

**Service Quality, Student Satisfaction and Brand Equity: A Case
Study of Select South African Universities**

by

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Declaration

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Abstract

Service quality, student satisfaction, and brand equity are key principles in marketing that are known to play an important role in marketing success. Changes to the South African higher education landscape and the subsequent challenges accompanying these changes such as, *inter alia*, greater competition, declining government subsidies, and more discerning students, has necessitated managing higher education institutions like businesses, and the application of business and marketing principles to attain success has become imperative.

Whilst the areas of Service Quality, Student Satisfaction and Brand Equity within a higher education context have been studied over time, there remains a dearth of literature in a South African higher education context. In fact, the association between service quality and brand equity, including their sub-categories, in a higher education context, is not only an under-researched area in South African higher education, but also in higher education internationally. Hence, the study's contribution can be considered unique particularly in this context.

The main problem that the study tries to seek answers to is what is the perception amongst students of Service Quality, Student Satisfaction, and Brand Equity, and the associations between these constructs for the selected sample of higher education students in South Africa?

A purposive judgmental sample of 400 students from two select higher educational institution campuses were selected in equal proportions (i.e. 200 students from each institution). The data was collected using a semi-structured questionnaire and subjected to different kinds of statistical analyses. Descriptive tests for each construct were conducted based on frequency tables and graphs (including cross-tabulations with select demographic variables e.g. gender), cluster analyses, and factor and Confirmatory Factor Analyses. Inferential statistical analyses, to show the associations and predictive abilities of the independent variables within each construct was conducted using correlations, multiple linear regression analyses AND Structural Equation Modelling. A conceptual model was tested based on the aforementioned analyses. The study's findings are:

- The key service quality factors rated from highest to lowest were Responsiveness, Assurance, Reliability, Tangibles, and Empathy.

- OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) and OVERALL BRAND EQUITY (OBE) were rated as above average.
- No differences were found in OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) and OVERALL BRAND EQUITY (OBE) across demographic categories, except for race.
- The key service quality dimensions based on its importance to the student, in descending order were Responsiveness, Reliability, Assurance, Empathy and Tangibles.
- Statistically significant negative gaps were found for all the service quality dimensions, suggesting improvements are needed in all areas in order to close the gaps. The largest negative gaps were found for Reliability and Empathy.
- Important service quality explanatory factors were Empathy, Tangibles, Reliability, Responsiveness and Helpfulness.
- Important brand equity explanatory factors were Key Associations and Differentiation, Loyalty and Awareness.
- Empathy, Responsiveness, Reliability and Assurance were significant and positive predictors of OVERALL SERVICE QUALITY (OSQ).
- Empathy, Responsiveness, and Tangibles were positive and significant predictors of OVERALL STUDENT SATISFACTION (OSS).
- Significant and positive relationships were found to exist between Empathy and Tangibles with OVERALL BRAND EQUITY (OBE).
- Significant and positive relationships were also found to exist between Key Associations and Differentiation and Loyalty with OVERALL BRAND EQUITY (OBE).
- The relationship between the dimensions of brand equity and OVERALL BRAND EQUITY (OBE) differ for male and female students.
- Empathy and Tangibles significantly predict Loyalty.
- Empathy, Assurance, Reliability and Tangibles significantly predict Key Associations and Differentiation.
- OVERALL STUDENT SATISFACTION (OSS) and OVERALL SERVICE QUALITY (OSQ) are significant predictors of OVERALL BRAND EQUITY (OBE).

- Service Quality (SQ), Brand Equity (BE) and OVERALL STUDENT SATISFACTION (OSS) are significantly and positively associated.

In the light of the various findings, it is recommended that greater emphasis be placed by higher educational institutions on measuring and managing Service Quality, Student Satisfaction, and Brand Equity. Furthermore, the associations between the aforementioned constructs, and their measurement dimensions which emerged as being significant also needs to be carefully considered if Higher Education leaders are to attract and retain students in the highly competitive environment.

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CHAPTER ONE

INTRODUCTION, BACKGROUND AND SCOPE OF STUDY

1.1. Introduction and Background

Marketing thinking is being transferred from a business context to higher education institutions due to the challenges posed by, inter alia, the global economy having an intense effect on education and changes in tertiary education are putting pressure on addressing the expectations of clients and stakeholders (Eggin, & Society for Research into Higher Education, 2003:121).

Although there are contrary views (Samervel, 2012 & Webber, 2011), viewing the student as a customer has become a very important focus of debate within the realms of higher education. A positive argument for viewing the student as a customer is that by putting the student at the centre of higher-education decision-making is useful in democratising the learning experience, introducing greater accountability, and helping to enhance the quality pertaining to the entire experience (Tripathi & Mukerji, 2013).

In the context of viewing the student as a customer, important customer oriented factors are service quality (Rauterberg, 2003:337), customer satisfaction (Raab, 2008:19) and brand equity (Verma, 2006:212). Within an organisational context, service quality (Panda, 2008:309; Reid & Bojanic, 2010:147; Hö hsmann, 2014:12), customer satisfaction (Chen, 2006:1; Liu, 2008:52) and brand equity (Burger, 2012:12; Kumar & Shah, 2015:18) are some of the important issues.

Service quality is a difficult construct to define and there have been many conceptualizations of it. From a customer's standpoint, service quality is defined as excellence, value, and meeting or surpassing customer expectations (Wood & Brotherton, 2008:316). van Schalkwyk and Steenkamp (2014) contend that service quality is a single most important issue in private higher education in South Africa. Unfortunately, Nair (2010:105) contends that there is a general lack of a quality culture in South African higher education, but in a transformation context, higher education institutions should lead and not lag behind in demonstrating quality in all areas. In fact, one of the important goals that the minister of higher education in South Africa has made reference

to is putting into place interventions in improving quality (MacGregor, 2012:para 9). In support of adopting a service quality orientation, Gbadamosi and de Jager, (2008:10) reason that it becomes imperative for higher education institutions in South Africa to use effective techniques to improve service quality because South African universities have experienced budgetary and government subsidy cuts and in addition, are pressurised to increase student numbers. Moreover, owing to the increased competition between higher educational institutions in South Africa, Universities of Technology (formerly Technikons) and Universities are now competing directly in the same market. Other researchers (Badat & Sayed, 2014; Mitra & Edmondson, 2015:388) have also documented similar challenges that higher education organisations in South Africa face.

In support of a service quality culture in South African higher learning, Radder and Han (2009:108) contend that “South African tertiary institutions are increasingly being forced to compete on the basis of service quality and satisfaction due to higher education becoming more competitive, changes in market demand patterns, and an increasing concern for quality assurance.” Likewise, Wang, (2012:193) also asserts that “a greater pressure is being placed on South African higher education institutions regarding service delivery.” It is noteworthy that the success of higher education institutions has been shown to have a link with service quality (Abouchdid & Nasser, 2002:198).

Like service quality, customer satisfaction is another important area of focus in marketing and is defined as “..... the feeling a customer has about the extent to which their experiences with an organisation have met their needs” (Hill, Roche, & Allen, 2007:32). Competitive pressures faced by higher educational institutions have resulted in a greater importance being placed on student satisfaction (Letcher & Neves, 2010:2). From English universities (Douglas, Douglas, & Barnes, 2006: 251-252), to Italian universities (Petruzzellis, D’Uggento, & Romanazzi, 2006: 349-350), to universities in Germany (Gruber et al., 2010:106), a strong emphasis is placed on student satisfaction.

Brand equity, unlike service quality and customer satisfaction, is a comparatively newer area of focus in marketing and amongst its various definitions, it (brand equity) has been conceptualised as “the value that the brand adds to the product,” (Crane, 2010:131). There are many potential advantages that a brand can offer in a higher education context. It helps to benefit the institution

through benefits being provided to students; marketing efforts become more efficient and effective; prices and margins become higher; revenue generation becomes more stable; opportunity to extend the brand become better; a reduction in risk; and the institution becomes more competitive (Toma, 2003:201).

In as much as the concepts of service quality, student satisfaction and brand equity are important as alluded to above, there is limited literature in the areas of service quality (Gruber et al., 2010:6), demographic issues pertaining to service quality (Takaro, 2014), student satisfaction (El Rawas & El Sagheir, n.d) and branding (Teh & Salleh, 2011; Lamboy, 2011) in a university context.

Service quality in higher education, particularly using the SERVQUAL scale is a somewhat under researched area (Barnes, 2007:317). In fact, overall, there is limited research into higher education service quality (Diedericks, de Klerk, & Bevan-Dye, 2015). Also, research into higher education service quality is relatively new (Sharma, Patel, & Sabharwal, n.d) particularly in terms of antecedents of service quality (Sultan & Wong, 2011:11).

In a South African higher education context, in the last five years, the majority of the most relevant studies in service quality focused on “gap” analyses using the SERVQUAL scale (Veerasamy, Govender & Noel, 2012; Green, 2014; Naidoo, 2014; van Schalkwyk & Steenkamp, 2014). One study used the SERVPERF model, but focused on business students and concluded that the SERVPERF scale is a useful one in higher education (Diedericks, 2012). A different study, which was a purely qualitative one found three themes in a higher education context, which were Empathy, Professionalism and Responsiveness (McClellan, 2012). Finally, a study that focused on management students to find the key factors in higher education service quality, uncovered 13 factors. None of these studies went into any detail regarding the demographic issues associated with service quality, nor undertook any form of cluster analyses or predictive analyses (except for a study by Radder & Han, 2009:116), which focused on room amenities at a university, to determine statistically whether there are specific service quality factors that predict service quality.

A number of South African studies attempted to show the relationship between service quality and student satisfaction in the past five years. Of these, the most relevant studies were correlational (Nell & Cant, 2014; Hefer & Cant, 2014; Oduaran, 2011). In addition, there were studies that

showed positive relationships between service quality and student satisfaction using predictive analyses like structural equation modelling, but focused only on postgraduate students (Govender & Ramroop, 2012), and another study by Gbadamosi and de Jager (2009:251) that used predictive analyses was based on non-SERVPERF or SERVQUAL dimensions. None of the aforementioned studies undertook any significant demographic analysis (i.e. with reference to gender and academic field of study) pertaining to service quality and student satisfaction.

In exploring the brand equity literature in higher education over the last nine years, studies that measured brand equity of higher education institutions were Manafi et al. (2011) in Malaysian Universities, Aggarwal, Rao and Popli (2013) who studied brand equity at Indian business schools; a qualitative study using the Keller (2001) model of brand equity (Clarke, 2009); U.K studies on brand positioning (Furey, Springer, & Parsons, 2014), a qualitative branding study by Chapleo (2010); a U.S.-based exploratory study on brand equity (Joseph, Mullen, & Spake, 2012); a study pertaining to creating brand equity at select Australian universities (Mitsis, 2007); a study of business school websites in a branding context (Shaari & Areni, 2009); and one African-based brand equity study of re-branding the University of Botswana (Makgosa & Molefhi, 2012). Furthermore, regarding the relationship between service quality and brand equity in a higher education context, Mourad, Ennew and Kortam (2011) showed that quality issues in general had a bearing on brand equity in an Egyptian context. Furthermore, using non-SERVPERF and SERVQUAL dimensions, a study into Iranian universities showed that service amenities and the physical environment had a positive effect on brand equity (Moghaddam, Asadollah, and Garache, 2013). In addition, in an Australian higher education study, the support from the learning environment and course-related perceptions had a significant influence on brand equity (Mitsis, 2007). In another study, using only image as a brand equity factor and non-SERVPERF or SERVQUAL dimensions, Iqbal, Rasli and Hassan (2012) found that quality followed by prestige were significant influencers of brand equity. Finally, a brand equity study with engineering students in India found that quality influenced the brand rating of the university (John & Senith, 2013). From the aforementioned studies on brand equity and the relationship between service quality and brand equity in higher education, it is evident that there is a dearth of literature, not only internationally, but more particularly in a South African context where no studies were found

in the literature pertaining to the key dimensions in higher education brand equity and the predictive relationship between the popular service quality models and brand equity.

Evidently, there are gaps in the extant literature in a South African higher education context pertaining to service quality, student satisfaction and brand equity, which this study seeks answers to. Hence, the problem statement below raises the pertinent questions to be addressed in this study.

1.2. Statement of the Problem

Given the dearth of information in the literature as alluded to in the section above, this study seeks to address the following broad question:

What is the state of service quality, student satisfaction and brand equity at select South African university campuses, and is there a predictive relationship between each of these constructs and their dimensions? The sub questions relating to the broad problem are as follows:

- 1.2.1 How do students at select South African universities rate service quality, student satisfaction and brand equity at their universities?
- 1.2.2 What level of importance is placed by students on the explanatory factors/dimensions of service quality and brand equity at select South African universities?
- 1.2.3 What are the key explanatory factors for service quality and brand equity as perceived by students at select South African universities?
- 1.2.4 What is the relationship between service quality, student satisfaction and brand equity, also including the relationships between their constituent factors/dimensions as perceived by students at select South African universities?

Relating to the aforementioned research questions, the specific research objectives of the study are addressed hereunder:

1.3. Research Objectives

- 1.3.1 To evaluate service quality, student satisfaction and brand equity at select South African universities.
- 1.3.2 To determine and analyse the importance placed on explanatory factors/ dimensions of service quality at select South African universities.
- 1.3.3 To determine the key explanatory factors for service quality and brand equity as perceived by students at select South African universities.
- 1.3.4 To evaluate the predictive relationships between service quality, student satisfaction and brand equity (including their overall measures); also including the predictive relationships between their constituent factors/dimensions at select South African universities.

Based on the aforementioned research questions and objectives, the hypotheses that this study will attempt to address are postulated in Chapter three of this thesis.

1.4. Significance of the Study

As alluded to, this study is unique in that it attempts to address the gaps in knowledge in the existing literature within a South African higher education context. Evidently, as indicated earlier in this chapter, the areas of service quality, student satisfaction and brand equity, and more particularly the predictive relationships between these constructs, are relatively under researched areas in a South African higher education context. In addition, owing to the important role that these constructs play in organizational success as already alluded to earlier in this chapter, it is the researcher's view that being able to effectively manage these constructs and the interrelationships between them would benefit higher education institutions in serving their students more effectively.

More specifically, the study is significant as it would be able to provide insight into how students at the select universities rate service quality, student satisfaction and brand equity, and determine if there exists room for improvement, if any. This knowledge would be beneficial to the administrators and managers of the select universities in the sample used who could utilise the

information to understand their strengths and weaknesses, in order to manage their institutions and attract more students.

In addition, the study is significant in helping higher education marketing practitioners to understand where students place importance regarding service quality, and to determine which areas are most and least important, to improve the focus on key areas of importance.

Moreover, the study is significant in that it attempts to understand the underlying dimensions or explanatory factors relevant to service quality and brand equity. This information will be very useful in determining whether the validated service quality (SERVPERF scale), popularized by Cronin and Taylor (1994) and brand equity (Aaker, 1996) model used in this study apply to the sample studied. This knowledge will be useful in providing exploratory insight in debating whether South African universities need different models to measure service quality and brand equity.

Another significant area of contribution of this study would be in exploring the predictive relationships between the research constructs. This knowledge would be useful in helping the managers and administrators of higher education institutions to obtain an understanding of which specific factors predict or significantly influence other dimensions, factors, and constructs. Equipped with this knowledge, higher education marketers can manipulate the relevant dimensions or factors and constructs to affect positive changes in service quality, student satisfaction and brand equity.

The research methodology adopted in this study is briefly explained in the section below.

1.5. Research Methodology

The population under study were undergraduate students studying courses in the main academic disciplines offered at select university campuses.

Unfortunately, a list of student names, email addresses, telephone numbers, and other relevant contact details could not be obtained due to the confidential nature of the information. However, for each campus, a list of the broad disciplines under study, as well as the different courses offered within such disciplines was available. Hence, the sampling frame that was used in the study was a

list of all the broad disciplines and the courses offered within each discipline for each of the two university campuses chosen for the study.

Over 500 completed questionnaires were collected. However, in the end, taking into account spoilt copies and other editing issues, the sample was reduced to 400 with 200 students from each campus so that both campuses were represented equally. Non-probability, judgmental sampling was considered to be most appropriate and used in this study.

The study employed a structured questionnaire to collect the data. This questionnaire comprised of five sections. Each of the constructs under study – service quality, student satisfaction, and brand equity were measured based on validated scales as reported in the existing literature. Service quality was measured based on the SERVPERF scale (Cronin & Taylor, 1994); OVERALL STUDENT SATISFACTION (OSS) was measured based on two measurements - a four item/variable measure used by Yadav (2012), and a one item/variable overall measure used by Govender and Ramroop (2012); and brand equity was measured based on the popular Aaker (1996) model. Before finalisation of the questionnaire, it was pre-tested with marketing academics and pilot tested among students.

Data was collected using the survey method, as surveys are considered to be the most popular form of data collection method in descriptive research designs (Matthews & Kostelis, 2011:84). The data was collected from two selected campuses of different universities in Kwa-Zulu-Natal, one of nine provinces in South Africa. Before data collection, written gatekeeper permission was obtained from the respective gatekeepers (i.e. the department controlling the right of entry into the university) to conduct the survey on their respective campuses. Thereafter, application was made for ethical clearance from the Ethics Committee of the University of KwaZulu-Natal, and permission was granted to conduct the survey.

From each of the selected campuses, lecturers were contacted in advance with requests to conduct the survey in class after being briefed on the specifics of the study. Efforts were made to make sure that for each of the selected campuses, students enrolled for courses representing all the relevant broad disciplines, namely, Science, Humanities, Commerce, and other relevant disciplines were surveyed.

Upon permission being granted by the lecturers, the relevant lectures were attended where students were briefed on the survey and informed that participation in the study was entirely voluntary, and that the information collected will be treated in the strictest of confidence, and anonymity will be ensured. Those that were willing to participate were given about 15 minutes to complete the questionnaire.

1.6. Delimitations of the Study

In the main, this study was limited to the following boundaries:

1.6.1. The Research Problem, Questions and Objectives

This study was conducted within the context of a problem that comprised of a set of four questions and four objectives and their related hypotheses. Hence, the literature review, research methodology, findings and conclusions are within the context of these aforementioned issues.

1.6.2. The Constructs under Study

The study and its objectives focus on three constructs namely, Service Quality, Student Satisfaction and Brand Equity. Moreover, each construct is limited in its measurement and scaling. The service quality construct is operationalized based on the popular perceptions only SERVPERF model adapted from Cronin and Taylor (1994). Service Quality is measured based on 22 items that converge into five dimensions, which are Tangibles, Reliability, Responsiveness, Assurance and Empathy. The OVERALL STUDENT SATISFACTION (OSS) construct is operationalized based on a composite mean score of four variables as used by Yadav (2012) and another measurement as reported by Govender and Ramroop (2012) where one overall measure was used to operationalise OVERALL STUDENT SATISFACTION (OSS). Hence, there were two separate measures of OVERALL STUDENT SATISFACTION (OSS). The brand equity construct is confined to Customer-Based-Brand-Equity (CBBE) as popularised by Aaker (1996) and Keller (1993), and does not include financial-based brand equity as explained by Oh (2009). In addition, the Brand Equity construct used in this study comprised of 25 variables as operationalized in the Aaker (1996) Model of Brand Equity converging into four broad dimensions, which are Perceived Quality and Leadership, Loyalty, Awareness, and Key Associations and Differentiation.

1.6.3. The Population

Another de-limitation of this research is the population under study. Only institutions classed as South African universities were targeted, and within such institutions, only undergraduate students were targeted. In addition, due to logistical and resource constraints, only two university campuses were included. Hence, the findings of the study should not be generalised without factoring this limitation.

1.6.4. Research Philosophy, Approach and Strategy

From a research philosophy perspective, this research is confined to using a Positivist philosophy, which according to Chui (2007:49) is perceived to be the most scientific way of research. It uses existing theory in producing other theories and hypotheses, is relatively structured and addresses important issues of rigor and validity that go with testing theory and measurement (Carson, Gilmore, & Gronhaug, 2001).

The research approach conforms to the deductive reasoning procedure outlined by Wagner, Halley, and Zaino (2011:9) in that “it moves from general to specific.” In so doing, it follows Kitchen’s (1999:480), five main sections to a deductive research project as follows:

1. Literature review: this includes a summary and critical assessment of secondary information in the field. It also addresses gaps in the literature that the researcher tries to address pertaining to Service Quality, Student Satisfaction and Brand Equity.
2. Explaining the research method: defining the main research method, explaining the research instruments to be used, and justifying the research approach to be adopted.
3. Findings: analyzing and synthesizing the primary data.
4. Discussion: interpreting and evaluating the findings and explaining how the findings can "explain the research questions and hypotheses".
5. Recommendations: based on the findings and the limitations of the research approach will be highlighted.

Furthermore, this research focuses on a quantitative survey method, as opposed to qualitative research, which is less scientific (Yellin, 2008:142). It uses a scientific approach in testing hypotheses, showing statistical relationships, and using precision and objective methods in data collection, which is in keeping with Rubin and Babbie's (2013:41) explanation of quantitative research.

1.7. Outline of the Study

This thesis spans seven chapters. Chapter one introduces the study, the problem and research questions to be investigated, the significance of the study, the research methodology and the study context.

Chapter two is the first of the two literature review chapters that introduces the important constructs to be addressed in the study, namely, Service Quality, Customer Satisfaction and Brand Equity. The main aim of this chapter is to explain how these constructs are conceptualised, measured and defined.

Chapter three is the second literature review chapter which elaborates on Service Quality, Student Satisfaction and Brand Equity in higher education. This chapter discusses the importance of Service Quality, Student Satisfaction and Brand Equity in higher education both internationally, as well as in South Africa. The chapter also reports on the relationships between Service Quality, Student Satisfaction and Brand Equity and the related empirical studies both international and South African-based.

Chapter four explains the research methodology adopted in addressing the research questions and objectives. It explains the research design, data collection method, sampling, questionnaire design and the operationalisation of the study constructs as well as data analysis specific to the research questions and the hypotheses.

Chapter five presents the research findings and is organised based on the research questions and objectives. Both descriptive and inferential statistics are used to report the findings.

Chapter six provides a discussion of the significant findings within the context of the research objectives. In addition, the chapter also presents models based on the significant findings of the study and summarises the main findings based on the study objectives.

Chapter seven concludes the study, provides recommendations based on the findings and offers some direction for future research.

1.8. Conclusion

Chapter one introduced the constructs to be studied, the background that has given rise to the gaps in knowledge that necessitates and justifies undertaking this study, the research problem, research questions, objectives, the research methodology, significance of the study and the parameters within which the study will be undertaken.

In the next chapter, a conceptual review is provided of Service Quality, Customer Satisfaction and Brand Equity.

CHAPTER TWO

SERVICES, SERVICE QUALITY, CUSTOMER SATISFACTION AND BRAND EQUITY

2.1. Introduction

This chapter will address the theory relating to the constructs covered in the study. These constructs are Service Quality, Customer Satisfaction and Brand Equity. The unique characteristics of services will initially be addressed followed by a discussion of service quality and its importance in marketing. In addition, the various service quality models will be discussed with emphasis on the most widely used models within a marketing and management context.

Customer satisfaction, another important construct under study, will be discussed with emphasis placed on its importance in marketing and the different perspectives provided in the literature in defining and measuring it.

Finally, brand equity and its importance in marketing will be discussed. In particular, the different perspectives into brand equity namely, Customer-Based Brand Equity and Financial-Based Brand Equity will be explained. In addition, the different approaches in measuring brand equity will be discussed with particular emphasis on the Aaker (1996) model.

2.2. Characteristics of Services

The service sector has experienced exponential growth in most countries throughout the world. It contributes significantly to GDP and employment creation in the majority of countries and is fast “becoming the mainstream focus of marketing” (Lovelock, Patterson, & Wirtz, 2014:5).

“A service is an activity which has some element of intangibility associated with it. It involves some interaction with customers or property in their possession, and does not result in a transfer of ownership. A change of condition may occur and provision of the service may or may not be closely associated with a physical product” (Payne & McDonald, 2012:10).

According to Lamb, Hair and McDaniel, (2014:194), services possess certain distinctive features that distinguish them from physical goods; each of these features will be briefly described below.

2.1.1. Intangibility

Intangibility is the most basic characteristic of services. A service cannot be seen, touched and smelt in the same way as tangibles. Due to the intangible nature of services, customers will make inferences regarding quality based on aspects of the service environment such as the people, place, equipment used and other tangible cues. Hence, services marketers need to be able to manage the physical evidence (tangibles), which can translate into converting the intangible service into concrete benefits (Rama, 2011:9).

2.1.2. Heterogeneity

Heterogeneity will come about because no two customers are the same and because of this, each customer would have demands that are unique and each would experience a service differently. Consequently, it will be difficult to standardise service quality.

2.1.3. Simultaneous Creation and Consumption

In general, the creation and consumption of a service takes place simultaneously. This means, that customers are often present whilst the service is being produced. Hence, customers become coproducers of the service.

2.1.4. Perishability

Unlike tangible goods, marketers are unable to store, keep, or resell a service. In addition, a service customer is not able to return a service. In particular, the inability to store a service creates certain challenges for the marketers of services, mainly in terms of forecasting demand and capacity utilization planning. The inability to return or resell a service challenges marketers in that they need to have effective strategies in place to recuperate goodwill from customers in the event that something goes wrong (Zeithaml, Bitner, & Gremler, 2009:22).

Other academic writers in the field of services marketing have also alluded to the presence of the above unique characteristics of services (Verma, 2012:28; Rai, 2013:186-187).

Reid and Bojanic (2010) allude to the fact that service quality is important to customers, which is important for marketers to understand. In addition, Dominic, Goh, Wong, and Chen, (2010) have shown that service quality has an important role to play in gaining competitive advantage.

2.3. Service Quality and Service Quality Models

Siddique, Karim and Rahman (2011:3) contend that “quality is an elusive and indistinct construct” that is not easily articulated by customers and difficult to measure by researchers. Similarly, Oh (2009:211) contends that service quality is both elusive and challenging to define and alludes to the many different perspectives used to define service quality over time, albeit many inherent weaknesses. Consequently, Oh (2009:211) suggests that the definition of service quality is best looked at by a performance-only measurement, and on this basis argues that a better definition of service quality should be based on a customer’s personal evaluation of performance. Other authors (Verma, 2008; Lindenau-Stockfisch, 2011; Lisch, 2014) define service and view service quality on a similar basis, that is, it is subjective.

Despite the many challenges faced in defining service quality, it “is one of the most researched areas of services marketing” (Adamson & Polgar, 2012:166). For example, the construct service quality was intensively investigated and widely researched by Parasuraman, Zeithaml and Berry (1985). The importance of service quality is documented by Hu, Kandampully, and Juwaheer (2009:112) who cite many authors (Anderson & Zeithaml, 1984; Buzzell & Gale, 1987; Parasuraman et al., 1985; Zeithaml, 2000) who concur that service quality has a contributory role in consumer satisfaction and market share and suggesting that all organizations driven by a quest to survive and be competitive must pursue service quality.

As the interest in service quality increased over time, there have been many service quality models developed that covered many different types of services ranging from conventional services to web-based services. According to Merican, Suhaiza, and Fernando (2009:282), there are at least 19 service quality models that have been used and applied in a services marketing context. In addition, there have been many service quality models that have been applied to the manufacturing

sector and adapted for use in the service sector. These service quality models have been extensively studied and reported on (Seth, Deshmukh, & Vrat, 2005:915-932; Verma, 2012:412-414; Xu, Yasinzai, & Lev, 2013; Emel, 2014:79-93). A discussion of some of the more popular service quality models follows.

2.3.1. “Technical and Functional Quality Model” of Grönroos

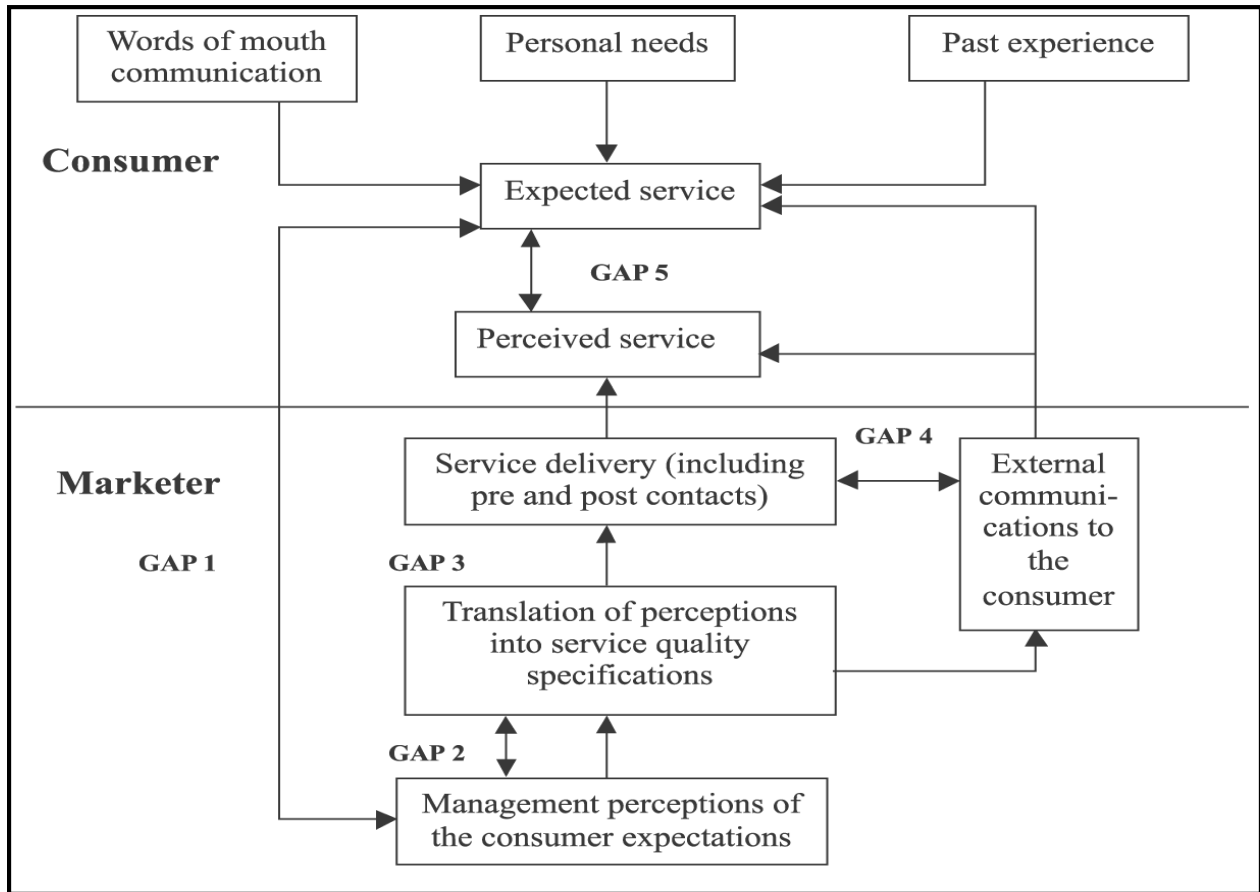
According to the Grönroos (1984) model of service quality, service quality includes three components: “technical, functional and image” quality. Gummesson and Grönroos (2012:483-484) state that “technical quality” is focused on the result of the service i.e. what a customer receives based on his/her interaction with the service organization; “functional quality” pertains to how the customer gets the technical quality i.e. the process; and image quality, a “dynamic aspect” which is important to service organizations, includes both technical and functional quality as well as additional marketing-related issues.

The Grönroos (1984) service quality model is popular and a significant model of service quality, as it emphasises on the manner in which the service is conducted (Kardaras & Karakostas, 2012; Rodrigues, 2013).

2.3.2. The “Gaps Model” (SERVQUAL) of Parasuraman, Zeithaml and Berry

According to Parasuraman et al. (1985:42) the “Gaps Model” of service quality (Figure 2.1) or SERVQUAL is based on a “disconfirmation paradigm”. This model envisages service quality as based on the difference between customer expectations of the service and their perceptions of the performance of the service by the service organization.

Figure 2.1: The “Gaps Model” of Service Quality



Source: Parasuraman, Zeithaml and Berry (1985:42)

Zeithaml et al. (2009) explain that the SERVQUAL model comprises of five domains or dimensions of service quality, which are depicted by 22-items, variables, or attributes in a measurement scale, which are discussed hereunder. These domains or dimensions of service quality are Responsiveness, Reliability, Assurance, Empathy and Tangibles. The SERVQUAL questionnaire used to measure the quality of a service comprises of two sections – one measuring the expectations of the service for each of the 22-items, and the other section measuring the perceptions of the service for each of the 22-items in the scale. Reliability is mainly concerned with whether the outcome of the service delivery was as promised. Responsiveness pertains to the ability to be helpful to customers and the provision of prompt attention. Assurance is the ability to instill trust and confidence by a service organization in the mind of the customer regarding its

service delivery. Tangibles pertain to the appearance of issues such as buildings, staff, communication materials, and so on. Empathy pertains to the caring and individual attention provided by the service organization to its customers.

As already alluded to, SERVQUAL is based on the gap or variance between customer expectations and their perceptions of the actual service. The SERVQUAL dimensions would show how customers differentiate performance on these dimensions (Bebko, 2000) cited in Hu et al. (2009:112). The “Gaps Model” (SERVQUAL) of service quality views services in a structured and cohesive manner. The model is made up of Customer and the Provider (Marketer) Gaps (Zeithaml et al., 2009). A discussion of the “Gaps Model” follows:

The “Customer Gap” looks at the differences between what customers expect and what they get. Expectations are essentially standards or reference points and perceptions are subjective based on what the customer thinks would happen. Due to the importance of customer satisfaction in influencing the competitiveness of a firm, in order to deliver quality service, an organization needs to begin with an understanding of its customer. The “Customer Gap” is calculated by finding the variance between what a customer expects and what he/she gets to determine service quality. There could be a positive gap, negative gap or no gap. Of particular concern will be a negative gap, as this would mean that customer expectations exceed their perceptions of the service (Zeithaml et al., 2009:32-33).

In terms of the “Provider Gaps”, four service quality gaps are prevalent, which are the “Listening Gap (Gap 1)”, “Service Design and Standards Gap (Gap 2)”, “Service Performance Gap (Gap 3)” and the “Communications Gap (Gap 4)” as explained by Zeithaml, et al. (2009:33).

The “Listening Gap (Gap 1)” is concerned with the differences between what the customer expects of the service and the organisation’s understanding and knowledge of such expectations. It arises due to an organization lacking an understanding of what customer expectations actually are. Organizations may not be aware of customer expectations due to a number of reasons. They may not be willing to ask about customer expectations or not be prepared to address expectations. Consequently, this may result in poor decisions thereby affecting service quality negatively. One of the reasons giving rise to the “Listening Gap” (Gap 1) is inadequate marketing research. An

organization may not collect accurate information on its customers, which may contribute, to a large “Listening Gap”. Marketing research, through formal and informal methods, plays a crucial role in understanding customer expectations. In addition, the “Listening Gap” could manifest because of some organizations lacking upward communication. Furthermore, the “Listening Gap” can widen due to management not keeping in contact with customer contact employees or not understanding what customer contact personnel know. Furthermore, the “Listening Gap” widens due to a lack of relationship marketing resulting from inadequate strategies to retain customers. Consequently, the “Listening Gap” is less likely to occur when an organization has good relationships with customers. Service recovery is crucial in assisting an organization whose service has failed to rectify service failure and being able to subsequently deal with it (Zeithaml et al. 2009).

It is not sufficient for a company to accurately perceive customer expectations in order to deliver quality service. There has to be a presence of service design and standards in order to reflect these accurate perceptions. Hence, it is essential for companies to translate customer expectations into service quality specifications that can be understood and executed by service employees. The “Service Design” and “Standards Gap (Gap 2)” occurs when there is a difference between a business’s understanding and knowledge of customers’ expectations and the creation of a service design and standards, which are customer-driven (Zeithaml et al., 2009). Zeithaml et al. (2009) explains that a contributing factor to the Service Design and Standards Gap (Gap 2) is the belief on the part of managers that customer expectations are unrealistic or unreasonable and that the variable nature of a service does not allow for standardization and hence the setting of standards will not help in achieving goals. The “Service Design and Standards Gap (Gap 2)” is also contributed to by the intangible nature of services, which pose difficulties in describing and communicating a service and this becomes even more evident for new services. Therefore, it is important that those involved with the service work with similar or alike ideas of the new services based on customer expectations. For an existing service, all those involved need to have the same vision for the service so as to improve it. In avoiding the “Service Design and Standards Gap (Gap 2)”, one of the approaches that can be taken by marketers of services is to employ a clear design without oversimplifying it. When standards reflect the expectations of customers, then service quality is likely to improve. Therefore, some of the important factors contributing to Gap 2 are:

poor design of service, no customer driven standards or a lack thereof and physical evidence (Tangibles) that may not be appropriate (Zeithaml et al.,2009:36-38).

However, it is not enough to deliver quality service by having service design and standards in place. The firm needs to be able to perform at a level that meets service design and standards. In other words, the organization needs to have the systems, processes and people in place. The “Performance Gap (Gap 3)” arises when there is a difference between customer-based service ideals and real performance of the organisation’s employees and “when the level of service delivery falls short of the standards, and falls short of what customers expect as well” (Zeithaml et al., 2009:38). Therefore, resources needed to meet standards are essential in reducing “Performance Gap (Gap 3)”. There are a number of impediments to reducing the “Performance Gap”. These inhibitors include, personnel who lack knowledge on their roles in their respective jobs, who experience conflict between the customer and the organisation, and are poorly selected; insufficient technology, poor reward and recognition, and a lack of team effort and empowerment. These are essentially human resource-related factors and need to be addressed in order to better service performance (Zeithaml et al., 2009).

