902	0.878	0.864	0.857	0.815	0.831	0.805
Total variance explained = 58.48%							

Loadings ≥ than 0.35 were considered significant

* See Annexure B for the wording of the statements (items).

Factor Five: 'Image: Recognition'

The items (Table 6.1: items 54 and 55) that loaded onto factor five relate to the national and international recognition of the NMMU. Factor five only partially supports the modified conceptual model (Figure 1.2 of Chapter One).

As a result of the factors that emerged on 'image' variables, the conceptual model and some of the hypotheses had to be modified.

Factor Six: 'Personality'

Seven statements were used to measure the variable 'personality'. Only four items (Table 6.1: items 17, 18, 19 and 20) loaded onto factor six, which supported the modified conceptual model (Figure 1.2 of Chapter One).

Factor Seven: 'Relationship'

Based on the consulted literature on branding, six 'relationship' statements were included in the research instrument. Only two items (Table 6.1: items 35 and 36) loaded onto this factor. One 'identity' item (Table 6.1: item 37) also loaded onto factor seven, interpreted by respondents as a 'relationship' item and thus regarded as such. Factor seven supports the modified conceptual model (Figure 1.2 of Chapter One).

Table 6.1 shows that the items expected to measure the variable 'relevance' in the conceptual model did not load onto a separate factor. As these items did not demonstrate sufficient discriminant validity and, as a result, no evidence of construct validity, this variable had to be removed from the conceptual model before it was subjected to further empirical assessment by means of multiple linear regression analysis.

Annexure B contains the wording of the relevant statements (items) for each of the seven factors on expectations, also showing the associated factor loadings,

item correlations and Cronbach alpha coefficients after the deletion of an item.

(ii) **Discriminant validity of brand experience items**

The same exploratory factor analysis procedures were followed for assessing stakeholders' brand experiences. Of the 60 statements in the research instrument, 46 items loaded onto seven factors. The sorted rotated factor matrix for actual experiences of the NMMU brand appears in Table 6.2. The seven factors in Table 6.2 explain 50% of the variance in the brand experiences data. All items loaded to a significant extent (loadings of ≥ 0.35), and loaded onto a single factor only. Table 6.2 also shows the Cronbach alpha reliability coefficients, ranging from 0.762 to 0.908. Given the interpretation of the Cronbach alphas and the alpha values empirically found, the reliability of the research instrument can be regarded as good. The factors were named as follows:

<u>**Factor One: 'Reputation'**</u>

All seven items (Table 6.2: items 1, 2, 3, 4, 5, 6 and 7) that were used to measure the variable 'reputation' loaded onto factor one. Two items (Table 6.2: items 8 and 11) related to 'relevance' were also included in factor one, being regarded by respondents as being related to 'reputation'. Factor one supports the modified conceptual model (Figure 1.2 of Chapter One).

<u>**Factor Two: 'Identity'**</u>

Of the 14 items used to measure 'identity', 11 items (Table 6.2: items 38, 39, 41, 42, 44, 45, 46, 47, 48, 49 and 50) loaded onto factor two, as expected. Three 'image' items (Table 6.2: items 51, 52 and 53) also loaded onto factor two. The respondents thus regarded these items as additional measures of the variable 'image'. Factor two supports the modified conceptual model (Figure 1.2 of Chapter One).

TABLE 6.2: Rotated factor matrix for brand experiences

Item number *	Factor 1 Reputation	Factor 2 Identity	Factor 3 Image: Academic	Factor 4 Performance	Factor 5 Relationship	Factor 6 Image: Recognition	Factor 7 Personality
1	**0.704**	-0.013	-0.067	0.032	0.146	-0.022	-0.029
2	**0.714**	0.042	0.049	-0.085	-0.015	0.030	-0.052
3	**0.531**	0.094	0.026	-0.030	-0.025	0.045	0.050
4	**0.607**	0.077	-0.094	0.095	-0.063	0.068	0.039
5	**0.704**	-0.058	-0.006	0.024	0.111	-0.001	0.076
6	**0.678**	-0.019	0.020	0.109	-0.070	0.023	-0.015
7	**0.641**	-0.036	0.010	0.017	0.073	0.045	0.127
8	**0.418**	0.086	0.267	0.035	-0.016	-0.038	0.048
11	**0.383**	0.092	0.152	0.097	-0.007	-0.017	0.136
38	0.084	**0.413**	0.062	-0.037	0.149	0.044	0.042
39	0.019	**0.533**	-0.090	0.062	0.006	0.080	-0.113
41	0.061	**0.431**	-0.012	0.109	0.224	-0.018	0.031
42	0.162	**0.449**	0.106	-0.013	0.077	0.030	0.034
44	0.053	**0.409**	0.223	0.024	0.111	-0.001	0.126
45	0.016	**0.614**	0.083	-0.046	0.074	-0.061	0.142
46	0.069	**0.551**	0.000	0.008	0.054	-0.007	0.144
47	-0.043	**0.454**	-0.028	0.061	0.005	0.174	0.035
48	0.011	**0.402**	0.050	0.055	0.053	0.129	0.162
49	0.014	**0.447**	0.107	0.036	-0.023	0.023	0.211
50	0.124	**0.476**	0.206	-0.039	-0.044	0.035	0.065
51	0.087	**0.429**	0.232	0.021	0.013	0.085	0.064
52	0.066	**0.555**	0.017	0.079	-0.017	0.032	-0.083
53	0.062	**0.380**	0.084	0.088	0.139	0.111	-0.016
27	0.068	-0.034	**0.511**	0.172	0.042	0.013	0.087
28	0.032	0.043	**0.400**	0.245	0.005	-0.039	0.021
29	-0.006	0.082	**0.539**	0.019	0.021	0.007	0.011
57	0.016	-0.036	**0.751**	-0.020	0.032	0.134	0.047
58	0.001	0.015	**0.605**	0.035	0.058	0.162	0.012
59	0.082	0.167	**0.432**	0.060	0.124	0.150	-0.070
23	0.137	0.074	0.038	**0.609**	-0.052	0.009	-0.020
24	0.090	-0.009	0.141	**0.430**	0.020	-0.018	0.090
25	-0.092	-0.004	-0.050	**0.867**	0.062	0.011	0.029
26	0.058	-0.012	0.056	**0.666**	0.041	0.043	0.030
31	0.119	0.031	0.038	0.049	**0.404**	0.156	0.092
32	0.167	0.012	0.296	0.041	**0.383**	0.037	-0.091
33	0.103	0.178	0.164	0.136	**0.423**	-0.007	-0.114
34	0.022	0.234	0.141	0.171	**0.384**	-0.041	0.012
35	0.026	-0.021	0.004	0.073	**0.578**	0.098	0.182
36	0.032	0.152	0.037	0.097	**0.463**	0.031	0.131
37	0.064	0.190	-0.024	0.050	**0.367**	0.184	0.101
54	0.045	0.065	0.029	0.005	-0.040	**0.786**	0.011
55	0.010	-0.017	0.087	-0.008	0.049	**0.700**	0.035
18	0.128	0.052	0.068	0.109	0.042	0.035	**0.449**
19	0.145	0.079	0.072	0.112	-0.021	0.079	**0.524**
20	0.065	-0.052	-0.035	0.100	0.183	0.197	**0.496**
21	0.082	0.158	0.004	0.050	0.109	0.093	**0.472**
Variance explained	17.2683	1.3386	1.2388	1.0198	0.9648	0.6247	0.5457
Eigenvalues	17.7777	1.9358	1.7177	1.4864	1.3475	1.0933	0.9893
Cronbach alpha	0.908	0.861	0.814	0.762	0.790	0.822	0.870
Total variance explained = 50.00%							

Loadings ≥ than 0.35 were considered significant

* See Annexure C for the wording of the statements (items).

Factor Three: 'Image: Academic'

As in the case of brand expectations (Table 6.1), 'image' items for actual brand experiences also loaded onto two separate factors, namely factors three and six. Three 'image' items (Table 6.2: items 57, 58 and 59) loaded on factor three, all related to academic matters, such as teaching and research at the NMMU. This factor was then labelled as 'image: academic'. A further three items (Table 6.2: items 27, 28 and 29) related to 'performance' also loaded onto factor three. The variable 'image: academic' was thus measured by six items. Factor three does not support the modified conceptual model (Figure 1.2 of Chapter One), in the sense that the image variable, as originally modelled in the modified conceptual framework, was a uni-dimensional construct.

Factor Four: 'Performance'

Only four of the nine 'performance' items (Table 6.2: items 23, 24, 25 and 26) loaded onto factor four. Factor four supports the modified conceptual model (Figure 1.2 of Chapter One).

Factor Five: 'Relationship'

The six 'relationship' items (Table 6.2, items 31, 32, 33, 34, 35, 36) as identified in the research instrument loaded onto factor five. One 'identity' item (Table 6.2: item 37) also loaded onto factor five, regarded by respondents as an additional 'relationship' measure. Factor five supports the modified conceptual model (Figure 1.2 of Chapter One).

Factor Six: 'Image: Recognition'

The second image factor 'recognition' consists of two items (Table 6.2: items 54 and 55) that relate to national and international recognition. Factor six was thus labelled as 'image: recognition'. Factor six does not support the modified conceptual model (Figure 1.2 of Chapter One).

Factor Seven: 'Personality'

Four of the seven items (Table 6.2: items 18, 19, 20 and 21) used to measure 'personality' loaded onto factor seven, as expected. Factor seven supports the modified conceptual model (Figure 1.2 of Chapter One).

As in the case of expectations, the wording of the statements and additional statistics for the seven factors on experiences are provided. The associated factor loadings, item correlations and Cronbach alpha coefficients after the deletion of an item are shown in Annexure C.

(iii) **Findings on exploratory factor analysis of expectations and actual experiences**

The empirical factor structures as reported in Tables 6.1 and 6.2 differ to some extent from what was expected (Figure 1.2: Modified conceptual model) and may cast some doubt on the discriminant validity of the research instrument. However, the reliability analyses and exploratory factor analyses ensured that only items with empirical evidence of reliability and discriminant validity were used in the next phase of the data analysis.

Tables 6.1 and 6.2 also show that as a result of the exploratory factor analysis, the dependent variable (in this research, 'brand image') split into two separate variables, namely 'image: academic' and 'image: recognition'. Based on this finding, the original second set of hypotheses had to be reformulated as follows:

➢ $H_{2.A}$: *There is a positive relationship between brand identity and perceived brand 'image: academic' of the NMMU.*

➢ $H_{2.B}$: *There is a positive relationship between brand identity and perceived brand 'image: recognition' of the NMMU.*

6.4.2 Assessing hypothesised relationships in modified conceptual model

(i) Findings on first set of hypotheses: Effect of brand identity variables on brand identity

Multiple linear regression analysis was performed to assess whether the identified independent variables exerted a significant influence on brand identity.

The multiple linear regression results are reported in Table 6.3 (for expectations) and Table 6.4 (for actual experiences). The statistics of both tables show that the four independent variables, namely 'reputation', 'performance', 'personality' and 'relationship' for both expectations and experiences exert a significant ($p<0.001$) positive influence on the moderating variable 'identity'. As reported in Section 6.4.1 (iii), one of the independent variables hypothesised, 'relevance', did not load onto a separate factor.

In total, the independent variables ('reputation', 'performance', 'personality' and 'relationship') explain 60.71% of the variance in the moderating variable ('identity'), as shown in Table 6.3 (for expectations).

TABLE 6.3: Multiple linear regression analysis (expectations): Impact of brand identity variables on 'Identity'

Moderating variable: Identity				
Parameter	Estimate (Beta coefficient)	t-value	Exceedance probability	Std error of estimate
Intercept	15.3568	13.92	0.0001	1.104
Reputation	0.321	8.82	0.0001 ***	0.036
Performance	0.285	6.64	0.0001 ***	0.043
Personality	0.392	6.09	0.0001 ***	0.064
Relationship	0.909	12.94	0.0001 ***	0.072
R^2	C.V.	Root MSE	Identity mean	
60.71%	12.11	6.9674	57.53	

*   = $p < 0.05$
**   = $p < 0.01$
*** = $p < 0.001$

Table 6.4 reveals that the modelled independent variables ('reputation', 'performance', 'personality' and 'relationship') explain 62% of the variation in the moderating variable ('identity') (for actual experiences).