The Communication Gap (Gap 4) represents the incongruity concerning an organisation’s service delivery and its external communications. Any promises made by the organisation can raise customer expectations and expected standards against which customers measure service quality. Hence, a difference between actual and promised service could result in a widening of this customer gap. Poor service quality perceptions can arise when employees do not fully understand the service delivery and hence may exaggerate promises which cannot be met. Therefore, coordinating service delivery with external communications helps to narrow the communication’s gap and also affects the customer gap. Hence, it is important that organisations effectively manage all communications to customers in order to prevent inflated promises resulting in higher expectations (Zeithaml et al., 2009).

Despite its popularity and extensive application, SERVQUAL has had many criticisms leveled at it over time, and these have been widely documented in the existing literature (Buttle, 1996; Lam & Woo, 1997; Kilbourne et al., 2004; Lee, 2006; Bayraktaroglu & Atrek, 2010; Vaughan & Woodruffe-Burton, 2011; Souca, 2011; Al Ghaswyneh & Albkour, 2013).

Buttle (1996) documents one of the earlier criticisms of SERVQUAL as follows:

Theoretical criticisms - contains two distinct issues. Firstly, SERVQUAL emphasises on expectations, which is considered inappropriate and should rather be an attitudinal model of service quality. Secondly, SERVQUAL does not expand on the extensive existing knowledge in statistics, psychology and economics.

1. "Gaps model" – there is limited proof that customers gauge service quality based on perceptions minus expectations (P-E gaps).
2. Process criticism – SERVQUAL centers on the service delivery process and not the results of the service encounter.
3. Dimension criticism – where the five dimensions used are not universal and are contextualized. In addition, these five dimensions do not all the time load exactly according to the SERVQUAL model dimensions based on the theory. Moreover, the extent of inter-correlation between the SERVQUAL dimensions is high.
4. Criticisms of expectations – it is argued that customers use other standards aside from expectations to evaluate service quality. In addition, SERVQUAL is criticized for not measuring absolute service quality expectations.
5. Item configuration criticism – it is argued that a few items or variables cannot capture the variability in each SERVQUAL dimension.
6. Moment of truth (MOT) criticism – it is debated that a customer evaluations of service quality would change between each moment of truth.
7. Polarization criticism – reversing polarity of the scale items may cause respondent error where items that are negatively worded load heavily on one factor and vice versa.
8. Scale criticisms – it is argued that the seven-point Likert scale is flawed due to the lack of labels for each point and the difficulty for respondents in interpreting the midpoint.

However, despite the many criticisms levelled against SERVQUAL, it remains a very valuable tool in measuring service quality (Ladhari, 2009). In fact, according to Jayasundra (2009), the

value of SERVQUAL is that it is a generic model, which can be applied to any organisation in measuring service quality. Furthermore, in support of the usefulness of SERVQUAL as a tool in measuring service quality, many authors (Duffy & Kilbourne, 2015; Ciavolino & Calcagni, 2015; Ahuja, Mahlawat, & Masood, 2011) have made positive inputs about SERVQUAL's efficacy as a service quality-measuring tool.

2.3.3. The “Attribute Service Quality Model” Of Haywood-Farmer

The “Attribute Service Quality Model” has been extensively discussed by many researchers (Shahin & Samea, 2010; Rahman, Khan & Haque, 2012; Harmse, 2012; Mwatsika & Khomba, 2013). According to this model, service quality offered by an organization is deemed to be of high quality when it is able to consistently meet customer expectations and preferences. Based on this model, there are three simple attributes of services: “physical facilities and processes”, “people behavior” and “professional judgment”. Each of the attributes is further divided into a number of sub-attributes. However, too much of emphasis on an attribute by a service organization, at the expense of other attributes, may create service quality problems (Seth et al., 2005).

2.3.4. The “Synthesised Service Quality Model” of Brogowicz, Delene and Lyth

The “Synthesised Service Quality Model” by Brogowicz et al. (1990) is a “less-known” model of service quality (Wickramasinghe, 2013). According to this model, a gap in service quality may arise even though a customer has no experience with the service offering of the organization, but who has learned from additional sources, such as word of mouth, about the organisation's service. Hence, a perception is formed of service quality even by potential customers (as opposed to actual customers) who have not experienced the service. The “Synthesised Service Quality Model” incorporates three factors believed to influence technical and functional service quality expectations, which are an organisation's image, outside influences and traditional marketing activities.

2.3.5. The Performance Only Model of Service Quality of Cronin and Taylor

According to this model, often referred to as SERVPERF, perception was shown to predict service quality better. The creators of this model argued in favour of a service quality model based on attitude which is better measured by performance only (SERVPERF), and not performance-expectation as was the case with SERVQUAL and amongst other tests, found that the use of structural models “supports the theoretical superiority of the SERVPERF scale” (Cronin & Taylor, 1992:64). Many writers have found SERVPERF to be superior to SERVQUAL in certain areas (Smith & CAB International, 2010; Kajan, Dorloff, & Bedini, 2012; Ehrmann, 2013; Rai, 2013).

2.3.6. The “Ideal Value Model of Service Quality” of Mattsson

According to Mattsson (1992), this model debates for a value-based approach to service quality. The model is viewed as a consequence of a satisfaction process. It tries to match a customer’s experience of a service to an ideal standard (through learning). It is argued that during the match, a negative cognitive bias occurs which is a negative disconfirmation that is believed to have a major effect on customer satisfaction. Consequently, the author argues for more emphasis to be placed on the cognitive processes that customers use to form perceptions of service concepts.

2.3.7. The “Evaluated Performance and Normed-Quality Model” of Service Quality of Teas

The Normed-Quality model distinguishes between different levels or points of expectations, for example, the difference between expectations of an ideal or feasible nature in determining service quality (Wickramasinghe, 2013). In other words, the Normed-Quality model of service quality determines service quality by assessing the gap between the performance of a service and an ideal amount of a particular feature instead of customer expectations as presented by SERVQUAL (Remenyi, 2007).

2.3.8. The “IT Alignment Model” of Berkley and Gupta

This model shows the contribution of the information technology (IT) function to service quality through service and information strategy linkages. The model is based on numerous case studies in many different business sectors that shows a link between the use of IT and improved service

quality. The model makes reference to seven areas of quality found under the heading “service strategy”. In addition, the model is able to show where IT can contribute to individual service quality dimensions and places emphasis on the alignment of IT and service quality strategies by explaining the process of so doing. The model shows that there are a number of areas that IT can contribute to in order to improve service quality. Some of these areas include input information (e.g. forecasting customer expectations, service standards, etc.), process information (e.g. quality control), and output measures (e.g. measures of external quality) cited in Berkley and Gupta (1995).

2.3.9. The “Attribute and Overall Affect Model” of Service Quality of Dabholkar

This service quality model proposes two alternate models of service quality for businesses based on technology and self-service. Due to the popularity of self-service because of high labour costs, the “Attribute Model” is based on customer expectations for this type of service option through the evaluation of attributes related to technology-oriented self-service businesses (Dabholkar, 1996:33).

According to the ‘Attribute-Based’ model, there are five service delivery attributes that are important to customers in a self-service business context. These are speediness of service transfer, easy to use, reliable, gratification and control (Dabholkar, 1996:33).

2.3.10. “Perceived Service Quality and Satisfaction” Model of Spreng and Mackoy

This model tries to increase the knowledge of service quality and issues concerning customer satisfaction as distinct constructs. A number of constructs are shown to have an effect on OVERALL SERVICE QUALITY (OSQ) and customer satisfaction. These constructs are expectations, perceived performance, desires, expectations disconfirmation and desires congruency (Spreng & Mackoy, 1996).

2.3.11. The “PCP Attribute Model” of Philip and Hazlett

Philip and Hazlett (1997) explain that this model is based on a hierarchical structure comprising three types of attributes – “pivotal (outputs), core and peripheral (comprising of inputs and

processes)". The "pivotal" is deemed as the key determinant of customer satisfaction and service quality. They represent the product that the customer expects upon completion of the service.

According to Philip and Hazlett (1997), with increasing frequency of use of the service, customers place more emphasis on core and peripheral attributes. Core attributes on the other hand, represent the combination of people, processes and structure which play an interactive and negotiating role with the customer in order that the customer can receive the pivotal attribute. These attributes represent dimensions such as Reliability, Responsiveness, Assurance and Empathy. The peripheral attributes, which is the third level, are really the "frills" which contribute to rounding off the service encounter with the aim of making the customer's experience delightful. These attributes represent Tangibles and Access.

2.3.12. The "Retail Service Quality and Perceived Value Model" of Sweeney, Soutar and Johnson

This model examines the influence of service quality on two important attributes, namely, value and willingness to buy. There are essentially two models included here. Value examines the difference between what the customer gets from the service encounter compared with what the customer gives and is essentially about value for money. Model 1 asserts that both functional service quality as well as technical service quality insights have a direct effect on the perception of value over and above the influence of product quality and price perceptions. Model 2 shows that willingness or readiness to buy is affected by perceptions of functional service quality. (Sweeney, Soutar and Johnson, 1997)

2.2.13. The "Service Quality, Customer Value and Customer Satisfaction Model" of Oh

Through a study involving a sample from the luxury hotel market, Oh (1999) proposed an integrated model that focuses on the quality of service, customer satisfaction, and issues pertaining to value. The model's emphasis is on the post-purchase decision procedure. Important variables included in this model are issues pertaining to "perception, service quality, consumer satisfaction, customer value and intentions to repurchase", and "word of mouth" (WOM) (Oh, 1999:76). The model shows the important role played by perceived service quality, customer value and

satisfaction in customer decision making. The model also indicates that perceived price can negatively affect customer value, and may have no influence on service quality Oh (1999) .

2.2.14. The “Antecedents and Mediator Model” of Service Quality of Dabholkar, Shepherd and Thorpe”

Dabholkar, Shepherd and Thorpe’s (2000) model shows that issues related to service quality can be more effectively considered as its influencers (and not its constituents), and customer satisfaction has a strong mediating influence between service quality and behavioural intents. The model shows a sequential outline in comprehending and forecasting service quality and its effects.

2.2.15. The “Internal Service Quality Model” of Frost and Kumar

This model, referred to as the “Internal Service Quality Model” explores service quality’s role within the internal environment of marketing. This model, founded on the GAP model of Parasuraman et al. (1985), focuses on service quality within a large service provider (Singapore Airlines) by evaluating internal customers and internal suppliers who are front-line staff and support staff respectively. The dependent variable used in the study was internal service quality and the independent variables were the “SERVQUAL dimensions – Tangibles, Responsiveness, Reliability, Assurance and Empathy”. The results show that internal customer perceptions and expectations play a vital role in identifying the level of perceived internal service quality (Frost & Kumar, 2000).

2.2.16. The “Internal Service Quality DEA Model” of Soteriou and Stavrinides

This service quality model was developed for banking institutions with an emphasis on an optimal use of resources in achieving service quality. The model is designed to identify resources that are not being properly utilized. The model comprises of inputs and outputs. Inputs include resources such as staff, space, time, etcetera, and outputs refer to the perceived level of service quality by staff of the branch. Essentially, the “Data Envelope Analysis (DEA) Model” compares bank branches on how effectively they are able to change these inputs to attain service quality outputs. In so doing, underperforming sections of a bank are identified and guidance provided for improvement (Soteriou & Stavrinides, 1997).

2.2.17. The “Internet Banking Model” of Broderick and Vachirapornpu

One of the main problems of the Internet as a service transfer medium is how service marketers use such remote arrangements in ushering important change in customer collaboration and behaviour. Based on the theory of service quality and applying this to the Internet, this study puts forward and evaluates a service quality paradigm in Internet banking. The study used participant observation and a narratively based examination of a UK-based Internet banking web site group to discover how customers of Internet banking identify and understand the features of the model. Results indicated the level and type of customer interaction had the highest effect on service quality as experienced by customers. Matters such as a customer’s zone of tolerance, the extent to which customers understand their roles as customers and a customer’s emotional reaction potentially influenced expected and perceived service quality (Broderick & Vachirapornpu, 2002).

2.2.18. The “IT-based Model” of Zhu, Wymer and Chen

This is an information technology-based model that highlights the importance and use of IT in service delivery, cost reduction and creating value added. The model attempts to show a link between IT and service quality. It (the model) emphasises on the relationship between the dimensions of service quality as measured by SERVQUAL with constructs related to IT-based service quality (Zhu et al., 2002).

2.3.19. The “E-service Quality Model” of Santos

According to Santos (2003), service quality is progressively accepted as a significant part within the field of electronic commerce. Since the online appraisal of the technical attributes for goods is cost free, viable, and simpler than contrasts for products based on traditional networks, service quality is a significant contributing factor for effective e-commerce. A theoretical model of the determining factors in e-service quality is recommended and deliberated on. The study used focus group interviews to examine factors relating to e-service quality. It (i.e. the study) suggested that electronic service quality “has incubative and active dimensions in improving hit rates, stickiness, and customer retention” (Santos, 2003:233). The incubative element comprises of “ease of use,

appearance, linkage, structure and layout, and content. The active dimension consists of reliability, efficiency, support, communication, security, and incentives.” (Santos, 2003:233).

A summary of the various service quality models is presented in the table 2.1.

Table 2.1: Summary of Service Quality Models

Model Name	Authors/Source	How Does the Model Measure Service Quality?
“Technical and Functional Quality Model”	Grönroos (1984)	Technical, functional and image issues.
SERVQUAL	Parasuraman et al. (1985)	Uses a disconfirmation paradigm – expectations minus perceptions. Five main dimensions: “Tangibles, Reliability, Responsiveness, Assurance, Empathy”.
The “Attribute Service Quality Model”	Haywood-Farmer (1988)	Service quality is high when expectations and preferences are met. Comprises of three “attributes: physical facilities and processes, people behaviour and professional judgment”.
The “Synthesised Service Quality model”	Brogowicz et al. (1990)	Three important dimensions: an organisation’s image,

Model Name	Authors/Source	How Does the Model Measure Service Quality?
		outside effects and marketing activities that are traditional.
“The Performance Only Model of Service Quality (SERVPERF)”	Cronin and Taylor (1992)	Has the same dimensions as SERVQUAL but without the disconfirmation paradigm. It considers perceptions and not expectations.
The “Ideal Value Model of Service Quality”	Mattsson (1992)	Service experience is compared to an ideal standard which has a bearing on satisfaction.
The “Evaluated Performance and Normed-Quality Model”	Teas (1993)	Assesses the variance between the performance of the service and the best amount of a particular feature.
“IT Alignment Model”	Berkley and Gupta (1995)	Seven areas of quality found under “Service Strategy” need to be aligned with IT areas in order to bring about good service quality.
The “Attribute and Overall Affect Model”	Dabholkar (1996)	Five important service quality attributes in a self-service business are

Model Name	Authors/Source	How Does the Model Measure Service Quality?
		promptness of service delivery, easy to use, reliable, fun to use and have control of.
“Model of Perceived Service Quality and Satisfaction”	Spreng and Mackoy (1996)	OVERALL SERVICE QUALITY (OSQ) is impacted on by expectations, perceived performance, desires, expectations disconfirmation and desires congruency.
“The PCP Attribute Model”	Philip and Hazlett (1997)	Three classes of service quality attributes – “pivotal (outputs), core and peripheral” (comprising of “inputs and processes”).
“The Retail Service Quality and Perceived Value Model”	Sweeney et al. (1997)	Service quality is affected by worth and readiness to buy.
“Model of Service Quality, Customer Value and Customer Satisfaction “	Oh (1999)	Examines service quality based on: issues pertaining to “perception, service quality, consumer satisfaction, customer value, intentions to

Model Name	Authors/Source	How Does the Model Measure Service Quality?
		repurchase and word of mouth.”
The “Antecedents and Mediator Model” of Service Quality	Dabholkar et al., (2000)	Issues related to service quality are more its antecedents than its constituents and customer satisfaction has a strong mediating influence on the association concerning service quality and behavioural intents.
The “Internal Service Quality Model”	Frost and Kumar (2000)	Based on SERVQUAL and uses its five dimensions to evaluate internal service quality with employees and others internal to the business.
“Internal Service Quality DEA Model”	Soteriou and Stavrinides, (1997)	Specifically for banks. Evaluates service quality based on Data Envelope Analysis (DEA), which compares banks in the transformation of inputs to achieve outputs.

Model Name	Authors/Source	How Does the Model Measure Service Quality?
The “Internet Banking Model”	Broderick and Vachirapornpuk, (2002)	Internet service quality affected by customer’s zone of tolerance, the extent to which customers understand their roles as customers and a customer’s emotional reaction.
The “IT-based Model”	Zhu et al. (2002)	Focuses on the relationship between the dimensions SERVQUAL with constructs related to IT-based service quality.
“Model of e-service quality”	Santos (2003)	“incubative” and “active” dimensions affect Service quality.

Source: Adapted from Seth et al. (2005)

Given the numerous service quality models discussed in the literature, it is noteworthy that based on a review of relevant literature since 2009, the service quality models most reported on in the literature are SERVQUAL, SERVPERF and the Grönroos models of service quality. This is evidenced in Table 2.2.

Table 2.2: Popular and Widely used Models of Service Quality

SERVQUAL	Verma (2012:413); Kardaras and Karakostas (2012:6); Dornfeld and Linke (2012:50), Pergamon Flexible Learning, and Elearn Limited (2009:89); Rodrigues (2012); Scupola (2013), Eid (2013); Sarin (2013:408); Etō (2015:153).
Grönroos(1984) – “Technical and Functional Quality Model”	Kardaras and Karakostas (2012:6).
SERVPERF	Rodrigues (2012); Rai (2013:213); Xu et al. (2013:248); Etō (2015:153); Wickramasinghe (2013:348).

Source: Developed by the author.

Reserachers (Oh, 1999 and Dabholkar et al., 2000) have shown a relationship between service quality and customer satisfaction. The next section discusses customer satisfaction and its multi-dimensional nature.

2.4. Customer Satisfaction

Customer satisfaction is a strategic issue (Naumann, Jackson, & Rosenbaum, 2001:37), and many researchers have recently acknowledged its importance (McColl-Kennedy, 2015; Kärnä, 2014; Hao et al., 2015). In exploring the origins and development of the concept, Chiu et al. (2011:9781) cite the following developments:

Cardozo (1965) was the first to introduce the concept of customer satisfaction. He argued that customer satisfaction increased the likelihood of repeat purchases. According to Woodside, Frey, and Daly (1989), customer satisfaction was the main influence in consumer behaviour. Similarly, Fornell (1992) asserted that customer satisfaction is an asset contributing to repeat business and therefore created economic benefits for the organization. Tu, Wang, and Chang (2012:25) advocate that it is not always that satisfied customers would return to patronize the organization as the organization may not provide what customers need or want or not offer what customers require and may not be able to fulfil their (customers') expectations.

The challenge with customer satisfaction though is that despite many attempts to define it, no consensus has been reached. (Giese and Cote, 2000). Similarly, more recently. Rau (2015:81) contends that customer satisfaction is difficult to explicitly define.

It was only until the 1970s, though, that customer satisfaction became a separate researchable topic (Churchill & Surprenant, 1982). Many writers contend that customer satisfaction can be viewed as a "transaction-specific" issue or "a cumulative" issue (Gün ör, 007:19-20; Schellong, 2008:13; Rai, 2013). A transactional focus of customer satisfaction involves a customer's satisfaction with a specific transaction with a firm (usually the preceding transaction) whilst cumulative satisfaction involves a sum total or an overall measure of all the transactions that a customer has had with a firm. This view is also corroborated by Homburg and Giering (2001) who cite many authors who view customer satisfaction as a cumulative experience in respect of a product or service and not a transaction-specific issue.

Adopting a slightly different view though, Ostrom and Iacobucci (1995) proposed a confirmation/disconfirmation paradigm of customer satisfaction pointing to the difference pertaining to customer expectations and their perceptions for a number of different issues/indexes e.g. overall company performance. This is supported by Homburg and Giering (2001) who assert that the majority of studies in the field of customer satisfaction hinged on the confirmation/disconfirmation paradigm. Similarly, Kotler (2006) alludes to an expectation-confirmation theory, which explores pre-purchase customer expectations vis-à-vis post-purchase perceptions in understanding customer satisfaction. In line with this, Homburg and Giering (2001)

cite many authors who allude to customer satisfaction involving not only cognitive (rational) processes, which formed the basis of traditional models, but also affective (emotional) processes.

In view of the aforementioned issues, it can be inferred that customer satisfaction is multi-dimensional. For example, Chiu et al. (2011) show that the measurement of customer satisfaction has many so-called indexes or factors, which coincide with the view of Yi (1990), cited in Homburg and Giering (2001) that customer satisfaction is a multi-dimensional concept. Table 2.3 expands on the aforementioned discussion by providing different perspectives of customer satisfaction over time.

Table 2.3: Different Perspectives into Customer Satisfaction

AUTHOR/S	DEFINITION OF CUSTOMER SATISFACTION
Fornell (1992).	Customer satisfaction/dissatisfaction involves an overall post purchase appraisal. No agreement on its measurement though.
Pizam and Ellis (1999), Vavra (1997:4).	Customer satisfaction is built on an outcome or process.
Cronin, Brady and Hult (2000:196).	Satisfaction is the “primary and direct link to outcome measures.”
Parker and Mathews (2001).	Satisfaction as a process and outcome.
Olsen (2002).	Customer satisfaction is a “Global” assessment or “feeling state”.
Høst and Knie-Andersen (2004:27)	Customer satisfaction is an “overall judgement” or “attribute-specific”.

AUTHOR/S	DEFINITION OF CUSTOMER SATISFACTION
Hennig-Thurau (2004).	Customer satisfaction is an overall assessment of an organisation's products or services.
Homburg, Hoyer and Koschate (2005).	A post-consumption assessment involving both cognitive and affective elements.
Al-Hawari and Ward (2006).	Customer's overall assessment of the product.
Bai, Law and Wen (2008).	Definition based on disconfirmation paradigm of needs and expectations.
Negi (2009).	Meeting customer needs.
Clemes, Gan and Ren (2010).	Comparing service performance and expectations.
Ganguli and Roy (2011).	The customer's overall experience with the product.
Hafeez and Muhammad (2012).	Content with performance.
Goetsch and Davis (2014).	Disconfirmation paradigm – meet needs and exceed expectations.
Bansal and Taylor (2015).	Consumers total evaluation.

Source: Developed by the researcher

It is, therefore, clear from the literature reported in Table 2.3 that a widely held view of customer satisfaction is that it is an overall measure and as opposed to being transaction-specific, involves the customer's cumulative appraisal of all the transactions with the organization.

Brand equity, unlike service quality and customer satisfaction is a comparatively newer area of focus in marketing and amongst its various definitions, it (brand equity) has been conceptualised as “the value that the brand adds to the product,” (Crane, 2010:131). The next section discusses brand equity, its importance and the different approaches used in measuring it.

2.5. Branding and Brand Equity

Brand-related issues, as would be discussed in this section, have a significant role to play in marketing and this would be addressed within the context of branding and Brand Equity.

2.5.1. Branding

Stephen King, of the WH Group cited in Aaker (2009:1) states that “a product is something that is made in a factory; a brand is something that is bought by a customer. A product can be copied by a competitor; a brand is unique. A product can be quickly outdated; a successful brand is timeless.”

The American Marketing Association states that a brand is “a name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers” (American Marketing Association (AMA), n.d.). The role of a brand is to certify that customers will get the equivalent quality every time the brand is purchased, and to make easier the customer's purchase decision thereby bringing down the risk of making an incorrect buying decision (Krklijes, 2011:13).

Kotler and Keller (1997:13) contend that branding is essentially about the creation of differences amongst products. The aforementioned authors advocate that branding builds mental arrangements which assist customers to shape their understanding of products and services so as to add clarity to their decisions whilst at the same time providing value to the organisation. For effective branding, customers must be convinced that there are significant advantages which the brand can provide to them vis-à-vis other brands (Krklijes, 2011:13).

There has been a greater importance placed on brands and brand management due to current globalisation and the economic situation and under such challenging conditions, the actual worth of a strong brand is when it is capable of attracting preference from customers (Marrs, Gajos, & Pinar, 2011:964). Interestingly, Kotler and Armstrong (2010) assert that in the 21st century, an aptitude in building and managing brands will be the greatest distinguishable skill in marketing. In addition, Marrs et al. (2011:964) contend that a brand is an invaluable asset and embodies the heart of an organisation acting as an influential differentiator for the organisation as well as an aid to decision-making for the customer. The true worth of a strong brand is when it is able to bring about preference and loyalty amongst customers (Kotler & Armstrong, 2010). Hence, potentially, branding is a fundamental tool in marketing strategy and helps to create an identity and reputation for an organisation (Marrs et al., 2011:964).

With a higher level of perceived risk associated with services, Mourad, Ennew and Kortam (2010:158) contend that a brand is an information source and can be a helpful instrument in reducing the perceived risk of selecting a service as it makes available information to customers which may otherwise be lacking. From an operational viewpoint, a brand acts as a promise that will be satisfied upon consumption of the service (De Chernatony & McDonald, 1998) in Mourad et al. (2010:158).

2.5.2. Brand Equity

Brand equity has received much attention in the literature (Keller, 1993) and its measurement and assessment has been the subject of significant focus (Milne & McDonald, 1999). Brand equity is described as an ultimate measure of brand success (Academy of Marketing Science & Spotts, 2014). However, it is important to note that there is no universal definition of brand equity and it means different things to different people (Roll, 2006, Ramaswamy, & Namakumari, 2009).

The literature has viewed brand equity from a number of different perspectives (Keller, 1993:1; Ailawadi, Lehmann, & Neslin, 2003; Netemeyer et al., 2004:2009). Keller (1993:1) explains brand equity as “the marketing effects uniquely attributable to the brand”, for example, when certain effects arise due to product or service-marketing efforts owing to the brand name and which otherwise would not have resulted if the brand name were not used.

According to Farquhar (1989:24), brand equity represents “added value” for an organisation. “These added intangible values differentiate a product from its competitors, influence consumer preferences, and enhance customer satisfaction levels often leading to greater customer loyalty” (Davcik, da Silva, and Hair, 2015:3). Elliott and Percy (2007) state that over time, marketers have known that brands add value to the product, but it was only in the 1980s that brand equity featured as an important component of the asset value of an organisation and despite the many different definitions of brand equity generated during this period, what was common between all of them was that brand equity described how the brand added to the value of a product. Brand equity is therefore the power that a brand has in creating product/service demand and positively inducing consumer behaviour (Cant, Van, & Ngambi, 2010).

Lasser, Mittal, and Sharma (1995:13) on the other hand, contend that brand equity is the “overall superiority of a product carrying that brand name compared to other brands.” The popular Aaker (2009:15), contends that brand equity “is a set of assets and liabilities linked to a brand, its name and symbol that add or subtract from the value provided by a product or service to a firm and/or to a firm’s customers” and categorizes brand equity as comprising of “Loyalty”, “Awareness”, “Perceived Quality”, Brand Associations, and “Other Proprietary Assets”.

According to (Berry, 2000:128), with services, the organisation is the main brand, and given the intangible nature of services “strong brands enable customers to better visualize and understand intangible products.” In addition, Berry (2000:128-129) argues that, especially with services, due to increasing competition and the difficulty associated with differentiating services, which are intangible, brand development becomes crucial. In fact, according to Farquhar (1989:25-26), a strong brand has the advantages of providing a stage for new products, being a barrier to entry in certain markets, creates power for an organisation due to easier acceptability of the product and widespread distribution, amongst other things. “If consumers perceive a particular brand favourably, then the firm may have a competitive advantage. Hence, it becomes vital for brand managers to have access to valid and reliable consumer-based brand equity instruments” (Pappu, Quester, & Cooksey, 2005:143).

Similarly, Keller (1993:1), a pioneer in the study of brand equity, states that there are two reasons for studying brand equity. Firstly, to measure the value of a brand based on financial and

accounting perspectives, and secondly, from a strategic perspective, to increase marketing efficiency in the light of higher costs and competition through knowledge that the brand creates in the mind of the customer so that better marketing decisions can be made.

2.5.3. Different Perspectives of Brand Equity

The important perspectives within which brand equity is studied is Consumer-Based and Financial-Based brand equity (Woodside, Megehee, & Ogle, 2009). In a marketing context, brand equity is viewed from the customer's perspective whilst from an accounting or financial perspective, brand equity is viewed from the organisation's perspective (Piotraschke, 2008:4).

2.5.3.1. "Customer-Based Brand Equity" (CBBE)

Keller's (1993:1) focus on brand equity is primarily from a customer's standpoint termed "Customer-Based Brand Equity" which is defined as "the differential effect of brand knowledge on consumer response to the marketing of the brand" (Keller, 1993:2). "Customer-Based Brand Equity" results from a customer's acquaintance and awareness with the brand and holding "favorable, strong, and unique brand associations in memory." (Keller, 1993:2). Keller (1993:2) argues that by viewing brand equity from this perspective is important because a customer's memory of a brand will impact on the effectiveness of brand strategies in the future and therefore, it is important for marketing managers to know how their marketing efforts influence a consumer's learning and hence the resultant recalling of information relating to the brand. Hence, the focus of Keller's (1993:7) theory of brand equity is based on what is referred to as "brand knowledge" which is a multidimensional concept.

According to Liu (2015) in "Customer-Based Brand Equity" (CBBE), the strength of a brand would be contingent upon customers who use it, understand it and experience it over time. CBBE is the differential response that the knowledge of the brand creates; the way that a customer responds to a marketed brand. Analysing this definition of CBBE, the following issues are noteworthy according to Liu (2015). Firstly, brand equity results from the differences in customer response without which, the brand can be considered a commodity or a general or generic form of the product. Secondly, the difference in customer response is based on the customer's knowledge of the brand suggesting that brand equity will ultimately depend on what lies in the mind of the

customer. Thirdly, the differential response that brand equity comprises shows in customer opinions, likings and the behaviour associated with the whole marketing of the brand (Liu, 2015). Based on this, CBBE will arise when customers have brand awareness, and have some solid, distinctive brand links in their memories (Thorson & Moore, 2013).

Pappu et al. (2005:144) contend that scholars reason in favour of the “Consumer-Based Brand Equity”-Centred dimension based on the argument that only if it is beneficial to customers will it benefit investors, manufacturers, and retailers. In fact, popular scholars such as Aaker (1996) and Keller (1993) view brand equity based on a consumer’s viewpoint, i.e. “Consumer-Based Brand Equity” (CBBE) even though they conceptualised it differently.

2.5.3.2. “Financial-Based Brand Equity”

“Financial-based brand equity” determines a brand’s value for licencing arrangements or purchase resolutions. It is built on the cumulative future discounted cash flows resulting from a brand’s sales compared to that of an unbranded product (Simon and Sullivan,1993) cited in Oh (2009:98). The brand, as an asset, is documented in the organisation’s balance sheet. In estimating the value of intangible assets, of which brand equity is part, the value of an organisation’s tangible assets are subtracted from the market value for that organisation. Brand equity, hence, can be calculated by taking the market value of the organisation (e.g. share price x the number of shares) less the organisation’s tangible and the outstanding intangible assets (e.g. trademarks, patents, goodwill, etc.) (Oh, 2009:96).

2.5.4. Measuring “Customer-Based Brand Equity”

According to Netemeyer et al. (2004:209), although there are many conceptualizations of brand equity offering valuable perspectives into it, many facets of “Consumer-Based Brand Equity” (CBBE) “have not been systematically measured or validated within a nomological framework.” Due to the vast number of brand equity measures provided in the literature, a discussion of each would be beyond the scope of this study. However,

Table 2.4 briefly shows select studies in brand equity measurement since the year 1989 conducted across a variety of market situations and providing a broad perspective into brand equity measurement.

Table 2.4: Studies on Brand Equity Measures

Author/s and Year	Context of research	Brand equity measures
Farquhar (1989)	General	“Brand Valuation, Incremental Cash Flow, Market Share.”
Simon and Sullivan (1993)	General	“Financial Market Value”.
Keller (1993)	General	“Brand Awareness, Brand Image/Associations.”
Lasser et al., (1995)	Televisions and Watches	“Performance, Social Image, Value, Trustworthiness, Attachment.”
Aaker (1996)	Across Brands and Markets	“Loyalty, Perceived Quality, Awareness, Associations/Differentiation, Market Behaviour.”
Berry (2000)	Service Organisations	“Brand Awareness and Meaning.”
Morgan (2000:70)	General	“Equity Engine Model” – “Affinity, Identification, Approval, Functional Performance, Price.”

Author/s and Year	Context of research	Brand equity measures
Yoo and Donthu (2001)	Athletic Shoes, Camera Films and Television Sets.	3 Dimensions – “Perceived Quality, Brand Loyalty, and Brand Associations. Also created a measure for OVERALL BRAND EQUITY (OBE)”.
Hoeffler and Keller (2002)	Social and Corporate Marketing	“Awareness, Image, Credibility, Brand Feeling, Brand Communication and Brand Engagement.”
Ailawadi et al. (2003)	Packaged Goods Industry	Revenue Premium that the brand attracts.
Netemeyer et al. (2004)	10 Product Categories	“Perceived Quality, Perceived Value, Willingness to Pay Premium.”
Pappu et al. (2005)	Cars and Televisions	“Awareness, Associations, Perceived Quality, Loyalty.”
Srinivasan, Park, and Chang (2005:1433)	Product Market (Digital Cellular Phones)	“Brand Awareness, Attribute Perception Biases, and Non-attribute Preference”.
Lee and Leh (2011)	Malaysian Brands	“Brand Awareness, Brand Associations, Perceived Quality, Brand Loyalty.”

Author/s and Year	Context of research	Brand equity measures
Battistoni, Colladon, and Mercorelli (2013)	Apparel Products	“Brand Reputation, Offered Products and Services, Communication Strategy, Logo, Consumer Base, Loyalty, Price.”
Gil-Sauraa, Ruiz-Molinaa, Amparo and Corraliza-Zapata (2013)	Retail	“Store Image, Perceived Value, Store Awareness.”
Sanayei, Ansari, and Naami (2013)	Education Services	“Perceived Quality, Brand Awareness, Brand Associations, Brand Loyalty, Other Assets.”
Sehhat (2013)	Banking	“Perceived Quality, Brand Awareness, Brand Associations, Brand Loyalty.”
Shin, Kim, Lim, and Kim (2014)	Study of Travel Show (International Hanatour)	“Awareness, Quality Image.”
Subramaniam et al. (2014)	Banks	“Loyalty, Image.”

Source: Compiled by author.

It is clear from Table 2.4 that brand equity is a multidimensional concept and has been measured in different ways. However, most studies in marketing employed brand equity measures more in line with “Customer-Based Brand Equity” (CBBE) with very little focus on financial issues. In addition, by far the majority of the studies used measures for brand equity that were more in line with Aaker’s (1996) model of brand equity.

According to Davcik et al. (2015:9), Aaker is the originator of the Consumer-Based Brand Equity (CBBE) methodology and has given particular research attention to the customer instead of the organization or shareholder groups. In fact, Pappu et al. (2005:144) argue that Aaker's characterization of brand equity "was the most comprehensive definition of brand equity available in the literature." Hence, the discussion hereunder will focus mainly on Aaker's (1996) model and a few other key models of brand equity measures.

2.5.4.1. Aaker's Brand Equity Model

Aaker (1996) popularized the concept of the "Brand Equity Ten" which uses ten categories/dimensions in measuring brand equity across products and markets. These ten categories/dimensions are contained within five broad headings used to measure brand equity. These five broad issues (also called dimensions) are, according to (Aaker, 1996:118), "Loyalty", "Perceived Quality/Leadership", "Associations/Differentiation", "Awareness", and "Market Behavior". "Market Behavior" is a Financial-Based Brand equity measure. The focus in this study is on "Customer-Based Brand Equity" and hence four out of five brand equity dimensions based on Aaker's (1996) model are discussed hereunder, which are Loyalty, Perceived Quality/Leadership, Associations/Differentiation, and Awareness.

2.5.4.1.1. Loyalty

Loyalty is defined by Subramaniam et al. (2014:68) "as the commitment to repurchase superior goods or services in the future, despite competitors' efforts." Similarly, brand loyalty is defined by Oliver (1997:392) as "a deeply held commitment to rebuy or re-patronise a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior" "Loyalty" is a fundamental aspect of brand equity and often acts as a barrier to entry of competition. It is made up of "price premium" and "customer satisfaction/loyalty" (Aaker, 1996:106-108). Similarly, Yoo, Donthu and Lee (2000:197) contend that if brand loyalty results in customers purchasing the brand on a routine basis, resisting any switching to competing brands, such loyalty will hence result in an increase in brand equity. If customers are willing and able to pay a higher price for a brand and are satisfied with the brand,

they are deemed loyal to the brand. Loyal customers also help to bring new customers to the organization (Subramaniam et al., 2014:68).

According to Keller (1998) cited in Lee and Leh (2011:4), there are two different ranks of loyalty – behavioural and cognitive. When a brand is purchased repeatedly or there exists, amongst customers a commitment to repurchasing a brand as a key choice, behavioural loyalty is shown, and cognitive loyalty is indicated when the customer has the intent to purchase the brand as a main choice cited in (Lee & Leh, 2011:4). In fact, according to Keller (1993:8), brand loyalty comes about when the belief and attitude of a customer towards a brand is positive, thus resulting in repeat purchases.

2.5.4.1.2. Perceived Quality and Leadership

“Perceived quality is defined as the consumer’s judgment about a product’s overall excellence or superiority” (Subramaniam et al., 2014:69). High quality and consistent quality brands, which are considered brand leaders, innovative, and popular amongst customers will make a positive contribution to brand equity. It is a crucial factor and one of the core factors in the measurement of brand equity (Subramaniam et al., 2014:69).

Perceived Quality and Leadership are considered key factors in brand equity. In fact, according to Aaker (2012:1971) “perceived quality is one of the only factors that drive financial performance of an organisation and is the “strategic thrust” as well as a measure of “brand goodness.”