TABLE 6.4: Multiple linear regression analysis (experiences): Impact of brand identity variables on 'Identity'

Moderating variable: Identity				
Parameter	**Estimate (Beta coefficient)**	**t-value**	**Exceedance probability**	**Std error of estimate**
Intercept	15.9174	13.21	0.0001	1.205
Reputation	0.286	7.89	0.0001 ***	0.036
Performance	0.144	2.01	0.0001 ***	0.071
Personality	0.528	6.83	0.0001 ***	0.077
Relationship	0.812	15.81	0.0001 ***	0.051
R^2	**C.V.**	**Root MSE**	**Identity mean**	
62.00%	14.06	9.0438	64.32	
* = $p < 0.05$				
** = $p < 0.01$				
*** = $p < 0.001$				

The t-values reported in Tables 6.3 and 6.4 need to be interpreted. The higher the t-values, the stronger the impact of the independent variables on 'identity'. Noteworthy is that both for expectations (Table 6.3) and actual experiences (Table 6.4), the independent variable 'relationship' has the strongest impact on 'identity'. Equally noteworthy is the t-value of 'performance' ($t = 2.01$) for experiences (Table 6.4). This low t-value indicates the weakest relationship between the independent variables and 'identity'.

Testing of hypotheses:

➢ $H_{1.1}$: *There is a positive relationship between the variable 'reputation' and brand identity.*

- Both Tables 6.3 and 6.4 report a statistically significant positive relationship between the identity variable 'reputation' and brand identity ($p < 0.001$) for both expectations and experiences.
- $H_{1.1}$ is not rejected.

➢ $H_{1.2}$: *There is a positive relationship between the variable 'relevance' and*

brand identity.

- Brand relevance items were excluded during the exploratory factor analysis. The items used to measure this variable did not demonstrate acceptable levels of discriminant and construct validity.
- $H_{1.2}$ is rejected.

➢ $H_{1.3}$: *There is a positive relationship between the variable 'personality' and brand identity.*

- Tables 6.3 and 6.4 report a statistically significant positive relationship between the identity variable 'personality' and brand identity for both expectations and experiences.
- $H_{1.3}$ is not rejected.

➢ $H_{1.4}$: *There is a positive relationship between the variable 'performance' and brand identity.*

- Tables 6.3 and 6.4 report a statistically significant positive relationship between the identity variable 'performance' and brand identity ($p < 0.001$) for both expectations and experiences.
- $H_{1.4}$ is not rejected.

➢ $H_{1.5}$: *There is a positive relationship between the variable 'relationship' and brand identity.*

- Tables 6.3 and 6.4 report a statistically significant positive relationship between the identity variable 'relationship' and brand identity ($p < 0.001$) for both expectations and experiences.
- $H_{1.5}$ is not rejected.

(ii) Findings on second set of hypotheses: Effect of brand identity on perceived brand image

The findings of the exploratory factor analysis on expectations and actual experiences revealed two distinct sub-dimensions of image factors (Tables 6.1 and 6.2). The dependent variable, as originally modelled, did not prove to be

uni-dimensional and, as reported, 'image' split into two sub-dimensions, namely 'academic' and 'recognition'. Based on this finding, the original second set of hypotheses was reformulated in Section 6.4.1 (iii), which is repeated here for ease of reading.

➢ $H_{2.A}$: *There is a positive relationship between brand identity and perceived brand 'image: academic' of the NMMU.*

➢ $H_{2.B}$: *There is a positive relationship between brand identity and perceived brand 'image: recognition' of the NMMU.*

Two separate sets of linear regression analyses were conducted to test the above hypotheses.

<u>*'Image: Academic'*</u>

The statistical values for 'image: academic' are reproduced in Table 6.5 (for expectations) and in Table 6.6 (for experiences).

TABLE 6.5: Linear regression analysis (expectations): Impact of brand identity on 'image: academic'

Dependent variable: Image: academic				
Parameter	**Estimate (Beta coefficient)**	**t-value**	**Exceedance probability**	**Std error of estimate**
Intercept	3.7722	8.49	0.0001	0.444
Identity	0.2214	29.21	0.0001 ***	0.008
R^2	**C.V.**	**Root MSE**	**Image: academic mean**	
43.95%	16.81	2.7754	16.5092	
* = p < 0.05 ** = p < 0.01 *** = p < 0.001				

Table 6.5 reveals that the modelled moderating variable ('identity') explains 43.95% of the variation in the dependent variable 'image: academic'.

From Table 6.6, it appears that the moderating variable ('identity') explains only

5.81% of the variance in the dependent variable 'image: academic'.

It is difficult to explain the low R^2 value in Table 6.6. A possible explanation may be negative experiences by respondents with regard to academic matters. This low R^2 may also be ascribed to confounding variables that obscured the interpretation of image variables.

TABLE 6.6: Linear regression analysis (experiences): Impact of brand identity on 'image: academic'

Dependent variable: Image: academic				
Parameter	Estimate (Beta coefficient)	t-value	Exceedance probability	Std error of estimate
Intercept	8.4881	3.24	0.0012	2.619
Identity	0.3253	8.20	0.0001 ***	0.040
R^2	C.V.	Root MSE	Image: academic mean	
5.81%	65.23	19.19	29.4147	
* = p < 0.05 ** = p < 0.01 *** = p < 0.001				

'Image: Recognition'

The statistical values for 'image: recognition' are reported in Table 6.7 (for expectations) and in Table 6.8 (for experiences).

TABLE 6.7: Linear regression analysis (expectations): Impact of brand identity on 'image: recognition'

Dependent variable: Image: recognition				
Parameter	Estimate (Beta coefficient)	t-value	Exceedance probability	Std error of estimate
Intercept	1.8687	4.69	0.0001	0.398
Identity	0.1526	22.44	0.0001 ***	0.007
R^2	C.V.	Root MSE	Image: recognition mean	
31.63%	23.88	2.49	10.6468	

Table 6.7 reveals that the modelled moderating variable ('identity') explains only 31.63% of the variation in the dependent variable 'image: recognition'.

The moderating variable ('identity') explains only 33.23% of the variance in the dependent variable 'Image: recognition', as shown in Table 6.8.

TABLE 6.8: Linear regression analysis (experiences): Impact of brand identity on 'image: recognition'

Dependent variable: Image: recognition

Parameter	Estimate (Beta coefficient)	t-value	Exceedance probability	Std error of estimate
Intercept	0.6021	1.63	0.1040	0.370
Identity	0.1305	23.27	0.0001 ***	0.006

R^2	C.V.	Root MSE	Image: recognition mean
33.23%	30.13	2.71	8.9972

*   = p < 0.05
**   = p < 0.01
*** = p < 0.001

From Tables 6.5 and 6.6 (impact of 'identity' on 'image: academic') and Tables 6.7 and 6.8 (impact of 'identity' on 'image: recognition'), the following findings seem evident:

➢ $p < 0.001$ (smaller than all the exceedance probabilities of the four tables). This implies that a statistically significant positive relationship exists between 'identity' and 'image: academic' at the 99.9% confidence level. This implies that $H_{2.A}$ is not rejected;

➢ A statistically significant positive relationship exists between 'identity' and 'image: recognition' at the 99.9% confidence level. This implies that $H_{2.B}$ is not rejected;

➢ Although the R^2 values for Tables 6.6, 6.7 and 6.8 are low, it must be emphasised that a positive correlation was found between the variables as

described;

> The above findings require the modification of the modified conceptual model (Figure 1.2 of Chapter One) on the strength of the empirical findings.

6.4.3 Findings: Third set of hypotheses; Pair-wise t-tests

The third set of hypotheses relates to the perceptions of stakeholders' expectations and actual experiences of the perceived NMMU brand image.

As defined earlier, a t-test is a technique used to test the hypothesis that the mean scores on some interval-scaled variable are significantly different for two independent samples or groups (Blumberg *et al.* 2005:664; Zikmund 2003:524).

Table 6.9 reports the statistical values of the t-tests. It must be noted that no items (statements) were deleted for the purpose of the t-tests; the motivation was that not the same items loaded in the exploratory factor analysis for expectations and actual experiences. An inspection of Table 6.9 reveals that all the significant difference scores for all the items are statistically different ($p < 0.0001$) at the 99.99% confidence level.

The above findings require that $H_{3.0}$ be rejected. Significant statistical differences do exist between the expectations and actual experiences of the NMMU brand. The alternative hypothesis $H_{3.A}$ is thus not rejected.

6.4.4 Findings: Third set of hypotheses; Mean scores and relative percentage ratings

In the previous section, $H_{3.A}$ was not rejected, indicating that statistical differences did exist in terms of 'expectations' and 'actual experiences' of the NMMU brand. The unanswered question remains: What is the magnitude of the "gap" between 'expectations' and 'actual experiences' with regard to the NMMU brand?

TABLE 6.9: Results of t-tests

	Statements on NMMU brand identity and brand image	Expectation mean	Experience mean	Mean diff.	t value	Significance
1	The NMMU brand signifies trustworthiness.	5.126	4.317	-0.809	16.910	0.000
2	The NMMU brand signals legitimacy.	5.191	4.610	-0.581	14.721	0.000
3	The NMMU brand is advertised in a credible manner.	5.411	4.844	-0.567	12.840	0.000
4	The NMMU brand sends clear communication messages to stakeholders.	5.166	4.411	-0.755	15.551	0.000
5	The NMMU brand conveys a sense of reliability.	5.247	4.397	-0.850	17.636	0.000
6	The NMMU brand is communicated in an honest manner.	5.353	4.678	-0.675	15.301	0.000
7	The NMMU brand creates a high level of confidence.	5.341	4.551	-0.790	15.509	0.000
8	The NMMU brand reflects my educational needs.	5.584	4.878	-0.706	15.232	0.000
9	The NMMU brand has real meaning (relevance) for me.	5.045	4.413	-0.632	13.943	0.000
10	The NMMU brand is innovative.	5.077	4.455	-0.622	14.141	0.000
11	The NMMU brand reflects an academic value in line with stakeholders' needs.	5.266	4.598	-0.668	15.786	0.000
12	The NMMU brand is well accepted by stakeholders.	4.979	4.299	-0.680	14.629	0.000
13	The NMMU brand is modern and up to date.	5.445	4.777	-0.668	14.452	0.000
14	The NMMU brand fulfills specific stakeholders' needs.	5.071	4.395	-0.676	14.312	0.000
15	The NMMU brand conveys sincerity.	5.064	4.391	-0.673	15.318	0.000
16	The NMMU brand creates a degree of excitement.	4.973	4.111	-0.862	17.340	0.000
17	The NMMU brand reflects competence.	5.327	4.591	-0.736	15.792	0.000
18	The NMMU brand reflects sophistication.	5.080	4.378	-0.702	15.670	0.000
19	The NMMU brand is resilient (strong).	5.301	4.686	-0.615	13.923	0.000
20	The NMMU brand is superior to competition.	4.972	4.193	-0.779	15.758	0.000

TABLE 6.9: Results of t-tests (*continued*)

	Statements on NMMU brand identity and brand image	Expectation mean	Experience mean	Mean diff.	t value	Significance
21	The NMMU brand has a strong personality.	5.183	4.544	-0.639	14.442	0.000
22	The NMMU brand offers tangible academic benefits.	5.394	4.753	-0.641	14.331	0.000
23	The NMMU brand delivers on promises.	5.028	4.006	-1.022	19.016	0.000
24	The NMMU brand reflects value for money.	5.031	4.202	-0.829	15.175	0.000
25	The NMMU brand exceeds expectations in terms of promises.	4.657	3.648	-1.009	18.876	0.000
26	The NMMU brand is performing well in terms of expectations.	4.867	3.992	-0.875	16.697	0.000
27	The NMMU brand provides high quality academic programmes.	5.670	5.006	-0.664	15.116	0.000
28	The NMMU brand always delivers academic services on time.	5.329	4.423	-0.906	18.433	0.000
29	The NMMU academic staff is knowledgeable and proficient.	5.748	5.091	-0.657	14.859	0.000
30	The NMMU brand is a strategic resource of the institution.	5.295	4.747	-0.548	14.781	0.000
31	The NMMU brand is strongly preferred by stakeholders.	4.920	4.203	-0.717	15.695	0.000
32	I enjoy studying at the NMMU.	5.702	4.965	-0.737	15.232	0.000
33	The NMMU brand supports the needs of stakeholders.	5.121	4.332	-0.789	18.422	0.000
34	The NMMU brand reflects what is important to stakeholders.	5.131	4.407	-0.724	16.803	0.000
35	I prefer the NMMU brand to those of other Higher Education Institutions.	4.877	4.205	-0.672	13.791	0.000
36	The NMMU brand lets me feel part of the institution.	5.024	4.259	-0.765	15.629	0.000
37	The NMMU brand identity is strongly established in the mind of stakeholders.	4.933	4.274	-0.659	14.094	0.000
38	The NMMU brand reflects diversity of stakeholders.	5.140	4.639	-0.501	12.543	0.000
39	The NMMU brand reflects a true 'African University'.	5.103	4.559	-0.544	11.269	0.000
40	The NMMU brand reflects a competitive advantage ('reasons why' stakeholders should use the brand).	5.147	4.410	-0.737	15.641	0.000

TABLE 6.9: Results of t-tests (*continued*)

	Statements on NMMU brand identity and brand image	Expectation mean	Experience mean	Mean diff.	t value	Significance
41	The NMMU brand reflects engagement with all stakeholders.	4.970	4.228	-0.742	16.219	0.000
42	The NMMU brand reflects the university's vision and mission.	5.370	4.806	-0.564	13.653	0.000
43	The NMMU brand is differentiated from those of other Higher Education Institutions.	5.413	4.905	-0.508	12.871	0.000
44	The NMMU brand reflects strong values.	5.342	4.685	-0.657	15.195	0.000
45	The NMMU brand reflects a visual expression of the institution.	5.113	4.574	-0.539	12.130	0.000
46	The NMMU brand is a verbal expression of the institution.	5.023	4.445	-0.578	13.315	0.000
47	The NMMU brand reflects the university's lingual identity (official language are Xhosa, Afrikaans and English).	4.956	4.311	-0.645	12.735	0.000
48	The NMMU brand creates high levels of awareness.	5.104	4.543	-0.561	13.490	0.000
49	The NMMU logo reflects the NMMU brand identity.	5.278	4.780	-0.498	11.506	0.000
50	The NMMU slogan ('for tomorrow') reflects the NMMU brand identity.	5.510	5.072	-0.438	10.712	0.000
51	The NMMU brand reflects a values-driven university.	5.247	4.582	-0.665	15.332	0.000
52	The NMMU brand reflects transformation for equity.	5.289	4.581	-0.708	16.199	0.000
53	The NMMU brand reflects a people-centred institution.	5.288	4.485	-0.803	16.746	0.000
54	The NMMU brand is nationally recognised.	5.485	4.772	-0.713	15.383	0.000
55	The NMMU brand is internationally recognised.	5.158	4.223	-0.935	17.561	0.000
56	The NMMU brand reflects the leadership qualities and vision of Nelson Mandela.	5.196	4.332	-0.864	16.975	0.000
57	The NMMU brand reflects high quality teaching.	5.602	4.892	-0.710	15.709	0.000
58	The NMMU brand reflects high quality research.	5.419	4.773	-0.646	15.753	0.000
59	The NMMU brand leads to the fulfillment of the dreams and aspirations of students.	5.483	4.667	-0.816	17.283	0.000
60	The NMMU has a strong brand image.	5.431	4.703	-0.728	15.308	0.000

❑ **Procedures for the calculation of mean scores and relative percentage ratings:**

As reported earlier, altogether 60 items on the NMMU brand were included in the research instrument. The respondents were requested to express their perceptions of the relative importance of individual brand statements (items) using the Likert seven-point interval scale (1 = strongly disagree to 7 = strongly agree) for both expectations and actual experiences. The mean scores for expectations and actual experiences are reported in Table 6.10. Panel A of Table 6.10 shows the relative importance mean score of NMMU brand expectations, while Panel B indicates the relative importance mean scores with regard to the respondents' perceptions of the actual NMMU brand experience they had been exposed to. A further linear transformation was performed to map mean scores derived from the Likert seven-point interval scale into relative rating percentages, i.e. 1 = 0 per cent; …; 4 = 50 per cent; …; 7 = 100 per cent. In order to establish the level of satisfaction, the differences between the mean scores and relative rating percentages (Panel B minus Panel A) were calculated, as shown in Panel C of Table 6.10.

However, the statistics indicated in Panel D (level of satisfaction) of Table 6.10 are even of greater significance in terms of interpretation than the mean scores and relative percentage ratings of Panels A, B and C. Panel D provides insight in terms of the level of satisfaction as perceived by stakeholders in using the NMMU brand. To further facilitate the interpretation of the mean differences (of Panel C) and to estimate the relative percentage rating of the level of satisfaction, the mean scores per item of the actual experiences were divided by the mean score for expectations. In doing so, it is possible to indicate which items dealing with expectations were perceived as delivered. For example, if both the expectations and actual experiences had mean scores of 2.00, the level of satisfaction would be 100%. Alternatively, if the mean score for expectations was 4.00 and the actual experiences mean score was 2.00, then the level of satisfaction would be 50% only.

❑ **The most significant findings on *expectations of the NMMU brand* (Panel A, Table 6.10) are as follows:**

➢ All mean scores were equal or above 4.657, implying that ratings were above 66.53%. These high ratings imply that the respondents had high expectations about the NMMU brand.

➢ The lowest mean score (4.657) was obtained for the statement "The NMMU brand exceeds expectations in terms of promises" (statement 25), with a relative rating of 66.53%.

➢ The highest mean score (5.748) was obtained for the statement "The NMMU academic staff is knowledgeable and proficient" (statement 29), with a relative rating of 82.11%. This high mean score signals that respondents expected that the academic knowledge and quality of the NMMU's lecturers had to be of a high standing.

➢ "I enjoy studying at the NMMU" (statement 32) obtained a relative rating of 81.46%, which is another noteworthy finding.

❑ **The most significant findings on *actual experiences of the NMMU brand* (Panel B, Table 6.10) are as follows:**

➢ All mean scores were equal or below 5.091, implying relative rating percentages of below 72.73%.

➢ The lowest mean score (3.648) was obtained in respect of the statement: "The NMMU brand exceeds expectations in terms of promises" (statement 25), with a relative rating of 52.11%.

➢ The highest mean score (5.091) was obtained in respect of the statement "The NMMU academic staff is knowledgeable and proficient" (statement 29), with a relative rating of 72.73%.

❑ **The most significant findings on differences in perceptions of the NMMU brand (Panel C, Table 6.10) are as follows:**

➢ All mean difference scores were negative, implying that respondents were

TABLE 6.10: Relative importance of expectations and actual experiences of NMMU brand

	Statements on NMMU brand identity and brand image	Panel A: Expectations			Panel B: Actual experiences			Panel C: Differences in perceptions		Panel D: Level of satisfaction	
		Mean	SD	Rating%	Mean	SD	Rating%	Mean diff.	Rating% difference	Rating%	Ranking
1	The NMMU brand signifies trustworthiness.	5.126	1.452	73.23	4.317	1.487	61.67	-0.809	-11.56	84.22	51
2	The NMMU brand signals legitimacy.	5.191	1.330	74.16	4.610	1.405	65.86	-0.581	-8.30	88.81	11
3	The NMMU brand is advertised in a credible manner.	5.411	1.397	77.30	4.844	1.512	69.20	-0.567	-8.10	89.52	6
4	The NMMU brand sends clear communication messages to stakeholders.	5.166	1.520	73.80	4.411	1.583	63.01	-0.755	-10.79	85.39	43
5	The NMMU brand conveys a sense of reliability.	5.247	1.428	74.96	4.397	1.529	62.81	-0.850	-12.15	83.80	52
6	The NMMU brand is communicated in an honest manner.	5.353	1.447	76.47	4.678	1.565	66.83	-0.675	-9.64	87.39	23
7	The NMMU brand creates a high level of confidence.	5.341	1.587	76.30	4.551	1.657	65.01	-0.790	-11.29	85.21	44
8	The NMMU brand reflects my educational needs.	5.584	1.469	79.77	4.878	1.586	69.69	-0.706	-10.08	87.36	24
9	The NMMU brand has real meaning (relevance) for me.	5.045	1.619	72.07	4.413	1.629	63.04	-0.632	-9.03	87.47	22
10	The NMMU brand is innovative.	5.077	1.511	72.53	4.455	1.553	63.64	-0.622	-8.89	87.75	18
11	The NMMU brand reflects an academic value in line with stakeholders' needs.	5.266	1.412	75.23	4.598	1.491	65.69	-0.668	-9.54	87.31	27
12	The NMMU brand is well accepted by stakeholders.	4.979	1.549	71.13	4.299	1.536	61.41	-0.680	-9.72	86.34	36
13	The NMMU brand is modern and up to date.	5.445	1.500	77.79	4.777	1.684	68.24	-0.668	-9.55	87.73	19
14	The NMMU brand fulfills specific stakeholders' needs.	5.071	1.408	72.44	4.395	1.459	62.79	-0.676	-9.65	86.67	32
15	The NMMU brand conveys sincerity.	5.064	1.409	72.34	4.391	1.432	62.73	-0.673	-9.615	86.71	31
16	The NMMU brand creates a degree of excitement.	4.973	1.683	71.04	4.111	1.695	58.73	-0.862	-12.31	82.67	56
17	The NMMU brand reflects competence.	5.327	1.435	76.10	4.591	1.557	65.59	-0.736	-10.51	86.18	38
18	The NMMU brand reflects sophistication.	5.080	1.503	72.57	4.378	1.539	62.54	-0.702	-10.03	86.18	39
19	The NMMU brand is resilient (strong).	5.301	1.476	75.73	4.686	1.566	66.94	-0.615	-8.79	88.40	14
20	The NMMU brand is superior to competition.	4.972	1.702	71.03	4.193	1.706	59.90	-0.779	-11.13	84.33	50

TABLE 6.10: Relative importance of expectations and actual experiences of NMMU brand (*continued*)