Zeithaml (1988:3) states that perceived quality is “the customer’s subjective judgement about a product’s overall excellence or superiority.” Numerous factors such as personal experiences with the product, distinctive needs, and consumption conditions may have an impact on a customer’s personal conclusion about quality. When perceived quality is high with customers having had long-term experience with the brand, they know the distinctiveness and advantage the brand possesses (Yoo et al., 2000:197).

According to Zeithaml (1988), an important constituent of brand value is perceived quality. Hence, if perceived quality is high, consumers will be motivated to select the brand vis-à-vis competing brands resulting in higher brand equity (Yoo et al., 2000:197).

2.5.4.1.3. Key Associations and Differentiation

Key Associations and Differentiation that help to differentiate a brand over others are also considered an important dimension of brand equity (Aaker, 1991:109). Chieng and Lee (2011:36) identified different associations contributing to brand equity. For example, according to Kotler and Keller (2006:188), a brand association is anything relating to a consumer's memory about a brand and could include, inter alia, feelings, beliefs, perceptions, and so on that relate to a brand. These associations embody the foundation for purchase decisions and loyalty (Aaker, 1991:109).

According to Chieng and Lee (2011:36), a brand that offers value for money, has a good personality, is interesting, creates a clear image of the user of such a brand, and shows positive associations with the organization (e.g. trust, credibility, amiability) will contribute in driving brand equity.

In addition, differentiation is another important dimension of brand equity. A brand that is able to differentiate itself positively from competition will contribute more positively to brand equity. According to Aaker (1996:114), brands that gained sales and were popular were found to be higher on differentiation whilst the opposite was found for brands that were fading.

2.5.4.1.4. Awareness

Another important measure of brand equity is awareness. Brand awareness, amongst other issues, is a principal aim in several marketing initiatives (Huang & Cai, 2015:431). Keller (2003:76) describes awareness as "the customers' ability to recall and recognize the brand as reflected by their ability to identify the brand under different conditions and to link the brand name, logo, symbol, and so forth to certain associations in memory." Awareness has been a crucial factor acknowledged in virtually all brand equity models (Chieng & Lee, 2011:35). It (awareness) is the strong point of the brand's existence "in the mind of the customer" (Pappu et al., 2005:145). Brands that create more awareness through better recall and recognition, have top-of-mind awareness, are dominant in the market, have positive opinions amongst customers, and whose customers know exactly what they stand for, will also add to the creation of brand equity (Aaker, 1996). According to Rajh, (2002:772) as a customer's awareness of a brand rises to greater heights, so will brand equity. Furthermore, Rajh (2002:772) provides three key reasons for brand awareness playing a

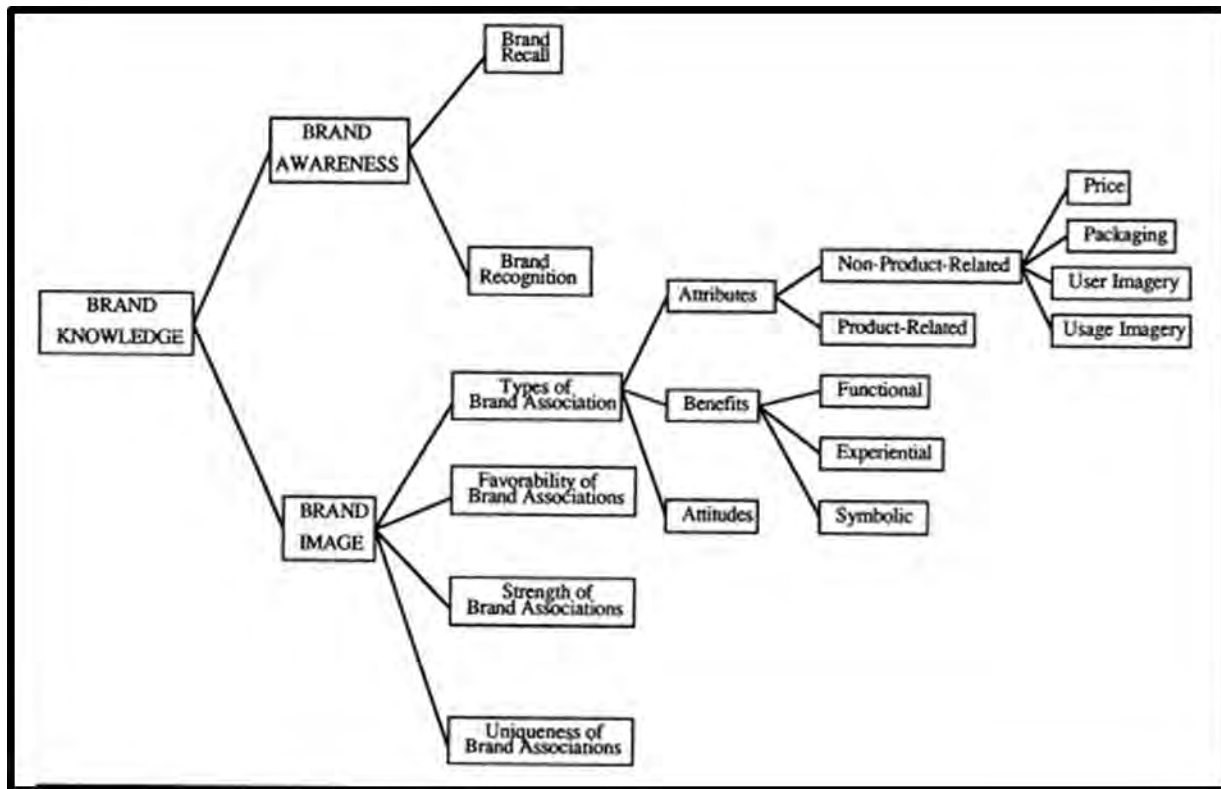
significant role in a customer's decision. Firstly, the higher the brand awareness, the more likely the customer will consider it when making a purchase choice. Secondly, although there may be an absence of additional brand associations, brand awareness could have an impact on customer brand decisions, particularly in decision situations of little involvement when the least amount of brand awareness may be adequate in affecting the choice of a brand. Thirdly, brand awareness has an influence on the creation and power of brand associations. Actually, Farquhar (1989:26) states that reviving a long-standing brand that has an elevated awareness amongst customers is easier as compared to producing a completely new brand in certain product classes. However, despite awareness being an essential gateway in creating brand equity, it is generally not adequate and other influences would come into effect (Hoeffler & Keller, 2002:79).

2.5.4.2. Keller's Model of Brand Equity

Keller (1993:12) states that "Customer-Based Brand Equity" is measured in two ways. Firstly, through an "indirect" method where brand knowledge is measured based on brand awareness (measured through recall and recognition) and image (measured through a focus on brand associations, for example, based on strength, uniqueness, etc.). A second way of measuring "Customer-Based Brand Equity" is through a "direct" method by addressing the influence that brand knowledge has on how a consumer reacts to the diverse features of an organisation's marketing plan (Keller, 1993:12).

Figure 2.2. illustrates the important constructs contained in Keller's (1993) Model Of Brand Equity.

Figure 2.2: Factors Comprising Brand Knowledge



Source: Adapted from Keller (1993:7)

According to Keller (2009, para1-4), the brand equity pyramid can be explained as follows:

“Brand Salience” is that aspect of brand equity which is concerned with identity and clarifying the question of ‘who am I’? The brand needs to be clearly identified in the mind of the customer and needs to be able to associate the brand with an organization, or product. When the brand is promoted to customers, they need to be able to place it in the correct context, which will help to solidify the building of an awareness and knowledge of the brand. Although ‘salience’ is about how easily a customer is able to recognize and recall a brand, in addition, it is vital that consumers positively consider the brand when considering a purchase/consumption. When brand salience is

high, consumers are considered to have knowledge about the brand that has depth and width. Depth is when the customer can easily activate the brand in the brain, and width is to what degree this occurs during a customer's purchase decision making? Brand salience is a prerequisite for ascending the brand equity pyramid.

“Brand Performance and Imagery” is the next stage once brand salience is achieved. The question of ‘what am I’ is addressed at this stage and can be answered through the use of intrinsic (tangible) and extrinsic (intangible) brand features. Intrinsic features pertain to the degree to which the product or service is perceived by customers to perform, and extrinsic features pertain to how customers think about the relevant brand. To increase brand equity, there needs to be a dynamic emphasis on both performance and imagery pertaining to the brand as all brand associations will ultimately unite in these two bases. Increasing brand performance will entail a brand meeting customer needs with attempts to exceed customer expectations. Image has more to do with what customers think about the brand from a value and meaning perspective rather than what the product is able to do (i.e. functional). Brand image can be increased either directly (through experiencing the brand) or indirectly (through advertising). Performance and imagery would need to strongly contribute to brand associations that are strong, affirmative and distinctive. Strengths at this level of the brand equity pyramid can be an important gauge for probable loyalty in the future.

“Brand judgments and feelings” are concerned with a customer's thinking and feelings of the brand. Customers form an attitude and opinion towards the brand by appraising and judging it. The two dimensions in this situation are rational (judgments) and emotional (feelings).

“Brand Resonance” is when the idea about the brand, “in the mind of the customer”, is a positive one both rationally and emotionally, and then a good foundation is laid to move on to the last stage of the brand equity pyramid. At this stage, the question of whether the customer wants to create a lasting relationship with the brand is addressed. If the answer to this question is affirmative, the brand achieves brand loyalty. The customer becomes strongly identified with the brand's values and expresses a preparedness to invest in associating with the brand. This can manifest in repeat purchases, a lower chance of being influenced by competitors, and even being prepared to pay more for the brand.

2.5.4.3. “Lasser, Mittal and Sharma’s Model of Brand Equity”

According to Lasser et al. (1995:13), brand equity can be operationalised as “enhancement in the perceived utility and desirability a brand name confers on a product”. Furthermore, the aforementioned researchers argue that brand equity pertains to how superior the customer views the brand relative to competing brands. Lasser et al. (1995:16-17) propose a five-dimension model to measure brand equity as follows: “performance” (replacing the “quality dimension” in Aaker’s (1996) model), “social image” (referred to as image in Keller’s (1993) model), “value” (what the brand gives to the customer relative to what it costs to obtain it), “trustworthiness” (the self-assurance that the brand/firm instils in the customer), and “attachment” (the affection that the brand creates in the customer).

2.5.4.4. Morgan’s Model of Brand Equity

According to Morgan, (2000:68) brand equity can be viewed in terms of two broad categories. Firstly, there is what is termed “functionality and performance” which are specific to a particular market. For example, fuel consumption and performance for motor cars, but for a bank, other issues may be important, for example client confidentiality and the absence of errors in client’s records. Secondly, another category is “emotional and intangible”, which is termed “affinity” and is not category-specific but encompasses universal rules that affect customer emotions regarding brands. These factors are contained in the “Equity Model” which views brand equity as a combination of affinity and a performance level specific to a product or service. Affinity comprises of authority, identification and approval. Authority encompasses three issues – “heritage” (brand reputation), trust (brand reliability), and how innovative the brand is. Identification involves the degree to which the values that are associated with the brand converge with those of the customer. Approval involves a customer’s perception that by using the brand will help in achieving a level of social acceptance (Morgan, 2000:68).

2.5.4.5. Pappu, Quester, and Cooksey’s Model of Brand Equity

Pappu et al. (2005) used confirmatory factor analysis to confirm a hypothesised four-factor brand equity model, which is a multidimensional construct. Similar to Aaker’s (1996) model, the authors

found that the following factors measured brand equity: “brand awareness”, “brand associations”, “perceived quality” and “brand loyalty”.

2.6. Conclusion

This chapter highlighted the theoretical constructs to be covered in this study. These were Service Quality, Customer Satisfaction and Brand Equity. It is noteworthy that there are a number of models of service quality. However, SERVQUAL, SERVPERF and the Grönroos models of service quality have been MOST popularly used and testified in the literature. Similarly, the concept of customer satisfaction is measured in several different ways. However, based on a review of the literature, it can be concluded that customer satisfaction is an OVERALL MEASURE.

Brand equity has also been a subject of much debate with a many different perspectives of measuring it both financially and from a customer’s perspective. “Customer-Based-Brand-Equity” (CBBE) has been shown to be popular in the marketing field and is used in this study. Some popular brand equity models and measures of brand equity have been discussed in the literature with the MOST POPULAR being the Aaker (1996) and Keller (1993) models.

The next chapter discusses Service Quality, Student Satisfaction and Brand Equity in a higher education context.

CHAPTER THREE

SERVICE QUALITY IN HIGHER EDUCATION

3.1. Introduction

The main aim of this chapter is to address issues of service quality, student satisfaction and brand equity in a higher education context. In order to contextualize the aforementioned and put these constructs into perspective, each construct will be examined in terms of its importance in higher education, and how it can be conceptualised and measured. In addition, the relationships between Service Quality, Student Satisfaction and Brand Equity will be explored. Furthermore, references will be made to empirical studies, where possible, in providing support to the discussion.

The importance of service quality in higher education will be addressed with particular emphasis on its importance within a higher education context. In addition, the different ways in conceptualising higher education service quality will be discussed within the context of different service quality models. In addition, the concept of OVERALL SERVICE QUALITY (OSQ) will be introduced. Empirical studies in higher education service quality will be reported based on the extant literature and in chronological order of time.

Student satisfaction, as an important construct in higher education, will be introduced and its benefits highlighted. The discussion of student satisfaction alludes to universities internationally attempting to measure it. The measurement of OVERALL STUDENT SATISFACTION (OSS) will also be explained and the relationship between Service Quality and Student Satisfaction will be explored through a review of the literature.

Brand equity, the third construct in this study, will be discussed with particular emphasis on its benefits to a higher education institution. Furthermore, the different models of brand equity will be discussed with reference to a higher education context and the measurement of OVERALL BRAND EQUITY (OBE) will be explained. Finally, through a review of the relevant literature, the relationship between Service Quality and Brand Equity will be explored.

3.2. Service Quality and its Importance in Higher Education

DeShields, Kara and Kaynak (2005:30) contend that due to the dynamic nature of the market, business schools internationally are being driven to reassess their business strategies in order to provide quality education. This is because of strong global competition that impels organisations to embrace a marketing oriented approach, in order to distinguish their products from that of their competition. However, service businesses including higher educational organisations, have been hesitant to embrace this type of focus as they were in a comfortable situation of seeing growing enrolments and budgets in the past as alluded to by Ford et al. (1999:171) cited in Gbadamosi and de Jager (2008:3). Unfortunately, the period of boom in the 1970s and 1980s was changed to a period of bust in the 1990s and 2000s, and tertiary education went through an intense decline in government subsidies and an escalation in student fees in several countries especially ones whose educational structures paralleled that of South Africa (Mok, 2003; Palihawadana, 1999; Soutar and Turner, 2002) cited in (Gbadamosi & de Jager, 2008:3). Similarly, Kotler (2003) in Gbadamosi and de Jager (2008:3) showed that student enrolments at business schools in the United States of America has “levelled off or declined” due to environmental changes and new competition. Seemingly, tertiary institutions in both developing and developed countries are facing market-related and financial burdens resulting in an educational environment where they are having to compete for the most talented students (who are their customers) through the use of logical business ideologies in order to acquire and retain students. (De Jager & du Plooy, 2006) cited in (Gbadamosi & de Jager, 2008:3). The situation is no different in South African higher education.

South African universities have experienced budgetary and government subsidy cuts with a corresponding pressure to increase student numbers (Gbadamosi and de Jager, 2008:10). Similar challenges in South African higher education have been documented recently by other researchers (Badat & Sayed, 2014; Mitra & Edmondson, 2015:388).

Furthermore, there has been a decline in student numbers in certain disciplines (Hibbert & van der Walt 2014:54-55) at South African universities giving rise to students having greater choice (Bigalke & Zurbuchen, 2014:217) and greater pressure being placed on service delivery (Wang, 2012:193).

In addition, owing to increased competition between higher educational institutions in South Africa, it becomes imperative for higher educational institutions to use effective techniques to improve the quality of their service offerings (Gbadamosi & de Jager, 2008:10).

In view of the importance of improving the quality of the service offering, a report on the quality of education at South African universities concluded the following: “The quality movement and quality assurance in South African higher education is now, with the establishment of the Higher Education Quality Committee (HEQC) of the Council on Higher Education (CHE), entering a new era. In general, a permeating quality culture is still sadly lacking in South African universities. However, institutions can no longer afford to sit back and wait for policy directives in this regard. Universities will have to be pro-active in establishing self-evaluation (quality assurance) systems at institutional and programme level. The biggest challenge for South African universities is to establish a quality culture and quality assurance systems in such a way so as to promote a sense of ownership among all stakeholders in the institution — academic, administrative and professional staff, students, and funders. A second major challenge is the prioritization of quality measures and linking them closely with the strategic planning of the institution. In order to meet these two challenges, a combination of top-down and bottom-up processes is required” (Fourie et al., n.d:15). Similar sentiments have been recently expressed by various other authors alluding to the importance of moving towards a quality culture in South African higher education (Nair, 2010:91; Rhoten & Calhoun, 2011:400).

It is apparent from the aforementioned discussion that South African institutions of higher education are increasingly being forced to compete based on service quality and student satisfaction due to higher education becoming more competitive, changes in market demand patterns, and an increasing concern for quality assurance (Radder & Han, 2009:108).

Consequently, Harris and Paddey (2010:3) contend that it becomes imperative for South African tertiary institutions to display excellence in service provision. Furthermore, Russell (2005:69) proclaims that providing a quality service is an essential purpose of tertiary educational institutions as perceived quality influences student satisfaction and which in turn affects profitability.

McBurnie and Ziguras (2007) cited in Gbadamosi and de Jager (2008:3) postulate that as an important factor of service delivery, quality increasingly dominates as a key aspect that impacts on students' decision making for learning and the quality of students' overall experience is critical to the programme's success. Thus, it is evident that service quality will play an important role in higher educational institutions wanting to attract and keep students and in the overall success of such institutions.

Similarly, Abouchedid and Nasser (2002:198) posit an intimate link between the idea of higher education service quality and the success of the organisation. In fact, more recently, Kats (2013:94) explored many studies that showed the link between service quality and eLearning success. Furthermore, Abouchedid and Nasser (2002:198) also contend that the quality of service offered by universities assists in helping to achieve the basic objectives of sustaining academic reputation, and retaining and getting students to enrol. In support of the importance of service quality, Abdullah (2006:31) states that service quality is a significant strategic management concern as it has developed into a widespread strategic force. This is because of a more competitive higher educational market with decreased government funding giving rise to many higher educational institutions pursuing funding from other sources. In view of these apparent difficulties experienced by higher educational institutions, Gbadamosi and de Jager (2008:4) suggest that apart from looking at traditional areas such as accreditation, teaching and research, higher educational institutions must also look at "students as customers".

A similar view is taken by Bisschoff (2001:232) who based on empirical evidence, contends that there has been a movement away from the traditional approach in education to an approach that is more customer-centred whereby students are viewed as valued customers. In support of this, various authors view the student as an important customer (Rutland, 2013:131; Dunne & Owen, 2013; Buller, 2015).

It is important to understand that higher educational institutions are service organisations and their quality of the service is not only based on tangible issues such as lecture venues and course notes, but also on intangible issues such as human resources in providing good service to their students (Yeo,2009) cited in Harris and Paddey (2010:5).

The following section tries to put into perspective the meaning of higher education service quality.

3.3. Conceptualising Higher Education Service Quality

Khodayari and Khodayari (2011:40) argues that in a higher learning environment, service quality is a concept difficult to define and conceptualise, and one of the reasons for this is that, unlike the conventional perspective, where quality is determined by the customer, in a higher education context, there still exists the debate of who exactly is the customer bringing into question whether the student is actually the customer or not? Similarly, Zabadi, (2013:48) asserts that higher education service quality is difficult to define and discuss and is thus a controversial issue.

In spite of the aforementioned ambivalences, the literature has conceptualised higher education service quality in many different ways, and some of the ways in which higher education service quality is conceptualised is discussed hereunder.

A broad view of quality in tertiary institutions is taken by Naidoo (2011:127) who views it as “skilled academic staff; quality of the program offering and its value and relevance to the labour market; good facilities, equipment, lecture and recreational venues; good administration staff who are efficient in dealing with student affairs; safety of the students at campus; quality research output; scholarships and funding facilities available to students within the campus; ranking of the university within the country; global recognition of the university and the university’s commitment to international student enrolments.”

Sohail, Rajadurai, and Abdul Rahman (2003:1) advocate an even broader perspective on service quality in higher education with a focus on Total Quality Management (TQM), by emphasising that the implementation thereof is an important reassurance of good performance and service to their customers (students).

Taking a similar broad view, Cubillo, Sanchez, and Cervino (2006:115) view student decision making based on service quality as being made up of five factors. Of these factors, three are external to the organisation and include personal reasons, past experiences by friends and where the curriculum is offered. The importance placed on experiences of friends could by implication mean that the experience of alumni can turn into a significant marketing tool that aids as a

reputation builder outside the institution. Two other factors linked directly to and managed by the organisation are the university's image as well as the perception of the curriculum's quality. While the relative significance of the aforementioned factors has not been determined, it does mean that universities need to build and defend both their institutional and programme images to maintain a competitive position (Gbadamosi & de Jager, 2008: 3).

Taking a slightly narrower view of service quality in a higher education setting, Oldfield and Baron (2000:93) view quality in higher education in terms of more distinct three underlying factors which are: "requisite elements" (essential encounters helping students accomplish their education commitments), "acceptable elements" (these are desirable but not necessary to students) and "functional elements" (these pertain to the practicalities and are functional issues). The authors further contend that students are normally disinterested in the hierarchy of the organisation and have the expectation that all staff should operate like a team in representing the institution in the delivery of the service and view this as a vital quality issue.

Emphasising the issue of interaction as alluded to in the aforementioned paragraph, Hill (1995) cited in Gbadamosi and de Jager (2008: 3) states that the delivery of service and satisfaction of students in an educational context depends on staff and student interaction. Given this individual interaction and the labour intensiveness of an educational service, there is a high potential for the service quality experience to be heterogeneous. Students could therefore have different expectations and preferences of the educational exercise.

Irrespective of whether the perspective taken on conceptualising service quality in higher education is broad or narrow, it is nonetheless a multi-level concept. This view of service quality as a multilevel concept is supported by Radder and Han (2009:108) who cite research by Brady and Cronin (2001). In fact, various scholars in higher education service quality view it (service quality) as a multifaceted or multi-level concept (Abdullah, 2006; Khodayari & Khodayari, 2011:41; Zabadi, 2013:48). Hence, in view of the heterogeneous nature of higher education service quality, Cheng and Tam (1997:29) posit that many diverse approaches can be used to assess education quality due to the fact that there are different ideas and concerns about the attainment of education service quality. As a result, not all facets of inputs, processes and outcomes of the education institution may be included when conceptualising service quality.

Many attempts have been made to measure service quality in a higher education context. Consequently, a number of different service quality models have been devised to measure service quality in higher education which the following section discusses.

3.4. Measuring Service Quality in Higher Education

Research into service quality in higher education is comparatively new, relative to the commercial sector and most of the service quality models used in the higher education sector have been adapted from those used in the commercial sector (Sultan & Wong, 2013:72). However, some of the more popular models used in the higher education context have been SERVQUAL, SERVPERF and HEdPERF (Kontic, 2014).

3.4.1. The SERVQUAL Model

Radder and Han (2009:108) argue that SERVQUAL has been popular with aspects of tertiary education as a measuring instrument of service quality. As discussed in Chapter Two, The SERVQUAL model, frequently denoted as the “Gaps Model”, is based on the difference or variance between the expectations that customers have and their perceptions of the service using 22 items or variables (Parasuraman et al., 1985).

According to Brochado (2009:176), in a higher educational context, service quality items/dimensions comprise of the look of physical facilities of a university, equipment, staff, and materials used to communicate (Tangibles), a university’s capability in performing the pledged service in a trustworthy and exact manner (Reliability), a university’s preparedness to help students and deliver quick service (Responsiveness), a lecturer’s know how and good manners and their capability to deliver confidence and trust (Assurance) and the considerate, personalised attention that a university can provide to its students (Empathy). This difference between consumer expectations and their experience measures service quality, which is popularly described as the disconfirmation-based approach of service quality according to Parasuraman, Zeithaml and Berry (1988) cited in Radder and Han (2009:108).

Customer expectations are service delivery beliefs which serve as standards on which basic performance is gauged whilst customer perceptions are “subjective assessments of actual services

experiments” through a customer’s collaboration with the supplier of the service (Zeithaml et al., 2006:49) cited in Brochado (2009:176). The following factors can have an impact on customer expectations: “word of mouth communications, personal needs, past experience of the service and external communications from the service provider” (Brochado, 2009:176).

A major drawback of SERVQUAL is that student perceptions are more unstable with time as compared to expectations as alluded to by Cuthbert (1996b:34) cited in Brochado (2009:176). Similarly, drawbacks of SERVQUAL in higher education have also been documented by other researchers (Abdullah, 2006; Luo, 2012:120; van Schalkwyk & Steenkamp, 2014). For example, due to the disconfirmation nature of the SERVQUAL scale, answering the same questions pertaining to both perceptions and expectations could become tedious and time-consuming for students in a higher education context (Kontic, 2014).

Nevertheless, despite the drawbacks and the many criticisms levelled at SERVQUAL, it is a most practical paradigm in measuring service quality and hence expectations ought be taken into account in operationalising service quality in a higher education context (Cuthbert, 1996b:34) cited in Brochado (2009:176). Çerri (2012) shows that SERVQUAL has been documented as being a suitable tool for application in a higher education context. In view of the perceived shortcomings of SERVQUAL, both conceptually and operationally (see Buttle, 1996, for a review) cited in Brochado (2009:176), and Cronin and Taylor (1992) cited in Radder and Han (2009:108), a “performance-based approach” to measuring service quality entitled SERVPERF was proposed which measures service quality based only on perceptions of customers’ experiences with a service.

3.4.2. The SERVPERF Model

The application of SERVPERF as a suitable tool in higher education has been addressed by various authors, and more recently by Mertova and Nair (2011) and Christiansen, Turkina and Williams (2013).

SERVPERF measures service quality based on exactly the same 22-items employed in the SERVQUAL model, with five broad dimensions but without the expectations aspect. In other words, SERVPERF does not view service quality as a disconfirmation paradigm as SERVQUAL

does, but rather as a perception and an attitude. SERVPERF has been documented as having been used in a number of higher education studies (Kontic, 2014) and as compared to SERVQUAL, showed more applicability to the higher education and library sectors (Kajan et al., 2012). In addition, compared to SERVQUAL, SERVPERF is more simplistic in the metrics used and contains fewer questions (Kajan et al., 2012).

The dimensions of service quality as pertaining to SERVPERF are Tangibles, Reliability, Responsiveness, Assurance and Empathy. These dimensions are discussed hereunder with special reference to a higher education context (Cronin & Taylor, 1992).

Kontic (2014) provides a brief explanation of the five dimensions of the SERVPERF scale. Tangibles pertain to the look of equipment, staff and buildings. Reliability relates to the accuracy and timeliness of the service offering. Responsiveness relates to the readiness displayed by service personnel in helping customers and the promptness of the service. In addition, when the situation gets difficult, reliability is the aptitude displayed in being able to respond successfully. Assurance relates to employee knowledge and courteousness and their skill in being able to deliver feelings of trust, poise and confidence. Empathy is concerned with the care and attention that an organisation provides to its customers together with the convenience of operating times (Kontic, 2014). A discussion of each of the five SERVPERF dimensions is ensues hereunder.

3.4.2.1. Tangibles

Tangibles relate to factors such as equipment, physical facilities, and staff appearance (Rasli et al., 2012). According to Bennett et al. (2002) cited in Naidoo and Mutinta (2014), there are certain strategies that are important in managing tangibility in services, which involve taking into account the effect of the servicescape such as furniture, equipment, interior and exterior factors, buildings and colours; and providing tangible things to customers such as business cards, brochures, receipts, and documentation to serve as a record of the service transaction.

Krestovics, (2011:189) contends that the servicescape influences a student's decision to patronize one higher education institution over another and has an effect on student inclination to stay and communicates to students purposefully or unintentionally. In addition, it (i.e. the servicescape) can also add value to a student's encounter with the institution through contributing to image and

perception. In the physical environment, “actions speak louder than words” (Krestovics, 2011:189). If the furniture and fittings are old and in a poor state, if maintenance is tardy, and if the premises are unclean and poorly groomed, what message are students and prospective students receiving? (Krestovics, 2011:189).

3.4.2.2. Reliability

Dell (n.d.) showed that reliable service quality at Imperial College London helped to solve information and communication technology (ICT)-related problems at the college and expounded on the following issues. With about 14000 full time students and 6000 staff members, responsibility for over 200 end user services was allocated to ICT. The old software that the college used resulted in certain problems with end users complaining and in certain cases becoming frustrated. The college decided to look for a solution and found a monitoring system called “Foglight” which provided the benefits of ICT staff being able to monitor critical systems and resolve problems before such problems affect students. As a result of the new technology, the college was able to save money through fewer calls being received by the support desk allowing ICT to save over 10 days in a month. In addition, the new technology has resulted in a savings of £150 000 through the provision of a more reliable service (Dell, n.d). From the aforementioned discussion, it is indicative that technology does play an important role in improving the reliability of the educational service.

In a study into effective and ineffective lecturers in Zimbabwe, some of the traits that were found relating to ineffective lecturers and hence reliability-related problems were unfair and biased marking, absenteeism, not providing comments but simply giving a mark, providing marks but not reading the work, ignorance, incompetence, arriving late for lectures, no course outline provided, ill prepared for lectures, and ineffective time management (Chireshe, 2011:267-268). Hence, the lecturer makes an important contribution to reliability.

3.4.2.3. Responsiveness

“Be responsive to students and their parents.” “If you tell a parent you will call them back today, then call them back today” (Ewers, 2010:2). “Being true to your word means a lot to students and

their families” cited in Boyd (2012, para 7). This indicates that students and their families place great importance on responsiveness.

According to Kwan and Jones (n.d), the ability to help and be willing to help students is deemed to be an important trait of a good lecturer. In addition, such a good lecturer is perceived to be one who clearly shows that he/she is never too busy to assist students wherever possible. In addition, a helpful lecturer is perceived to be one who is willing to answer questions from students even if the questions are ‘stupid’ but guides students in a patient way so as to lead them to the correct answer (Kwan & Jones, n.d.).

In a study by Getzlaf et al. (2009:12-13) in terms of responsiveness, promptness of feedback to students regarding assessments has been found to be important. Emphasis on promptness was made by using terminology such as soon after the assignment was given and within the acclaimed time period. The perception of promptness differed between students ranging from 24 hours to two weeks considered as being realistic. Also, students wanted lecturers to provide an indication as to when feedback will be provided and in the event that lecturers were unable to meet the specified promised time, students expected that lecturers would inform them of the delay and indicate when the feedback can be expected. The indication as to why feedback should be prompt was that the student would have sufficient time to use and process the information meaningfully (Getzlaf et al., 2009:12-13).

3.4.2.4. Assurance

Andreatta (2012:119) proclaims that campus safety is an important issue within the assurance dimension of service quality. Regarding safety, there are a number of issues that raise concerns. Natural disasters, for example, such as floods and earthquakes and how students will be protected in the event of such disasters. A university needs to be able to provide the facilities such as shelter and food to protect students in the event of such natural disasters. Furthermore, another important safety concern is fire particularly for students who live on campus and universities need to have fire safety mechanisms in place addressing issues like evacuations of buildings and the provision of alternative accommodation. Furthermore, another safety concern is crime on campus and violent crimes are more of a concern than no-violent crimes (Andreatta, 2012:119).

In a South African university campus context, Rodriguez, Kramer and Sherriff (2013) contend that in their study of University of South Africa (Unisa) Muckleneuk Campus, four themes were revealed. These were crime, fire and electrocution-related injuries, injuries pertaining to the road and traffic situation, and accidental injuries. In relation to these themes, a number of recommendations were made to address these safety concerns.

Customers want courtesy and want to interact with service personnel who are civil and display good mannerisms, are greeted, spoken to and treated as being important (Chinunda, 2013:108).

3.4.2.5. Empathy

Avram (n.d., 3-4) states that an empathetic relationship is considered to be an important ingredient to generating maximum student satisfaction. Empathy involves being skilled in sharing in the feelings and thoughts of other individuals in a particular situation; acting as though one is the other individual. Some of the issues depicting empathy are listening to others, showing interest and attention, making attempts to understand others, and information sharing. In a higher education context, an empathetic teacher must have an understanding of the mind-set of students, be close to them (accessible), show interest in student concerns, and put himself/herself in the student's personal situation. By so doing, the lecturer will be able to win the student's trust and cooperation (Avram, n.d., 3-4).

Teaching empathy in higher education can be a debatable issue as it may be perceived to be unrelated to academia and may be clearly political, but it is believed that empathy can be applied in any academic discipline and that empathetic instructors could help to bring about better learning outcomes and results (Dumansky, 2013). The use of role playing exercises and exposure to role models who display high levels of empathy are possible ways of developing empathy in a higher education context (Dumansky, 2013).

Dumansky (2013) offers some advice in developing empathetic teaching approaches as explained hereunder. Learning the names of students is considered to be important. Placing emphasis on listening as an important skill in excelling in the discipline. Conducting a student survey to understand their expectations, previous experience with the subject, and why they enrolled for the course. From such information, the teacher is able to create activities and explore diverse learning

choices. In addition, having a mid-semester review in obtaining feedback from students regarding their experience with the subject, their concerns and whether they can provide any suggestions for improvement of the learning situation. Empathy should be viewed as a skill and practice that can be developed and not just an emotion that may come more naturally to some.

According to Cooper (2011:197), the higher education sector was considered to be one that exhibited the lowest level of empathy and suggests the adoption of “profound empathy” involving a superior quality of interaction. The advice that empathy positively relates to age and the older one becomes, the more one has learned and experienced giving rise to greater empathy towards others. Moreover, the suggestion that informal learning, by being more relaxed and less stressful and offering learner’s greater choice and autonomy, would give rise to a better interaction in the learning environment which relates to the concept of “profound empathy”. In addition the adoption of technology such as computers and highly interactive software can contribute to positive emotions amongst those in the learning environment. Advancements in technology can bring about global empathy where individuals can communicate quickly and interact intensively across the globe, for example, online learning. In addition, “profound empathy” can be developed by the training of educators which emphasises on understanding the importance of relationships with learners within the learning environment (Cooper, 2011).

3.4.3. The HEdPERF Model

A new measure of service quality, specifically designed for higher education termed HEdPERF has been recently developed and comprises of 38 items which go beyond consideration of just academic issues by also incorporating a focus of the entire service setting as felt by students (Abdullah, 2006). According to Abdullah (2006:41), HEdPERF includes five service quality dimensions which are:

1. Non-academic essential items helping students to fulfill study requirements relating to responsibilities directed by staff who are non-academic,
2. Academic issues which are the obligations of academic staff,
3. Reputation in portraying a professional image,

4. Access which incorporates matters such as being approachable, easy to make contact, “availability and convenience”,
5. Programme matters which emphasises on offering a wide choice of sound academic programmes/specialist areas with a variable structure.

Due to the possibility of different issues assuming different degrees of importance for different students, Brochado (2009:177) suggests using relative importance measures attached to the dimensions used in measuring service quality in higher education. For example, the SERVQUAL and SERVPERF scales ignore the comparative significance of the five dimensions. The suggestion is that “importance-weighted scores could be computed for these scales.” although some studies incorporate the the relative importance weightings for each dimension (Brochado, 2009:177).

The results of an important study to assess the applicability and relative advantages and disadvantages of the different service quality models from the literature in a higher education context were reported in Brochado (2009). The five models compared in the study were SERVQUAL, SERVPERF, importance-weighted SERVQUAL and SERVPERF and HEdPERF. A sample made up of of 360 students from a Portuguese University of Lisbon participated, and all participants were from one faculty that had a technology background. In comparing the potential application of the different service quality models from the literature, Brochado’s (2009:179) study examined whether each of the service quality scales of the models from the literature showed accuracy and applicability. In order to ascertain this, “unidimensionality; reliability; validity, and explained variance” were assessed.

In conducting the tests for unidimensionality, the intention was to ascertain whether the total number of dimensions follow expectations based on already established theory. It was determined, that all the scales provided a good fit of the model. Therefore, all the models met the requirements of unidimensionality (Brochado, 2009:179).

Regarding reliability of a measuring instrument, it is based on whether the measuring instrument can produce a set of consistent findings over repetitive measurements (Malhotra, 2004) cited in Brochado (2009:180). Based on the results, all the scales provided reliable results. However, the importance weighted SERVPERF scale showed the top result with the HEdPERF scale following

in the second place. Also noteworthy was the fact that the weighted versions of both the SERVQUAL and SERVPERF scales provided superior results based on reliability as compared to the original scales. Moreover, the results show that SERVPERF was relatively superior to SERVQUAL (Brochado, 2009:180).

Validity is concerned with whether a particular measure or measures represents the concept being studied (Brochado, 2009:180). In evaluating the validity of the five measurement scales, certain tests of validity were conducted. The study found that all the scales evaluated had content validity. In addition, it was found that SERVPERF and HEDPERF showed better performance in terms of criteria validity and overall, SERVPERF showed the greatest construct validity (Brochado, 2009:180-183).

SERVPERF AND HEDPERF showed the greatest measurement abilities although it could not be determined as to which one was the best. However, due to the study examining the measurement capability of five measuring instruments in only one faculty, more data needs to be collected from other higher education institutions to make further comparisons in order to generalize the findings (Brochado, 2009:185).

The drawback of Brochado's (2009) study however alludes to the fact that only one faculty and five service quality models were used in the study. Hence, more data was needed from other higher educational institutions and the need to draw comparisons that go beyond the five models used in the study. In this way, further comparisons could be made with the possibility of stronger generalizations.