	Statements on NMMU brand identity and brand image	Panel A: Expectations			Panel B: Actual experiences			Panel C: Differences in perceptions		Panel D: Level of satisfaction	
		Mean	SD	Rating%	Mean	SD	Rating%	Mean diff.	Rating% difference	Rating%	Ranking
21	The NMMU brand has a strong personality.	5.183	1.482	74.04	4.544	1.583	64.91	-0.639	-9.13	87.67	21
22	The NMMU brand offers tangible academic benefits.	5.394	1.469	77.06	4.753	1.597	67.90	-0.641	-9.16	88.12	16
23	The NMMU brand delivers on promises.	5.028	1.667	71.83	4.006	1.635	57.23	-1.022	-14.60	79.67	59
24	The NMMU brand reflects value for money.	5.031	1.698	71.87	4.202	1.734	60.03	-0.829	-11.84	83.52	53
25	The NMMU brand exceeds expectations in terms of promises.	4.657	1.666	66.53	3.648	1.580	52.11	-1.009	-14.42	78.33	60
26	The NMMU brand is performing well in terms of expectations.	4.867	1.576	69.53	3.992	1.573	57.03	-0.875	-12.50	82.02	57
27	The NMMU brand provides high quality academic programmes.	5.670	1.337	81.00	5.006	1.577	71.51	-0.664	-9.49	88.29	15
28	The NMMU brand always delivers academic services on time.	5.329	1.604	76.13	4.423	1.762	63.19	-0.906	-12.94	83.00	55
29	The NMMU academic staff is knowledgeable and proficient.	5.748	1.330	82.11	5.091	1.523	72.73	-0.657	-9.38	88.57	12
30	The NMMU brand is a strategic resource of the institution.	5.295	1.333	75.64	4.747	1.360	67.81	-0.548	-7.83	89.65	5
31	The NMMU brand is strongly preferred by stakeholders.	4.920	1.484	70.29	4.203	1.473	60.04	-0.717	-10.25	85.43	42
32	I enjoy studying at the NMMU.	5.702	1.422	81.46	4.965	1.688	70.93	-0.737	-10.53	87.07	28
33	The NMMU brand supports the needs of stakeholders.	5.121	1.351	73.16	4.332	1.370	61.89	-0.789	-11.27	84.59	49
34	The NMMU brand reflects what is important to stakeholders.	5.131	1.301	73.30	4.407	1.363	62.96	-0.724	-10.34	85.89	40
35	I prefer the NMMU brand to those of other Higher Education Institutions.	4.877	1.785	69.67	4.205	1.843	60.07	-0.672	-9.60	86.22	37
36	The NMMU brand lets me feel part of the institution.	5.024	1.640	71.77	4.259	1.726	60.84	-0.765	-10.93	84.77	48
37	The NMMU brand identity is strongly established in the mind of stakeholders.	4.933	1.437	70.47	4.274	1.464	61.06	-0.659	-9.41	86.64	33
38	The NMMU brand reflects diversity of stakeholders.	5.140	1.388	73.43	4.639	1.448	66.27	-0.501	-7.16	90.25	4
39	The NMMU brand reflects a true 'African University'.	5.103	1.703	72.90	4.559	1.808	65.13	-0.544	-7.77	89.34	9
40	The NMMU brand reflects a competitive advantage ('reasons why' stakeholders should use the brand).	5.147	1.439	73.53	4.410	1.510	63.00	-0.737	-10.53	85.68	41

TABLE 6.10: Relative importance of expectations and actual experiences of NMMU brand (*continued*)

	Statements on NMMU brand identity and brand image	Panel A: Expectations			Panel B: Actual experiences			Panel C: Differences in perceptions		Panel D: Level of satisfaction	
		Mean	SD	Rating%	Mean	SD	Rating%	Mean diff.	Rating% difference	Rating%	Ranking
41	The NMMU brand reflects engagement with all stakeholders.	4.970	1.375	71.00	4.228	1.445	60.40	-0.742	-10.60	85.07	46
42	The NMMU brand reflects the university's vision and mission.	5.370	1.379	76.71	4.806	1.564	68.66	-0.564	-8.50	89.50	7
43	The NMMU brand is differentiated from those of other Higher Education Institutions.	5.413	1.378	77.33	4.905	1.535	70.07	-0.508	-7.26	90.62	2
44	The NMMU brand reflects strong values.	5.342	1.353	76.31	4.685	1.461	66.93	-0.657	-9.38	87.70	20
45	The NMMU brand reflects a visual expression of the institution.	5.113	1.381	73.04	4.574	1.475	65.34	-0.539	-7.70	89.46	8
46	The NMMU brand is a verbal expression of the institution.	5.023	1.401	71.76	4.445	1.477	63.50	-0.578	-8.26	88.49	13
47	The NMMU brand reflects the university's lingual identity (official language are Xhosa, Afrikaans and English).	4.956	1.746	70.80	4.311	1.868	61.59	-0.645	-9.21	86.99	30
48	The NMMU brand creates high levels of awareness.	5.104	1.409	72.91	4.543	1.521	64.90	-0.561	-8.01	89.01	10
49	The NMMU logo reflects the NMMU brand identity.	5.278	1.491	75.40	4.780	1.618	68.29	-0.498	-7.11	90.56	3
50	The NMMU slogan ('for tomorrow') reflects the NMMU brand identity.	5.510	1.416	78.71	5.072	1.604	72.46	-0.438	-6.25	92.05	1
51	The NMMU brand reflects a values-driven university.	5.247	1.318	74.96	4.582	1.413	65.46	-0.665	-9.50	87.33	25
52	The NMMU brand reflects transformation for equity.	5.289	1.365	75.56	4.581	1.527	65.44	-0.708	-10.12	86.61	34
53	The NMMU brand reflects a people-centred institution.	5.288	1.344	75.54	4.485	1.541	64.07	-0.803	-11.47	84.81	47
54	The NMMU brand is nationally recognised.	5.485	1.536	78.36	4.772	1.798	68.17	-0.713	-10.19	87.00	29
55	The NMMU brand is internationally recognised.	5.158	1.739	73.69	4.223	1.850	60.33	-0.935	-13.36	81.87	58
56	The NMMU brand reflects the leadership qualities and vision of Nelson Mandela.	5.196	1.663	74.23	4.332	1.749	61.89	-0.864	-12.34	83.37	54
57	The NMMU brand reflects high quality teaching.	5.602	1.383	80.03	4.892	1.541	69.89	-0.710	-10.14	87.33	26
58	The NMMU brand reflects high quality research.	5.419	1.388	77.41	4.773	1.455	68.19	-0.646	-9.22	88.08	13
59	The NMMU brand leads to the fulfillment of the dreams and aspirations of students.	5.483	1.433	78.33	4.667	1.587	66.67	-0.816	-11.66	85.12	45
60	The NMMU has a strong brand image.	5.431	1.452	77.59	4.703	1.680	67.19	-0.728	-10.40	86.60	35

not satisfied with the NMMU brand, because their expectations were not met.

> The largest mean difference score (-1.022) was obtained in respect of the statement that the NMMU brand delivered on promises (statement 23). This implies a level of dissatisfaction with brand delivery.

> The lowest mean difference score (-0.438) was recorded for "The NMMU slogan ('for tomorrow') reflects the NMMU brand identity" (statement 50).

❑ **Panel D of Table 6.10 shows the relative satisfaction percentages. The statistics of Panel D amplifies the findings of Panel C. The most significant findings on actual experiences (on which the level of satisfaction is based) of the NMMU brand are as follows:**

> All relative rating scores were below 92.05%. These relative satisfaction percentages imply that respondents were not satisfied with the NMMU brand, because their expectations were not fully met.

> The highest rating percentage (92.05%) was obtained in respect of the statement "The NMMU slogan ('for tomorrow') reflects the NMMU brand identity" (statement 50).

> The lowest rating percentage (78.33%) was given to the statement that "The NMMU brand exceeds expectations in terms of promises" (statement 25).

> The second lowest rating percentage (79.67%) was found for "The NMMU brand delivers on promises" (statement 23).

> Also listed under Panel D are the rankings for the level of satisfaction. Statement 50, "The NMMU slogan ('for tomorrow') reflects the NMMU brand identity" (92.05%) is ranked first, followed by statement 43, "The NMMU brand is differentiated from those of other Higher Education Institutions" (90.62%), followed by statement 25, "The NMMU brand exceeds expectations in terms of promises" (78.33%).

The pair-wise t-tests have revealed statistically significant differences between 'expectations' and 'actual experiences'. The findings as reflected in Table 6.10 give a better insight into the magnitude of the "gap" between the expectations

and actual experiences of using the NMMU brand.

6.5   SUMMARY AND CONCLUSIONS

The research instrument was first tested for discriminant and construct validity by means of exploratory factor analysis. The reliability of the research instrument was assessed by calculating Cronbach alpha reliability coefficients. All of the above statistical procedures produced very good interpretable results.

Based on the discriminant and construct validity findings, Figure 1.2 (modified conceptual model) had to be reconstructed. This reconstructed model was renamed the empirical model on brand identity and brand image (Figure 6.1).

FIGURE 6.1: Empirical model on brand identity and brand image
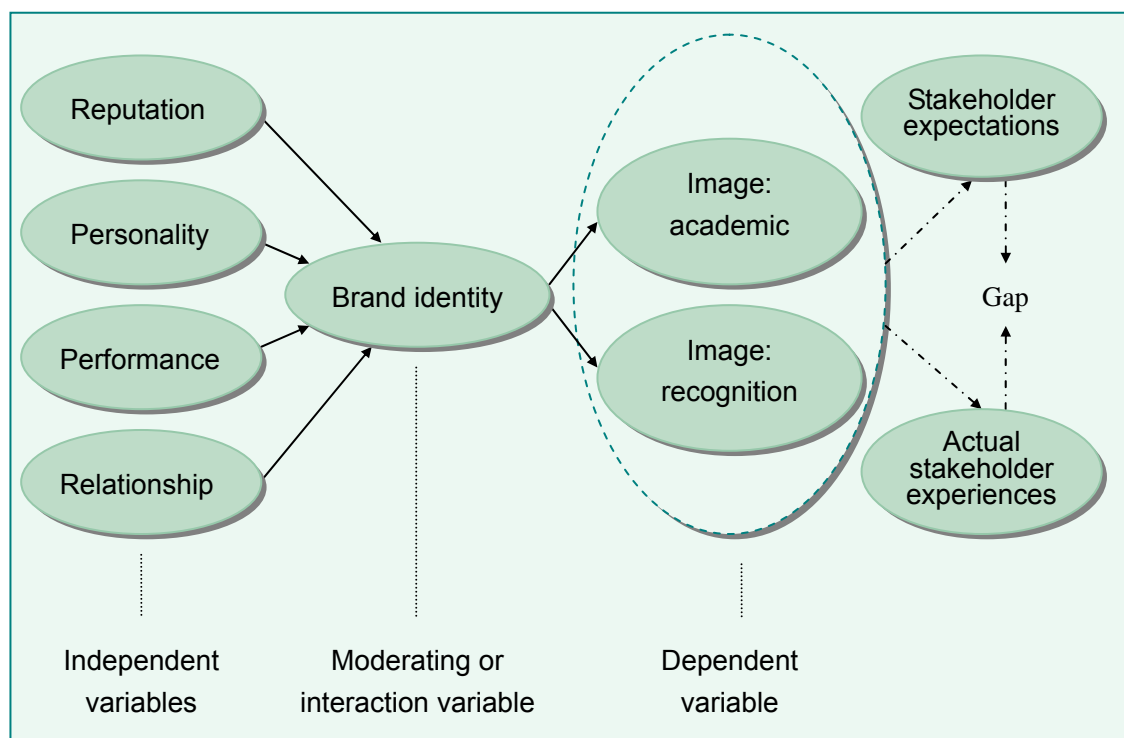
Source: Empirical findings as reported

As explained in Section 6.4.1, the items used to measure the independent variable 'relevance' did not load onto a separate factor. Further, the exploratory factor analysis revealed two sub-dimensions of the 'image' statements

('academic' and 'recognition'). This uni-dimensional construct of the original conceptual model had to be reconstructed, as shown in Figure 6.1, which required a reformulation of the relationships to be tested in the second set of hypotheses.

The findings on the hypotheses and statistical analysis are as follows:

Multiple linear regression analyses were done to test the first set of hypotheses.

❑ **First set of hypotheses: Effect of brand identity variables on brand identity.**

➢ $H_{1.1}$: *There is a positive relationship between the variable 'reputation' and brand identity.*
  - $H_{1.1}$ is not rejected.

➢ $H_{1.2}$: *There is a positive relationship between the variable 'relevance' and brand identity.*
  - $H_{1.2}$ is rejected.

➢ $H_{1.3}$: *There is a positive relationship between the variable 'personality' and brand identity.*
  - $H_{1.3}$ is not rejected.

➢ $H_{1.4}$: *There is a positive relationship between the variable 'performance' and brand identity.*
  - $H_{1.4}$ is not rejected.

➢ $H_{1.5}$: *There is a positive relationship between the variable 'relationship' and brand identity.*
  - $H_{1.5}$ is not rejected.

Regression analyses were performed for the second set of hypotheses.

❑ **Second set of hypotheses: Effect of brand identity on perceived brand image.**

➢ $H_{2.A}$: *There is a positive relationship between brand identity and perceived brand 'image: academic' of the NMMU.*
- $H_{2.A}$ is not rejected.

➢ $H_{2.B}$: *There is a positive relationship between brand identity and perceived brand 'image: recognition' of the NMMU.*
- $H_{2.B}$ is not rejected.

Pair-wise t-tests were conducted for the inferential statistical analyses to test the third set of hypotheses.

❑ **Third set of hypotheses: Perceptions of stakeholders of expectations and actual experiences of the perceived NMMU brand image.**

➢ $H_{3.0}$: *There are no perceived differences between stakeholders' expectations and actual stakeholders' experiences of the NMMU brand image.*
- $H_{3.0}$ is rejected.

➢ $H_{3.A}$: *There are perceived differences between stakeholders' expectations and actual stakeholders' experiences of the NMMU brand image.*
- $H_{3.A}$ is not rejected.

Besides the pair-wise t-tests, further descriptive statistical analyses were also performed to assess the magnitude of the "gap" between expectations and

actual experiences when using the NMMU brand. The findings revealed that the NMMU stakeholders were not completely satisfied with their actual experiences when using the NMMU brand.

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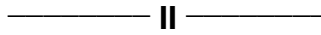
CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1   INTRODUCTION

In the previous chapter, the empirical findings of this study were reported and the validity and reliability of the research instrument was discussed. The findings of the conceptual model and hypotheses, which were subjected to empirical testing, were also presented.

The above issues will be revisited in this chapter during an overview of the significant findings and contributions of this research. When the conclusions and recommendations are made, the only research objective not yet discussed [research objective (vi)], namely to make recommendations on which dimensions, if any, of the NMMU brand identity need to be addressed to enhance the image of the institution, will be covered. The recommendations will also pertain to secondary sources dealing with brand literature and guidelines for future research.

This section will be followed by a discussion of the limitations of this research. A section dealing with learning and reflection, as experienced by the researcher, will conclude this chapter.

7.2   SUMMARY: HOLISTIC PERSPECTIVES AND CONTRIBUTIONS OF THIS RESEARCH

7.2.1 Purpose of the research and research objectives

The purpose of this analytical research project was described in a twofold

manner in Section 1.2 of Chapter One; firstly, to analyse the impact of the independent variables (reputation, relevance, personality, performance and relationship) on brand identity (moderating variable) and the shaping of brand image (dependent variable) by brand identity; and, secondly, to gauge the perceptions of NMMU stakeholders of the brand image of the institution, in terms of both expectations and actual experiences. In order to give effect to the above, a conceptual model on branding, based on secondary sources, was empirically tested.

The research objectives of this study were explained in Section 1.3 of Chapter One. For expediency, the research objectives are restated below.

The primary research objective was to test the relationships as depicted in the modified conceptual model (Figure 1.2 of Chapter One). In order to achieve this objective, the opinions of stakeholders of the perceived brand image of the NMMU, as shaped by the brand identity, were canvassed and discussed.

The following six secondary research objectives were identified, namely:

(i) To investigate which research paradigms, research methodologies and data collection methods and methods of analysis would be most appropriate to research the problem in question. This objective implied that the appropriate overall research design for the study also had to be determined.

(ii) To construct (design) a research instrument to canvass the opinions of stakeholders of the perceived brand image of the NMMU, as shaped by brand identity. This objective required an in-depth analysis of secondary sources dealing with brand identity, brand image and related concepts.

(iii) To source primary data to gauge the opinions of stakeholders of the

perceived NMMU brand image.

(iv) To test empirically the construct and hypotheses as depicted in Figure 1.2.

(v) To analyse the data and report on possible disparities ("gaps") between the expectations linked to the NMMU's brand image and the actual experience of this brand.

(vi) To make recommendations on which dimensions, if any, of the NMMU brand identity needed to be addressed to enhance the image of the institution.

The research questions and hypothesised relationships will be dealt with in Section 7.3 of this chapter.

7.2.2 Research design and methodology

Chapter Two was dedicated to the important issue of an appropriate research design and methodology for this study. In addition, the research paradigm adopted was also motivated. By doing this, effect was given to the first of the secondary research objectives (Section 1.3.2 of Chapter One). The research design and methodology was selected based on secondary sources on research to contextualise the purpose and nature of the research.

It was also motivated in Chapter Two that the research in question carried outstanding quantitative features; it was labelled analytical based on the relationships to be researched, as shown in Figure 1.2 of Chapter One. The method of reasoning was deductive and the research findings had strategic implications, which is an important feature of applied research.

An analysis of the research problem, the unit of analysis, research questions, hypotheses and the type of data to be sourced, collectively indicated that a

positivistic research paradigm had to be adopted. The criteria for a well-designed research project were described, with an indication of how these requirements would be addressed in this research.

7.2.3 Literature review

A critical phase of this research project was the analysis of secondary sources. The purpose of the literature review was not only to provide evidence of scholarship, but more specifically to formulate statements to be tested empirically in the research instrument. The literature analysis also revealed certain relationships between reputation, relevance, personality, performance and relationship to brand identity, and also between brand identity and brand image. The outcome of the analysis of secondary sources was therefore of a dual nature: the design of the research instrument was achieved, and the modified conceptual model, as shown in Figure 1.2 of Chapter One, was constructed.

The analysis of the secondary sources enabled the researcher to give effect to the primary research objective and the second of the secondary research objectives (Section 1.3 of Chapter One).

7.2.4 Primary data sourcing

Chapter Five was devoted to the sourcing of primary data, giving effect to the third set of secondary objectives. For the purpose of data sourcing, pivotal decisions had to be taken on the measurement scales of the research instrument. For the required inferential statistical analyses, a decision was taken to choose a Likert seven-point interval scale. The pilot testing of the research instrument actually constituted the first phase of the data collection

activity. The target population, sampling frames and sampling units were identified. Suitable sampling methods used in this research were described. A yield of 1 092 usable questionnaires was obtained, a number significantly in excess of the minimum specified for testing the conceptual model on brand identity and brand image.

7.2.5 Data analysis

The statistical analysis of the data consisted of six phases and related to secondary research objectives (iv) and (v). Initially, the data was subjected to an exploratory factor analysis to assess the discriminant validity of the measuring instrument. Items that did not load to a significant extent (loadings ≥ 0.35) or on a unique factor, were deleted. This was followed by an assessment of the reliability of the research instrument by means of an internal consistency measure (Cronbach alpha reliability coefficients). Only the items that remained, were further used in the multiple regression analysis to assess the impact of brand identity variables on brand identity. The next phase comprised a regression analysis of brand identity on brand image. Fifthly, to assess any differences between stakeholders' expectations and actual experiences when using the NMMU brand, pair-wise t-tests were performed. Finally, to gauge the level of satisfaction of NMMU stakeholders when using the brand, a "gap" analysis was performed by using the mean scores to find relative percentage ratings.

7.3   OVERVIEW OF SIGNIFICANT FINDINGS

Based on the discriminant and construct validity findings, Figure 1.2 (modified conceptual model) had to be reconstructed. This reconstructed model was renamed the empirical model on brand identity and brand image, which is now

reproduced below as Figure 7.1 for ease of reading.

FIGURE 7.1: Empirical model on brand identity and brand image
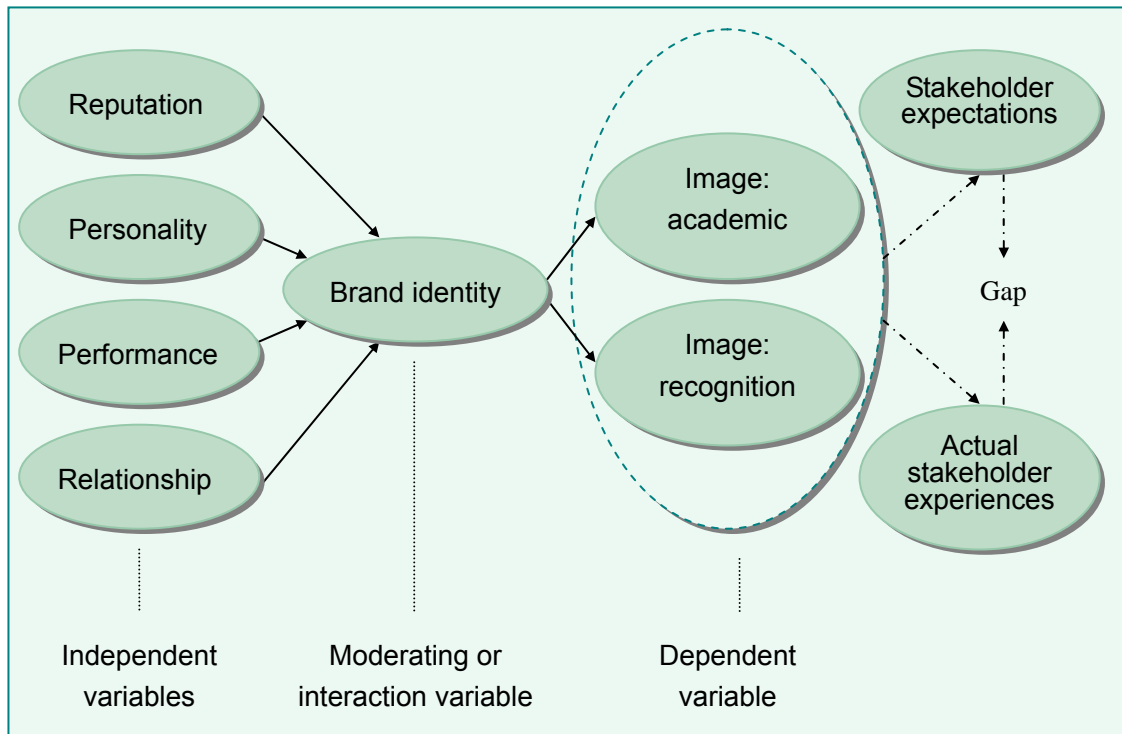
<u>Source</u>: Empirical findings as reported

It was explained in Section 6.4.1 of Chapter Six that the items used to measure the independent variable 'relevance' did not load onto a separate factor. Further, the exploratory factor analysis revealed two sub-dimensions of the 'image' construct, namely 'academic' and 'recognition'. This uni-dimensional construct of the original conceptual model had to be reconstructed, as shown in Figure 7.1, which also required the reformulation of the relationships to be tested in the second set of hypotheses.

Multiple linear regression analyses were performed to test the first set of hypotheses.

❑ **First set of hypotheses: Effect of brand identity variables on brand**

identity.

> $H_{1.1}$: *There is a positive relationship between the variable 'reputation' and brand identity.*
>   - $H_{1.1}$ is not rejected.

> $H_{1.2}$: *There is a positive relationship between the variable 'relevance' and brand identity.*
>   - $H_{1.2}$ is rejected.

> $H_{1.3}$: *There is a positive relationship between the variable 'personality' and brand identity.*
>   - $H_{1.3}$ is not rejected.

> $H_{1.4}$: *There is a positive relationship between the variable 'performance' and brand identity.*
>   - $H_{1.4}$ is not rejected.

> $H_{1.5}$: *There is a positive relationship between the variable 'relationship' and brand identity.*
>   - $H_{1.5}$ is not rejected.

Regression analyses were performed for the second set of hypotheses.

- **Second set of hypotheses: Effect of brand identity on perceived brand image.**

> $H_{2.A}$: *There is a positive relationship between brand identity and perceived brand 'image: academic' of the NMMU.*

- $H_{2.A}$ is not rejected.

➢ $H_{2.B}$: *There is a positive relationship between brand identity and perceived brand 'image: recognition' of the NMMU.*
  - $H_{2.B}$ is not rejected.

Pair-wise t-tests were conducted for the inferential statistical analyses to test the third set of hypotheses.

❑ **Third set of hypotheses: Perceptions of stakeholders of expectations and actual experiences of the perceived NMMU brand image.**

➢ $H_{3.0}$: *There are no perceived differences between stakeholders' expectations and actual stakeholders' experiences of the NMMU brand image.*
  - $H_{3.0}$ is rejected.

➢ $H_{3.A}$: *There are perceived differences between stakeholders' expectations and actual stakeholders' experiences of the NMMU brand image.*
  - $H_{3.A}$ is not rejected.

Besides the pair-wise t-tests, further descriptive statistical analyses were performed to assess the magnitude of the "gap" between expectations and actual experiences when using the NMMU brand. The findings revealed that the NMMU stakeholders were not completely satisfied with their actual experiences when using the NMMU brand.