3.4.4. OVERALL SERVICE QUALITY (OSQ)

He and Li (2011:82) distinguish between OVERALL SERVICE QUALITY (OSQ) and specific Service Quality and conceptualised OVERALL SERVICE QUALITY (OSQ) as the “consumers’ overall perception of the gap between expectations and actual service performance” and specific Service Quality as the individual drivers (Tangibles, Reliability, Responsiveness, Assurance and Empathy) that consumers use to assess OVERALL SERVICE QUALITY (OSQ). They measured OVERALL SERVICE QUALITY (OSQ) based on the following statements: “X deliver excellent overall service, the offerings of X are of high quality, and X deliver superior service in every way”

which were obtained through the use of a confirmatory factor analysis with good model fit and no convergent and discriminant validity problems (He & Li, 2011:87-88).

The next section discusses the results of some empirical studies used in measuring higher education service quality.

3.5. Empirical Studies involving Service Quality in Higher Education

The literature contains various studies in higher education service quality and its dimensions pertaining to actual ratings and perceived importance thereof. This section attempts to address the core findings comprising these studies.

Pariseau and McDaniel (1997) in a service quality study into Business Faculties in the USA found that Assurance was rated as the topmost dimension trailed by Responsiveness, Empathy, Reliability and Tangibles.

The study by Radder and Han (2009:110) focused on measuring the quality of service in a higher educational institute by using a modified SERVQUAL questionnaire where service quality was measured on six dimensions: “Reliability, Responsiveness, Assurance, Empathy, general amenities, and room amenities” with the last two dimensions replacing the tangibility dimension of the original SERVQUAL questionnaire. The study undertook to measure service quality of student accommodation at Nelson Mandela Metropolitan University.

Concerning the results of the study, service quality for student housing comprised four aspects: interaction, empathy, general amenities and room amenities thus showing that service quality is a multi-level construct (Radder & Han, 2009:115-116). However, assurance was not found to make a contribution to service quality in this study. It is also noteworthy that all the gap scores in the study were negative, suggesting a service quality problem. In the main though, one of the conclusions of the study was that SERVQUAL is a valuable instrument for measuring non-academic service quality at a University.

An adapted version of the SERVQUAL scale was also used in assessing service quality at tertiary educational institutions studied by Joseph et al. (2003) cited in Harris and Paddey (2010:6). In this

study, the adapted SERVQUAL scale included the following dimensions “cost; degree content and structure; physical aspects, facilities and resources; value of education and a general dimension for other aspects relating to service” (Paddey, 2010:6).

Using an adapted version of the SERVQUAL scale in a study at University of Kwa Zulu-Natal (UKZN), Naidoo (2011:129) found that “students were very dissatisfied with the quality of services provided...” That is, there were negative gaps for each SERVQUAL dimension.

In a service quality study into Polytechnics in Nigeria, the research revealed that Tangibles were the most important and the least important were Reliability and Empathy (Iro-Idoro, Ayodele, & Orija (2014).

According to Mohammadi and Mohammadi (2014:89) in studying service quality at a medical university, Reliability was rated the highest followed by Empathy, and the lowest score was for Responsiveness. In addition, the largest gap for Responsiveness and the smallest was for Reliability.

Kontic (2014:646) in a service quality study using the SERVPERF model in Serbian higher education, found Assurance, Reliability, and Responsiveness were the key service quality factors in the study.

Hence, the aforementioned empirical studies helps to highlight significant findings from the literature pertaining to the perceived ratings and importance placed by students on service quality and its dimensions.

Various service quality studies were conducted within the higher education context internationally and in South Africa. Table 3.1 illustrates the most relevant international studies in higher education service quality since 2004 based on the service quality model/instrument used and the main findings or focus of these studies.

Table 3.1: Select International Studies Specific to Higher Education Service Quality

AUTHOR/S/DATE	INSTRUMENT USED/CONTEXT	MAIN FOCUS/FINDINGS
Tan and Kek (2004).	Enhanced SERVQUAL/Singapore	Service quality gap analysis.
Abdullah (2006).	HEdPERF vs SERVPERF/MALAYSIA	HEdPERF more effective than SERVPERF
Voss, Gruber and Szmigin (2007).	Exploratory using laddering techniques/European Universities.	Explored areas such as lecture qualities, desirable values, etc.
Brochado (2009).	Comparing alternative instruments in measuring service quality/Portugal.	SERVPERF and HEdPERF were best.
Nadiri, Kandampully and Hussain (2009).	SERVPERF/Eastern Mediterranean University (EMU)	SERVPERF did not form five dimensions but instead loaded onto two – Tangibles and intangibles.
Gallifa and Batallé (2010).	SERVQUAL/SERVPERF/ SPAIN	Comparing different campuses on SERVQUAL/SERVPERF dimensions.
Faganel (2010).	Adapted SERVPERF/Slovenia	Comparing staff and student perceptions of quality. Found differences.

AUTHOR/S/DATE	INSTRUMENT USED/CONTEXT	MAIN FOCUS/FINDINGS
Chuah, and Sri Ramalu (2011)	SERVQUAL	Responsiveness, Assurance and Empathy were significant predictors of service quality.
Hanaysha, Abdullah and Warokka (2011).	SERVPERF/SERVQUAL dimensions/Malaysia	Focus on relationships between service quality and satisfaction.
Sultan and Wong (2011:11).	Qualitative and quantitative study/Central Queensland University	“The core dimensions of service quality are academic service quality, administrative service quality and facilities service quality in the context of Central Queensland University (CQUni).”
Al-Mushasha and Nassuora (2012:1474).	Modified SERVQUAL in elearning/Jordanian universities.	“Interface design, Reliability, Responsiveness, trust, personalisation.”
Calvo-Porrall, Lévy-Mangin and Novo-Corti (2013).	SERVQUAL/Spain.	Tangibles and Empathy were most important dimensions.
Yousapronpaiboon (2014).	SERVQUAL/Thailand	Expectations did not meet perceptions. Highest negative gap was for Tangibles and lowest for Reliability.

Source: Compiled by researcher.

As can be evidenced from Table 3.1, the relevant international studies as reported in the literature have used mainly the SERVQUAL and SERVPERF scales in measuring higher education service quality. The focus of most of these studies was to understand student perceptions of service quality and its key dimensions as well as the determination of gaps between expectations and perceptions. Due to the fact that the majority of international studies reported using the SERVQUAL or SERVPERF models, the most important service quality dimension was mainly related to the dimension of Tangibles.

In addition to the international studies in higher education service quality as reported in Table 3.1, Table 3.2 reports on the most relevant South African studies on higher education service quality based on the service quality model used and the main findings/focus.

Table 3.2: South African Studies Specifically Pertaining to Higher Education Service Quality

AUTHOR/S/DATE	INSTRUMENT USED/CONTEXT	MAIN FOCUS/FINDINGS
de Jager and Gbadamosi (2010)	52 questions/Management students at two South African universities.	Service quality is a multi-dimensional variable loading on 13 factors.
Diedericks (2012)	SERVPERF/Two institutions with focus on Business Students	SERVPERF is a useful tool in measuring service quality.
McClean (2012).	Appreciative Inquiry Method/Library Service at a university.	Three themes revealed – Empathy, professionalism and Responsiveness.
Veerasamy et al. (2012)	SERVQUAL/International students at a South African university.	Found gaps between expectations and perceptions.

AUTHOR/S/DATE	INSTRUMENT USED/CONTEXT	MAIN FOCUS/FINDINGS
Green (2014).	SERVQUAL/University of Technology	High expectations for Tangibles, Reliability and Assurance. Highest perceptions were for the Assurance dimension.
Naidoo (2014)	SERVQUAL/South African University	Service quality gaps identified.
van Schalkwyk and Steenkamp (2014).	SERVQUAL/Private Higher Education Institutions in South Africa	Service quality is important and SERVQUAL and SERVPERF are beneficial.

Source: Compiled by researcher.

As is evidenced in Table 3.2, the majority of South African studies on higher education service quality were mainly based on SERVQUAL and SERVPERF models and were primarily focused on gap analyses. Again, similar to the international studies, a high importance was placed on Tangibles, but in addition, Assurance and Reliability also emerged as important dimensions.

Based on the aforementioned most relevant studies within the milieu of service quality in higher education, there is a dearth of information on how service quality was rated and the importance placed on service quality dimensions particularly with reference to demographic groups such as gender and academic field of study. Hence, this study aims to address this gap in knowledge.

In addition, based on the aforementioned discussion on service quality, although some studies have attempted to show the key dimensions or factors that contribute to higher education service quality, there is generally a dearth of information in the literature on the influence that service quality and its dimensions have on OVERALL SERVICE QUALITY (OSQ). Hence, based on this gap in knowledge, this study hypothesises that:

H1: Tangibles, Reliability, Responsiveness, Assurance and Empathy have a significant positive effect on OVERALL SERVICE QUALITY (OSQ).

However, whilst it is important for higher education marketers to assess student perceptions of their service quality, it is just as important, if not more important, to assess student satisfaction which is “a broader concept than service quality” as service quality is a construct contributing to satisfaction (Chebat, Oumlil, & Academy of Marketing Science, 2015:52). A discussion of student satisfaction follows.

3.6. The Importance of Student Satisfaction

According to Douglas et al. (2006: 251-252) educational institutions use questionnaires to seek feedback on students’ opinions regarding all facets of university life in determining student satisfaction, since students are considered to be the main customers of a university. In England, for example, a national survey of final year students is used to determine their satisfaction with their respective qualifications. The survey focuses on a number of areas such as *inter alia*, issues pertaining to teaching, assessments, and support provided by their respective institutions. The results of the satisfaction survey are used by government and funding institutions in producing what is called a league table showing the performance of a university. The position of a university on this league table will go towards determining the amount of funding the institution receives and its image will accordingly be determined. Hence, student satisfaction is a vital issue for universities, which aim to maximize student satisfaction in order to increase student retention rates and perform more effectively (Douglas et al., 2006: 251-252).

Similarly, Petruzzellis, D’Uggento, and Romanazzi, (2006: 349-350) state that in Italy, strong emphasis is placed by the Ministry of Education on satisfying students who are regarded as important assets which must be preserved. Universities are subject to performance evaluation in Italy, which will determine the amount of funding, they receive from the government. Many initiatives are put into practice by Italian universities to understand stakeholders especially students better to satisfy and market to them more effectively. In this context, the measurement of student satisfaction takes on added importance (Petruzzellis, D’Uggento, & Romanazzi, 2006: 349-350).

In a study of student satisfaction in a German university, Gruber et al. (2010:106) show that a higher education service is like a business and the focus is on not only meeting their students' needs but also exceeding them. In the past, German students did not pay fees but in terms of a new change in legislation recently, students in Germany pay university fees. By virtue of this fact, the focus is now on the student as a customer and not just as a receiver of a service (Gruber et al., 2010:106)

Similarly, according to Douglas and McClelland, (2008:20), the government of the United Kingdom is applying market principles to the higher educational sector. It is a fact that people who exercise choices when they spend their money and amongst other things make decisions regarding what to spend their money on, who to support and so on, will not be passive customers and simply accept any service provided by the government. Based on this analogy, what applies to customers should also apply to students. The concept of the student as a customer is not a new one (Douglas & McClelland, 2008:20).

Petruzzellis et al., (2006: 349-350) states that it is a known fact that services are increasingly playing a more important role in the competitive marketplace. Higher educational institutions, which are services, face intense competition both locally as well as internationally as already alluded to in this chapter. Students act as customers by supporting the university by enrolling at it or leave the university if they disapprove of what is being offered. It is interesting to note the great lengths that higher educational institutions can go to, in trying to satisfy their students. For example, Italian universities are adopting an entrepreneurial approach in satisfying their students by offering personalized programmes in order to compete for the patronage of the student (Petruzzellis et al., 2006: 349-350).

Yet another benefit of satisfied students is that satisfied students were found to be more loyal and attended more lectures and elected to register for other modules taught by the lecturer that they were satisfied with (Banwet and Datta's, 2003) in Douglas et al. (2006: 254). In addition, according to studies, satisfied students played an important role in influencing new students to register at a university through word-of-mouth, had a positive influence on student motivation and impacted positively on fundraising (Gruber et al., 2010:108).

As already alluded to, the competitive pressures faced by higher educational institutions have given rise to a greater importance being placed on student satisfaction. (Athiyaman, 1997; Elliott & Healy, 2001; DeShields et al., 2005; Helgesen & Nettet, 2007) in Letcher and Neves (2010:2). Universities are recognizing that students have a diversity of needs and are making efforts to understand those needs in order to meet them. From a psychological perspective, it has been found that satisfaction contributes in building a level of confidence which helps students form useful skills (Letcher and Neves, 2010:2). Satisfaction amongst students has also been shown to improve their grades (Oja, 2011).

Based on the aforementioned discussion, it should be apparent that student satisfaction is an important focus of higher educational institutions. However, higher educational institutions cannot satisfy their students if they do not understand what satisfaction means. The next section addresses the conceptualisation of student satisfaction.

3.7. Meaning of Student Satisfaction

Satisfaction in an educational context has been defined as “the favourability of a student’s subjective evaluation of the various outcomes and experiences associated with education. Student satisfaction is being shaped continually by repeated experiences in campus life” Elliott and Shin (2002:198) cited in Gruber et al. (2010:08). Similarly, Hunt (1977:49) in Letcher and Neves (2010:3) define customer (product) satisfaction as “the favourableness of the individual’s subjective evaluation of the various outcomes and experiences associated with buying it or using it.” By extension, student satisfaction involves a favourable subjective assessment of the many consequences and experiences within the realms of education.

Interestingly, Seymour (1993) noted in Letcher and Neves, (2010:3), that a student’s classroom experiences are dependent on other experiences with the university and a student’s overall satisfaction is affected by a combination of all these experiences. This means that there are potentially many different issues affecting student satisfaction and different ways of measuring student satisfaction.

The following section discusses the measurement of student satisfaction.

3.8. Measuring Student Satisfaction

Measuring satisfaction amongst university students can take many approaches. A narrower approach involves focusing on specific areas for example, university services such as student housing, or individual courses. On the other hand, satisfaction measures can also take the format of a total university experience that looks at a student's overall or total experience with the university taking into account areas such as academic, non-academic, social, and other factors specific to the university. Extensive research into student satisfaction has looked at how these specific factors influence satisfaction (Letcher & Neves, 2010: 2-3).

Choosing a broader perspective of student satisfaction, Gruber et al. (2010:109-111) cite studies such as where student satisfaction surveys are used. These satisfaction surveys take many forms and could involve evaluating lecturers, courses, faculties, and the institution as a whole with emphasis on the total experience of a student. It is noteworthy that their preference is for an institution-wide survey of satisfaction, which is believed to provide more complete information on satisfaction as opposed to a survey of just a module, or course, which could be limited in information. Through extensive research of the student satisfaction literature, these authors developed a student satisfaction questionnaire covering “administrative and student services; atmosphere among students; attractiveness of the surrounding city; computer equipment; courses; library; lecturers; lecture theatres; refectory/cafeteria; relevance of teaching to practice; reputation of the university; school placements; support from lecturers; the presentation of information; and university buildings.” Moreover, to add to the aforementioned list, a question on the “general satisfaction with the university was included” Gruber et al. (2010:109-111).

Similarly, in adopting a broader perspective into student satisfaction, Arambewela and Hall (2009:562) studied the satisfaction of international students at a university, and found that the following seven factors played an important role in influencing student satisfaction:

1. Education: made up of - valuable feedback from teaching staff, effective access to academic staff, and high teaching standards with excellent lecturers.
2. Social orientation: made up of - counselling service, social events, close working associations with students, universal orientation programmes.

3. Economic considerations: made up of – non-permanent jobs, living expenses, prospects for relocation.
4. Safety: made up of - safety issues and life-style.
5. Image and stature: made up of image and esteem or prestige all over the world, image and esteem in Australia, “image and prestige in home country”.
6. Technology : made up of – being able to have accessibility to facilities such as computing and up-to-date technology.
7. Accommodation: made up of equitable cost, and good standards.

Closely paralleling the results of the studies above, especially in terms of facilities provided by a university, is Douglas et al. (2006:253) who cite studies over time impacting on the choice and hence satisfaction of a university by students stating the main reasons to be as follows: courses were right, computer facilities were available, good quality library amenities, reputable lecturing methods, access to areas that have some silence, accessibility to places for personal study, good public transport system in the area, and students treated in a pleasant way. It is evident from the aforementioned main reasons provided for satisfaction that facilities provided by a university are one of the key satisfaction factors prompting students to enrol at the university. Furthermore, Douglas et al. (2006:253) cite Coles (2002) who found students will be less satisfied as the size of classes increase and as the number of compulsory core courses increases compared to optional courses.

Similarly, Eom and Wen (2006:225) found significant associations between student satisfaction and six issues which were personal-motivation of students, the study methods of students, the knowledge of the instructor, the feedback from the instructor, student interactions, and the course structure, again emphasizing on the importance of the ‘education’ factor in student satisfaction. However, unlike the other studies alluded to above, facilities do not feature as important in Eom and Wen’s (2006) study.

Whilst the studies alluded to above did not specifically try to single out a most important factor influencing student satisfaction, a study at a university in Saudi Arabia, by Sohail and Shaikh (2004) discovered that “contact personnel” were the most significant to students in evaluating the

university although “physical environment, layout, lighting, classrooms, appearance of buildings and grounds and the overall cleanliness” were also deemed to be important.

Similarly, in Galloway’s (1998) study of a UK university as cited in Douglas et al. (2006:254), the administrative office of the faculty had a very strong influence on the quality perceptions that students formed about the university with the key predictors being “office has a professional appearance; staff dress smartly; never too busy to help; and opening hours are personally convenient.”

In yet another study in trying to highlight a single most important influencer of student satisfaction, a different outcome was obtained as compared to the study by Sohail and Shaikh (2004), where the lecture played the most significant role in influencing satisfaction. For example, in a study by Banwet and Datta’s (2003), reported in Douglas et al. (2006: 254), students gave greater emphasis to the lecture outcome (“knowledge and skills gained, availability of class notes and reading material, coverage and depth of the lecture and teacher’s feedback on assessed work”) than on other issues.

Furthermore, various other factors that have been found to influence student satisfaction. For example, Moro-Egido and Panades (2010) found less satisfaction amongst part-time students, and greater satisfaction levels amongst women students and those registered for specialist programs. In addition, Umbach and Porter (2002), Grunwald and Peterson (2003), and Thomas and Galambos (2004) “focused on faculty and department roles in shaping student satisfaction, concluding that the department where faculty focus on research, students report higher levels of satisfaction” cited in (Letcher & Neves, 2010:2-3).

An important perspective on measuring student satisfaction is provided by Rapert et al. (2004) who distinguished between process quality and functional quality. Process quality deals with how effectively services are provided, e.g. the effectiveness of teaching and advising, and the like. Functional quality, in contrast pertains to the outcome of the outcome of the procedure in helping customers to realize other goals, e.g. educational value to advance in a career and achieve intellectually. According to these authors, it was found that most satisfaction studies in higher education emphasise process quality aspects i.e. on the operational aspects of the learning exercise

and the authors advise that educational functional quality should also be measured in student satisfaction studies.

More recently, a comprehensive study into student satisfaction by Grebennikova and Shah (2013:6) summarises the most important factors contributing to student satisfaction based on issues that recurred from a number of different studies cited. In order of importance, the factors were as follows:

- “a range of learning support services provided to students, such as library, IT facilities and academic advice;
- quality of teaching, including teaching ability of staff, subject expertise and staff approachability;
- course outcomes, particularly the extent to which undertaking the course enables attainment of generic and job-specific skills;
- assessments, including clarity of expectations, assessment standards, marking, timely and constructive feedback on learning;
- online learning technology and ease of its use;
- learning resources, including online access to learning and supplementary materials;
- opportunity to undertake work experience or work placement while studying.”

Hence, based on the discussion above, student satisfaction is a broad, subjective multi-dimensional construct and consequently, there are many different issues that have a bearing on it. However, in order to improve student satisfaction, it must be measured effectively.

3.9. OVERALL STUDENT SATISFACTION (OSS)

In a study titled “Service Quality towards Student Satisfaction” the author viewed student satisfaction as a multi-dimensional variable and measured it through the following four statements “I am happy that I enrolled in this institute, If I have a choice to do it again, I still will enroll in this institution, I am satisfied with my decision to attend this Institute, and My choice to enroll in this institute is a wise one” (Yadav, 2012:116). However, Govender and Ramroop (2012:237) view OVERALL STUDENT SATISFACTION (OSS) as one overall Likert scale measure with only

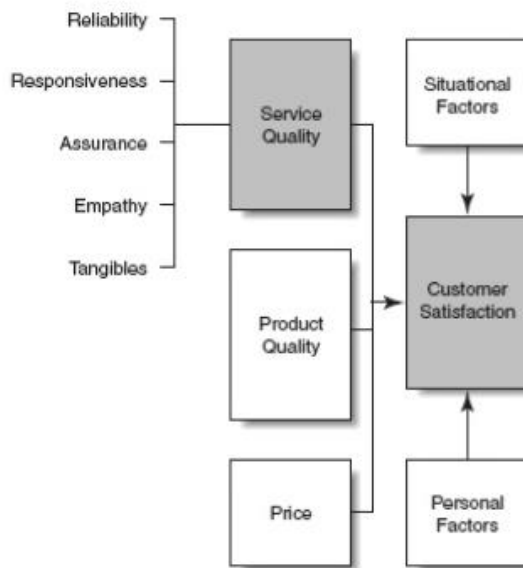
one question to measure it - "Overall, I was satisfied". Similarly, in the study by Kayastha (2011), service quality was measured as a one overall measure.

3.10. The Relationship between Service Quality and Customer/Student Satisfaction

According to Zeithaml et al. (2009), the concepts service quality and satisfaction have been perceived as being the same and the terms have been used interchangeably. However, the authors contend that researchers have endeavoured to define and measure these terms more accurately and clearly, giving rise to much debate. Researchers concur that service quality and satisfaction are profoundly different concepts based on their essential causes and consequences. While these concepts have some issues in common, satisfaction is a wider phenomenon whilst service quality is comparatively narrower and emphasises on the specific dimensions of a service. On this basis, service quality is deemed a part of satisfaction. (Zeithaml et al., 2009:103).

Furthermore, Zeithaml et al. (2009) clarify that service quality is a concentrated assessment reflecting customer perceptions of dimensions such as Tangibles, Reliability, Responsiveness, Assurance and Empathy. In contrast, satisfaction is more wide-ranging and is impacted on by perceptions of service quality, quality of the product and price, in addition to situation-related and personal factors as depicted in Figure 3.1.

Figure 3.1: Service Quality and Customer Satisfaction



Source: Adapted from Zeithaml et al. (2009:103)

Table 3.3 reports on the most relevant South African studies that explored the relationship between service quality and student satisfaction. It is evident that by far the majority of studies were correlational and non-predictive.

In support of service quality and customer satisfaction being divergent constructs, Yap and Kew (2007:62) cite various researchers (Cronin and Taylor, 1992; Oliver, 1993; Bitner, 1990; Carman, 1990; Boulding et al., 1993; Spreng and Mackoy, 1996) who contend that service quality and customer satisfaction are distinct constructs.

Based on the aforementioned distinction concerning service quality and customer satisfaction, by inference therefore, service quality and student satisfaction would also be distinct constructs with service quality being a part of student satisfaction, which is a broader construct.

Table 3.3: Differences between Service Quality and Customer Satisfaction

Customer Satisfaction	Service Quality
Customer satisfaction can come about through many dimensions or factors and not only from service quality dimensions.	Service quality comes about because of specific dimensions or factors.
Judgements pertaining to customer satisfaction can arise from a wide range of factors not related to quality.	Quality expectations are centred on an ideal concept and perceptions of distinction and excellence.
Customer satisfaction has a greater number of precursors or antecedents.	Service quality is affected by a smaller number of precursors or antecedents.

Source: Adapted from Yap and Kew (2007:62)

The relationship between Service Quality and Student Satisfaction has been widely reported in the literature both internationally and in South Africa (see Tables 3.4 and 3.5). Most of the South African studies to determine the relationship between service quality and student satisfaction were based on correlations. According to Awasthi (2013:98), correlation analysis has a restricted applicability to studying only whether there is a relationship or association between constructs and variables and does not predict like a regression analysis does. Of the most relevant South African studies, only three employed predictive analyses as shown in Table 3.4. Gbadamosi and de Jager (2009:251) factor analysis, Govender and Ramroop (2012) used both factor analysis and Structural Equation Modelling, but studied postgraduate students only, and Radder and Han (2009:116) used Structural Equation Modelling, but in studying student housing. Therefore, there is a dearth of information within a South African higher education context since 2009 on the predictive relationship between service quality and student satisfaction.

Table 3.4: South African Studies on Service Quality and Student Satisfaction

Author/s	Study Focus	Main Findings, Sample Size and Data Analysis Techniques Used
Nell and Cant (2014)	Service quality (SERVQUAL) and student satisfaction	Positive relationship between service quality and student satisfaction. Strongest relationship with Assurance and weakest with Empathy. (Sample:200, Correlations)
Hefer and Cant, (2014)	Measuring student service quality (SERVQUAL)	Positive correlation for OVERALL SERVICE QUALITY (OSQ) and OVERALL STUDENT SATISFACTION (OSS). Weak, but positive correlation between tangibility and OVERALL STUDENT SATISFACTION (OSS). (Sample: 200, Correlations).
Govender and Ramroop (2012)	Assessing the relationships for postgraduate students between service experience, research climate, quality, and satisfaction.	A significant positive link determined between service quality and student satisfaction. (Sample: 117, Exploratory Factor Analysis, Structural Equation Modelling).

Author/s	Study Focus	Main Findings, Sample Size and Data Analysis Techniques Used
Oduaran (2011)	Correlation between service quality and student satisfaction in a distance-learning context.	Positive correlation between service quality (all its dimensions) and student satisfaction found. (Sample: 313, Correlational Study).
Gbadamosi and de Jager (2009:251)	Service quality perceptions and student satisfaction	Significant predictors of student satisfaction were “perceptions of readiness for change, intention to leave, trust in management and support, living arrangements (accommodation) and academic performance.” (Sample: 391, Factor Analysis).
Radder and Han (2009:116)	Measuring service quality using SERVQUAL in student housing.	Four underlying factors uncovered – “Interaction, Empathy, General Amenities and Room amenities” (Sample: 430, Exploratory and Confirmatory Factor Analyses, Structural Equation Modelling).

Source: Authors’ Own Compilation

The results of international studies between service quality and student satisfaction are reported in the Table 3.5. Evidently, most of the international studies (Table 3.4) have found that service quality and student satisfaction are positively and significantly related, except for one study by Dib and Alnazer (2013) that found no relationship between the two constructs.

Table 3.5: International Studies on Service Quality and Student Satisfaction

Author/s	Study Focus	Main Findings
Shanmuga and Jeyakumaran, (2015).	SERVQUAL dimensions.	Assurance was the only significant dimension to influence student satisfaction.
Alnaser and Almsafir (2014)	Dimensions of service quality and student satisfaction	Proposed a thirteen-factor theoretical framework (including all the SERVQUAL factors) affecting student satisfaction based on a literature review.
Lazibata, Bakovića, and Duževića (2014)	Perceived service quality's influence on student satisfaction taking a student and teacher perspective.	Significant impact on student satisfaction found for the following factors: access, reputation, and academic dimension.
Kundi et al., (2014)	Pakistan higher education. SERVQUAL.	All SERVQUAL dimensions significantly impacted on student satisfaction particularly Assurance and Tangibles.
Razi-ur-Rahim (2013)	Service quality, student satisfaction and branding in business schools	SERVQUAL dimensions directly influence student satisfaction.

Author/s	Study Focus	Main Findings
Shah (2013)	22 universities in Pakistan.	Reliability together with Assurance are significant predictors of Student Satisfaction and less significant are Responsiveness, Empathy and Tangibles.
Saepudin and Marlina (2013)	Influence of institution service quality of student satisfaction	SERVQUAL dimensions significantly influence student satisfaction.
Seng and Ling (2013:141)	Effect on service quality dimensions on student satisfaction	Significant influence of the following service quality dimensions found: “instructor”, “learning resources”, “academic courses”, and “student engagement”. No positive effect found for assessment.
Al-Alak & Alnaser (2012)	Business Students/Jordan	Assurance made largest contribution to service quality and Tangibles were significantly negative in the contribution to service quality.
Jiewantoa, Laurensb, and Nellohc (2012)	The effect of service quality on image of the university and student satisfaction.	Service quality (SERVQUAL) positively influences student satisfaction.

Author/s	Study Focus	Main Findings
Minh Tuan (2012:138)	The influence of service quality and pricing fairness on student satisfaction.	Service quality positively influences student satisfaction based on the following five factors: “Facility, Faculty, Administration, Documentation, and Appearance”.
Palli and Mamilla (2012)	Student opinion of service quality in higher education.	Students satisfied with all SERVQUAL dimensions except Responsiveness. Female students expressed higher levels of satisfaction with service quality.
Hanaysha et al. (2011)	Service quality and student satisfaction at Malaysian Universities.	Significantly positive influence found between service quality and student satisfaction for both Malaysian and International students across all dimensions of SERVQUAL.
Sumaedi, Bakti, and Metasari, (2011)	The effects of perceived quality and price on student satisfaction	Service quality positively and significantly influences student satisfaction.
Malik (2010)	Influence of service quality on student satisfaction in Punjab.	Tangibles, Assurance, Reliability and Empathy positively and significantly influence student satisfaction.

Author/s	Study Focus	Main Findings
Gong (2010)	Comparing SERVQUAL and SERVPERF in influencing student satisfaction	Both SERVQUAL and SERVPERF positively and significantly influence student satisfaction.

Source: Authors' own compilation.

The international studies between service quality and student satisfaction, as reported in Table 3.5, were far more extensive than the South African studies. However, there is a dearth of information pertaining to the influence of Service Quality and the influence of its dimensions on Student Satisfaction, especially pertaining to South African higher education.

Based on the aforementioned discussion on the relationship between service quality and student satisfaction, it is hypothesized that:

H2: Service quality and its dimensions (Tangibles, Reliability, Responsiveness, Assurance and Empathy) have a significant positive effect on OVERALL STUDENT SATISFACTION (OSS)

3.11. Branding and Brand Equity in Higher Education

Kapferer, (2008:128-129) contends that higher education institutions are brands. Amongst other things, the name of a country is very much linked to the image created by its institutions of higher learning. Higher educational institutions are in a “brand war” which is of a global nature. There are now quality comparisons drawn between higher educational institutions on a global scale and such institutions are even ranked by popular media in terms of their competitive positioning. Countries have their own popular higher educational brands, for example, it is Harvard and MIT in the United States, Oxford and Cambridge in the United Kingdom, Tsing Hua in China, and so on. With emphasis placed on the globalisation of higher education, these institutions of higher

learning need to be able to effectively export their qualifications. But, to do this they need to be able to provide added value on which they are measured and rated, and the university as a brand is made based on its products such as its students who are its ambassadors, professors who publish in journals of high repute, to name a few (Kapferer, 2008:128-129).

According to Marrs et al. (2011:965), in the light of economic and financial constraints affecting many higher educational institutions, branding is viewed and used as a much needed and valuable strategic tool in differentiating such organisations in a positive way. For example, in order to bring about a strong competitive distinctiveness so as to set British education apart from other key competitors, and in order to appeal to and attract more students on a global level, the government of the United Kingdom supported an international re-branding campaign in the year 2000 (Hemsley-Brown & Goonawardana, 2007). Therefore, it is apparent that branding in a higher educational context is taking on higher levels of importance.

Menon, Terklz, and Gibbs (2014:81-82) argue that brand equity is becoming a topical issue in higher education marketing. Amongst other reasons, competition between higher educational institutions creates a need to differentiate one's educational offerings. However, the exercise of branding does pose challenges in higher education because of a lack of funding, a limited marketing culture, and a lack of understanding of branding resulting in branding becoming an ad hoc process lacking strategic orientation (Menon et al., 2014:81-82).

However, Menon et al. (2014:82-86), allude to the importance placed on branding activities and branding issues and the view that it should be all encompassing including all touch points such as open days, tracking applications, business networking activities, and so on, all of which should feed into branding strategies and policies. In addition, due to the contribution branding makes to the value proposition by helping students make a better choice, higher education institutions create specific objectives for branding.

According to Menon et al. (2014:86) branding objectives include some of the following issues: image related, differentiation of facets of the university, to sensitize staff on how to communicate with students and other stakeholders, and create a competitive advantage. However, the authors contend that problems arise, as there are often variances between universities regarding objectives,

some of which are difficult to quantify and lacking commonality and with the result is viewed as being wasteful by some.

According to Pretorius (2007), changes to the South African higher educational landscape that took place on 1 January 2004 ushered in opportunities for higher educational institutions to differentiate their service offerings through branding. There is consensus amongst marketing academicians that a brand extends beyond simply a name. It comprises a set qualities and principles that represent and relate to physical, social and psychological issues. Additionally, an organisation's standing for proficient service and Reliability of its product quality help to build a brand. The aforementioned characteristics of a brand influence customer perceptions and connotations they attribute to the brand (Simões & Dibb, 2001:217, cited in Pretorius, 2007:2).

Pretorius (2007:2-3) contends that marketing communication with customers has become difficult, due to more competition, an escalation in mergers and acquisitions, differences in public characteristics and the influence of media and civic opinion that create problems in communicating with customers. Consequently, Pretorius (2007:3) recommends devoting attention to branding issues to create brand equity, and organisations differentiating themselves from the competition through creating their own uniqueness and individual features.

Moreover, according to Bastedo (2012:1929), branding is crucial in the creation of competitive advantage, and relating to this, brand equity that is "a brands tangible value to a firm", contributes to the creation of such an advantage.

Subramaniam et al., (2014:67) contend that brand equity is becoming very important for service organisations especially those offering identical services and which are difficult to differentiate. Hence, strengthening their brand image becomes an important focus.

In higher education for example, image-related issues played a more significant role in brand equity than awareness-related issues (Mourad et al., 2011:403). The aforementioned researchers contend that in a higher educational context, the image of the institution helps in reducing the risk related to that type of service essentially because service quality is assessed after consumption. Therefore, through a strong brand, there is a reduction in risk and the customer's decision-making is made easier.

Washburn and Plank (2002:47) argue that because positive brand equity makes many positive contributions, amongst which would be increased sales, lower costs, higher profits, better value of the brand and an overall more effective marketing mix, it is therefore important that brand equity be effectively measured.

In a higher education context, Toma (2003:201) contends that there are many potential advantages that brand equity can offer. It helps to benefit the institution through benefits being provided to students; marketing efforts become more efficient and effective; prices and margins become higher, revenue generation becomes more stable; opportunity to extend the brand become better; a reduction in risk; and the institution becomes more competitive.

3.12. Measuring Brand Equity in Higher Education

The previous chapter discussed the various brand equity measurement models. To avoid a repetition of the same discussion, the discussion hereunder pertains to the dimensions of Aaker's (1996) Brand Equity Model in a higher education context. The broad issues addressed in Aaker's (1996) model, namely, Awareness, Key Associations and Differentiation, Perceived Quality and brand Loyalty are discussed hereunder with reference to higher education.

3.12.1. Brand Loyalty

According to Krkljes (2011:15), in a higher educational context, loyalty to an institution is shown through personal endorsement of the institution and the rate at which students drop out. Rojas-Me'Ndez et al. (2009:21-24) state that "student loyalty is a key factor in higher education in helping to retain students until they graduate and drawing them back, and they view loyalty in higher education as a strategic competitive advantage." This is due to firstly, existing students being less costly to contend with than finding new ones, and secondly, loyal alumni promote the institution through word of mouth, may also contribute financially to the institution, and may even employ its graduates (Rojas-Me'Ndez et al., 2009).

3.12.2. Key Associations and Differentiation

Gibbs and Maringe, (2008:135) state that associations have played an important role in adding value to a higher education brand. For example, a university can provide scholarships, or promote the fact that a popular person or celebrity attended the institution. For example the St Andrews University in Scotland which was attended by Prince William. Moreover, the University of Southampton associated itself with the image of a dolphin, which is internationally known as a clever, friendly and intelligent animal and hence creates a positive association for the university amongst not only students but others as well (Gibbs & Maringe, 2008:135).

3.12.3. Brand Awareness

Toma (2003:201) contends that in a higher education context, awareness is a key factor when dealing with students and donors, as it is an indication that the brand is one that can be taken into account. The aforementioned author contends that, consequently, this awareness of the institution makes the jobs of people who represent the university easier because people know something affirmative about their institutions.

According to Iqbal et al., (2012:168), recognition and reputation of the brand are crucial for universities, as they need recognition for what they do. Similarly, Allen and Ebooks Corporation (2007:92) contend that recognition of a University's brand is important within a competitive context.

An interesting issue about awareness was raised by Gibbs and Maringe (2008:134), who cited the example of a study done in Zimbabwe involving the application by prospective students for study at British higher education institutions who generally associated all these institutions with the Oxbridge brand, which was strongly and positively positioned in their minds. This has been because of the long-term influence that colonial education has had on certain indigenous populations creating a more favourable position in their minds of the colonial education quality over that which was provided locally.

3.12.4. Perceived Quality

With reference to Perceived Quality, in a higher education context, Shin and Teichler, (2013:108) state that it is viewed in terms of its product offerings vis-à-vis its competitor's products. Strong emphasis is placed on the status or the brand power of the university, which is an indication of perceived quality. Students place a sense of value on brand power and the status of a university becomes an end in itself. As a contributor to brand power, stronger emphasis is placed on research than student satisfaction (Shin & Teichler, 2013:108).

According to Toma (2003:201), perceived quality can be an important factor which gives a customer a reason to buy because it allows for differentiation, can generate interest in a brand amongst customers, and can allow for the extension of a brand, for example, for business schools such as Harvard, which are perceived as a high quality brand.