7.4   CONCLUSIONS AND RECOMMENDATIONS

Three sets of conclusions and recommendations follow from this research, namely the strategic implications of the findings for the NMMU marketing communication strategists; conclusions and recommendations on secondary sources dealing with brand literature; and, finally, recommendations for future research.

7.4.1 Strategic implications of findings for the NMMU marketing communication strategists

Although the primary research objective was geared towards the empirical testing of relationships in a modified conceptual model dealing with brand identity variables, brand identity and brand image, some of the secondary research objectives provided ample scope for gauging perceptions of the NMMU brand that could be reported. The last secondary research objective (vi) specifically referred to recommendations on which dimensions, if any, of the NMMU brand identity had to be addressed to enhance the image of the institution.

This research objective is in line with the basic feature and purpose of research, namely to increase knowledge and, for the research in question, knowledge of the perceptions of stakeholders on the NMMU brand identity and brand image. Further, in Section 2.2.4 of Chapter Two, this study was described as applied research, which is characterized by the usage of the research findings to solve a specific problem.

As reported when the modified conceptual model was tested, the independent variable 'relevance' did not demonstrate sufficient discriminant validity and, as a

result, no evidence of construct validity. This variable had to be removed from the conceptual model before it was subjected to further empirical assessment by means of the multiple linear regression analysis. This finding on 'relevance' should be a triggering cue for NMMU marketing communication strategists to perform an in-depth investigation on the brand variables, i.e. the items used to test the variable 'relevance', should be subject to close scrutiny.

Further, the finding that the dependent variable 'brand image' was not a uni-dimensional construct as suggested in the conceptual model, has further strategic implications. Ideally, as reported in the literature on corporate branding (Section 3.3.3 of Chapter Three), corporate (in this case, NMMU) images should feed into strategic vision, serving as a mirror in which executive managers can reflect on who they are. This implies that, instead of using stakeholder images as exact assessments of brand performance compared with strategic vision, images held by stakeholders of who the NMMU is and what it stands for (e.g. personality and relevance comparisons) should become part of the strategic envisioning process. From this finding, the inseparatable linkage between the strategic intent and brand image should be evident.

The findings as presented in Section 6.4.3 of Chapter Six revealed significant statistical differences between the expectations and actual experiences of using the NMMU brand at the 99.99% confidence level. Further, the statistics of Table 6.10, particularly panels C and D, manifested that the actual experiences of stakeholders using the NMMU brand were contradictory to their expectations. Clearly, several problems related to the NMMU brand were identified which do have strategic implications. An inspection of Table 6.10, panels C and D, reveals that respondents were of the opinion that:

➢ The NMMU brand does not completely meet expectations in terms of

promises (statement 25, level of satisfaction: 78.33%);

- ➢ The NMMU brand does not completely deliver on promises (statement 23, level of satisfaction: 79.67%);

- ➢ The NMMU brand is not fully internationally recognised (statement 55, level of satisfaction: 81.87%);

- ➢ The NMMU brand is not performing as well as expected (statement 26, level of satisfaction: 82.02%);

- ➢ The NMMU brand does not in all respects create a degree of excitement amongst stakeholders (statement 16, level of satisfaction: 82.67%);

- ➢ The NMMU brand does not always deliver academic services on time (statement 28, level of satisfaction: 83.00%).

Other areas of concern are linked to the following statements:

- ➢ Statement 56: The NMMU brand reflects the leadership qualities and vision of Nelson Mandela (level of satisfaction: 83.37%);

- ➢ Statement 24: The NMMU brand reflects value for money (level of satisfaction: 83.52%);

- ➢ Statement 5: The NMMU brand conveys a sense of reliability (level of satisfaction: 83.80%);

- ➢ Statement 1: The NMMU brand signifies trustworthiness (level of satisfaction: 84.22%);

- ➢ Statement 20: The NMMU brand is superior to competition (level of satisfaction: 84.33);

- ➢ Statement 33: The NMMU brand supports the needs of stakeholders (level of satisfaction: 84.59%);

- ➢ Statement 36: The NMMU brand lets me feel part of the institution (level of satisfaction: 84.77);

- ➢ Statement 53: The NMMU brand reflects a people-centered institution (level

of satisfaction: 84.81%);

➢ Statement 41: The NMMU brand reflects engagement with all stakeholders (level of satisfaction: 85.07);

➢ Statement 59: The NMMU brand leads to the fulfillment of the dreams and aspirations of students (level of satisfaction: 85.12%);

➢ Statement 7: The NMMU brand creates a high level of confidence (level of satisfaction: 85.21%);

➢ Statement 4: The NMMU brand sends clear communication messages to stakeholders (level of satisfaction: 85.39%);

➢ Statement 31: The NMMU brand is strongly preferred by stakeholders (level of satisfaction: 85.43%);

➢ Statement 40: The NMMU brand reflects a competitive advantage ('reasons why' stakeholders should use the brand) (level of satisfaction: 85.68%);

➢ Statement 34: The NMMU brand reflects what is important to stakeholders (level of satisfaction: 85.89%);

The abovementioned areas of concern may also be regarded as perceived weaknesses of the NMMU brand.

Besides the above negative perceptions highlighted, numerous positive dimensions of the NMMU brand need to be emphasised, for example:

➢ Statement 50: The NMMU slogan ('for tomorrow') reflects the NMMU brand identity, (level of satisfaction: 92.05%);

➢ Statement 43: The NMMU brand is differentiated from those of Higher Education Institutions (level of satisfaction: 90.62%);

➢ Statement 49: The NMMU logo reflects the NMMU brand identity (level of satisfaction: 90.56%);

➢ Statement 38: The NMMU brand reflects diversity of stakeholders (level of

satisfaction: 90.25%);

➢ Statement 30: The NMMU brand is a strategic resource of the institution (level of satisfaction: 89.65%).

The positive dimensions of the NMMU brand may also be viewed as strengths associated with the brand.

It is also useful to inspect panel A (expectations) of Table 6.10 for the highest mean scores:

➢ Statement 29: The NMMU academic staff is knowledgeable and proficient (mean score of 5.748);

➢ Statement 32: I enjoy studying at the NMMU (mean score of 5.702);

➢ Statement 27: The NMMU brand provides high quality academic programmes (mean score of 5.670).

In concluding this section, it is recommended that NMMU marketing communication strategists perform a comprehensive SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis to manage the brand strategically. From this analysis, action plans can be devised and strategies implemented to enhance the strong dimensions of the NMMU brand, to counteract weak dimensions, to exploit opportunities that avail themselves, and to take proactive steps to manage threats. Threats can also be turned into opportunities by the crafting and implementation of suitable strategies.

7.4.2 Secondary sources on brand literature

Relevant conclusions and recommendations can be made with reference to secondary sources used to generate statements for the research instrument

and to design the theoretical and modified conceptual models.

Academic textbooks representing secondary sources on brands and related concepts usually contain normative theories on how brands should be managed. A theory entails a systematic set of associated concepts, definitions and statements presented to predict certain phenomena, for example, theories that impact on brand identity, and theories on how brand image is shaped by brand identity. These theories must be verified before they may be deemed as part of a science and thus a component of the body of knowledge. In the brand literature, brand image was identified as one of the most important assets of any institution. The maintenance and enhancement of brand image was identified as of great importance for an institution like the NMMU. This reality requires a periodic brand image assessment.

In this research, the modified conceptual model, based on brand theories, was subjected to empirical testing. As reported, the conceptual model had to be reconstructed, because the relevance statements did not demonstrate sufficient discriminant validity and, as a result, no evidence of construct validity. Further, the image variable split into two distinct sub-dimensions, namely 'image: academic' and 'image: recognition'.

This reconstruction of the modified conceptual model does not necessarily imply that branding theories are distorted, but at the minimum that the research must be replicated. Should the same findings emerge, the relevance of existing branding theories pertaining to Higher Education Institutions should be revisited.

From the brand literature, numerous normative guidelines on branding emerged, as highlighted in Chapters Three and Four. Of the many normative

guidelines presented in Chapters Three and Four, the following are re-emphasised:

- ➢ To build and entrench the NMMU corporate brand, stakeholder commitment from both internal and external constituencies is vital, in contrast to product brands, that thrive on consumer commitment only. To shape the NMMU brand, the university staff must understand the brand's vision and mission, and be totally committed to delivering it. It follows that great emphasis should be placed on effective internal communication. This reality implies that the NMMU needs to pay attention to its culture, ethos, core values and principles, since these encompass the values of staff and assumptions that affect their behaviour and eventually influence other stakeholders' perceptions. Should the above objective be achieved, the NMMU should show progress in terms of shaping its corporate image.

- ➢ In terms of the brand orientation model, the starting point in brand building is to create a clear understanding of the internal brand identity. The brand then becomes a strategic platform that provides the framework for the satisfaction of customers' needs and wants. Applied to the NMMU brand, it should support the needs and wants of stakeholders and lead to the fulfillment of the dreams and aspirations of its stakeholder groups.

- ➢ According to brand asset management, the NMMU brand should:

  - reflect an academic value in line with stakeholder needs;
  - reflect value for money;
  - act as a strategic resource of the institution;
  - reflect the competitive advantages of the institution ('reasons why' stakeholders should use the brand); and

- reflect strong values and principles of the institution.

➢ With reference to the Logman model, it should be important for the NMMU brand to:

- be well accepted by stakeholders;
- exceed expectations in terms of promises; and
- reflect the diversity of stakeholders.

➢ As reported in the literature, managing brand equity, in respect of both the customer and financial perspectives, has strategic implications for the NMMU. To manage brand equity and the dimensions thereof, namely brand awareness, perceived quality, brand associations, brand loyalty, and brand commitment, requires a well directed marketing communication strategy.

➢ As indicated above, the role of effective brand communication cannot be underestimated. A model for the NMMU brand communication process was proposed (Figure 4.3 of Chapter Four), based on the secondary sources on brand literature.

7.4.3 Recommendations for future research

Areas for further research on brands and branding are virtually unlimited. Based on this research, the potential for research on brands and branding in the following domains have been identified:

➢ Replication of the research, focusing on other faculties, and larger samples from alumni, staff and organised business as principal respondents;

➢ Replication of the research in question, incorporating the environment of

Higher Educational Institutions;

➢ Assessment of the NMMU brand image applying phenomenological research paradigms;

➢ Research on brand loyalty of the NMMU;

➢ An assessment of all the variables of the brand knowledge model on brand knowledge *per se* (see Figure 4.2 of Chapter Four). A reconstruction of the dimensions of the brand knowledge model is proposed. Brand recognition, brand recall, types of brand associations, and the favourability, strength and uniqueness of brand associations should be reconstructed as independent variables, with brand knowledge as the dependent variable;

➢ Research on brand commitment, using the conversion model of Hofmeyr and Rice (2000; 1995);

➢ Empirical verification of the proposed NMMU brand communication model (Figure 4.3 of Chapter Four);

➢ Comparative research on brand awareness by respondents (national and international) of South African Higher Education Institutions;

➢ South African Higher Education Institutions tend to be a favourite destination for many international students. The core question is if Higher Education Institution brands and brand communication are decisive for international students to decide where to study abroad.

7.5   LIMITATIONS OF RESEARCH

Although all precautions were taken to ensure the meeting of the criteria for a good research project, like reliability, validity and generalisability, it is with the benefit of hindsight, possible to identify some limitations to this research like the following:

➢ Different authors on brands and branding offer different interpretations to the

variables that impact on brand identity and associations related to brand image. For example, the strategic intent of organisations is usually merged with the brand identity variables. The question is if strategic intent should not be considered as a sixth independent variable. However, leading authors indicated a closer linkage between brand image and the strategic intent, suggesting that findings on brand image should shape the strategic intent (vision, mission and key values). The faulty interpretation by the various authors is therefore a possibility;

➢ For the purpose of this research, a conceptual diagram was constructed and tested empirically. Some of the PERCCI respondents also wrote marginal notes on the questionnaire, expressing their desire to be part of a focus group to share views on the NMMU brand. Thus, instead of testing a theoretical construct, the phenomenological research paradigm could have provided "rich" data in a more natural location, enhancing the validity of the findings. Methodological triangulation is another option that could have been explored;

➢ More innovative strategies could have been implemented to elicit a higher response rate from alumni, staff and members of PERCCI;

➢ It is possible to conduct further statistical analysis to gauge the differences, if any, in the responses between the sampling frames [different campuses and sampling units (degree versus diploma programmes)];

➢ Table 6.10 of Chapter Six provides a wealth of information that could be reported more extensively;

➢ The biographical data sourced from respondents, given the theoretical construct that was tested, was not fully exploited.