3.12.5. OVERALL BRAND EQUITY (OBE)

Yoo and Donthu (2001) have popularized a multi-dimensional brand equity scale for consumer-based brand equity. Through a confirmatory factor analysis and rigorous tests pertaining to different types of validity, they developed a four-item/variable measure of OVERALL BRAND EQUITY (OBE) by requiring respondents respond to these four questions: "OBE1 It makes sense to buy X instead of any other brand, even if they are the same, OBE2 Even if another brand has the same features as X, I would prefer to buy X, OBE3 If there is another brand as good as X, I prefer to buy X., OBE4. If another brand is not different from X in any way, it seems smarter to purchase X" (Yoo & Donthu, 2001:14). Other researchers (Washburn & Plank, 2002; Tong & Hawley, 2009), have also used similar measures for OVERALL BRAND EQUITY (OBE).

3.13. Empirical Studies on Brand Equity in Higher Education

Although brand equity, in general, has been researched in many product markets, there is a comparative dearth of brand equity information in service markets, especially in the higher education sector. The literature has revealed not more than ten studies covering brand equity in the higher education sector and only one master's study in South Africa. These studies are briefly reported on below.

Brand equity in higher education can be viewed as follows: institutional awareness, recognizing what the university is known for, loyalty towards the university, understanding the institution's worth, and whether people will be prepared to pay a premium price to attend the institution (Krestovics, 2011).

It was found that consumer-based-brand equity is applicable to higher education in Slovenia. The conceptual model tested and recommended comprised of the following: Awareness-related - "promotion, and image-related - service attributes, symbolic attributes, and finance attributes" image-related factors were found to contribute most significantly to brand equity whilst awareness issues did not as significantly (Vukasovič, 2015:87).

According to Mourad et al. (2011:406), in higher education, the image of the brand plays a crucial part as given the nature of the service, quality assessment often takes place after consumption. A strong brand image is an important differentiator of the brand. Quality perception of a university brand entails quality of staff, university location, size, historical issues, and so on. Mourad et al. (2011:414-415) applied a model within the context of Egyptian higher education based mainly on the Keller model using two elements – awareness and image. Awareness was measured in terms of marketing communication events and word of mouth. Image encompassed the following symbolic qualities (personality of the brand, image of the brand in society and its market position), service traits ("price, perceived quality, after sales service, benefits from consuming the service") and provider traits ("relationship between the provider and the staff, location of the service organization, internationalization of the service, staff, historical image, size") (Mourad et al., 2011:414-415). Image related issues had the biggest impact on brand equity.

In a master's study into brand equity and its application to select universities in Australia, Clarke (2009:45-46) found the following issues to be relevant, namely, "brand salience (brand Awareness), brand meaning (performance and image), brand response (judgement and feeling). How a university is judged in relation to other universities and testimonials, for example, describe student feelings towards the university. Brand relationships (resonance) which is the Loyalty for the institution through the media, repeat purchases, etc. (Clarke, 2009:45-46).

In a study by Gold and Moler (n.d.), Aaker's (1996) model was used to compare different colleges based on their brand equities. Similarly, also based on Aaker's (1996) model, a study to develop brand equity of Jesuit colleges, the following conceptualisation was used - brand awareness, brand loyalty, perceived quality (Laczniak, 2004:6).

A South African masters study into brand equity at Tshwane university Pretorius (2007) analysed the following dimensions: awareness, perceived quality, loyalty, brand reliability, and brand feelings. However, no predictive analysis was conducted to determine which brand equity dimensions were significant predictors of brand equity.

A study into brand equity at a midwestern USA university found that the faculty was the key dimension, followed by university reputation and emotional environment, brand loyalty, and awareness (Pinar et al., 2014).

In a PhD study into the antecedents of brand equity, the measures of brand equity used in the context of Australian higher education was perceived quality, value and loyalty (Mitsis, 2007).

Owing to limited literature on Brand Equity and its significant predictors in higher education, particularly in South African higher education, this study hopes to address this gap in knowledge with the following hypothesis:

H3: The brand equity dimensions (Perceived Quality/Leadership, Awareness, Loyalty and Key Associations/Differentiation) have a significant positive effect on OVERALL BRAND EQUITY (OBE).

3.14. Relationship between Student Satisfaction and Brand Equity

Pappu and Quester (2006), popular researchers in the field of brand equity, have shown that there exists a significant positive relationship between customer satisfaction and brand equity. Their research was mainly based on the retail sector where departmental and speciality retail stores were included in the sample. They found that customer satisfaction varied differently with brand equity of the different retail outlets, but there was nonetheless a significant relationship between the constructs.

According to Mackay et al. (2013), there is limited research on brand equity in service industries. In addition, from an examination of the existing literature addressing the constructs of student satisfaction and brand equity, there is evidently a dearth of relevant literature on the subject with no relevant studies done in a South African context. A literature search found only three relevant studies reported on hereunder. These studies are mainly on brand loyalty, which is a component of brand equity.

In a study by Guild (2011) at Srinakharinwirot University in India, postgraduate students were researched to ascertain whether their satisfaction positively and significantly influenced their loyalty (a component of brand equity). The results of the study indicated that student satisfaction had a low and moderate effect respectively on two measures of loyalty.

A study by Fares, Achour and Kachkar (2013:589) researched relationships between service quality, student satisfaction and brand loyalty of International students at a Malaysian higher education institute, found that service quality and student satisfaction have a significant positive influence on brand equity, although the influence from student satisfaction was stronger than that from service quality.

In a study into online higher education, student satisfaction was found to be a mediator in the relationship between service quality, brand equity and loyalty (Jarrell, 2012).

Therefore, based on the limited literature pertaining to the empirical research where the relationship between student satisfaction and brand equity was reported on, it is inferred that this deficiency gives rise to a gap in knowledge, which this study will aim to address.

The relationship between service quality and brand equity in a higher education context is reported on in the next section.

3.15. Relationship between Service Quality and Brand Equity in a Higher Education Context

There is a dearth of literature on the relationship between service quality and brand equity in a higher education context. Table 3.6 shows the brand equity empirical studies recorded in the

literature, and based on an extensive review of the literature, no relevant South African study can be reported on.

Table 3.6: Relationship between Service Quality and Brand Equity in Higher Education

AUTHOR/S	STUDY CONTEXT/AREA	MAIN FINDINGS
Mitsis (2007)	Emphasis on the creation of Customer Based Brand Equity (CBBE) with postgraduate students in Australian higher education.	Support from the learning environment was an important influence to brand equity. Course-related perceptions also influenced brand equity.
Kuo and Ye (2009)	Vocational Education/Taiwan	Service quality and image influence student loyalty indirectly through satisfaction.
Chapleo (2010).	Higher education/U.K	Qualitative study. Shows that there is a need for a branding model that can be effectively applied to universities in the U.K.
Mourad et al. (2011)	Higher Education/Egypt No SERVQUAL/SERVPERF used. No Loyalty measure within brand equity.	Quality issues had a bearing on brand equity. After sales service had a significant but inverse relationship with brand equity.

AUTHOR/S	STUDY CONTEXT/AREA	MAIN FINDINGS
Iqbal et al.(2012)	University branding and image. Many different universities throughout the world. Quality was measured in terms of overall satisfaction and service-based satisfaction, not SERVQUAL dimensions.	Quality followed by prestige is an important influencer of university image.
Jarrel (2012)	Online higher education.	Service quality is associated with brand equity and loyalty.
Makgosa and Molefhi (2012)	Re-branding a University/Botswana. No service quality studied.	Corporate communication is important in re-branding a university.
Aggarwal et al. (2013)	Business schools/India	Assesses brand equity at Indian business schools. Does not show the effect of SERVQUAL on brand equity.
John and Senith (2013)	Engineering institutions in India	Amongst other factors, quality was an influencer of brand rating of different universities.
Moghaddam et al. (2013)	Designing a brand equity model for select universities/Iran.	Educational service, amenities, and the physical environment of the

AUTHOR/S	STUDY CONTEXT/AREA	MAIN FINDINGS
		universities studied positively and significantly affect brand equity. No evidence of specific SERVQUAL dimensions used in the study.
Ramli, Othman and Salleh, (2015)	Quality;s influence on loyalty.Malaysia public higher education.	Learning quality affects brand loyalty.
Vukasovič (2015)	Select university in Slovenia	No relationship explored between service quality (SERVQUAL-based) and brand equity. Instead service quality was one of the components of service attributes that comprised other components. Service attributes were found to be statistically significant and positively related to brand equity.

Source: Researcher's compilation

It is evident from Table 3.6, there is no study documenting the predictive relationship between service quality and brand equity in a South African higher education context. In addition, regarding the international studies, no predictive study was undertaken based on student demography.

Hence, based on the overall dearth of literature pertaining to the relationships between Service Quality, OVERALL STUDENT SATISFACTION (OSS) and Brand Equity, this study hopes to address this gap in knowledge and hypothesizes the following:

H4: Service quality dimensions have a significant positive effect on OVERALL BRAND EQUITY (OBE).

H5: Service quality dimensions have a significant positive effect on the significant predictor dimensions of OVERALL BRAND EQUITY (OBE).

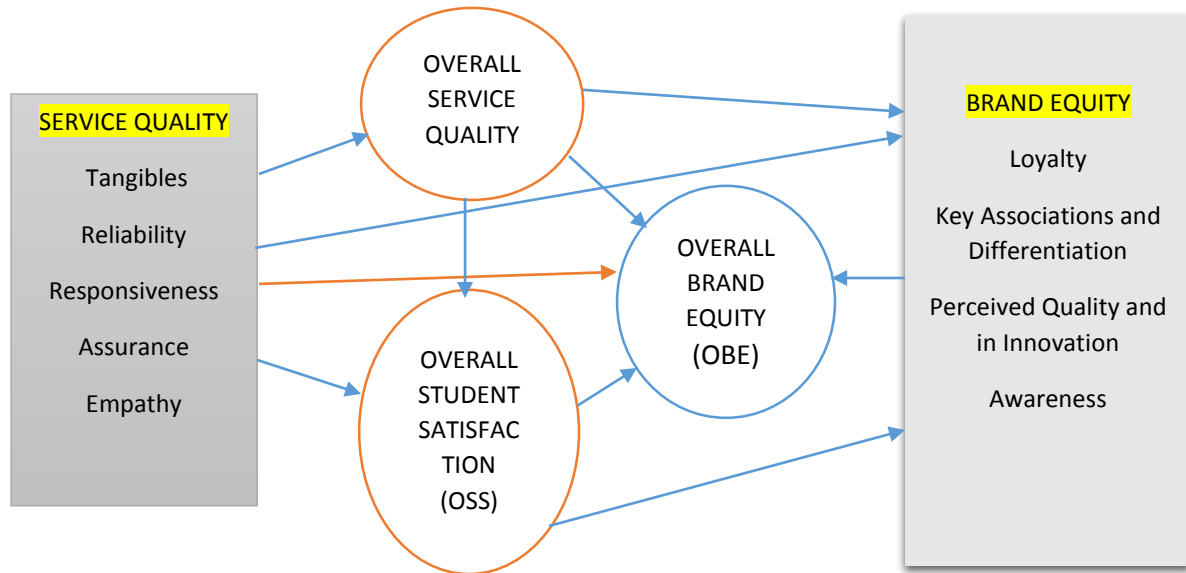
H6: OVERALL SERVICE QUALITY (OSQ) is a significant and positive predictor of OVERALL BRAND EQUITY (OBE).

H7: OVERALL STUDENT SATISFACTION (OSS) is a significant and positive predictor of OVERALL BRAND EQUITY (OBE).

H8: Service Quality, OVERALL STUDENT SATISFACTION (OSS) and Brand Equity are significantly associated

The relationships postulated in the eight hypotheses generated through a critical review of the literature can be conceptualized in the model depicted in Figure 3.2. The arrows represent significant positive hypothesized relationships.

Figure 3.2: Conceptual Model



Source: Researcher's Compilation

3.16. Conclusion

The purpose of this chapter was to contextualize the important research constructs of the study and put them into perspective. The constructs service quality, satisfaction, and brand equity were discussed in general in chapter two, and in this chapter, these constructs were discussed within a higher education context.

Evident from this chapter is that service quality in the higher education sector is starting to get more attention due to its importance and benefits within a competitive higher education market. Also evident is that service quality in higher education can be measured in different ways. However, it was shown, through the literature, that SERVQUAL and SERVPERF were the more popular models used in measuring higher education service quality. The concept of OVERALL SERVICE QUALITY (OSQ) was also discussed.

Student satisfaction was shown to be an issue that is widely emphasized on within the higher education sector particularly internationally. Student satisfaction was shown to be an overall

measure and measured through one variable. However, another approach to measuring OVERALL STUDENT SATISFACTION (OSS) was through four variables as discussed in the chapter.

Brand equity within the higher education context, although relatively new, is an important area that has many benefits to offer within higher education. Despite there being relatively few models to measure brand equity, Aaker's (1996) model was shown to be relatively more widely used.

Concerning the relationships between the constructs Service Quality, Student Satisfaction and Brand Equity, the results of relevant empirical studies were documented in this chapter. However, there is a dearth of literature particularly in relation to the relationship between service quality and brand equity, not only internationally, but also in a South African higher education context. In addition, although there have been studies showing the relationship between Service Quality and Student Satisfaction, relatively few exist in South African higher education particularly in terms of demographic issues.

The information provided in this chapter would be helpful in guiding the development of an appropriate data collection instrument (questionnaire) for this study. The next chapter, chapter four, details the research methodology to be undertaken in this study.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1. Introduction

Considering that the research design is the critical step in the research process, this chapter explains various components of the design, inter-alia, research approach, data collection methods, sampling procedure, the data collection instrument and its design, validity and reliability, and data analysis in relation to the broad research questions. The descriptive research design used in this study and its appropriateness will be discussed. The survey method to be adopted in data collection will be introduced and the structured data collection instrument to collect the data from a relatively large sample size will be explained.

The target population will be described and the sampling method used discussed justifying and explaining its use. In addition, the sample size will be explained and how it was arrived at. The data collection instrument (questionnaire) will be discussed and its sections explained. Furthermore, the questionnaire will be discussed in relation to the study objectives showing how the different sections of the questionnaire relate to the objectives of the study. In addition, the operationalization of each study construct will be explained in relation to the specific questions in the questionnaire that measure them.

Important issues such as validity and reliability will be explained and their application to the study will be discussed. In this context, face validity, construct validity, content validity, discriminant validity, convergent validity and Cronbach's Alpha (pertaining to reliability) will be discussed. The data analysis will be explained relative to each research objective and research hypotheses. Both descriptive statistics and inferential statistics will be explained.

4.2. Research Design

According to Hair et al. (2011:186), in a research study, the nature of the study and the research objectives will guide the type and amount of data to be collected. If the study is exploratory, narrative data will be collected by conducting focus group interviews, personal interviews or

observational studies of behaviour. Typically, in such studies, sample sizes will be smaller or even case studies may be used. On the other hand, with descriptive or causal studies, relatively large amounts of quantitative data would be required with surveys (Hair et al., 2011:186).

Based on the objectives of this study, this study can be considered to be descriptive- analytical, in that relatively large amounts of quantitative data were collected from students at two university campuses with the aim of describing, assessing and finding associations, through the testing of hypotheses, between the main constructs under study, which are service quality, student satisfaction and brand equity. According to Shukla (2010:45) descriptive research designs have the advantage of being less time consuming, less costly and easy to administer” and are considered to be “more popular.”

4.3. Data Collection

The survey method was used to collect the data, since surveys are considered to be the most popular form of data collection methods in descriptive research designs (Matthews & Kostelis, 2011:84). The data collection instrument was a structured, self-administered questionnaire. Structured self-administered surveys are considered to be advantageous in terms of helping to ensure anonymity and confidentiality of the respondent, low-cost, quick to administer, easier handling of sensitive questions, and reduces interviewer bias (Cho, 2007:72), and appropriate with relatively literate respondents (students) (Kelly, Ruiz-Janecko, & Guttmacher (2013).

Data was collected from two selected campuses of different universities. Before data collection, written gatekeeper permission was obtained from the respective institutions to conduct the on-campus surveys. Thereafter, application was made for ethical clearance from the Ethic’s Committee of University of KwaZulu-Natal and permission was granted to conduct the survey.

From each of the selected campuses, lecturers were contacted in advance with requests to conduct the survey during lectures, after being briefed on the specifics of the study. Efforts were made to ensure that for each of the selected campuses, students taking courses representing all the relevant broad disciplines e.g. Science, Humanities, Commerce, and other relevant disciplines were surveyed.

Upon receipt of permission from the lecturers to conduct the survey, the researcher attended the lectures and briefed the students on the survey and informed them that participation in the study was entirely voluntary, and that any information collected will be treated in the strictest of confidence and anonymity will be ensured. Those that were willing to participate were given about 15 minutes to complete the questionnaire.

Upon completion of the questionnaire, students and their lecturers were thanked for their participation, and the questionnaires were collected. To comply with the ethical requirements of confidentiality and anonymity, the survey was personally administered by the researcher himself.

After the data collection exercise, the researcher personally screened each questionnaire and eliminated those (which were retained in a separate container) that were incomplete, after which the questionnaires to be included in the final analysis were appropriately coded and thereafter boxed and kept in a secure drawer.

4.4. Research Population and Sampling Frame

A research population comprises of four measures: elements, sampling units, extent and time (Søgaard,1996:113; Krishnaswamy, Appa & Mathirajan, 2006:282). The element is the aspect that the researcher needs information on; a sampling unit refers to the element accessible for selection in the process of sampling; extent refers to the context/area within which the study will be undertaken; and time refers to the period during which the research will be conducted. This can be reflected as follows:

Element: Undergraduate students at the selected university campus.

Sampling Unit: Courses within the select broad academic disciplines available for selection

Extent: University campuses in KwaZulu-Natal.

Time: Between March and June 2015.

The population was undergraduate students studying courses in the main academic disciplines offered at the selected university campuses. Unfortunately, a list of student names, email addresses,

telephone numbers, and other relevant contact details could not be obtained due to the confidential nature of the information. However, for each campus, a list of the broad disciplines offered as well as the different courses offered within such disciplines was available. Hence, the sampling frame that was used was a list of all the broad disciplines and the courses offered within each discipline for each of the two university campuses chosen for the study.

4.5. Sampling

Sampling involves the selection of a small group of respondents from a larger population so that the sub-group is representative of the larger population and plays an important part in research as it helps to lessen the effort, resources and difficulties involved in a research survey (Brown, 2000:71).

4.5.1. Sample Size

Due to ethical reasons, the identity of the institutions studied will be kept confidential. Hence, any detail provided on individual campus statistics could compromise the confidentiality and anonymity requirements of the study. In order to prevent the dissemination of such detail that could compromise confidentiality, it would suffice to state that the combined populations of the university campuses studied were approximately 20000 students.

According to Sekaran and Bougie (2010:296), for a population size of 20000, the sample size should be 377. For this study, over 500 questionnaires were collected. However, in the end, taking into account spoilt copies and other editing issues, and more importantly the need to have both the university campuses involved in the study to be represented in equal proportions, the sample was reduced to 400 with 200 students from each campus so that both campuses were represented equally.

4.5.2. Sampling Method

There are essentially two broad sampling methods: “probability and non-probability” (Lamb, Hair, & McDaniel, 2013:329). In probability sampling, each population member has a known probability of selection into the sample. In addition, due to its scientific nature, probability samples

are deemed to be more representative of the populations from which they are drawn. On the other hand, with non-probability samples, the chances of a member of a population being selected are not known or cannot be statistically determined. In addition, there is no intention to be representative in the selection of non-probability samples (Lamb et al., 2013:329).

Probability sampling methods include, inter alia, simple random sampling, stratified sampling, cluster sampling, and systematic random sampling. Non-Probability sampling methods include, inter alia, convenience sampling, judgemental (purposive) sampling, quota sampling, and snowball sampling. These, and other sampling techniques are extensively discussed in the literature by various authors (Lamb et al., 2013:329; Maxfield & Babbie, 2015:222; Nestor & Schutt, 2015; Dixon, Singleton, & Straits, 2015).

In this research, probability sampling could not be used since there was a lack of sufficient information on the population to be studied and its specific constituents. In addition, the pilot test indicated that it would have proven to be exceedingly difficult to contact selected aspects of the sample using a probabilistic approach (Denscombe, 2014:33). Hence, the use of non-probability sampling was considered to be appropriate in this study, and more specifically judgemental or purposive sampling.

Judgemental or purposive sampling is less costly and easier to conduct. It also has the advantage in relation to other non-probability sampling approaches with regards to the “care paid in selecting the samples that the researcher seeks for his objectives” (Rajamanickam, 2001:83). Judgemental sampling is a frequently used non-probability sampling technique. One of the common reasons for the application of judgemental sampling is that it may be difficult to access certain parts of the population and more commonly the lack of a sampling frame (Blaikie, 2009:178). As alluded to earlier, no list of students was available from which to draw the sample.

The actual sampling procedure involved listing the broad disciplines of study and the main qualifications within each broad discipline. The broad disciplines were found to be Commerce, Humanities, and Science. Once these broad disciplines were established, the researcher located courses within these disciplines that could be targeted for the survey by administering the questionnaires in-class. Every effort was made to have each of the disciplines represented

approximately equally in the sample for each campus studied. However, it needs to be noted that in a particular course, there were students who came from different academic disciplines, for example, in a Management course, there could be students registered for Science, Arts and Commerce qualifications. Consequently, the proportions of students from each discipline was not exactly equal. Notwithstanding this though, every effort was made to keep the sample representative.

After collecting the data during lectures, the questionnaires were edited and spoiled copies discarded, and the remaining questionnaires were included in the final sample for data analysis.

However, it needs to be noted that despite the aforementioned limitations, the objective in this study is not to generalise the findings beyond the sample studied and consequently judgemental sampling was considered to be appropriate (Amandeep & Ghorbani, 2014).

4.6. Data Collection Instrument

The data collection instrument was a structured, self-administered questionnaire. According to Lewis-Beck, Bryman, and Liao (2004:1012), self-administered questionnaires are one of the most widely and frequently used in the collection of data for a research study. The questionnaire used was developed through following the steps advocated by Hair et al. (2011:249), which included:

1. Preliminary Considerations

- Make clear the nature of the research problem and its objectives.
- Develop questions to address the research objectives.
- Define the study population and the sampling frame (ascertain prospective respondents).
- Determine sampling methodology, sample magnitude and anticipated response rate.
- Decide on a primary method of data gathering.

2. Clarifying the Concepts

- Confirming that the concepts can be defined clearly.
- Selection of variables/indicators to represent and signify the concepts.
- Decide on the level of measurement.

3. Decide on the nature of the questions, format and order

- Decide on the kinds of questions and their order.
- Checking question phrasing/wording and coding.
- Deciding on question grouping and questionnaire length.
- Deciding on the organization/structure and layout of the questionnaire.

4. Pretest the Questionnaire

- Decide on the nature of the pretest for the questionnaire.
- Analyse the data from the pretest to identify any shortcomings of the questionnaire.
- Refine or improve the questionnaire if need be.
- Return to some or all of the above steps if need be.

5. Questionnaire Administration

- Ascertain the best practice in administering the type of questionnaire to be used.
- Train and assess fieldworkers if necessary.
- Confirm a process is in place to deal with completed questionnaires.

- Decide on a cutoff date and follow-up procedures.

Although self-completion questionnaires can be either administered in a supervised or unsupervised setting (Lewis-Beck et al., 2004:1012), in this study, the questionnaire was administered in a supervised setting with the researcher being present. Due to the high literacy levels (participants were students), minimal problems were experienced in the completion of the questionnaire.

Being a self-completion questionnaire, the questions needed to be clear, and instructions easy to follow, with fewer open-ended questions, and fewer questions so as to reduce respondent fatigue (Bryman, 2012:233).

Due to the fact that data had to be collected in a short space of time during a lecture, and the overall need to keep costs low and to obtain honest responses, a self-administered questionnaire was considered appropriate. It is believed that with self-completion questions, especially with topics of a sensitive nature, the responses tend to be more complete and truthful with its greatest advantage being lower cost compared to other data collection methods (Lewis-Beck et al., 2004:1012).

Lewis-Beck et al. (2004:1012) however caution that self-completion questionnaires should not be used when more than 20% of a population are illiterate, the questionnaire exceeds 12 pages and the objectives are complex. In this study, none of the aforementioned potential problems applied, as the respondents in this study were students of higher educational institutions who are literate, the questionnaire does not exceed 12 pages and the objectives and related questions are clear, easy to follow, user-friendly and based on validated instruments.

The questionnaire comprised five sections (A,B,C,D and E) spanning seven pages. A discussion of each section of the questionnaire follows.

4.7. Section A -Service Quality Rating

Section A measured the different dimensions of service quality. This section comprised 22-items that rated service quality on a 7-point Likert scale ranging from '1 = Poor' to '7 = Excellent'. The

questions comprising the service quality construct were adapted from Cronin and Taylor's (1994) SERVPERF model. As is evident from recent research, SERVPERF has been found to be more accurate than SERVQUAL (Ramez, 2012:131). The service quality dimensions were measured under five headings – Tangibles, Assurance, Empathy, Responsiveness and Reliability. However, unlike the SERVQUAL scale which uses a disconfirmation paradigm of “expectations versus perceptions” to assess service quality, the scale employed in this study can be described as an “attitude-only” scale that measures service quality based only on perceptions. This is in accordance with the SERVPERF scale of service quality (Cronin & Taylor, 1992).

4.8. Section B -Service Quality Importance

Section B measured the importance that respondents place on the different dimensions of service quality. It uses exactly the same questions, and scale as in Section A, but respondents had to rate each question based on the level of importance they attach to each service quality item/variable ranging from ‘Low’ to ‘High’ on a 7-point Likert scale. Questions for the service quality construct were adapted from Cronin and Taylor's (1994) SERVPERF model. There were a total of 22-items included in this section measured under five headings – Tangibles, Assurance, Empathy, Responsiveness and Reliability.

4.9. Section C-Brand Equity

This section measured brand equity based on a 7-point Likert scale ranging from 1= Strongly Disagree to 7 = Strongly Agree. The less respondents agreed with a statement, the lower the score and vice versa.

This section comprised 25 questions adapted from Aaker's (1996) brand equity model and addresses brand-related issues of Loyalty, Awareness, Perceived Service Quality, and Key Associations and Differentiation.

4.10. Section D -Overall Measures

Section D comprised 11 questions pertaining to overall measures of the constructs under study. Questions D1 to D4 measured OVERALL BRAND EQUITY (OBE) and were adapted from (Yoo

& Donthu, 2001, Washburn & Plank, 2002; Tong & Hawley, 2009). Furthermore, student satisfaction was also be taken as an overall measure which can be reflected in question D7 (Govender & Ramroop, 2012). Questions D5 to D8 measured OVERALL STUDENT SATISFACTION (OSS) and were adapted from Yadav (2012). So, there were two different measures of OVERALL STUDENT SATISFACTION (OSS). Questions D9 to D11 measured OVERALL SERVICE QUALITY (OSQ) and were adapted from He and Li (2011).

4.11. Section E- Demographic Information

Section D collected demographic information on the respondents such as age, gender, academic field of study and race. These details proved to be beneficial in crosstabulations pertaining to the main constructs of the study (service quality, student satisfaction, and brand equity).

4.12. Operationalising of the Research Constructs

Table 4.1 summarises how each of the constructs used in the study were operationalised.

Table 4.1: Operationalising the Research Constructs

CONSTRUCT	QUESTIONS MEASURING CONSTRUCT	PREVIOUSLY VALIDATED BY
Service Quality (Rating)	Section A, Questions 1 to 22.	Cronin and Taylor (1994)
Tangibles (Rating)	Section A, Questions 1 to 4.	Zeithaml et al. (2009:152)
Reliability (Rating)	Section A, Questions 5 to 9.	Zeithaml et al. (2009:152)
Responsiveness (Rating)	Section A, Questions 10 to 13.	Zeithaml et al. (2009:152)

CONSTRUCT	QUESTIONS MEASURING CONSTRUCT	PREVIOUSLY VALIDATED BY
Assurance (Rating)	Section A, Questions 14 to 17.	Zeithaml et al. (2009:152)
Empathy (Rating)	Section A, Questions 18 to 22	Zeithaml et al. (2009:152)
Service Quality (Importance)	Section B, Questions 1 to 22.	Cronin and Taylor (1994)
Tangibles (Importance)	Section B, Questions 1 to 4.	Zeithaml et al. (2009:152)
Reliability (Importance)	Section B, Questions 5 to 9.	Zeithaml et al. (2009:152)
Responsiveness (Importance)	Section B, Questions 10 to 13.	Zeithaml et al. (2009:152)
Assurance (Importance)	Section B, Questions 14 to 17.	Zeithaml et al. (2009:152)
Empathy (Importance)	Section B, Questions 18 to 22	Zeithaml et al. (2009:152)
Brand Equity	Section C, Questions 1 to 25	Aaker (1996) – Four Dimension measure

CONSTRUCT	QUESTIONS MEASURING CONSTRUCT	PREVIOUSLY VALIDATED BY
		“Customer-Based-Brand Equity.”
Perceived Quality, Leadership and Innovation	Section C, Questions 1 to 6.	Aaker (1996)
Awareness	Section C, Questions 7 to 10.	Aaker (1996)
Loyalty	Section C, Questions 11 to 16.	Aaker (1996)
Key Associations and Differentiation	Section C, Questions 17 to 25	Aaker (1996)
OVERALL BRAND EQUITY (OBE)	Section D, Questions 1 to 4.	Yoo and Donthu, (2001); Washburn and Plank, (2002); Tong and Hawley, (2009).
OVERALL STUDENT SATISFACTION (OSS) -1	Section D, Questions 5 to 8.	Yadav (2012).
OVERALL STUDENT SATISFACTION (OSS) -2	Section D, Question D7.	Govender and Ramroop (2012)

CONSTRUCT	QUESTIONS MEASURING CONSTRUCT	PREVIOUSLY VALIDATED BY
OVERALL SERVICE QUALITY (OSQ)	Section D, Questions 9 to 11.	He and Li (2011).

Source: Researcher's summary

4.13. Pre-Testing and Pilot Testing of the Questionnaire

The questionnaire was pre-tested amongst a group of academics who lectured in the marketing field. Some suggestions, mainly in terms of layout and format were provided in order to improve the questionnaire which were taken into account and the requisite changes made. Thereafter, the questionnaire was pilot tested amongst a convenience sample of students. Particular focus was placed on whether the questions were understood and the time taken to complete the questionnaire. Initially 10 minutes were thought to be sufficient in completing the questionnaire, but after the pilot test, it was decided to adjust the duration to 15 minutes.

The questionnaire was also evaluated against the literature and similar questions used in other studies to measure the same or related constructs, which helped in addressing issues such as terminology, question wording and layout in certain places.

4.14. Validity

Validity is concerned with whether a research method is effective in examining or evaluating what it sets out to examine or evaluate (Taylor, Sinha, & Ghoshal, 2006:2). When a research method is valid, any differences in results between individuals, groups, or organisations are deemed to represent true differences in the characteristics being studied (Taylor et al., 2006:2). According to

Uys & Basson (1991:81-83) the following are some of the different types of validity: face, content, construct and concurrent.

4.14.1. Face Validity

Face validity will be high for a question if respondents perceive that it seems to measure that which it should be measuring (Grosse, 2002; Carducci, 2006:43) and is a useful procedure in addressing validity, although it is statistically the weakest. Face validity is a subjective issue (Christmann & Badgett, 2009:118). By simply examining an instrument, a researcher will decide if it is valid. Face validity is assured in this study, since the questionnaire clearly appears to be measuring service quality, student satisfaction and brand equity and their overall measures. This was also confirmed from the pilot test with students and pre-tests with marketing academicians whom had no issues with the measurement of the main constructs used in the study and measuring what these constructs were supposed to measure.

4.14.2. Content Validity

If a questionnaire represents all the components of a variable to be measured, it has content validity (Brink, Van, & Van, 2007:160). Although content validity is more substantial than face validity it is however a comparatively unsophisticated process (Uys & Basson, 1991:81). This type of validity is more applicable to the content of the measuring instrument (questionnaire) to ascertain whether it has addressed the important facets to be studied (Parasuraman, Grewal and Krishnan, 2007:63). Due to the fact that each of the constructs and their components (facets) used in this study have been measured based on the extant literature, content validity can be claimed. For example, SERVPERF (Cronin & Taylor, 1994), Brand equity (Aaker, 1996) and OVERALL STUDENT SATISFACTION (OSS) (Yadav, 2012:115-116; Govender & Ramroop, 2012).

In addition, according to Poutziouris, Smyrnios and Klein (2006), a common approach adopted in measuring content validity is through consulting with experts in the field about the relevance of the measures being used in the questionnaire. This was done through the pre-test conducted amongst academics lecturing and researching in the field of marketing, who had no concerns with the contents of the questionnaire.

4.14.3. Construct Validity

Construct validity in the measurement of a construct can be assured if it can be determined that the measure relates to other measures that are identified in the theory (Engel, Schutt, & Engel, 2010:70). In this study, the main constructs Service Quality, Brand Equity, Student Satisfaction, OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS), and OVERALL BRAND EQUITY (OBE) have been operationalised based on validated instruments as specified in the theory, and also reflected in Table 4.1. pertaining to the operationalisation of the constructs used in the questionnaire above. Thus, construct validity can be claimed for this study.

According to Clow and James (2013:271), in order to have construct validity, a construct needs to have convergent and discriminant validity. Convergent validity is concerned with the correlations between constructs that should be related with each other as based on theory and previous research. In discriminant validity, a particular construct or factor should not correlate strongly with another unrelated construct (Clow, & James, 2013:271).

4.15. Reliability

According to Bailey (1994:72), reliability is a measure of consistency. If a concept's measurement does not change in value with repeated measures, that measurement is deemed to be reliable. Although there are many types of tests to measure reliability such as Test-re-Test techniques, multiple forms, Inter-rater, split-half reliability, this study used the more frequently used test of internal reliability, namely, Cronbach's alpha (Singh, 2007:78),.

Cronbach's alpha essentially measures how effectively a set of variables measure a unidimensional construct. Cronbach alpha values can vary "between 0 and 1", with values above 0.7 being reliable (Andrew, Pedersen, & McEvoy, 2011:202). The Cronbach's alpha values for each of the constructs in this study were above the 0.7 threshold, and where the Cronbach's alpha was lower than 0.7, the contributing variable was removed from the analysis.

4.16. Data Analysis

Data analysis was conducted using SPSS (Version 23) to perform a number of appropriate statistical techniques depending on the research question. In this study, descriptive and inferential statistics were used to analyse the data.

According to Feinberg, Kinnear and Taylor (2008:393) descriptive statistics are concerned with the provision of summary estimates for the data for a given sample and its primary aim is simply to describe the data on hand. The statistics used in descriptive analysis are frequency distributions, averages or means, dispersion and percentage distributions (Crouch & Housden, 2013).

Inferential statistics, on the other hand, attempts to make inferences regarding a given population based on data collected from a given sample, based on the theory of probability (Feinberg et al., 2008:393). Kolb (2008:257) states that inferential statistics go beyond simply describing data and helps to show if a particular hypothesis can be false.

Within the contexts of descriptive and inferential statistics, this study uses a number of statistical analyses to evaluate the data given the number of objectives and hypotheses contained in the study. The theory relating to statistical techniques used in this study are explained hereunder.

4.16.1. Frequency Distributions

A frequency distribution entails arranging values taken by variables in a sample. For a frequency table, for example, each of the entries in the table comprises of the frequencies or counts of values that come about in a particular sample producing a summary of value distributions for that sample (Burns, 2012).

4.16.2. Cluster Analysis

Cluster analysis is concerned with the discovery of groups in a set of data (Everitt, 2011). It involves, through the use of a number of mathematical procedures, determining which items/variables in a data set are alike or related. Each cluster comprises of homogeneous or similar items or variables (Romesburg, 2004:2).

4.16.3. Correlational Analysis

Correlational analysis indicates which variables in a data set are associated with each other. When correlation coefficients are above +0.7 or below -0.7 as a rule of thumb, this is indicative of an increasing association between two variables. The most basic form of correlation is a bivariate correlation between two variables and a multivariate correlation is between more than two variables (Crouch & Housden, 2013:236). Significant correlations or associations are present when $p < 0.05$ i.e. there is a significant relationship between the variables being analysed. In addition, when the Pearson Correlation coefficient is closer to 1, there is a positive correlation and when it is closer to 0, no correlation exists.

4.16.4. Factor Analysis

Factor analysis is conducted in ascertaining the underlying factors that make up service quality and brand equity. Essentially, factor analysis aims to reduce a number of items into a smaller number of factors which explain the variance in the data set. It (i.e. Factor analysis) is a data reduction method (Rogerson, 2014), and through data reduction, a large quantity of variables are reduced to fewer factors/dimensions which is a common type of factor analysis called exploratory factor analysis (EFA) (Bhattacharyya, 2006:296). When interpreting the output of the factor analysis procedure, the undermentioned are important considerations.

The Kaiser-Meyer-Olkin (KMO) test of sampling adequacy can have a statistic between 0 and 1 (Munro, 2005:336), and the closer the outcome is to 1, the more appropriate the use of factor analysis will be, and vice versa. The KMO statistic for the 22-item Service Quality construct and 25-item Brand Equity construct was closer to 1, indicating the suitability of factor analysis.

In addition, the Bartlett's test (Walker & Maddan, 2009:329) was conducted. The test result is significant, implying that the variables under study are indeed related, if the p value is < 0.05 . In the case of this study's constructs, the test result was significant; hence, the data satisfied another requirement to justify the use of a factor analysis. Oblique rotation was also used, as opposed to orthogonal rotation, as it was believed that the factors were related with each other (Brown, 2014:27-28).

In addition, the variables whose factor loadings were below 0.4, or if they loaded significantly on two or more factors were removed (Ehrmann, 2013:117) from the analysis. In this way, convergent and discriminant validity were maintained. The cut-off factor loading used in this study was 0.4.