7.6   LEARNING EXPERIENCES AND REFLECTION

The recommendations for further research and the limitations of the research

as listed above are in many respects symbiotic and should be assessed simultaneously.

The research exposed the researcher to a wide range of learning experiences and immersion in various challenges, which required high levels of resilience. These learning experiences can also be seen as distinct contributions and are summarised under the same headings as the chapter titles.

❑ **Introduction and problem definition (Chapter One)**

The importance of researching the brand identity and brand image for the NMMU was identified and justified. It was a challenge for the researcher to identify the research problem, together with a justification of the wider relevance thereof within the NMMU context. Another learning experience was to construct the modified conceptual model on brand identity and brand image. This construct augmented the background of the research, to obtain a better understanding of the research objectives, research questions and hypotheses. Collectively, the analysis of the secondary sources and the construct of the modified conceptual model, introduced the researcher to the utilisation of a sophisticated analytical technique called Structural Equation Modeling. This by itself, is seen as a contribution to the knowledge base on branding.

The Structural Equation Model enabled the researcher to specify and phrase the research objectives, research questions and hypotheses. Care was taken to ensure that each of the research objectives was addressed and contextualised in respect of the NMMU brand identity and brand image. The researcher realised that the strategic importance of the research findings for the NMMU marketing communication specialists must be highlighted.

❑ **Research design and methodology (Chapter Two)**

By using Structural Equation Modeling, the researcher realised that the research design and methodology of this dissertation must demonstrate thoroughness and rigour at all stages of the research process. For this reason, a separate chapter was devoted to research design and methodology. It was important for the researcher to explain that the adopted research paradigm and data collection strategies met the purpose of the research and gave effect to all the stated research objectives. This required a thorough discussion of the research paradigms, with a comprehensive justification of the choices made. The research design framework (Figure 2.1 of Chapter Two) is innovative and reflects the researcher's own construct. Bringing together all the criteria of a sound research project, is another learning experience and contribution of this study.

❑ **Review of secondary sources (Chapters Three and Four)**

The critical review of the secondary sources presented the researcher with a real scholarly experience in respect of brands and related concepts. The relevance of the secondary sources was demonstrated by the compilation of the research instrument and the introduction to Structural Equation Modeling through the construction of the theoretical and modified conceptual models. In this process, evidence of relevance and comprehension of the secondary sources was demonstrated by the researcher.

❑ **Primary data sourcing (Chapter Five)**

In line with the research design and methodology as proposed in Chapter Two, the strategies for primary data sourcing were identified and described. In order

to be able to claim that the empirical results would be valid, reliable and generalisable, the researcher realised that it was important to take a defendable decision on the measuring scales. Therefore, an elaboration on the measurement scales was provided, with a motivation why an interval scale was chosen. The results of the pilot test were reported as the first phase in primary data sourcing.

❑ **Data analysis and empirical findings (Chapter Six)**

By adopting the positivistic research paradigm, the researcher came to the early conclusion that an understanding of inferential statistics is an important prerequisite for the successful completion of the study. It was necessary to describe, and execute the phases of data analysis and the statistical procedures used, as indicated in the literature. A logical presentation of empirical findings was required, based on the data analysis. Contrary findings were presented, which culminated in the empirical model, which is a reconstruction of the modified conceptual model on brand identity and brand image.

❑ **Summary, conclusions and recommendations (Chapter Seven)**

In terms of the requirements for writing up the research, the researcher realised that the summary, conclusions and recommendations had to follow logically from the empirical findings. The identified strategic implications for the NMMU marketing communication strategists had to be highlighted. Likewise, the conclusions and recommendations must be based on empirical evidence. Recommendations for future research had to be specified, as well as certain weaknesses of the research in question.

❑ **Final remarks**

All the research objectives of this research as stated in Section 1.3 of Chapter One were met. In the execution of the research objectives numerous contributions were made as highlighted in the aforegoing sections.

All in all, an enriching learning experience was encountered by the researcher.

———— **II** ————

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ANNEXURE A

THE RESEARCH INSTRUMENT

Nelson Mandela Metropolitan University

f o r   t o m o r r o w

Centre for Applied Business Management
Summerstrand South Campus
DEPARTMENT OF BUSINESS MANAGEMENT
Tel. +27 (0)41 5042875 Fax. +27 (0)41 5832644
nasreen.adams@nmmu.ac.za

23 September 2005

Dear NMMU student,

As a Nelson Mandela Metropolitan University (NMMU) student, your views as a key stakeholder on the brand identity and brand image of the NMMU are of utmost importance. Will you kindly share your opinion and perceptions on the NMMU brand identity and brand image with us.

PURPOSE OF THE SURVEY

The Centre for Applied Business Management (CABM) is a research unit functioning under the auspices of the Department of Business Management at the Nelson Mandela Metropolitan University (NMMU). The CABM is currently (2005) conducting research on the brand identity and perceived brand image of the NMMU. The purpose of the research is to gauge the perceptions of NMMU stakeholders on brand image expectations and actual experiences when using the NMMU brand. Your willingness to participate in the survey could enable the marketing communication strategists to identify which strategies must be considered to enhance the NMMU brand image.

The NMMU **brand identity** can be seen as the visual and verbal expression of the brand. It may also be seen as a unique set of NMMU brand associations that brand strategists aspire to create or maintain. The NMMU **brand image** is the perceptions of the brand, as reflected by the NMMU brand associations held in stakeholders' memory. Because you are an important stakeholder of the NMMU, it is essential to source your opinions (perceptions) of the NMMU brand identity and brand image.

Please complete the attached questionnaire, which has been compiled to gauge your perceptions in this regard. All information will be used for research purposes only. The confidentiality of your opinions will be respected. You are not required to identify yourself in the questionnaire.

The questionnaire should not take longer than 15 - 20 minutes to complete. There are no right or wrong answers only your opinion is important!

THE STRUCTURE OF THE QUESTIONNAIRE IS AS FOLLOWS:

Section A of the questionnaire consists of a number of statements where you have to indicate under the first column your **expectations of the NMMU brand** and, under the second column, your **actual experiences when using the NMMU brand**.

Section B of the questionnaire canvasses basic biographic data.

Please send your completed questionnaire as soon as possible but before Friday 21 October 2005 to:

- By email: johan.bosch@nmmu.ac.za

- By internal NMMU mail: Centre for Applied Business Management, 5th floor, Main Building, NMMU South Campus

- By mail: Centre for Applied Business Management
  Department of Business Management
  Summerstrand South Campus
  PO Box 77000 • Nelson Mandela Metropolitan University
  Port Elizabeth • 6031

THANK YOU FOR GIVING YOUR TIME TO COMPLETE THIS QUESTIONNAIRE.

RESEARCH LEADERS:

Dr E Venter   Prof. JK Bosch

SECTION A: STAKEHOLDER PERCEPTIONS ON THE NMMU BRAND IDENTITY AND BRAND IMAGE

Instructions:

This section requires a rating (assessment) of your perceptions about the NMMU brand identity and brand image. The newly launched NMMU brand may have established certain **expectations** in your mindset. On the other hand, having used the NMMU brand, you may also have **actual experiences**.

Please read the statements carefully, and then indicate in the first column your **expectations** and, in the second column, your **actual experience** when using the NMMU brand. In cases where you have no experience of the particular statement, please place a check (√) in the 'Not Applicable' box. Please indicate your response to the statements by indicating the relevant numbers in both columns "**expectations**" and "**actual experience**".

The interpretation of the numbers is as follows:
1 = strongly disagree;
2 = disagree;
3 = somewhat disagree;
4 = neutral or no opinion;
5 = somewhat agree;
6 = agree;
7 = strongly agree.

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STATEMENTS ON NMMU BRAND IDENTITY AND BRAND IMAGE	Expectations of NMMU brand								Actual experiences of NMMU brand							
	Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable	Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable
A 1 The NMMU brand signifies trustworthiness.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
2 The NMMU brand signals legitimacy.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
3 The NMMU brand is advertised in a credible manner.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
4 The NMMU brand sends clear communication messages to stakeholders.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
5 The NMMU brand conveys a sense of reliability.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
6 The NMMU brand is communicated in an honest manner.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
7 The NMMU brand creates a high level of confidence.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A

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	STATEMENTS ON NMMU BRAND IDENTITY AND BRAND IMAGE	Expectations of NMMU brand								Actual experiences of NMMU brand							
		Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable	Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable
B8	The NMMU brand reflects my educational needs.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
9	The NMMU brand has real meaning (relevance) for me.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
10	The NMMU brand is innovative.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
11	The NMMU brand reflects an academic value in line with stakeholders' needs.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
12	The NMMU brand is well accepted by stakeholders.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
13	The NMMU brand is modern and up to date.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
14	The NMMU brand fulfills specific stakeholders' needs.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
C15	The NMMU brand conveys sincerity.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
16	The NMMU brand creates a degree of excitement.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
17	The NMMU brand reflects competence.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
18	The NMMU brand reflects sophistication.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
19	The NMMU brand is resilient (strong).	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
20	The NMMU brand is superior to competition.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
21	The NMMU brand has a strong personality.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
D 22	The NMMU brand offers tangible academic benefits.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
23	The NMMU brand delivers on promises.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
24	The NMMU brand reflects value for money.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
25	The NMMU brand exceeds expectations in terms of promises.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
26	The NMMU brand is performing well in terms of expectations.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
27	The NMMU brand provides high quality academic programmes.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
28	The NMMU brand always delivers academic services on time.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A

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	STATEMENTS ON NMMU BRAND IDENTITY AND BRAND IMAGE	Expectations of NMMU brand								Actual experiences of NMMU brand							
		Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable	Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable
29	The NMMU academic staff is knowledgeable and proficient.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
30	The NMMU brand is a strategic resource of the institution.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
E 31	The NMMU brand is strongly preferred by stakeholders.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
32	I enjoy studying at the NMMU.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
33	The NMMU brand supports the needs of stakeholders.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
34	The NMMU brand reflects what is important to stakeholders.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
35	I prefer the NMMU brand to those of other Higher Education Institutions.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
36	The NMMU brand lets me feel part of the institution.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
F 37	The NMMU brand identity is strongly established in the mind of stakeholders.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
38	The NMMU brand reflects diversity of stakeholders.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
39	The NMMU brand reflects a true 'African University'.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
40	The NMMU brand reflects a competitive advantage ('reasons why' stakeholders should use the brand).	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
41	The NMMU brand reflects engagement with all stakeholders.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
42	The NMMU brand reflects the university's vision and mission.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
43	The NMMU brand is differentiated from those of other Higher Education Institutions.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
44	The NMMU brand reflects strong values.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
45	The NMMU brand reflects a visual expression of the institution.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
46	The NMMU brand is a verbal expression of the institution.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
47	The NMMU brand reflects the university's lingual identity (official language are Xhosa, Afrikaans and English).	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
48	The NMMU brand creates high levels of awareness.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
49	The NMMU logo reflects the NMMU brand identity.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
50	The NMMU slogan ('for tomorrow') reflects the NMMU brand identity.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A

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for tomorrow

	STATEMENTS ON NMMU BRAND IDENTITY AND BRAND IMAGE	Expectations of NMMU brand								Actual experiences of NMMU brand							
		Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable	Strongly disagree	Disagree	Somewhat disagree	Neutral or no opinion	Somewhat agree	Agree	Strongly agree	Not applicable
G51	The NMMU brand reflects a values-driven university.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
52	The NMMU brand reflects transformation for equity.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
53	The NMMU brand reflects a people-centred institution.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
54	The NMMU brand is nationally recognised.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
55	The NMMU brand is internationally recognised.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
56	The NMMU brand reflects the leadership qualities and vision of Nelson Mandela.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
57	The NMMU brand reflects high quality teaching.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
58	The NMMU brand reflects high quality research.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
59	The NMMU brand leads to the fulfillment of the dreams and aspirations of students.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A
60	The NMMU has a strong brand image.	1	2	3	4	5	6	7	N/A	1	2	3	4	5	6	7	N/A

Section B: Biographic Information

The following questions are related to biographic information. Please indicate your response by making a check (√) in the appropriate block.