4.16.5. Confirmatory Factor Analysis (CFA)

In the Confirmatory Factor Analysis (CFA) process, an assessment is made as to whether the hypothesised model fits the data, or whether there exists an association between the observed variables and their related fundamental latent or unobserved constructs (Child, 1990 cited in (Holtzman, n.d.)). In addition, the CFA is helpful in confirming that all the variables or items are correctly associated with the right aspects of the construct under measurement (Holtzman, n.d.:2).

According to (Holtzman, n.d.:2, in running a CFA, a number of steps need to be followed. It is important that a model be specified on which basis data needs to be obtained to test the model. Furthermore, it is important that a minimum of three variables or items are allocated to each factor or dimension for the factor to be strong, but it is regularly tolerable for a model to comprise of, as a maximum, one such dimension or factor (Anderson & Rubin, 1956 cited in Holtzman, n.d.:2). However, “if there are two or more correlated factors, two variables per factor can be sufficient” (Hancock & Mueller, 2010:106). In addition, the sample for a CFA, there must be a large sample and the rule of thumb is 10 individuals for each variable measuring the construct. (Everitt, 1975 cited in Holtzman, n.d.:2). Normality is also an important requirement and Kline (2005) cited in Harrington (2009) suggests that variables having absolute values of greater than 3 for the skew index and absolute values of greater than 10 for the kurtosis index indicate normality problems.

Finally, the data need to be examined for outliers, no missing data, a multivariate normal distribution and colinearity after which the CFA can be run. It is also important in a CFA analysis to evaluate model fit (Holtzman, n.d.:2).

In conducting a CFA, there are many fit statistics that need to be taken into account indicating whether the model shows an acceptable fit with the data. A chi-square test illustrates the extent of difference between the observed and expected covariance matrices. A chi-square value closer to 0 and an associated p value more than 0.05 is indicative of a small difference between the observed and expected covariance matrices and is an indicator of good model fit, but can be problematical

as this test can be sensitive to sample size (Joreskog, 1969 cited in Holtzman, n.d.:2). Hence, other fit statistics are consulted in determining model fit.

Holtzman (n.d:3) provides guidance on the fit statistics for CFA as hereunder. The Root Mean Square Error of Approximation (RMSEA) relates to the model's residuals. Values for RMSEA have a range of zero to one and a smaller RMSEA value showing a better fit. An RMSEA value of 0.06 or lower indicates good model fit (Hu & Bentler, 1999), although a value of 0.08 or lower is regularly deemed to be adequate (Browne & Cudeck,1993). Comparative Fit Index (CFI) evaluates overall enhancement of a suggested model against an independence model when the observed variables are not correlated (Byrne, 2006). CFI values are found between zero to one and higher values representing improved model fit. An adequate model fit value for CFI is 0.90 or higher (Hu & Bentler, 1999). Other common model fit indicators are The Normed Fit Index (NFI) and Nonnormed fit index (NNFI) (Bentler & Bonett, 1980). For these indices, a better model fit is brought about with larger values and values higher than 0.90 are deemed to be tolerable (Holtzman, n.d.:3). According to Ong and Van (2007:63) the Goodness-of-Fit Index (GFI) shows the percentage of available variance/co-variance in the dataset explained by the model and cite Bentler and Bonnett (1980) who recommend that the value for GFI should be at minimum 0.9 for acceptable model fit. For Adjusted Goodness-of-Fit Index (AGFI), Kats (2013:103) cites Hooper et al. (2008) who recommends that the value for this index should be greater than or equal to 0.9 for an acceptable model fit. According to Hooper et al. (2008) cited in Fields and Atiku (2015:288) the advice provided is that if at least four indices are good, a good model fit can be concluded.

A summary of model fit indices appears in Table 4.2.

Table 4.2: Model Fit Index Thresholds

Measure	Threshold
Chi-square/df (cmin/df)	< 3 good; < 5 sometimes permissible
p-value for the model	> .05
CFI	> .95 great; > .90 traditional; > .80 sometimes permissible
GFI	> .95
AGFI	> .80
SRMR	< .09
RMSEA	< .05 good; .05 - .10 moderate; > .10 bad
PCLOSE	> .05

Source: Hu and Bentler (1999) in Statwiki (n.d.)

It is also important to assess the model constructs for convergent and discriminant validity (Statwiki, n.d.). Convergent validity is commonly assessed through the calculation of average variance extracted (AVE). When AVE is less than 0.5, it is considered to be insufficient (Esposito, 2010:696) and therefore no convergent validity exists.

Discriminant validity is described as “the dissimilarity in the measurement tool’s measurement of different constructs” (Esposito, 2010:696). “A necessary condition for discriminant validity is that the shared variance between the latent variable and its indicators should be larger than the variance shared with other latent variables” (Hulland 1999:199) cited in Esposito (2010:696). Fornell and Larcker (1981:46) cited in Esposito (2010:696) contend that if a latent variables AVE is greater than the shared variances (i.e. “the squared correlations”), of the latent variable (or construct) with other constructs within the model, discriminant validity exists for that construct. Also, when maximum shared variance (MSV) is less than AVE, discriminant validity is confirmed (Gaskin, 2013 cited in Tsiakis, 2015:284). In addition, for discriminant validity to be confirmed, average shared variance (ASV) must be less than AVE (Hair et al., 2009 cited in Ernst, 2015:38).

4.16.6. Structural Equation Modelling (SEM)

In structural equation modelling, a number of models are used to show relationships between observed variables with the objective of testing a hypothesised theoretical model. A number of theoretical models can be tested using structural equation modelling that hypothesise variables that define constructs and show relationships between such constructs. In structural equation modelling, a theoretical model is developed and through analysis of the sample data, the researcher is able to determine whether the hypothesised theoretical model is supported by the sample observed data or not (Schumacker & Lomax, 2010:2).

4.16.7. The Mann-Whitney U Test

The “Mann-Whitney U test is a non-parametric equivalent” to “the independent samples t-test”, which compares the means of two independent samples with the data being at least ordinal in nature (Black, 2012:692). It (Mann-Whitney U test) “is used to test the hypothesis that two population distributions are identical” (Kirk, 2008:502). The basic procedure in the Mann-Whitney U test entails the mixture of all scores in both groups and then ranking them and if “no difference” “exists between the two groups” “the scores from both groups will be intermixed within the entire rank order” (Carver & Nash, 2009:250) and the “null hypothesis that there is no difference between the two groups is” accepted.

4.16.8. The Kruskal Wallis Test

The “Kruskal Wallis test is a non-parametric test” that compares more than two unrelated or independent samples and is the “non-parametric equivalent” to the parametric “one-way analysis of variance” (ANOVA) test (Foreman & Corder, 2013:6). It (the Kruskal Wallis test) tries to ascertain if the median values between two or more groups are different (Plichta & Garzon, 2009:195).

4.16.9. Paired Sample T-Test

Paired-sample t-tests are used when two different sets of responses are compared from a respondent (Clow, & James, 2014:412). The test is used for non-independent or a sample that is

non-exclusive (Hyman & Sierra, 2010). If the p value in a paired-sample t-test is significant (i.e. $p < 0.05$), the null hypothesis (i.e. the means from the two different responses are not different) is rejected with the conclusion that the means of the two responses from an individual are different.

4.16.10. Multiple Regression Analysis

In multiple regression, two or more independent variables are used in predicting the value of an outcome or dependent variable (Statistics Laerd, 2013). According to Malhotra (2007:552), multiple regression is a statistical method that simultaneously shows how a set of independent variables relate to an interval-scaled dependent variable mathematically. It (multiple regression) involves estimating a multiple linear regression equation, which provides a summary of the relationship between a group of predictors (independent variables) to an observed criterion and can be used for description, prediction and the testing of theory (Weiner, 2003:484).

In order to conduct the multiple regression tests, the following assumptions are recommended by Statistics Laerd (2013):

1. The dependent variable must be continuous (i.e. measured as an interval or ratio variable).
2. The independent or predictor variables could be continuous or categorical (i.e. ordinal or nominal).
3. There must be independence of observation.
4. Data should show homoscedasticity wherein the variance along the best fit line remains similar along the line.
5. The association between independent and dependent variables must be linear. This can be determined through a simple scatterplot.
6. The data must be free of multicollinearity wherein two or more independent variables are highly correlated resulting in confusion as to which independent variable contributes to the variance in the dependent variable.
7. No significant outliers should exist.

8. Residuals (errors) should approximate a normal distribution.

The output of multiple regression analysis provides a model summary, an ANOVA table and a table of Coefficients. The model summary shows “how well the model fits the data”. In the model summary, the “R square” value is indicative of the amount of variance in the dependent variable which is explained by the independent or predictor variables. The F value in the ANOVA table and the corresponding significance or p value are indicative of whether the model fits the data well i.e. whether the model is a good fit? If the significance value is less than 0.05 then the model is significant and vice versa. The final output represented by the Coefficients Table, indicates whether the independent or predictor values in the equation significantly predict the dependent variable, with corresponding significance or p values less than 0.05, showing a significant prediction or relationship and vice versa (Statistics Laerd, 2013).

In view of the aforementioned theory pertaining to statistical analysis, the next section discusses the application and appropriateness of the statistical analysis method to each research objective in the study.

4.17. Analysis of Each Research Objective

4.17.1. To evaluate service quality, student satisfaction and brand equity at select South African universities.

This objective is addressed using descriptive analysis. With respect to service quality, for example, for each of the dimensions – Assurance, Empathy, Tangibles, Responsiveness and Reliability, basic mean scores are computed with higher mean scores indicating more positive attitudes/perceptions and vice versa.

Regarding Brand Equity, for each of the dimensions or factors – Loyalty, Key Associations and Differentiation, Awareness and Perceived Quality, mean scores are computed with higher mean scores indicating more favourable attitudes/perceptions for the construct.

For the construct OVERALL STUDENT SATISFACTION (OSS), the score awarded for each of the questions was added and converted into an average score for the construct with a higher

average/mean indicating a more favourable perception/attitude towards the construct. For the one variable measure of OVERALL STUDENT SATISFACTION (OSS), the score for the variable itself represents an overall measure of student satisfaction with a higher score indicating higher satisfaction and a lower score indicating lower satisfaction.

Data analysis also takes the form of frequency distributions depicted through graphs and reported in tables. In addition, given the fact that demographic data was also collected, the aforementioned descriptive analyses included crosstabulations between and among the demographic data collected. Cluster analyses are also conducted.

4.17.2. To determine and analyse the importance placed on explanatory factors/ dimensions of service quality at select South African universities.

The above research objective is addressed mainly using descriptive analysis through the use of data presented in tables and graphs. The importance scores for each service quality dimension are based on a 7-point Likert scale with lower scores indicating lower importance whilst higher scores indicating higher importance.

For each dimension of service quality, the average score is shown for the ‘importance’ of that dimension. In addition, these ‘importance’ scores for each service quality dimension are compared to the actual mean rating for that dimension in order to determine if there are any gaps between the scores.

In addition, cluster analysis is conducted which helps to show how the ‘importance’ scores for each service quality dimension is associated with certain demographic factors such as gender, race, discipline and age. Cluster analysis is a useful technique in determining associations in the data and is an important data mining technique in revealing patterns, trends and relationships in the data (Albright, Winston, & Zappe (2009:145-146).

4.17.3. To determine the key explanatory factors for service quality and brand equity as perceived by students at select South African universities.

In addressing this objective, an exploratory factor analysis was conducted to reduce the total number of variables for both the service quality and brand equity constructs into a few factors or dimensions.

In addition, a confirmatory factor analysis (CFA) was conducted to determine the key factors or dimensions for service quality using the SERVPERF model and for brand equity using Aaker;s (1996) brand equity model and determining how similar or different the new models for each of these constructs are, based on CFA model fit, as compared to their original theoretical models.

4.17.4. To evaluate the predictive relationships between service quality, student satisfaction and brand equity (including their overall measures); also including the predictive relationships between their constituent factors/dimensions at select South African universities.

The data, in response to the above objective, was analysed through the use of multiple regression. The independent variables are service quality dimensions and the dependent variables are OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) AND OVERALL BRAND EQUITY (OBE). Hence, the predictor or explanatory variables will be the dimensions of service quality, namely, Tangibles, Assurance, Responsiveness, Reliability and Empathy. The predictor dimensions for OVERALL BRAND EQUITY (OBE) will be Perceived Quality and Innovation, Awareness, Loyalty and Key Associations and Differentiation.

In addressing this objective 4 of the study, the multiple regression analysis will be able to provide information regarding the strongest predictor variables for OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) AND OVERALL BRAND EQUITY (OBE). Structural Equation Modelling (SEM) is used to show the relationships between OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) and OVERALL BRAND EQUITY (OBE).

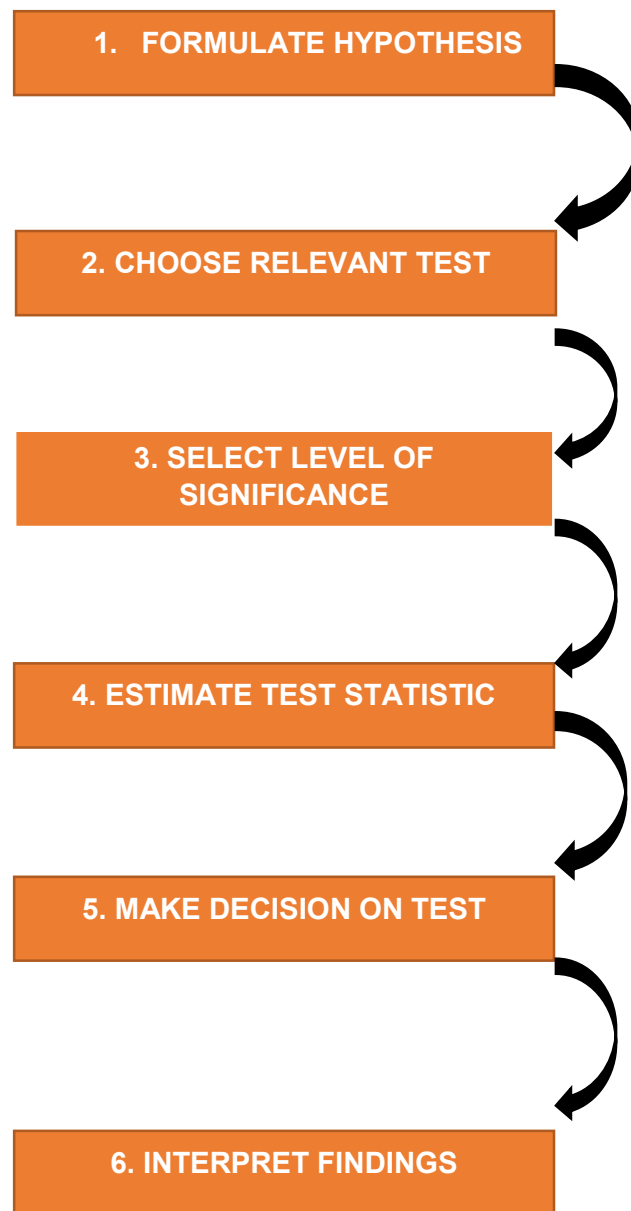
In addition, the Service Quality and Brand Equity models generated from the CFA will be tested in a structural relationship (using Structural Equation Modelling) together with OVERALL STUDENT SATISFACTION (OSS) to determine whether these constructs are significantly associated or not.

The research objectives of the study give rise to the research hypotheses, which are addressed in the next section.

4.18. The Hypothesis Testing Process

According to Le and Corbett (2009:87), “a hypothesis is a testable statement of relationship derived from a theory” and must be testable, specifies the nature of the relationship between the variables and is derived from a theoretical context. In testing hypotheses, certain steps need to be followed as depicted in Figure 4.1.

Figure 4.1: Steps in the testing of a Hypothesis



Source: Adapted from Sarstedt & Mooi (2014:144)

The hypothesis testing process commences with the setting of a null and alternative hypothesis. A null hypothesis (H_0) indicates no effect or difference in a statement whilst the alternative

hypothesis (H1) is a statement where the researcher expects some difference (Sarstedt, & Mooi, 2014:144).

In choosing the level of significance, some level of uncertainty needs to be accepted. Usually, researchers will estimate that there is a 5% probability of error or uncertainty that could result in an incorrect decision based on the test results. There are two types of errors that can manifest – “type I” and “type II errors”. “A type I error is when the researcher rejects a null hypothesis that is correct and a type II error is when a researcher fails to reject a null hypothesis that is false” (Sarstedt & Mooi, 2014:144).

In the calculation of the test statistic, the researcher will use a test statistic value in determining if the null hypothesis should be accepted or rejected. For each hypothesis, a specific test statistic will be applicable (Hanneman, Kposowa, & Riddle, 2013:255).

In making a decision about the null hypothesis and interpreting the finding, the value of the test statistic is taken into account. A p value or probability value is used to make a decision. This p value will vary between 0 and 1 and cannot be a negative value. The decision is based on comparing the p value with the appropriate level of significance set in step 3 of the hypothesis setting process. With a p value less than 5% ($p < 0.05$), the result is termed significant by rejecting the null hypothesis and accepting the alternative hypothesis, and vice-versa, if the p value is greater than 5% ($p > 0.05$) (Privitera, 2014:236).

The next section explains how the hypotheses in the study will be tested.

4.18.1. Techniques used to test the Hypotheses

Table 4.3 reflects the techniques that were used to address the hypotheses formulated in this study.

Table 4.3: Data Analysis Pertaining to Each Hypothesis

HYPOTHESIS	HOW TESTED
<p>H1: Tangibles, Reliability, Responsiveness, Assurance and Empathy have a significant positive effect on OVERALL SERVICE QUALITY (OSQ).</p>	<p>Multiple Regression</p>
<p>H2: Service quality and its dimensions (Tangibles, Reliability, Responsiveness, Assurance and Empathy) have a significant positive effect on OVERALL STUDENT SATISFACTION (OSS).</p>	<p>Multiple Regression.</p>
<p>H3: The brand equity dimensions have a significant positive effect on OVERALL BRAND EQUITY (OBE).</p>	<p>Multiple Regression.</p>
<p>H4: Service quality dimensions have a significant positive effect on OVERALL BRAND EQUITY (OBE).</p>	<p>Multiple Regression.</p>
<p>H5: Service quality dimensions have a significant positive effect on the significant predictor dimensions of OVERALL BRAND EQUITY (OBE).</p>	<p>Multiple Regression.</p>

HYPOTHESIS	HOW TESTED
H6: OVERALL SERVICE QUALITY is a significant and positive predictor of OVERALL BRAND EQUITY (OBE).	Multiple Regression..
H7: OVERALL STUDENT SATISFACTION (OSS) is a significant and positive predictor of OVERALL BRAND EQUITY (OBE).	Multiple Regression..
H8: Service Quality(SQ), OVERALL STUDENT SATISFACTION (OSS) and Brand Equity(BE) are significantly associated.	Structural Equation Modelling.

4.19. Conclusion

This chapter explained the research methodology used in the study. Important issues such as the reserarch design, sampling, data collection method, questionnaire design, measurement of the constructs, and issues pertaining to the data analysis were addressed.

The study uses a descriptive quantitative research design. This is considered to be appropriate due to the fact that the objectives require description and the testing of hypotheses.

Data is collected using a structured questionnaire that was designed based on validated scales as reported in the literature. The questionnaire employed is based on a 7-point Likert scale with higher scores reflecting higher levels of agreement and vice versa. The operationalisation of the study constructs – Service Quality, OVERALL STUDENT SATISFACTION (OSS), Brand Equity,

OVERALL SERVICE QUALITY (OSQ) and OVERALL BRAND EQUITY (OBE) are addressed by specific questions in the questionnaire.

Analysis of the data is in line with the study objectives and hypotheses and descriptive and inferential statistics are considered to be appropriate in the data analysis.

The next chapter, Chapter five, addresses the findings of the study.

CHAPTER FIVE

RESEARCH FINDINGS

5.1. Introduction

This chapter, which reports the research findings using the methodology reported in the previous chapter, is divided into four sections in line with the objectives of the study. The first section provides descriptive analyses of the main study constructs, Service Quality, Student Satisfaction, and Brand Equity as well as the demographic-related information collected. The second section reports, through a descriptive analysis, the importance placed on service quality and its dimensions by the respondents. These importance ratings are compared with the actual ratings, through paired sample T-Tests for each service quality dimension, to determine whether there are negative gaps. In addition, service quality and brand equity are analysed based on factor analyses and Confirmatory Factor Analyses (CFA) to determine their underlying key factors. Finally, a series of inferential statistics will be conducted to show relationships between Service Quality dimensions, OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS), Brand Equity dimensions and OVERALL BRAND EQUITY (OBE) through the use of multiple regression analyses and structural equation modelling (SEM).

5.2. Demographic Profile of Respondents

Table 5.1: Age of Respondents

Age of Respondents		
Mean	Unweighted Count	Valid N
20.43	400	398

Table 5.1 shows that the average age of students who participated in this study was 20.43 years. According to Table 5.2, a greater number of participants in this study were female (64.7%) as compared to males (35.3%).

Table 5.2: Gender Distribution of Respondents

Gender	Count	Unweighted Count	Table N %
Male	141	141	35.3%
Female	258	258	64.7%
Total	399	399	100.0%

Table 5.3 which reports the subject distribution amongst the participants reveals that the majority (66%) of students came from Commercial backgrounds, whilst the balance were equally distributed between Science (16.7%) and Humanities (16.7%) students. The reason for the higher percentage of Commerce students being more prevalent in the sample was that one of the campuses had mainly Commerce students.

Table 5.3: Academic Fields of Study

		Count	Table N %
Academic Fields	COMMERCIAL SUBJECTS	251	66.6%
	SCIENCE SUBJECTS	63	16.7%
	HUMANITIES SUBJECTS	63	16.7%
	Total	377	100.0%

According to Table 5.4, the majority of the sample (92.2%) comprised Black students with the smallest group (1.6%) made up of White students.

Table 5.4: Racial Profile

Race	Count	Unweighted Count	Table N %
Black	354	354	92.2%
White	6	6	1.6%
Indian	14	14	3.6%
Coloured	10	10	2.6%
Other	0	0	0.0%
Total	384	384	100.0%

All the findings hereunder specifically relate to the sample studied as is made up of the respondent demographic profile described above.

5.3. Descriptive Analysis

A descriptive analysis will be undertaken hereunder. The findings pertaining to this analysis evaluates the key constructs under study, which are Service Quality, Student Satisfaction and Brand Equity. This analysis specifically relates to **objective one** of the study.

5.4. Reliability

All the research constructs were subject to reliability analysis using a Cronbach’s Alpha test; the results of which are reflected in Table 5. Where reliability scores were low, the appropriate questions/items were deleted from the analysis, as indicated in Table 5.5, to improve overall reliability. Based on the information provided in the table, all service quality-related constructs were reliably measured.

Table 5.5 Reliability Scores of the Constructs

Variables and Constructs	Cronbach’s Alpha	Number of Items	Question Numbers in Questionnaire
Service Quality	.928	22	Section A - 1 to 22
Tangibles	.709	4	Section A - 1 to 4
Reliability	.829	5	Section A - 5 to 9
Responsiveness	.777	4	Section A - 10 to 13
Assurance	.830	4	Section A - 14 to 17
Empathy	.728	5	Section A - 18 to 22
OVERALL SERVICE QUALITY (OSQ)	.910	3	Section D - 9 to 11

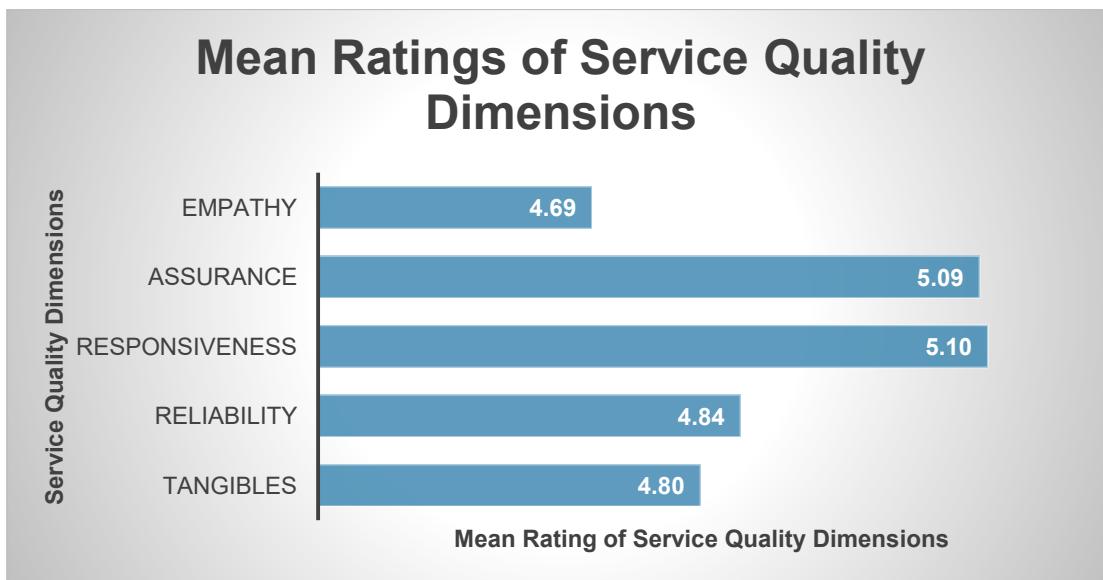
Variables and Constructs	Cronbach's Alpha	Number of Items	Question Numbers in Questionnaire
OVERALL SERVICE QUALITY (OSQ)	Cannot compute for one Variable.	1	D7
Service Quality Importance	.953	20 (2 items deleted)	Section B - 1 to 22 (excluding 3 and 4)
Tangibles Importance	.773	3 (Deleted 1 (no.3))	Section B -1, 2 4
Reliability Importance	.886	5	Section B - 5 to 9
Responsiveness Importance	.854	4	Section B -10 to 13
Assurance Importance	.847	4	Section B -14 to 17
Empathy Importance	.878	5	Section B - 18 to 22
OVERALL STUDENT SATISFACTION (OSS)	.893	4	Section D - 5 to 8
OVERALL STUDENT SATISFACTION (OSS) – D7	Cannot Compute Alpha for one Variable	1	D7
OVERALL BRAND EQUITY (OBE)	.848	4	Section D - 1 to 4
Brand Equity	.928	25	Section C - 1 to 25
Perceived Service Quality and Innovation	.813	5 (Deleted 1 (no.4))	Section C -1,2,3,5 and 6
Awareness	.808	4	Section C - 7 to 10
Loyalty	.852	6	Section C - 11 to 16

Variables and Constructs	Cronbach's Alpha	Number of Items	Question Numbers in Questionnaire
Associations/Image	.904	9	Section C -18 to 25

5.5. Descriptive Statistics for Service Quality

Service quality was analysed based on means, correlations and cluster analyses, which are presented hereunder. Figure 5.1 which shows the mean ratings for each of the service quality dimensions reveals that the participants rated Responsiveness the highest (mean=5.10), and Empathy the lowest (mean=4.69). A value of 3.5 would be deemed an average value or the halfway point as a 7-point scale was used. Therefore, the mean student ratings for each of the service quality dimensions would be deemed to be above average.

Figure 5.1: Means for Each Service Quality Dimension Rating



Apart from understanding the mean values of the service quality dimensions, it is also important to understand the specific variables within each dimension and which of these variables were most strongly associated with that particular dimension. Consequently, Table 5.6 shows the variables that are contained within each dimension that have the highest correlations with that dimension.

Table 5.6: Correlation between the Rating of Service Quality Dimensions and their Related Variables

Service Quality Dimension	Highest Positive Correlation With
Responsiveness	Willingness to Help ($r=0.827$, $p<0.001$, $N=396$)
Assurance	Feeling safe in transacting ... ($r=0.827$, $p<0.001$, $N=395$)
Reliability	Providing the service at promised time ($r=0.843$, $p<0.001$, $N=395$)
Tangibles	State of equipment ($r=0.799$, $p<0.001$, $N=395$)
Empathy	Personal attention provided... ($r=0.816$, $p<0.001$, $N=392$)

Based on information in Table 5.6, the Pearson’s correlation analysis was conducted between the service quality dimensions and their related variables. For each service quality dimension, correlations with their most important variables is reported in table 5.6. “Willingness to help” is strongly correlated with Responsiveness ($r=0.827$, $p<0.001$), “Feeling safe in transacting with the institution” is strongly correlated with Assurance ($r=0.827$, $p<0.001$), “Providing the service at the promised time” is strongly correlated with Reliability ($r=0.843$, $p<0.001$), “State of equipment” is strongly correlated with Tangibles ($r=0.799$, $p<0.001$), and “the Provision of personal attention” is strongly correlated with Empathy ($r=0.816$, $p<0.001$). Hence, helpfulness of staff, safety on campus, punctuality, good equipment such as computer facilities, and providing personal one-on-one attention had the strongest relationships with their respective service quality dimensions and emerge as the strongest variables in the rating of service quality.

The aforementioned service quality dimensions were further analysed using cluster analysis in order to determine the demographic profiles, which were associated with specific ratings for each of the service quality dimensions. Table 5.7 reveals a four-cluster solution, combining service quality dimensions and demographic categories.

Table 5.7: Cluster Analysis Based on Service Quality Dimensions and Demographic Factors

Cluster	3	4	1	2
Label	High Responsiveness, ...	High Responsiveness	High Tangible's Rating	High Assurance
Description	Low Empathy	Low Tangibles	Low Empathy	Low Empathy
Size	36.9% (133)	23.9% (86)	20.3% (73)	18.9% (68)
Inputs	Gender Female (100.0%)	Gender Male (98.8%)	Gender Male (52.1%)	Gender Female (100.0%)
	Academic Fields COMMERCIAL SUBJECTS (100.0%)	Academic Fields COMMERCIAL SUBJECTS (59.3%)	Academic Fields COMMERCIAL SUBJECTS (80.8%)	Academic Fields SCIENCE SUBJECTS (58.8%)
	RESPONSIVENESS 5.51	RESPONSIVENESS 5.77	RESPONSIVENESS 3.60	RESPONSIVENESS 5.03
	ASSURANCE 5.49	ASSURANCE 5.66	ASSURANCE 3.72	ASSURANCE 5.06
	RELIABILITY 5.21	RELIABILITY 5.48	RELIABILITY 3.40	RELIABILITY 4.98
	EMPATHY 4.94	EMPATHY 5.50	EMPATHY 3.22	EMPATHY 4.78
	TANGIBLES 5.05	TANGIBLES 5.16	TANGIBLES 3.86	TANGIBLES 4.97
	Race Black (99.2%)	Race Black (90.7%)	Race Black (74.0%)	Race Black (98.5%)
	Age 20.04	Age 21.17	Age 20.47	Age 20.04

Based on the cluster analysis results in Table 5.7, the sample can be divided into four clusters. The largest cluster (36.9%) labelled cluster 3 comprises mainly Black females doing Commercial subjects with an average age of 20.04 years. They rate Responsiveness the highest (mean=5.51), and Empathy the lowest (mean=4.94). Therefore, with cluster 3, more emphasis needs to be placed on improving Empathy, which could contribute towards improving service quality.

The second largest cluster (23.9%) labelled as cluster 4, has slightly higher ratings than the largest cluster for all the service quality dimensions, and even higher than the other clusters, suggesting that this is the cluster that is most satisfied with the service quality provided by the Higher Education Institution (HEI). This cluster rates Responsiveness as the highest (mean=5.77) and

Tangibles as the lowest (mean=5.16). It is also, by comparison, a cluster with an average age of 21.17, which is higher than that of the other clusters. In the main, this cluster comprises Black males studying Commercial subjects. Therefore, with more emphasis on trying to improve on Tangibles, service quality could be improved with cluster 4.

The third largest cluster, labelled as cluster 1, comprising 20.3%, is mainly made up of Black male students doing Commercial subjects. This cluster has an overall rating of the service quality dimensions, which is lower than all the other clusters. They rate Tangibles the highest (mean=3.86) and Empathy the lowest (mean=3.22). Again, as is the case with cluster 3, the Empathy dimension of service quality needs to be improved on for this cluster.

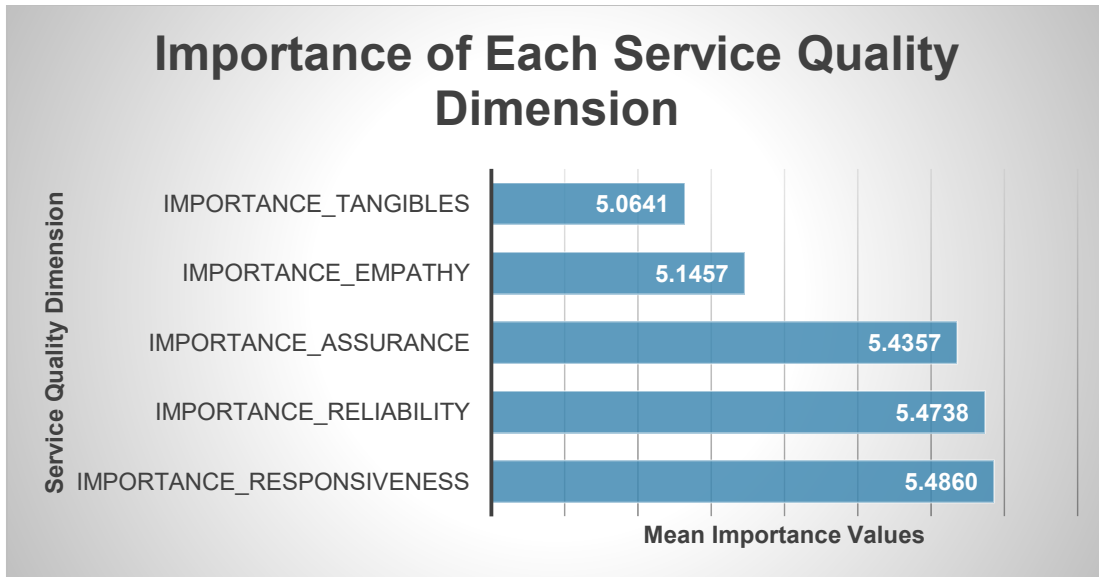
The smallest cluster (18.9%) labelled as cluster 2, comprises mainly Black females studying Science subjects who rate Assurance the highest (mean=5.06) and Empathy the lowest (mean=4.78), implying that with improvements in the Empathy dimension, service quality can be improved for this cluster.

Overall, though, **Empathy ratings for three out of the four clusters in the model have the lowest ratings** whilst cluster 4 has the lowest ratings for Tangibles. **Hence, Empathy and Tangibles should be dimensions of service quality that could be improved on.**

5.6. Descriptive Statistics for Importance of Service Quality Dimensions

Understanding which service quality dimensions the students place importance on could help Higher education Institutions (HEIs) to focus on such areas, to improve the quality of the service offering. This analysis is specifically related to **objective two** of the study. Figure 5.2 provides the importance ratings for each of the service quality dimensions.

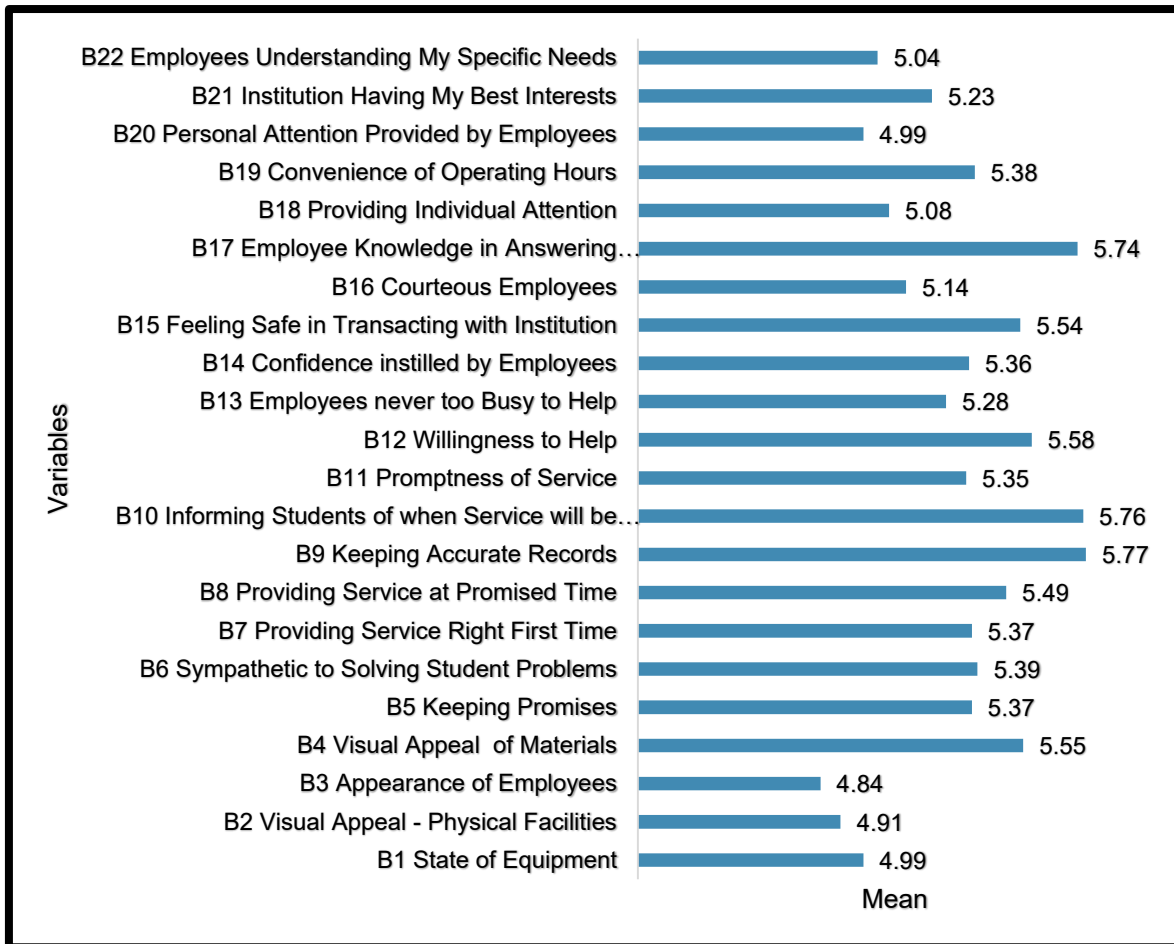
Figure 5.2: Importance Placed on Service Quality Dimensions



It is evident from Figure 5.2 that Responsiveness (mean=5.49) is rated as the most important dimension, whilst Tangibles is perceived to have the lowest importance (mean=5.06). However, the importance placed on Responsiveness is only slightly higher than Reliability (mean=5.47), and Assurance (mean=5.44), suggesting that student respondents place similar importance on these service quality dimensions.

To obtain a more detailed understanding of the specific variables that have the highest importance ratings, Figure 5.3 shows the mean importance ratings for each variable.

Figure 5.3: Mean Importance Ratings for Each Service Quality Variable



From Figure 5.3 it may be deduced that the most important Tangibles-related variable was the “Visual appeal of materials” (mean=5.55). For Reliability, the importance was placed on the variable “Keeping accurate records” (mean=5.77). With regard to Responsiveness, the highest importance was placed on “Informing students of when the service will be performed” (mean=5.76). For Assurance, the highest importance was placed on “Employee knowledge in answering questions” (mean=5.74). Empathy had the highest importance placed on the variable “Convenience of operating hours” (mean=5.38). Overall however, the five most important service quality dimensions to students are, in order of importance:

- a. Keeping accurate records (Reliability dimension).
- b. Informing students when the service will be performed (Responsiveness dimension).

- c. Employee knowledge in answering questions (Assurance dimension).
- d. Willingness to help (Responsiveness).
- e. Feeling safe in transacting with the institution (Assurance dimension).

Correlational analysis was conducted in order to determine the variables most strongly associated with the importance placed on each service quality dimension. The results of this analysis are presented in Table 5.8.

Table 5.8: Positive Correlations between the Importance Rating of Service Quality Dimensions and their Related Variables

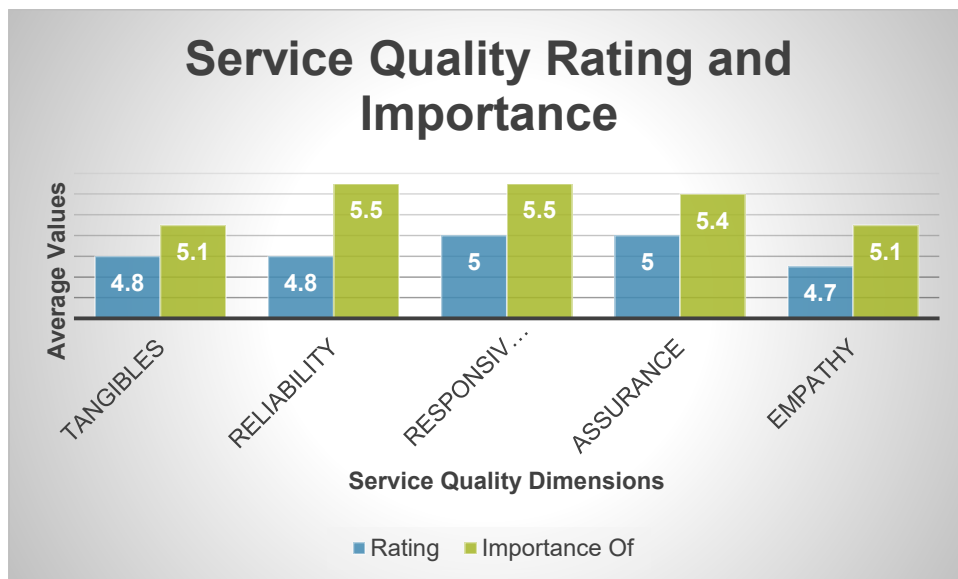
Service Quality Dimension Importance	Highest Positive Correlation With
Responsiveness Importance	Promptness of service (r=0.855, p<0.001, N=395)
Assurance	Feeling safe in transacting ... (r=0.857, p<0.001, N=397)
Reliability	Providing the service right the first time (r=0.888, p<0.001, N=397)
Tangibles Importance	Visual appeal of physical facilities (r=0.811, p<0.001, N=383)
Empathy	Institution having my best interests (r=0.865, p<0.001, N=393)

Table 5.8, which shows the Pearson’s correlations for the perceived importance of each service quality dimension and its most strongly correlated variable reveals that the most strongly correlated variable with Responsiveness is “Promptness of the service” (r=0.855, p<0.001, N=395); Assurance most strongly correlates with “Feeling safe in transacting with the institution” (r=0.857, p<0.001, N=397); Reliability most strongly correlates with “Providing the service right the first time” (r=0.888, p<0.001, N=397); Tangibles most strongly correlates with “Visual appeal of physical facilities” (r=0.811, p<0.001, N=383); and Empathy most strongly correlates with “Institution having my best interests” (r=0.865, p<0.001, N=393). The implication of these

findings could suggest that higher education marketers need to focus more on these areas of importance to improve their service quality to students.

By comparing the actual service quality dimension ratings with the importance placed on each service quality dimension, the ‘gap’ becomes apparent, particularly negative gaps that should be addressed to improve service quality. Figure 5.4 shows the gaps between actual service quality ratings and the importance ratings.

Figure 5.4: Comparing Service Quality Importance Ratings with Actual Ratings for Each Service Quality Dimension



As depicted in Figure 5.4, there are gaps between the importance ratings of service quality and the actual ratings for each dimension. It is also evident that for all the dimensions of service quality, the importance ratings are higher than the actual ratings.

To determine if the gaps are significant, a paired samples t-test was conducted and the results thereof reported in Table 5.9.

Table 5.9: Paired Samples T-Test between Actual Rating and Importance Rating for Each Service Quality Dimension

		Paired Differences			t	Df	Sig. (2-tailed)	Gap Rating
		Mean	Std. Deviation	Std. Error Mean				
Pair 1	IMPORTANCE_Tangibles - Tangibles	.26358	1.21410	.06078	4.336	398	.000	Smallest Gap
Pair 2	IMPORTANCE_Reliability - Reliability	.63342	1.34964	.06748	9.386	399	.000	Largest Gap
Pair 3	IMPORTANCE_Responsiveness - Responsiveness	.38701	1.34629	.06740	5.742	398	.000	Third Largest Gap
Pair 4	IMPORTANCE_Assurance - Assurance	.34921	1.24291	.06222	5.612	398	.000	Second Smallest Gap
Pair 5	IMPORTANCE_Empathy - Empathy	.46086	1.42256	.07122	6.471	398	.000	Second Largest Gap

The paired sample t-test for each Service Quality dimension in the Table 5.9 confirms that the gaps between the importance ratings and actual ratings of each service quality dimension are statistically significant, with $p < 0.005$ for each dimension. The most significant negative gaps pertain to Reliability and Empathy (highlighted in red) meaning that significant improvement is needed in these areas in order to enhance service quality.

It was also considered prudent to undertake an analysis to determine the gaps between the ratings of the service quality variables for each dimension and their importance ratings. This analysis was conducted through a paired samples t-test for each of the variables within the specific service quality dimensions hereunder. Important gaps are highlighted in yellow (negative gaps) and green (positive gaps).

According to Table 5.10 (Tangibles Dimension), the largest and most significant negative gaps exist for “state of equipment” and “visual appeal of physical facilities” ($p < 0.05$). However, there is a significant positive gap for “appearance of employees” ($P < 0.05$). This means that there may be too much focus on something that is relatively unimportant.

Table 5.10: Paired Samples T-Test for Variables within the Tangible’s Dimension

Paired Samples Test: Tangibles

TANGIBLE VARIABLES	Paired Differences			T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Pair 1 A1 State of Equipment - B1 State of Equipment	-.814	1.785	.090	-9.028	391	.000
Pair 2 A2 Visual Appeal - Physical Facilities - B2 Visual Appeal - Physical Facilities	-.530	1.763	.093	-5.724	361	.000
Pair 3 A3 Appearance of Employees - B3 Appearance of Employees	.367	1.774	.091	4.024	378	.000
Pair 4 A4 Visual Appeal of Materials - B4 Visual Appeal of Materials	-.065	1.553	.079	-.818	386	.414

According to Table 5.11 (Reliability Dimension), the largest and most significant negative gaps exist for “providing the service at the promised time”, “providing the service at the right time”, “sympathetic to solving student problems” and “keeping promises” ($p < 0.05$).

Table 5.11: Paired Samples T-Test for Variables within the Reliability Dimension

Paired Samples Test: Reliability

Reliability VARIABLES		Paired Differences			T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Pair 1	A5 Keeping Promises - B5 Keeping Promises	-.627	1.817	.092	-6.847	393	.000
Pair 2	A6 Sympathetic to Solving Student Problems - B6 Sympathetic to Solving Student Problems	-.607	1.889	.096	-6.334	388	.000
Pair 3	A7 Providing Service Right First Time - B7 Providing Service Right First Time	-.737	1.883	.095	-7.777	394	.000
Pair 4	A8 Providing Service at Promised Time - B8 Providing Service at Promised Time	-.875	1.830	.092	-9.482	392	.000
Pair 5	A9 Keeping Accurate Records - B9 Keeping Accurate Records	-.342	1.507	.076	-4.507	394	.000

It is evident from Table 5.12 (Responsiveness Dimension), the most significant negative gaps exist for “promptness of service”, “willingness to help” and “employees never too busy to help” ($p < 0.05$).

Table 5.12: Paired Samples T-Test for Variables within the Responsiveness Dimension

Paired Samples Test: Responsiveness

Responsiveness VARIABLES	Paired Differences			T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Pair 1 A10 Informing Students of when Service will be Performed - B10 Informing Students of when Service will be Performed	-.211	1.680	.085	-2.477	387	.014
Pair 2 A11 Promptness of Service - B11 Promptness of Service	-.384	1.661	.084	-4.566	390	.000
Pair 3 A12 Willingness to Help - B12 Willingness to Help	-.414	1.758	.089	-4.661	390	.000
Pair 4 A13 Employees never too Busy to Help - B13 Employees never too Busy to Help	-.576	1.941	.099	-5.840	386	.000

Table 5.13 (Assurance Dimension) indicates that the largest most significant negative gaps exist for “confidence instilled by employees” and “feeling safe in transacting with the institution”.

Table 5.13: Paired Samples T-Test for Variables within the Assurance Dimension

Paired Samples Test: Assurance

Assurance VARIABLES		Paired Differences			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Pair 1	A14 Confidence instilled by Employees - B14 Confidence instilled by Employees	-.528	1.684	.086	-6.165	385	.000
Pair 2	A15 Feeling Safe in Transacting with Institution - B15 Feeling Safe in Transacting with Institution	-.416	1.719	.087	-4.790	391	.000
Pair 3	A16 Courteous Employees - B16 Courteous Employees	-.282	1.641	.084	-3.344	379	.001
Pair 4	A17 Employee Knowledge in Answering Questions - B17 Employee Knowledge in Answering Questions	-.150	1.529	.079	-1.894	373	.059

Table 5.14: Paired Samples T-Test for Variables within the Empathy Dimension

Paired Samples Test: Empathy

Empathy VARIABLES	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Pair 1 Q18 Providing Individual Attention - B18 Providing Individual Attention	-.226	3.097	.157	-1.441	388	.151
Pair 2 Q19 Convenience of Operating Hours - B19 Convenience of Operating Hours	-.151	1.537	.078	-1.938	391	.053
Pair 3 Q20 Personal Attention Provided by Employees - B20 Personal Attention Provided by Employees	-.513	1.758	.090	-5.691	379	.000
Pair 4 Q21 Institution Having My Best Interests - B21 Institution Having My Best Interests	-.586	1.919	.097	-6.025	388	.000
Pair 5 Q22 Employees Understanding My Specific Needs - B22 Employees Understanding My Specific Needs	-.882	1.806	.091	-9.727	396	.000

According to Table 5.14 (Empathy Dimension) , the most significant negative gap exists for “employees understanding the specific needs of students”, followed by the “institution having my best interests”, and “personal attention provided by employees”.

In order to acquire deeper insight into the importance ratings, cluster analysis was conducted with the aim of associating important service quality dimensions with the student demographic profile. Figure 5.5 shows the results of such a cluster analysis.

Figure 5.5: Cluster Analysis of Dimensions of Service Quality Importance Ratings

Cluster	7	5	6	2	1	4	3
Label	Reliability Cluster	Assurance Cluster	Responsiveness Cluster	Reliability Cluster	Tangible's Cluster	Assurance Cluster	Assurance Cluster
Description	Commercial Subjects. Black female students.	Low importance cluster. Comprising mainly of Black females doing commercial subjects.	Comprising mainly of relatively older Black males doing commercial subjects.	The youngest cluster comprising mainly of black females doing science subjects.	Comprising mainly of Black females doing humanitie's subjects.	Comprising mainly of Black males in humanitie's subjects.	A relatively high rating of importance cluster comprising mainly of Indian females doing commercial subjects.
Size	30.4% (109)	17.6% (63)	15.1% (54)	14.8% (53)	8.9% (32)	7.5% (27)	5.6% (20)
Inputs	Academic Fields COMMERCIAL SUBJECTS (100.0%)	Academic Fields COMMERCIAL SUBJECTS (100.0%)	Academic Fields COMMERCIAL SUBJECTS (100.0%)	Academic Fields SCIENCE SUBJECTS (71.7%)	Academic Fields HUMANITIES SUBJECTS (50.0%)	Academic Fields HUMANITIES SUBJECTS (100.0%)	Academic Fields COMMERCIAL SUBJECTS (75.0%)
	IMPORTANCE_ RELIABILITY_ 6.11	IMPORTANCE_ RELIABILITY_ 3.84	IMPORTANCE_ RELIABILITY_ 6.11	IMPORTANCE_ RELIABILITY_ 6.29	IMPORTANCE_ RELIABILITY_ 4.20	IMPORTANCE_ RELIABILITY_ 5.37	IMPORTANCE_ RELIABILITY_ 6.42
	IMPORTANCE_ RESPONSIVENESS_ 6.08	IMPORTANCE_ RESPONSIVENESS_ 4.19	IMPORTANCE_ RESPONSIVENESS_ 6.17	IMPORTANCE_ RESPONSIVENESS_ 6.17	IMPORTANCE_ RESPONSIVENESS_ 3.84	IMPORTANCE_ RESPONSIVENESS_ 5.22	IMPORTANCE_ RESPONSIVENESS_ 6.20
	IMPORTANCE_ ASSURANCE_ 5.97	IMPORTANCE_ ASSURANCE_ 4.28	IMPORTANCE_ ASSURANCE_ 6.00	IMPORTANCE_ ASSURANCE_ 6.05	IMPORTANCE_ ASSURANCE_ 3.76	IMPORTANCE_ ASSURANCE_ 5.40	IMPORTANCE_ ASSURANCE_ 6.50
	IMPORTANCE_ EMPATHY_ 5.68	IMPORTANCE_ EMPATHY_ 3.73	IMPORTANCE_ EMPATHY_ 5.72	IMPORTANCE_ EMPATHY_ 5.90	IMPORTANCE_ EMPATHY_ 3.54	IMPORTANCE_ EMPATHY_ 5.16	IMPORTANCE_ EMPATHY_ 6.13
	Gender Female (100.0%)	Gender Female (66.7%)	Gender Male (100.0%)	Gender Female (81.1%)	Gender Female (90.6%)	Gender Male (100.0%)	Gender Female (60.0%)
	Race Black (100.0%)	Race Black (96.8%)	Race Black (98.1%)	Race Black (100.0%)	Race Black (87.5%)	Race Black (92.6%)	Race Indian (55.0%)
	IMPORTANCE_ TANGIBLES_ 5.53	IMPORTANCE_ TANGIBLES_ 3.89	IMPORTANCE_ TANGIBLES_ 5.48	IMPORTANCE_ TANGIBLES_ 5.39	IMPORTANCE_ TANGIBLES_ 4.49	IMPORTANCE_ TANGIBLES_ 4.78	IMPORTANCE_ TANGIBLES_ 5.55
	Age 20.22	Age 20.11	Age 21.61	Age 19.74	Age 20.66	Age 20.93	Age 19.80

According to Figure 5.5, the largest cluster (Reliability), constituting 30.4% of the sample and labelled as 7, comprises mainly of Black females studying Commercial subjects who place the highest importance on Reliability (mean=6.11), and the lowest importance on Tangibles (mean=5.53). Therefore, for this cluster Reliability as a service quality dimension needs to be a greater area of focus in marketing to this cluster.

In contrast, the second largest cluster (Assurance), constituting 17.6% (Cluster 5) of the sample, and labelled as cluster 5, depicts relatively lower importance scores than all the other clusters, suggesting that they do not place as much importance on the service quality dimensions, as the other clusters do. This cluster places the highest importance on Assurance (mean=4.28), and the lowest importance on Empathy (mean=3.73), suggesting that more emphasis on attributes of Assurance could improve this cluster's service quality perception.

The third largest cluster (Responsiveness), making up 15.1% (Cluster 6) of the sample, comprises mainly of relatively older Black males studying Commercial subjects. For this cluster, more emphasis needs to be placed on attributes of Responsiveness (mean=6.17) in an effort to improve and maintain effective service quality.

The fourth largest cluster (Reliability), constituting 14.8% (Cluster 2) of the sample, comprises of relatively younger Black females studying Science subjects. For this cluster, more emphasis needs to be placed on the attributes of Reliability (mean=6.29) in order to improve service quality for this cluster.

The fifth largest cluster (Tangible's), making up 8.9% (Cluster 1) of the sample comprises Black females studying Humanities' subjects. This cluster seems to display a lower importance rating on all service quality dimensions, suggesting perhaps that they do not place much importance on service quality. However, for this cluster, if greater emphasis is placed on Tangibles (mean=4.49) this could make the service experience better for them.

The second-to-last largest cluster (Assurance), making up 7.5% (Cluster 4) of the sample comprises of Black males studying Humanities' subjects. With greater emphasis on attributes of Assurance (mean=5.4), the students in this cluster could experience better service quality.

The smallest cluster (Assurance) making up 5.6% (Cluster 3) of the sample is a cluster placing relatively high importance on service quality and comprises mainly of Indian female students studying Commercial subjects. For this group, a greater emphasis on Assurance (mean=6.5) could help to increase the positive perception of service quality.

The cluster analysis has revealed that the **different levels of importance placed** on different service quality dimensions **by different clusters of students**.

5.7. Descriptive Statistics for OVERALL SERVICE QUALITY (OSQ)

Overall, service quality was computed as a composite average of the sum of questions D9 to D11. The important descriptive statistics for OVERALL SERVICE QUALITY (OSQ) are detailed in Table 5.15.

Table 5.15: Mean Rating of OVERALL SERVICE QUALITY (OSQ)

OVERALL_SERVICE_QUALIT		
Y		
N	Valid	396
	Missing	4
Mean		5.0867
Median		5.3333
Mode		7.00
Std. Deviation		1.37162
Variance		1.881
Range		6.00
Minimum		1.00

It is evident from Table 5.15 that OVERALL SERVICE QUALITY (OSQ) has a mean value of 5.09 and a modal value of 7. Considering that a 7-point Likert scale was used to measure OVERALL SERVICE QUALITY (OSQ) with 7 being the highest rating and 1 being the lowest, a value of 3.5 would therefore be considered as an average. OVERALL SERVICE QUALITY (OSQ) with a mean value higher than 3.5 is indicative of an above-average rating for the construct. Moreover, the modal value of 7, meaning it is the most frequently appearing value, can be considered as excellent. Consequently, based on the sample, it is inferred that the universities under study, offer higher than average OVERALL SERVICE QUALITY (OSQ).

Table 5.16: Mean Ratings of OVERALL SERVICE QUALITY (OSQ) based on Select Demographic Factors

DEMOGRAPHIC PROFILE		OVERALL_SERVICE _QUALITY	SIGNIFICANT DIFFERENCES OR NOT?
		Mean	
Academic Discipline	COMMERCIAL SUBJECTS	5.10	No significant differences in OVERALL SERVICE QUALITY (OSQ) between academic disciplines. $p=0.695$ (Kruskal Wallis Test).
	SCIENCE SUBJECTS	5.06	
	HUMANITIES SUBJECTS	5.21	
Race	Black	5.16	There are significant differences between race groups for OVERALL SERVICE QUALITY (OSQ) rating. $p=0.006$ (Kruskal Wallis Test).
	White	3.44	
	Indian	4.40	
	Coloured	4.77	
Gender	Male	5.02	No significant difference between male and female students for OVERALL SERVICE QUALITY (OSQ) rating. $p=0.492$ (Mann-Whitney U Test).
	Female	5.12	

From table 5.16 it is evident that there were no significant differences between the different academic disciplines with regard to the perception of OVERALL SERVICE QUALITY (OSQ) ($p=0.695$, Kruskal Wallis Test). This suggests that students from different academic disciplines had similar (above average) perceptions of the OVERALL SERVICE QUALITY (OSQ).

There were also no significant differences between male and female students' perceptions of the OVERALL SERVICE QUALITY (OSQ) ($p=0.492$, Mann-Whitney U Test). This suggests that both male and female students have similar (above average) perceptions of OVERALL SERVICE QUALITY (OSQ).

However, different race groups showed differences in their perception of the OVERALL SERVICE QUALITY (OSQ) ($p=0.06$, Kruskal Wallis Test). The most positive perception of the OVERALL SERVICE QUALITY (OSQ) was shown by Black students (mean=5.16), whilst White students displayed the lowest and below average perception of the OVERALL SERVICE QUALITY (OSQ) (mean=3.44). The other race groups displayed above average perceptions (i.e. higher than 3.5).

5.8. Descriptive Statistics for OVERALL STUDENT SATISFACTION (OSS)

OVERALL STUDENT SATISFACTION (OSS) was computed as the average of the sum of questions D5 to D8. The important descriptive statistics for OVERALL STUDENT SATISFACTION (OSS) are detailed in Table 5.17.

Table 5.17: Mean Rating of OVERALL STUDENT SATISFACTION (OSS)

OVERALL_STUDENT_SATISFACTION		
N	Valid	400
	Missing	0
Mean		4.9488

Median	5.2500
Mode	7.00

Based on Table 5.17, student satisfaction has a mean rating of 4.95 and a modal value of 7. Since the average in the 7-point Likert scale is 3.5, the mean values for OVERALL STUDENT SATISFACTION (OSS) indicate that it is above average with excellent modal values. This information suggests that overall, students are more than satisfied with their institutions.

In understanding the demographic profile of OVERALL STUDENT SATISFACTION (OSS), a cluster analysis was conducted as depicted in Figure 5.6.

Figure 5.6: Cluster Analysis for Overall Satisfaction based on Student Demography

Cluster	3	1	4	2
Label	Third Most Satisfied	Second Most Satisfied	Most Satisfied	Least Satisfied
Description	Black Female students studying commercial subjects.	Black male students studying mainly commercial subjects.	Black female students studying science subjects.	Mainly Indian female students studying commercial subjects.
Size	42.0% (152)	30.7% (111)	19.3% (70)	8.0% (29)
Inputs	Race Black (100.0%)	Race Black (100.0%)	Race Black (100.0%)	Race Indian (48.3%)
	Gender Female (100.0%)	Gender Male (100.0%)	Gender Female (100.0%)	Gender Female (55.2%)
	Academic Discipline COMMERCIAL SUBJECTS (100.0%)	Academic Discipline COMMERCIAL SUBJECTS (66.7%)	Academic Discipline SCIENCE SUBJECTS (55.7%)	Academic Discipline COMMERCIAL SUBJECTS (62.1%)
	OVERALL STUDENT SATISFACTION 4.90	OVERALL STUDENT SATISFACTION 5.19	OVERALL STUDENT SATISFACTION 5.21	OVERALL STUDENT SATISFACTION 4.18

It is evident from the cluster analysis in Figure 5.6 that all clusters have an average higher than the 3.5 with regard to the overall satisfaction with their universities.

The most satisfied (mean=5.21) students belong to the third largest cluster (19.3% of the sample), and mainly comprise of Black female students studying Science subjects. The second most satisfied group of students (mean=5.19) belong to the second largest cluster (30.7% of the sample)), and comprise mainly Black male students studying Commercial subjects. The third most satisfied group of students (mean=4.90) belong to the largest cluster (42% of the sample). This cluster comprises of mainly Black female students studying Commercial subjects. The least satisfied group (8% of the sample) is the smallest cluster and comprises of mainly Indian female students studying Commercial subjects.

5.9. Descriptive Statistics for OVERALL BRAND EQUITY (OBE)

OVERALL BRAND EQUITY (OBE) was computed as a composite average of the sum of questions D1 to D4. The important descriptive statistics for OVERALL BRAND EQUITY (OBE) are detailed in Table 5.18.

Table 5.18: Mean Rating of OVERALL BRAND EQUITY (OBE)

OVERALL BRAND EQUITY		
N	Valid	400
	Missing	0
Mean		4.5471
Median		4.7500
Mode		5.00

Based on a 7-point Likert scale used, the mean value for OVERALL BRAND EQUITY (OBE) is mean=4.55 and can be deemed to be above average (i.e. >3.5).

Table 5.19: OVERALL BRAND EQUITY (OBE) Based on Demographic Factors

		OVERALL_BRAND_EQUITY	Non-Parametric Test/ p value
		Mean	
Academic Discipline	COMMERCIAL SUBJECTS	4.51	Kruskal Wallis test, p=0.611. Therefore no difference between academic disciplines.
	SCIENCE SUBJECTS	4.62	
	HUMANITIES' SUBJECTS	4.69	
Race	Black	4.65	Kruskal Wallis test, p=0.007, therefore there are differences between race.
	White	3.54	
	Indian	3.71	
	Coloured	3.90	
Gender	Male	4.60	Mann-Whitney U Test, p=.548, therefore no difference between genders.
	Female	4.53	

From Table 5.19, it is evident that students studying Humanities' subjects have the highest overall perceived brand equity (mean=4.69), whilst those taking Commercial subjects have the lowest perceived OVERALL BRAND EQUITY (OBE) (mean=4.51), although the differences are not significant (p=0.611, Kruskal Wallis Test). This suggests that students studying different subjects display similar perceptions of OVERALL BRAND EQUITY (OBE).

Based on race though, there are significant differences between the race groups regarding their rating of the OVERALL BRAND EQUITY (OBE) (p=0.007, Kruskal Wallis Test). Black students

rate the OVERALL BRAND EQUITY (OBE) the highest (mean=4.65), whilst White students rate it the lowest (mean=3.54).

There is no difference between male and female students in their rating of the OVERALL BRAND EQUITY (OBE) ($p=0.548$, Mann-Whitney U Test).

5.10. Descriptive Statistics for Brand Equity Dimensions

Table 5.20 below depicts the mean values for each Brand Equity measure based on a composite average of the sum of all the variables measuring the Brand Equity dimension.

Table 5.20: Brand Equity Dimensions

Descriptive Statistics		
	N	Mean
Loyalty	400	4.3313
Key_Associations_and_Differentiation	400	5.1190
Awareness	400	5.3735
Perceived_Quality_and_Leadership	400	5.3815
Valid N (listwise)	400	

From the four brand equity dimensions used in this study (Table 5.20), Perceived Quality and Leadership had the highest mean value (mean=5.382), followed by Awareness (mean=5.37), Key Associations and Differentiation (mean=5.12) and Loyalty (mean=4.33). In view of the 7-point Likert scale used, with higher values being more positive, the mean values for each brand equity dimension can nonetheless be considered to be above average (average=3.5). This suggests that the dimensions of brand equity for the universities in the study, and based on the study sample, are positive and above average.

Thus far, the analysis has been mainly descriptive with special reference to the important constructs under study. The descriptive analyses in the main has addressed the issues relating to objectives one and two of the study.

The section that follows, undertakes factor analyses for service quality and brand equity to show the underlying explanatory factors, in the context of the universities studied and the sample used, which help to explain these constructs in this context. These analyses address **objective three** of the study.

5.11. Factor Analysis and Confirmatory Factor Analysis for Service Quality

Factor analysis was conducted on the items comprising the service quality construct. A total of 22 service quality items were subject to the analysis. Table 5.21 reveals that the KMO measure of sampling adequacy is 0.925, with the Bartlett’s test rendering a significant result ($p=0.000$), which statistics indicate that a factor analysis will, therefore, be appropriate.

Table 5.21: KMO and Bartlett’s Test for Service Quality Factors

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.925
Bartlett's Test of Sphericity	Approx. Chi-Square	3153.652
	Df	231
	Sig.	.000

Table 5.22 reveals the outcome of Principal Axis Factoring using Varimax rotation, which procedure was used to extract and rotate the factors resulting in five factors being extracted. Cumulatively, these factors contributed 50.198% to the total variance. It is also evident from Table 5.22 that the first factor contributed 13.852%, the second factor contributed 10.372%, the third

factor contributed 10.251%, the fourth factor 8.360% and the fifth factor 7.363%, to the total variance.

Based on the rotated factor matrix depicted in Table 5.23, Factor 1 loaded strongly on a combination of two service quality dimensions, Assurance and Empathy with eight items or variables. However, variable loadings pertaining to Empathy were higher. Factor 1 can therefore be called to 'Empathize and Assure'.

Factor 2 had three items/variables, which loaded strongly on issues pertaining to Tangibles, and is called 'Tangibles'. Factor 3 loaded strongly on four Reliability items and is called 'Reliability'.

Factors 4 and 5 loaded heavily on the "Responsive-related" dimension, with only one Reliability-related item/variable included. Therefore these factors combined are called 'Promptness and Accuracy' (Factor 4) and 'Helpfulness' (Factor 5).

Question A4 loaded very weakly and was therefore not included into a particular factor. Question A14 loaded onto two factors, indicating a lack of convergent and discriminant validity and was not included in any factor.

Table 5.22: Total Variance Explained for Service Quality

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.895	40.430	40.430	8.431	38.323	38.323	3.048	13.852	13.852
2	1.455	6.614	47.044	.931	4.230	42.554	2.282	10.372	24.224
3	1.181	5.370	52.414	.689	3.133	45.686	2.255	10.251	34.475
4	.992	4.509	56.923	.532	2.416	48.103	1.839	8.360	42.835
5	.956	4.346	61.269	.461	2.095	50.198	1.620	7.363	50.198

Extraction Method: Principal Axis Factoring.

Table 5.23: Rotated Factor Matrix Service Quality

Service Quality Variables	Factor				
	1	2	3	4	5
A1 State of Equipment		.727			
A2 Visual Appeal - Physical Facilities		.657			
A3 Appearance of Employees		.427			
A4 Visual Appeal of Materials					

A5 Keeping Promises		.644		
A6 Sympathetic to Solving Student Problems		.451		
A7 Providing Service Right First Time		.521		
A8 Providing Service at Promised Time		.722		
A9 Keeping Accurate Records			.469	
A10 Informing Students of when Service will be Performed			.648	
A11 Promptness of Service			.473	
A12 Willingness to Help				.552
A13 Employees never too Busy to Help				.700
A14 Confidence instilled by Employees	.430			.442
A15 Feeling Safe in Transacting with Institution	.489			
A16 Courteous Employees	.518			
A17 Employee Knowledge in Answering Questions	.507			
Q18 Providing Individual Attention	.400			
Q19 Convenience of Operating Hours	.536			
Q20 Personal Attention Provided by Employees	.688			
Q21 Institution Having My Best Interests	.535			
Q22 Employees Understanding My Specific Needs	.555			

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 6 iterations.

Based on the factor analysis, a Confirmatory Factor Analysis (CFA) using AMOS version 23 was conducted for the service quality construct, which is based on the SERVPERF model with 22 items/variables. The CFA revealed a five-factor service quality model as depicted in Figure 5.7 hereunder.

Figure 5.7: Measurement Model for Service Quality

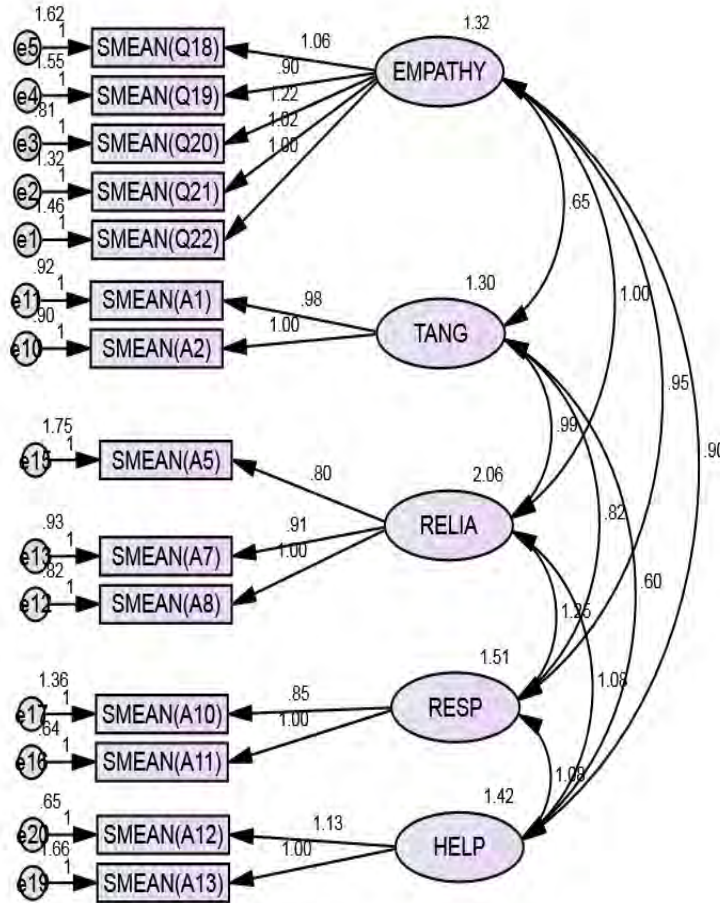


Figure 5.7 represents the service quality model based on SERVPERF dimensions through conducting a CFA where Empathy=Empathy, TANG=Tangibles, RELIA=Reliability, RESP=Responsiveness, and HELP=HELPFULNESS. Reliability analysis (Table 5.24) revealed the Cronbach Alpha scores for each dimension (above 0.7) that were deemed reliable (Andrew et al., 2011:202).

Table 5.24: Reliability Scores for SERVPERF Construct Dimensions Confirmed by CFA

Variable	Cronbach's Alpha
Empathy	0.836
Tangibles (TANG)	0.737
Reliability (RELIA)	0.805
Responsiveness (RESP)	0.715
HELPFULNESS (HELP)	0.734

The model fit indices for the Service Quality model appear in Table 5.25.

Table 5.25: Model Fit Indices for SERVPERF Dimensions (Service Quality Construct)

Measure	Threshold	Indices for Model	Comment
Chi-square/df (cmin/df)	<3 good, <5 sometimes allowed (Hu & Bentler, 1999).	2.250	ACCEPTABLE
p- value	>0.05 (Hu & Bentler).	0.00	NOT ACCEPTABLE
CFI	>0.9 (Hu & Bentler, 1999).	0.965	ACCEPTABLE

Measure	Threshold	Indices for Model	Comment
GFI	0.9 minimum (Hu & Bentler, 1999).	0.951	ACCEPTABLE
AGFI	Equal to or >0.9 (Hooper et al., 2008 cited in Kats, 2013:103).	.923	ACCEPTABLE
NFI	>0.9 (Bentler, 1995).	0.939	ACCEPTABLE
RMSEA	<0.06 (Hu & Bentler, 1999).	0.056	ACCEPTABLE
PCLOSE	>0.05 (Hu & Bentler, 1999).	0.196	ACCEPTABLE

Although the p-value of the Service Quality (SERVPERF-based) model is not in accordance with the recommended threshold, however based on the values of the other fit indices, which are in accordance with the recommended thresholds, it is inferred that the model is a good fit.

To determine whether the factors identified in the model display convergent and discriminant validity, appropriate analyses were conducted. According to Esposito (2010:696) convergent validity exists when AVE is greater than 0.5. In addition, when MSV is less than AVE and ASV is less than AVE, discriminant validity can be claimed (Hair et al., 2009 cited in Ernst, 2015:38). The Table 5.26 was generated by a template put together by Professor Gaskin to test for convergent and discriminant validity in confirmatory factor analysis (Statwiki, n.d.). From the table, AVE values for each factor in the model is greater than 0.5 and hence convergent validity can be claimed for each factor (Esposito, 2010:696). Furthermore, for each factor, the MSV and ASV values are less than AVE and hence discriminant validity can be claimed (Hair et al., 2009 cited in Ernst, 2015:38).

Table 5.26: Convergent and Discriminant Validity Indices

	CR	AVE	MSV	ASV	RESP	EMP	TANG	RELIA	HELP
RESP	0.725	0.572	0.546	0.461	0.756				
EMP	0.841	0.516	0.450	0.374	0.671	0.718			
TANG	0.737	0.583	0.365	0.288	0.586	0.497	0.764		
RELIA	0.814	0.596	0.503	0.409	0.709	0.606	0.604	0.772	
HELP	0.746	0.599	0.546	0.394	0.739	0.658	0.442	0.634	0.774

Please note, for clarification pertaining to the table, RESP=Responsiveness, EMP=Empathy, TANG=Tangibles, RELIA=Reliability and HELP=HELPFULNESS.

The data in the model was tested for normality. According to Kline (2005), cited in Harrington (2009), it is suggested that variables having absolute values of greater than 3 for the skew index and absolute values of greater than 10 for the kurtosis index indicate normality problems. The skewness and kurtosis values in the dataset for each variable is well within the specified range and hence the assumption of normality is met.