1. Please indicate your gender:

    Male   □
    Female   □

2. Please indicate which stakeholder group you present:

    Staff (member) of the NMMU   □
    Students   □
    Alumni   □

Other (Please specify)_____

3. Please indicate on which NMMU campus the majority of your contact sessions are presented:

> South Campus (ex UPE Campus)   □
> North Campus (ex PET Campus)   □
> Second Avenue Campus (ex PET Campus) □
> Vista Campus   □
> Algoa Campus   □
> George Campus   □
> Bird Street Campus   □

4. What is your current level of study, e.g. B.Com, (second year); B.Sc. (first year, etc.).

> _____.

5. If you were studying at a higher education institution in 2004, at which institution did you study?

> Former UPE, Summerstrand Campus   □
> Former Vista Campus   □
> Former PE Technikon   □
> Another university   □
> I was in Grade 12 at school in 2004   □

> ***Please send your completed questionnaire as soon as possible but before Friday 21 October 2005 to:***

- By email: johan.bosch@nmmu.ac.za

- By internal NMMU mail: Centre for Applied Business Management, 5th floor, Main Building, NMMU South Campus

- By mail: Centre for Applied Business Management
  Department of Business Management
  Summerstrand South Campus
  PO Box 77000·Nelson Mandela Metropolitan University
  Port Elizabeth·6031

Thank you very much for your cooperation!

ANNEXURE B: CRONBACH ALPHA COEFFICIENTS, CORRELATIONS AND FACTOR LOADINGS (EXPECTATIONS)

Item number	Statements on NMMU brand identity and brand image	Loading	Correlation	Cronbach alpha after deletion
FACTOR ONE: IDENTITY		Cronbach alpha: 0.902		
39	The NMMU brand reflects a true 'African University'.	**0.444**	0.528	0.900
41	The NMMU brand reflects engagement with all stakeholders.	**0.479**	0.661	0.892
42	The NMMU brand reflects the university's vision and mission.	**0.596**	0.679	0.891
43	The NMMU brand is differentiated from those of other Higher Education Institutions.	**0.500**	0.613	0.894
44	The NMMU brand reflects strong values.	**0.538**	0.710	0.889
45	The NMMU brand reflects a visual expression of the institution.	**0.752**	0.681	0.891
46	The NMMU brand is a verbal expression of the institution.	**0.774**	0.677	0.891
48	The NMMU brand creates high levels of awareness.	**0.475**	0.638	0.893
49	The NMMU logo reflects the NMMU brand identity.	**0.429**	0.637	0.893
50	The NMMU slogan ('for tomorrow') reflects the NMMU brand identity.	**0.585**	0.613	0.895
52	The NMMU brand reflects transformation for equity.	**0.437**	0.580	0.896

	FACTOR TWO: REPUTATION	Cronbach alpha: 0.878		
1	The NMMU brand signifies trustworthiness.	**0.629**	0.665	0.860
2	The NMMU brand signals legitimacy.	**0.615**	0.647	0.863
3	The NMMU brand is advertised in a credible manner.	**0.644**	0.584	0.871
4	The NMMU brand sends clear communication messages to stakeholders.	**0.758**	0.676	0.859
5	The NMMU brand conveys a sense of reliability.	**0.757**	0.715	0.854
6	The NMMU brand is communicated in an honest manner.	**0.672**	0.654	0.862
7	The NMMU brand creates a high level of confidence.	**0.658**	0.688	0.857

	FACTOR THREE: PERFORMANCE	Cronbach alpha: 0.864		
23	The NMMU brand delivers on promises.	**0.575**	0.676	0.838
24	The NMMU brand reflects value for money.	**0.509**	0.612	0.849
25	The NMMU brand exceeds expectations in terms of promises.	**0.846**	0.715	0.830
26	The NMMU brand is performing well in terms of expectations.	**0.744**	0.686	0.836
27	The NMMU brand provides high quality academic programmes.	**0.406**	0.632	0.845
28	The NMMU brand always delivers academic services on time.	**0.447**	0.626	0.847

ANNEXURE B: CRONBACH ALPHA COEFFICIENTS, CORRELATIONS AND FACTOR LOADINGS (EXPECTATIONS) (*continued*)

Item number	Statements on NMMU brand identity and brand image	Loading	Correlation	Cronbach alpha after deletion
FACTOR FOUR: IMAGE: ACADEMIC		Cronbach alpha: 0.857		
57	The NMMU brand reflects high quality teaching.	**0.786**	0.754	0.776
58	The NMMU brand reflects high quality research.	**0.669**	0.743	0.786
59	The NMMU brand leads to the fulfillment of the dreams and aspirations of students.	**0.501**	0.692	0.834

Item number	Statements on NMMU brand identity and brand image	Loading	Correlation	Cronbach alpha after deletion
FACTOR FIVE: IMAGE: RECOGNITION		Cronbach alpha: 0.815		
54	The NMMU brand is nationally recognised.	**0.796**	0.687	----
55	The NMMU brand is internationally recognised.	**0.750**	0.687	----

Item number	Statements on NMMU brand identity and brand image	Loading	Correlation	Cronbach alpha after deletion
FACTOR SIX: PERSONALITY		Cronbach alpha: 0.831		
17	The NMMU brand reflects competence.	**0.473**	0.654	0.788
18	The NMMU brand reflects sophistication.	**0.643**	0.669	0.781
19	The NMMU brand is resilient (strong).	**0.542**	0.683	0.775
20	The NMMU brand is superior to competition.	**0.403**	0.627	0.800

Item number	Statements on NMMU brand identity and brand image	Loading	Correlation	Cronbach alpha after deletion
FACTOR SEVEN: RELATIONSHIP		Cronbach alpha: 0.805		
35	I prefer the NMMU brand to those of other Higher Education Institutions.	**0.620**	0.655	0.731
36	The NMMU brand lets me feel part of the institution.	**0.584**	0.673	0.712
37	The NMMU brand identity is strongly established in the mind of stakeholders.	**0.428**	0.630	0.757

ANNEXURE C: CRONBACH ALPHA COEFFICIENTS, CORRELATIONS AND FACTOR LOADINGS (ACTUAL EXPERIENCES)

Item number	Statements on NMMU brand identity and brand image	Loading	Correlation	Cronbach alpha after deletion
FACTOR ONE: REPUTATION			**Cronbach alpha: 0.861**	
1	The NMMU brand signifies trustworthiness.	**0.704**	0.655	0.840
2	The NMMU brand signals legitimacy.	**0.714**	0.639	0.841
3	The NMMU brand is advertised in a credible manner.	**0.531**	0.573	0.848
4	The NMMU brand sends clear communication messages to stakeholders.	**0.607**	0.619	0.843
5	The NMMU brand conveys a sense of reliability.	**0.704**	0.708	0.834
6	The NMMU brand is communicated in an honest manner.	**0.678**	0.253	0.877
7	The NMMU brand creates a high level of confidence.	**0.641**	0.684	0.837
8	The NMMU brand reflects my educational needs.	**0.418**	0.581	0.847
11	The NMMU brand reflects an academic value in line with stakeholders' needs.	**0.383**	0.598	0.845

Item number	Statements on NMMU brand identity and brand image	Loading	Correlation	Cronbach alpha after deletion
FACTOR TWO: IDENTITY			**Cronbach alpha: 0.908**	
38	The NMMU brand reflects diversity of stakeholders.	**0.413**	0.571	0.904
39	The NMMU brand reflects a true 'African University'.	**0.533**	0.476	0.907
41	The NMMU brand reflects engagement with all stakeholders.	**0.431**	0.613	0.902
42	The NMMU brand reflects the university's vision and mission.	**0.449**	0.648	0.901
44	The NMMU brand reflects strong values.	**0.409**	0.677	0.900
45	The NMMU brand reflects a visual expression of the institution.	**0.614**	0.665	0.900
46	The NMMU brand is a verbal expression of the institution.	**0.551**	0.642	0.901
47	The NMMU brand reflects the university's lingual identity (official language are Xhosa, Afrikaans and English).	**0.454**	0.528	0.905
48	The NMMU brand creates high levels of awareness.	**0.402**	0.619	0.902
49	The NMMU logo reflects the NMMU brand identity.	**0.447**	0.600	0.903
50	The NMMU slogan ('for tomorrow') reflects the NMMU brand identity.	**0.476**	0.641	0.901
51	The NMMU brand reflects a values-driven university.	**0.429**	0.689	0.899
52	The NMMU brand reflects transformation for equity.	**0.555**	0.578	0.903
53	The NMMU brand reflects a people-centred institution.	**0.380**	0.621	0.902

Item number	Statements on NMMU brand identity and brand image	Loading	Correlation	Cronbach alpha after deletion
FACTOR THREE: IMAGE: ACADEMIC			**Cronbach alpha: 0.763**	
27	The NMMU brand provides high quality academic programmes.	**0.511**	0.582	0.707
28	The NMMU brand always delivers academic services on time.	**0.400**	0.060	0.833
29	The NMMU academic staff is knowledgeable and proficient.	**0.539**	0.512	0.726
57	The NMMU brand reflects high quality teaching.	**0.751**	0.698	0.675
58	The NMMU brand reflects high quality research.	**0.605**	0.633	0.693
59	The NMMU brand leads to the fulfillment of the dreams and aspirations of students.	**0.432**	0.613	0.699

<u>ANNEXURE C</u>: CRONBACH ALPHA COEFFICIENTS, CORRELATIONS AND FACTOR LOADINGS (ACTUAL EXPERIENCES) (*continued*)

Item number	Statements on NMMU brand identity and brand image	Loading	Correlation	Cronbach alpha after deletion
FACTOR FOUR: PERFORMANCE		Cronbach alpha: 0.814		
23	The NMMU brand delivers on promises.	**0.609**	0.629	0.768
24	The NMMU brand reflects value for money.	**0.430**	0.537	0.811
25	The NMMU brand exceeds expectations in terms of promises.	**0.867**	0.670	0.734
26	The NMMU brand is performing well in terms of expectations.	**0.666**	0.671	0.748
FACTOR FIVE: RELATIONSHIP		Cronbach alpha: 0.870		
31	The NMMU brand is strongly preferred by stakeholders.	**0.404**	0.619	0.854
32	I enjoy studying at the NMMU.	**0.383**	0.606	0.856
33	The NMMU brand supports the needs of stakeholders.	**0.423**	0.659	0.849
34	The NMMU brand reflects what is important to stakeholders.	**0.384**	0.660	0.849
35	I prefer the NMMU brand to those of other Higher Education Institutions.	**0.578**	0.665	0.848
36	The NMMU brand lets me feel part of the institution.	**0.463**	0.661	0.849
37	The NMMU brand identity is strongly established in the mind of stakeholders.	**0.367**	0.639	0.852
FACTOR SIX: IMAGE: RECOGNITION		Cronbach alpha: 0.790		
54	The NMMU brand exceeds expectations in terms of promises.	**0.786**	0.653	----
55	The NMMU brand is performing well in terms of expectations.	**0.700**	0.653	----
FACTOR SEVEN: PERSONALITY		Cronbach alpha: 0.822		
18	The NMMU brand reflects sophistication.	**0.449**	0.597	0.798
19	The NMMU brand is resilient (strong).	**0.524**	0.681	0.760
20	The NMMU brand is superior to competition.	**0.496**	0.653	0.773
21	The NMMU brand has a strong personality.	**0.472**	0.651	0.773