Table 5.27: Assessment of Normality

Variable	min	max	skew	kurtosis
A12_1	1.000	7.000	-.669	-.271
A13_1	1.000	7.000	-.415	-.722
A10_1	1.000	7.000	-.993	.210
A11_1	1.000	7.000	-.514	-.222

Variable	min	max	skew	kurtosis
A5_1	1.000	7.000	-.516	-.643
A7_1	1.000	7.000	-.401	-.561
A8_1	1.000	7.000	-.373	-.644
A1_1	1.000	7.000	-.293	-.159
A2_1	1.000	7.000	-.275	-.216
Q18_1	1.000	7.000	-.404	-.742
Q19_1	1.000	7.000	-.758	-.232
Q20_1	1.000	7.000	-.330	-.598
Q21_1	1.000	7.000	-.436	-.503
Q22_1	1.000	7.000	-.054	-.699
Multivariate				95.494

Source: AMOS 23 output generated by Researcher.

As can be seen therefore, the service quality model, based on the analysis conducted comprises of five dimensions – Empathy, Tangibles, Reliability, Responsiveness and Helpfulness, which is applicable to the higher education institutions in the sample studied. The Assurance dimension is not applicable to the sample in this study and is not an underlying dimension of service quality because it did not load into the model. In addition, of the 22 SERVPERF items or variables used in this study, only 14 were relevant. This means that the other eight variables are not relevant to Service Quality (SERVPERF-Dimensions) for the sample studied. However, the Empathy dimension of service quality was the only dimension for which all five SERVPERF variables

used to measure Empathy, were relevant. Therefore, Empathy is a key underlying factor or dimension of Service Quality in this study.

The Factor analysis and Confirmatory Factor analysis for the Brand Equity construct is discussed in the next section.

5.12. Factor Analysis and Confirmatory Factor Analysis for Brand Equity

The KMO measure of sampling adequacy, as depicted in Table 5.28, is 0.943 with the Bartlett's test rendering a significant result ($p=0.000$). These statistics indicate that the use of factor analysis is appropriate.

Table 5.28: KMO Bartlett's Test for Brand Equity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.943
Bartlett's Test of Sphericity	Approx. Chi-Square	5335.895
	df	300
	Sig.	.000

Principal Axis Factoring using Varimax rotation was used to extract and rotate the factors resulting in four factors being extracted (Table 5.29), which factors cumulatively contributed 52.903% to the total variance.

According to Table 5.29, the first factor contributed 19.630% to the total variance, the second factor 12.419%, the third factor 10.431%, and the fourth factor 10.423%.

Table 5.29: Total Variance Explained for Brand Equity

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.907	43.626	43.626	10.479	41.916	41.916	4.907	19.630	19.630
2	1.725	6.902	50.528	1.266	5.065	46.982	3.105	12.419	32.049
3	1.329	5.315	55.843	.871	3.483	50.464	2.608	10.431	42.480
4	1.117	4.468	60.311	.610	2.439	52.903	2.606	10.423	52.903

Extraction Method: Principal Axis Factoring.

It is evident from the rotated factor matrix (Table 5.30), that Factor 1 loaded heavily on ‘Loyalty’ and more strongly on ‘Key Associations and Differentiation’ items/variables. Factor 2 loaded strongly on the ‘Loyalty’ items/variables. Factor 3 loaded on the ‘Awareness’ items/variables and Factor 4 loaded on ‘Perceived Quality’ items/variables. Based on these loadings, Factor 1 is called ‘Key Associations and Differentiation with Loyalty’, Factor 2 is called ‘Loyalty’, Factor 3 is called ‘Awareness’ and Factor 4 is named ‘High Quality and Reliability’.

Table 5.30: Rotated Factor Matrix Service Quality

Brand Equity Variables	Factor			
	1	2	3	4
C1 High Quality Brand				.623
C2 High Reliability				.642
C3 Very Good Quality Brand				.442
C4 Is a Leading Brand				
C5 Growing in Popularity	.449			
C6 Innovative and Very Advanced	.476			
C7 More Aware of the Brand than Other Brands			.672	
C8 Easily Recognizable Brand			.679	
C9 Characteristics of Institution Easily Come to Mind			.639	
C10 I know what the Brand Looks Like			.446	
C11 Will not Study at another Institution		.690		
C12 Is My First Study Choice		.648		
C13 I am Loyal to Institution	.565			
C14 Would Recommend this Institution	.567			
C15 Would Not Switch to Another Institution		.720		

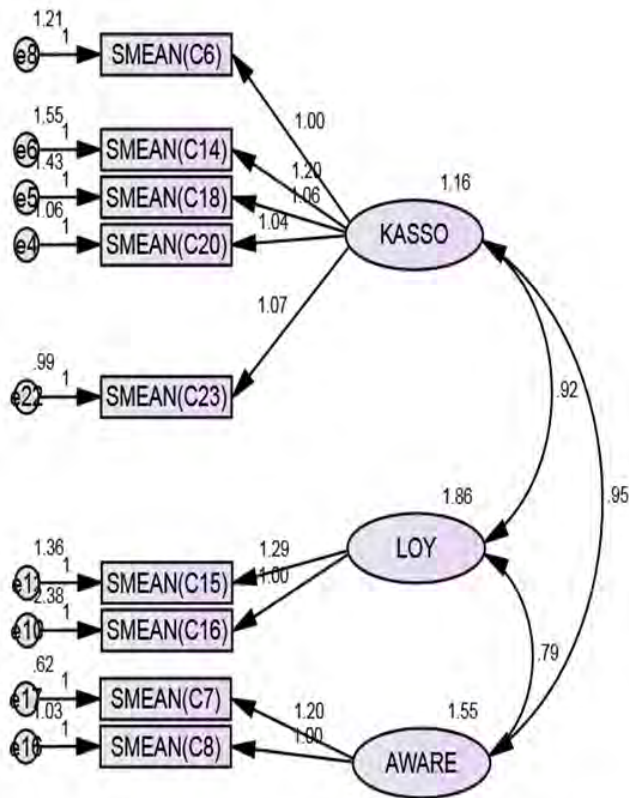
C16 Will Study at this Institution Despite Fee Increases	.640		
C17 Institution Provides Good Value for Money			.435
C18 I have Good Reason to Support this Institution	.516		
C19 Institution Has a Good Personality	.633		.441
C20 Institution's Brand is Interesting	.535		
C21 I Have a Positive Image of People Studying Here	.648		
C22 I Trust this Institution's Brand	.741		
C23 I Admire this Institution's Brand	.749		
C24 The Institution Has Credibility	.608		.434
C25 The Institution's Brand is Better than that of Others	.430	.447	

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

Based on the factor analysis and its underlying dimensions, a Confirmatory Factor Analysis (CFA) using AMOS version 23 was conducted for the brand equity construct, which is based on the Aaker's (1996) Model. The CFA revealed a three-factor brand equity model as depicted in Figure 5.8.

Figure 5.8: Measurement Model for Brand Equity



A reliability analysis (Table 5.31) revealed the Cronbach Alpha scores for each dimension was above 0.7, and were deemed reliable (Andrew et al., 2011:202).

Table 5.31: Reliability Scores for Brand Equity Construct Dimensions Confirmed by CFA

Variable	Cronbach's Alpha
Key Associations and Differentiation (KASSO)	0.842
Loyalty (LOY)	0.711
Awareness (AWARE)	0.813

The figure represents the Brand Equity dimensions through conducting a CFA where KASSO=Key Associations and Differentiation, LOY=Loyalty and AWARE=Awareness.

The model fit indices for the Brand Equity model appear Table 5.32 below

Table 5.32: Model Fit Indices for Aaker's (1996) Brand Equity Model (Brand Equity Construct)

Measure	Threshold	Indices for Model	Comment
Chi-square/df (cmin/df)	<3 good, <5 sometimes allowed (Hu & Bentler, 1999).	1.652	ACCEPTABLE
p- value	>0.05 (Hu & Bentler).	0.023	NOT ACCEPTABLE
CFI	>0.9 (Hu & Bentler, 1999).	0.989	ACCEPTABLE
GFI	0.9 minimum (Hu & Bentler, 1999).	0.978	ACCEPTABLE
AGFI	Equal to or >0.9 (Hooper et al., 2008 cited in Kats, 2013:103).	0.959	ACCEPTABLE

Measure	Threshold	Indices for Model	Comment
NFI	>0.9 (Bentler, 1995).	0.973	ACCEPTABLE
RMSEA	<0.06 (Hu & Bentler, 1999).	0.040	ACCEPTABLE
PCLOSE	>0.05 (Hu & Bentler, 1999).	0.743	ACCEPTABLE

Although the p-value of the model is not in accordance with the recommended threshold, based on the values of the other fit indices, which are in accordance with the recommended thresholds, it is inferred that the model is a good fit.

To check whether the factors identified in the Brand Equity model display convergent and discriminant validity, appropriate analyses were conducted shown in Table 5.33. According to Esposito (2010:696) convergent validity exists when AVE is greater than 0.5. In addition, when MSV is less than AVE and ASV is less than AVE, discriminant validity can be claimed (Hair et al., 2009 cited in Ernst, 2015:38). The table below was generated by a template put together by Professor Gaskin to test for convergent and discriminant validity in confirmatory factor analysis (Statwiki, n.d.). From table, AVE values for each factor in the model is greater than 0.5 and hence convergent validity can be claimed for each factor (Esposito, 2010:696). Furthermore, for each factor, the MSV and ASV values are less than AVE and hence discriminant validity can be claimed (Hair et al., 2009 cited in Ernst, 2015:38).

Table 5.33: Convergent and Discriminant Validity Indices

	CR	AVE	MSV	ASV	KASSO	loy	aw
KASSO	0.844	0.521	0.498	0.445	0.722		
loy	0.720	0.566	0.392	0.305	0.626	0.752	
aw	0.817	0.692	0.498	0.358	0.706	0.467	0.832

Please note, for clarification of terms pertaining to the table, KASSO=Key Associations and Differentiation, loy=Loyalty, and aw=Awareness.

The data in the model was tested for normality (Table 5.34). According to Kline (2005) cited in Harrington (2009), it is suggested that variables having absolute values of greater than 3 for the skew index and absolute values of greater than 10 for the kurtosis index indicate normality problems. The skewness and kurtosis values in the dataset for each variable is well within the specified range and hence the assumption of normality is met.

Table 5.34: Assessment of Normality

Variable	min	max	skew	kurtosis
C23_1	1.000	7.000	-.967	.519
C7_1	1.000	7.000	-.880	.006
C8_1	1.000	7.000	-1.149	.616
C15_1	1.000	7.000	.018	-1.317
C16_1	1.000	7.000	.522	-1.041
C6_1	1.000	7.000	-.779	.021
C14_1	1.000	7.000	-1.122	.312
C18_1	1.000	7.000	-.662	-.190
C20_1	1.000	7.000	-.733	.033
Multivariate				36.406

The analysis into Brand Equity reveals that for this study, the Brand Equity construct has three dimensions that are Key Associations and Differentiation, Loyalty, and Awareness. The dimension Perceived Quality did not load into the model. Furthermore, of the 25 variables used to measure

Brand Equity, only nine applied to the revised model. This suggests that Aaker’s (1996) model of Brand Equity may not be totally applicable to the sample of students studied.

The Factor analyses and Confirmatory Factor Analyses pertain to **objective three** of the study, which is concerned with the explanatory factors for both Service Quality and Brand Equity in the study. Interestingly, the dimensions of both Service Quality and Brand Equity **have not loaded exactly as the original conceptual/theoretical models** that these constructs were based on. This could suggest that different Service Quality and Brand Equity models and measurements may be applicable to the South African higher education context.

5.13. SERVPERF Predictors of OVERALL SERVICE QUALITY (OSQ)

The dimensions of service quality – Tangibles, Reliability, Responsiveness, Assurance and Empathy were included as independent variables in a multiple linear regression equation to ascertain their predictive power relating to OVERALL SERVICE QUALITY (OSQ). The results of the multiple linear regression procedure are presented in Table 5.35.

Table 5.35: Model Summary for SERVPERF Predictors of OVERALL SERVICE QUALITY (OSQ)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.586 ^a	.343	.334	1.11898	1.844

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

b. Dependent Variable: OVERALL_SERVICE_QUALITY

The model summary (Table 5.35) indicates that Empathy, Tangibles, Responsiveness, Reliability, and Assurance predict 34.3% (R Square=0.343) of the variation in OVERALL SERVICE QUALITY (OSQ). Hence, the balance 65.7% of the variance is not accounted for by the

independent variables in the equation. Therefore, there could be other factors predicting OVERALL SERVICE QUALITY (OSQ) in addition to the dimensions of the SERVPERF model.

The ANOVA procedure results (Table 5.36) indicates that the model is a significant predictor of OVERALL SERVICE QUALITY (OSQ) ($F=40.700$, $p<0.005$).

Table 5.36: Anova for SERVPERF Predictors of OVERALL SERVICE QUALITY (OSQ)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	254.805	5	50.961	40.700	.000 ^a
	Residual	488.329	390	1.252		
	Total	743.134	395			

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

b. Dependent Variable: OVERALL_SERVICE_QUALITY

Table 5.37 indicates that OVERALL SERVICE QUALITY (OSQ) is significantly predicted by four service quality dimensions (highlighted), which are Empathy ($\beta=0.192$, $p<0.05$), Assurance ($\beta=0.146$, $p<0.05$), Responsiveness ($\beta=0.149$, $p<0.05$), and Reliability ($\beta=0.155$, $p<0.05$). Tangibles are not a significantly predictor of OVERALL SERVICE QUALITY (OSQ).

Table 5.37: Coefficients for SERVPERF Predictors of OVERALL SERVICE QUALITY (OSQ)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.239	.293		4.224	.000		
Tangibles	.108	.063	.087	1.725	.085	.659	1.517
Reliability	.165	.066	.155	2.510	.012	.442	2.260
Responsiveness	.155	.068	.140	2.271	.024	.442	2.262
Assurance	.168	.076	.146	2.204	.028	.384	2.602
Empathy	.189	.054	.192	3.486	.001	.557	1.797

a. Dependent Variable: OVERALL_SERVICE_QUALITY

Furthermore, the data (Table 5.37) indicates that a 1 unit increase in Empathy will produce a 0.189 unit increase in OVERALL SERVICE QUALITY (OSQ); a 1 unit increase in Assurance will give rise to 0.168 unit increase in OVERALL SERVICE QUALITY (OSQ); a 1 unit increase in Responsiveness will result in a 0.155 unit increase on OVERALL SERVICE QUALITY (OSQ); and a 1 unit increase in Reliability will produce a 0.165 unit increase in OVERALL SERVICE QUALITY (OSQ). With interventions to improve on Empathy, Assurance, Responsiveness and Reliability, service quality will be likely to increase with reference to the sample studied.

A series of Pearson's correlations were conducted between OVERALL SERVICE QUALITY (OSQ) and the 22-items used to measure service quality, and for each service quality dimension,

the two factors/dimensions that correlated most strongly with OVERALL SERVICE QUALITY (OSQ) are listed below. Consequently, the following dimensions would prove to be important contributors to OVERALL SERVICE QUALITY (OSQ), due to their high correlations with service quality (Tangibles are not included due to it not being a predictor).

Empathy: “Personal attention provided by employees” (Pearson Correlation 0.473, $p < 0.01$) and the “Institution having my best interests” (Pearson Correlation 0.461, $p < 0.01$).

Assurance: “Feeling safe in” (Pearson correlation 0.435, $p < 0.01$) and “Employee’s knowledge in answering questions” (Pearson correlation 0.444, $p < 0.01$)

Responsiveness: “Informing students when service will be performed” (Pearson correlation 0.438, $p < 0.01$) and “Promptness of service” (Pearson correlation 0.426, $p < 0.01$).

Reliability: “Keeping accurate records” (Pearson correlation 0.405, $p < 0.01$) and “providing the service right the first time” (Pearson correlation 0.397, $p < 0.01$).

5.14. Service Quality Predictors of OVERALL STUDENT SATISFACTION (OSS)

The dimensions of service quality were included as independent variables in a multiple linear regression equation to ascertain their predictive power relating to OVERALL STUDENT SATISFACTION (OSS), and the results are presented in Table 5.38.

Table 5.38: Model Summary for Service Quality Predictors of OVERALL STUDENT SATISFACTION (OSS)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.506 ^a	.256	.247	1.32540	1.773

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

b. Dependent Variable: OVERALL_STUDENT_SATISFACTION

The model summary (Table 5.38) indicates that Empathy, Tangibles, Responsiveness, Reliability, and Assurance predict 25.6% (R Square=0.256) of the variation in the dependent variable OVERALL STUDENT SATISFACTION (OSS). Hence, the balance 74.4% of the variance is not accounted for by the independent variables in the equation. Therefore, there could be other factors predicting OVERALL STUDENT SATISFACTION (OSS), in addition to the dimensions of the SERVPERF model used in this study.

The ANOVA (table 5.39) below indicates that the model is a significant predictor of OVERALL SERVICE QUALITY (OSQ) ($F=27.156$, $p<0.005$).

Table 5.39: Anova Results for Service Quality Predictors of OVERALL STUDENT SATISFACTION (OSS)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	238.524	5	47.705	27.156	.000 ^b
	Residual	692.134	394	1.757		
	Total	930.658	399			

a. Dependent Variable: OVERALL_STUDENT_SATISFACTION

b. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability,

Assurance

The coefficients results (table 5.40) indicates that OVERALL STUDENT SATISFACTION (OSS) is significantly predicted by three service quality dimensions (highlighted), which are Empathy ($\beta=0.176$, $p<0.05$), Responsiveness ($\beta=0.157$, $p<0.05$), and Tangibles ($\beta=0.150$, $p<0.05$). Reliability and Assurance are not significant predictors of OVERALL STUDENT SATISFACTION (OSS).

Table 5.40: Coefficients Table for Service Quality Predictors of OVERALL STUDENT SATISFACTION (OSS)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.139	.345		3.304	.001	
	Tangibles	.206	.074	.150	2.795	.005	.654
	Reliability	.078	.078	.066	1.009	.314	.440
	Responsiveness	.194	.081	.157	2.410	.016	.443
	Assurance	.107	.090	.084	1.190	.235	.383
	Empathy	.193	.064	.176	3.020	.003	.554

a. Dependent Variable: OVERALL_STUDENT_SATISFACTION

Furthermore, the data in Table 5.40 indicates that a 1 unit increase in Empathy will produce a 0.193 unit increase in OVERALL STUDENT SATISFACTION (OSS); a 1 unit increase in Responsiveness will give rise to 0.194 unit increase in OVERALL STUDENT SATISFACTION (OSS); and a 1 unit increase in Tangibles will result in a 0.206 unit increase on OVERALL STUDENT SATISFACTION (OSS). With interventions to improve on Empathy, Responsiveness and Tangibles, OVERALL STUDENT SATISFACTION (OSS) will be likely to increase within the context of the sample studied.

5.15. Dimensions of Service Quality as Predictors of the One Overall Measure of OVERALL STUDENT SATISFACTION (OSS)

Overall satisfaction was also measured by a single variable, namely, “overall I am satisfied to study here” represented by question D7 in the questionnaire. To determine whether the five dimensions of service quality predict overall satisfaction, multiple linear regression analysis was conducted and the results presented in Table 5.41.

Table 5.41: Model Summary for Service Quality Predictors of Overall Student Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.503 ^a	.253	.244	1.496	1.874

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

b. Dependent Variable: D7 Overall, I am Satisfied to Study Here

The model summary in Table 5.41 indicates that Empathy, Tangibles, Responsiveness, Reliability, and Assurance predict 25.3% (R Square=0.253) of the variation in OVERALL STUDENT SATISFACTION (OSS). Hence, the balance 74.7% of the variance is not accounted for by the independent variables in the equation, implying that there could be other factors predicting OVERALL STUDENT SATISFACTION (OSS) in addition to the dimensions of the SERVPERF model used in this study.

The ANOVA results in Table 5.42 indicates that the model is a significant predictor of OVERALL STUDENT SATISFACTION (OSS) (F=26.446, p<0.005).

Table 5.42: Anova results for the Service Quality Predictors of Overall Student Satisfaction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	295.826	5	59.165	26.446	.000 ^b
	Residual	872.504	390	2.237		
	Total	1168.331	395			

a. Dependent Variable: D7 Overall, I am Satisfied to Study Here

b. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

Table 5.43: Model Summary for Service Quality Predictors of Overall Student Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.689	.391		1.763	.079		
	Tangibles	.094	.084	.061	1.124	.262	.655	1.527
	Reliability	.135	.088	.101	1.531	.127	.442	2.261
	Responsiveness	.244	.092	.176	2.664	.008	.438	2.283
	Assurance	.193	.102	.133	1.883	.060	.383	2.609
	Empathy	.175	.072	.142	2.416	.016	.556	1.798

a. Dependent Variable: D7 Overall, I am Satisfied to Study Here

The coefficient results reflected in Table 5.43 indicate that OVERALL STUDENT SATISFACTION (OSS) is significantly predicted by two service quality dimensions (highlighted), which are Empathy ($\beta=0.142$, $p<0.05$) and Responsiveness ($\beta=0.176$, $p<0.05$). Assurance, Reliability and Tangibles are not significant predictors of OVERALL STUDENT SATISFACTION (OSS). Furthermore, the data indicates that a 1-unit increase in Empathy will produce a 0.175 unit increase in OVERALL STUDENT SATISFACTION (OSS); and a 1-unit increase in Responsiveness will give rise to 0.244 unit increase in OVERALL STUDENT SATISFACTION (OSS). With interventions to improve Empathy, and Responsiveness, OVERALL STUDENT SATISFACTION (OSS) will be likely to increase within the context of the sample studied.

A series of Pearson's correlations were conducted between OVERALL STUDENT SATISFACTION (OSS) and the 22-items used to measure service quality, and for each service quality dimension, the two variables within it that correlated the most strongly with OVERALL STUDENT SATISFACTION (OSS) are listed below. Because Empathy and Responsiveness were found to be significant predictors of OVERALL STUDENT SATISFACTION (OSS), the following factors/dimensions correlating most strongly with them are listed below and briefly described.

Empathy: "Personal attention provided by employees" (Pearson Correlation 0.380, $p<0.01$) and "Institution having my best interest" (Pearson Correlation 0.440, $p<0.01$).

Responsiveness: "Informing students of when service will be performed" (Pearson correlation 0.371, $p<0.01$) and "Promptness of service" (Pearson correlation 0.398, $p<0.01$).

5.16. Service Quality Dimensions as Predictors of OVERALL BRAND EQUITY (OBE)

The five dimensions of service quality were included as independent variables in a multiple linear regression equation to ascertain their predictive power relating to OVERALL BRAND EQUITY (OBE). The results of this multiple linear regression analysis are reflected in Table 5.44.

Table 5.44: Model Summary for Service Quality Predictors of Overall Brand Equity

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.473 ^a	.223	.213	1.28505	1.612

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

b. Dependent Variable: OVERALL_BRAND_EQUITY

The model summary in Table 5.44 above indicates that Empathy, Tangibles, Responsiveness, Reliability, and Assurance predict 22.3% (R Square=0.223) of the variation in OVERALL BRAND EQUITY (OBE). Hence, the balance 77.7% of the variance is not accounted for by the independent variables in the equation, implying that there could be other factors predicting OVERALL BRAND EQUITY (OBE) in addition to the dimensions of the SERVPERF model used in this study.

The ANOVA table below (Table 5.45) indicates that the model is a significant predictor of OVERALL BRAND EQUITY (OBE) (F=22.651, p<0.005).

Table 5.45: Anova Results for Service Quality Predictors of Overall Brand Equity

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	187.021	5	37.404	22.651	.000 ^b
	Residual	650.634	394	1.651		
	Total	837.655	399			

a. Dependent Variable: OVERALL_BRAND_EQUITY

b. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

The coefficients (Table 5.46) indicate that OVERALL BRAND EQUITY (OBE) is significantly predicted by two service quality dimensions (highlighted), which are Empathy ($\beta=0.167$, $p<0.05$), and Tangibles ($\beta=0.199$, $p<0.05$). Assurance, Responsiveness and Reliability are not significant predictors of OVERALL BRAND EQUITY (OBE). Furthermore, the data indicates that a 1-unit increase in Empathy will produce a 0.174 unit increase in OVERALL BRAND EQUITY (OBE); and a 1-unit increase in Tangibles will give rise to 0.260 unit increase in OVERALL BRAND EQUITY (OBE). The Tangibles dimension of Service Quality is, therefore, the strongest predictor of OVERALL BRAND EQUITY (OBE). With interventions to improve on Empathy, and Tangibles, OVERALL BRAND EQUITY (OBE) will be likely to increase within the context of the sample studied.

Table 5.46: Coefficients for Service Quality Predictors of Overall Brand Equity

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.140	.334		3.410	.001	
	Tangibles	.260	.072	.199	3.632	.000	.654
	Reliability	.040	.075	.036	.531	.596	.440
	Responsiveness	.090	.078	.077	1.156	.248	.443
	Assurance	.136	.087	.112	1.557	.120	.383
	Empathy	.174	.062	.167	2.802	.005	.554

a. Dependent Variable: OVERALL_BRAND_EQUITY

A series of Pearson’s correlations were conducted between OVERALL BRAND EQUITY (OBE) and the 22-items used to measure service quality, and for each service quality dimension, the two service quality dimensions within it that correlated the most strongly with OVERALL BRAND EQUITY (OBE) are listed below. Because Empathy and Tangibles were found to be significant predictors of OVERALL BRAND EQUITY (OBE), two variables within these predictor dimensions correlating most strongly with OVERALL BRAND EQUITY (OBE) are listed and briefly described.

Empathy: “Personal attention provided by employees” (Pearson Correlation 0.393, $p < 0.01$) and “Institution having my best interest” (Pearson Correlation 0.374, $p < 0.01$).

Tangibles: “Visual appeal of physical facilities” (Pearson correlation 0.368, $p < 0.01$) and “State of equipment”(Pearson correlation 0.314, $p < 0.01$).

5.17. Brand Equity Dimensions as Predictors of OVERALL BRAND EQUITY (OBE)

The dimensions of brand equity namely, Key Associations and Differentiation, Awareness, Loyalty, and Perceived Quality and Leadership were included as independent variables in a multiple linear regression equation to ascertain their predictive power relating to OVERALL BRAND EQUITY (OBE). The results of this multiple linear regression are presented in Tables 5.47 to 5.49.

The model summary (Table 5.47) indicates that Key Associations and Differentiation, Awareness, Loyalty, Perceived Quality and Leadership predict 62.2% (R Square=0.622) of the variation in OVERALL BRAND EQUITY (OBE). Hence, the balance 37.8% of the variance is not accounted for by the independent variables in the equation. Therefore, there could be other factors predicting OVERALL BRAND EQUITY (OBE) in addition to the dimensions used in this study.

Table 5.47: Model Summary for Brand Equity Predictors of OVERALL BRAND EQUITY (OBE)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.789 ^a	.622	.619	.89492	2.098

a. Predictors: (Constant), Key_Associations_and_Differentiation, Awareness, Loyalty, Perceived_Quality_and_Leadership

b. Dependent Variable: OVERALL_BRAND_EQUITY

The ANOVA results in Table 5.48 below indicates that the model is a significant predictor of OVERALL BRAND EQUITY (OBE) (F=162.728, p<0.005).

Table 5.48: Anova for Brand Equity Predictors of OVERALL BRAND EQUITY (OBE)

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	521.305	4	130.326	162.728	.000 ^b
	Residual	316.350	395	.801		
	Total	837.655	399			

a. Dependent Variable: OVERALL_BRAND_EQUITY

b. Predictors: (Constant), Key_Associations_and_Differentiation, Awareness, Loyalty, Perceived_Quality_and_Leadership

The coefficients table (Table 5.49) indicates that OVERALL BRAND EQUITY (OBE) is significantly predicted by two dimensions (Highlighted), which are Key Associations and Differentiation ($\beta=0.526$, $p<0.05$), and Loyalty ($\beta=0.324$, $p<0.05$). Awareness and Perceived Quality and Leadership are not significant predictors of OVERALL BRAND EQUITY (OBE). Furthermore, the data indicates that a 1-unit increase in Key Associations and Differentiation will produce a 0.636 unit increase in OVERALL BRAND EQUITY (OBE); and a 1-unit increase in Loyalty will give rise to 0.307 unit increase in OVERALL BRAND EQUITY (OBE). With interventions to improve on Key Associations and Differentiation and Loyalty, OVERALL BRAND EQUITY (OBE) will be likely to increase within the context of the sample studied.

Table 5.49: Coefficients for Brand Equity Predictors of OVERALL BRAND EQUITY (OBE)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.145	.239		-.608	.544		
	Perceived_Quality_and_Leadership	-.011	.065	-.008	-.166	.868	.402	2.485
	Awareness	.031	.048	.026	.637	.525	.554	1.806
	Loyalty	.307	.040	.324	7.714	.000	.543	1.840
	Key_Associations_and_Differentiation	.636	.062	.526	10.281	.000	.365	2.740

a. Dependent Variable: OVERALL_BRAND_EQUITY

A series of Pearson’s correlations were conducted between OVERALL BRAND EQUITY (OBE) and the 25-items used to measure brand equity, and for each brand equity dimension, the variables within it that correlated most strongly with OVERALL BRAND EQUITY (OBE) are listed and discussed below.

Key Associations and Differentiation: “The institution’s brand is better than that of others” (Pearson Correlation 0.643, $p < 0.01$), “I have good reason to support this institution” (Pearson Correlation 0.620, $p < 0.01$) and “I admire this institution’s brand” (Pearson correlation 0.617, $p < 0.01$).

Loyalty: “I would recommend this institution” (Pearson correlation 0.543, $p < 0.01$) and “Is my first study choice” (Pearson correlation 0.559, $p < 0.01$).

5.18. Service Quality Dimensions as Predictors of Loyalty

Because Loyalty is a significant predictor of OVERALL BRAND EQUITY (OBE), this construct would be used as a dependent variable to ascertain which service quality dimensions predict it. The five dimensions of service quality were included as independent variables in a multiple linear regression equation to ascertain their predictive power relating to Loyalty. The results of this multiple linear regression are presented in Tables 5.50 to 5.52.

The model summary (Table 5.50) indicates that Tangibles, Reliability, Responsiveness, Assurance and Empathy together explain 17.3% (R Square=0.173) of the variation in the dependent variable Loyalty. Hence, the balance 82.7% of the variance is not accounted for by the independent variables in the equation. Therefore, there could be other factors predicting Loyalty in addition to the factors/dimensions used in this study.

Table 5.50: Model Summary for Service Quality Predictors of Loyalty

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.416 ^a	.173	.162	1.39826	1.717

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

b. Dependent Variable: Loyalty

The ANOVA table, Table 5.51, indicates that the model is a significant predictor of Loyalty (F=16.465, p<0.005).

Table 5.51: Anova Results for Service Quality Predictors of Loyalty

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	160.951	5	32.190	16.465	.000 ^a
	Residual	770.317	394	1.955		
	Total	931.268	399			

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

b. Dependent Variable: Loyalty

The coefficients (Table 5.52) indicate that Loyalty is significantly predicted by two dimensions (Highlighted), which are Empathy ($\beta=0.240$, $p<0.05$) and Tangibles ($\beta=0.175$, $p<0.05$). The other dimensions of service quality are not significant predictors of Loyalty. Furthermore, the data indicates that a 1-unit increase in Empathy will produce a 0.263 unit increase in Loyalty; and a 1-unit increase in Tangibles will give rise to 0.240 unit increase in Loyalty. Therefore, Empathy has a slightly higher influence on Loyalty than Tangibles.

Table 5.52: Coefficients Table for Service Quality Predictors of Loyalty

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.330	.364		3.657	.000		
	Tangibles	.240	.078	.175	3.087	.002	.654	1.529
	Reliability	-.072	.082	-.061	-.884	.377	.440	2.272
	Responsiveness	.122	.085	.098	1.428	.154	.443	2.257
	Assurance	.068	.095	.053	.719	.473	.383	2.613
	Empathy	.263	.067	.240	3.894	.000	.554	1.806

a. Dependent Variable: Loyalty

A series of Pearson’s correlations were conducted between Loyalty and the 22-items used to measure service quality and only the two variables within each service quality dimension that correlated the most strongly with Loyalty is reported on. Only the variables belonging to the significant service quality predictor dimensions of Loyalty are discussed below.

Tangibles: “Visual appeal physical facilities” (Pearson Correlation 0.337, $p < 0.01$), “State of equipment” (Pearson Correlation 0.278, $p < 0.01$).

Empathy: “Institution having my best interests” (Pearson correlation 0.377, $p < 0.01$) and “Personal attention provided by employees” (Pearson correlation 0.344, $p < 0.01$).

5.19. Service Quality Dimensions as Predictors of Key Associations and Differentiation

The dimensions of service quality were included as independent variables in a multiple linear regression equation to ascertain their predictive power relating to Key Associations and Differentiation. The results of this multiple linear regression are presented in Tables 5.53 to 5.55.

The model summary in Table 5.53 indicates that Tangibles, Reliability, Responsiveness, Assurance and Empathy together account for 30.7% (R Square=0.307) of the variation in the dependent variable Key Associations and Differentiation. Hence, the balance 69.3% of the variance is not accounted for by the independent variables in the equation. Therefore, there could be other factors predicting Key Associations and Differentiation in addition to the dimensions used in this study.

Table 5.53: Model Summary for Service Quality Predictors of Key Associations and Differentiation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.554 ^a	.307	.298	.97420	1.743

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

b. In/Out = 1

c. Dependent Variable: Key Associations and Differentiation

The ANOVA table, Table 5.54 indicates that the model is a significant predictor of Key Associations and Differentiation (F=34.603, p<0.005).

Table 5.54: Anova Results for Service Quality Predictors of Key Associations and Differentiation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	164.204	5	32.841	34.603	.000 ^a
	Residual	370.134	390	.949		
	Total	534.338	395			

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Reliability, Assurance

b. In/Out = 1

c. Dependent Variable: Key Associations and Differentiation

The coefficients (Table 5.55) indicate that there are four dimensions of service quality that predict (Highlighted) Key Associations and Differentiation. These are Empathy ($\beta=0.182$, $p<0.05$), Assurance ($\beta=0.170$, $p<0.05$), Reliability ($\beta=0.133$, $p<0.05$) and Tangibles ($\beta=0.116$, $p<0.05$). Responsiveness is not a significant predictor of Key Associations and Differentiation.

Table 5.55: Coefficients Table for Service Quality Predictors of Key Associations and Differentiation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.027	.255		7.952	.000		
	Tangibles	.122	.054	.116	2.234	.026	.656	1.525
	Reliability	.121	.057	.133	2.109	.036	.444	2.252
	Responsiveness	.079	.060	.083	1.318	.188	.443	2.256
	Assurance	.166	.066	.170	2.509	.013	.386	2.588
	Empathy	.152	.047	.182	3.223	.001	.557	1.794

a. In/Out = 1

b. Dependent Variable: Key Associations and Differentiation

A series of Pearson’s correlations were conducted between Key Associations and Differentiation and the 22-items used to measure service quality and the two variables within each service quality dimension that correlated the most strongly with Key Associations and Differentiation. Only the variables belonging to the significant service quality predictor dimensions most highly correlated with Key Associations and Differentiation are discussed below.

Tangibles: “Visual appeal physical facilities” (Pearson Correlation 0.343, $p < 0.01$), “State of equipment” (Pearson Correlation 0.315, $p < 0.01$).

Reliability: “Sympathetic to solving student problems” (Pearson correlation 0.378, $p < 0.01$) and “Keeping accurate records” (Pearson correlation 0.351, $p < 0.01$)

Assurance: “Employee knowledge in answering questions” (Pearson correlation 0.407, $p < 0.01$) and “Feeling safe in transacting with institution” (Pearson correlation 0.395, $p < 0.01$).

Empathy: “Institution having my best interests” (Pearson correlation 0.403, $p < 0.01$) and “Personal attention provided by employees” (Pearson correlation 0.428, $p < 0.01$).

5.20. Relationship between Overall Satisfaction and OVERALL BRAND EQUITY (OBE)

OVERALL STUDENT SATISFACTION (OSS) was included as an independent variable in a multiple linear regression equation to ascertain its predictive power relating to OVERALL BRAND EQUITY (OBE). The results of this multiple linear regression are presented in Table 5.56. Based on the model summary below (Table 5.57), OVERALL STUDENT SATISFACTION (OSS) predicts 55% of the variation in OVERALL BRAND EQUITY (OBE).

Table 5.56: Model Summary for Relationship between OVERALL STUDENT SATISFACTION (OSS) and OVERALL BRAND EQUITY (OBE)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.741 ^a	.550	.548	.97368	1.916

a. Predictors: (Constant), OVERALL_STUDENT_SATISFACTION

b. Dependent Variable: OVERALL_BRAND_EQUITY

The ANOVA table (Table 5.57) indicates that OVERALL STUDENT SATISFACTION (OSS) is a significant predictor of OVERALL BRAND EQUITY (OBE) ($F=485.545$, $p < 0.005$).

Table 5.57: Anova for Relationship between OVERALL STUDENT SATISFACTION (OSS) and OVERALL BRAND EQUITY (OBE)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	460.327	1	460.327	485.545	.000 ^b
	Residual	377.328	398	.948		
	Total	837.655	399			

a. Dependent Variable: OVERALL_BRAND_EQUITY

b. Predictors: (Constant), OVERALL_STUDENT_SATISFACTION

The coefficients (Table 5.58) indicates that OVERALL STUDENT SATISFACTION (OSS) is significantly and positively associated with OVERALL BRAND EQUITY (OBE) ($\beta=0.741$, $p<0.05$). The data indicates that a 1-unit increase in OVERALL STUDENT SATISFACTION (OSS) will result in a 0.703 unit increase in OVERALL BRAND EQUITY (OBE).

Table 5.58: Coefficients for Relationship between OVERALL STUDENT SATISFACTION (OSS) and OVERALL BRAND EQUITY (OBE)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.067	.165		6.453	.000
	OVERALL_STUDENT_SATISFACTION	.703	.032	.741	22.035	.000

a. Dependent Variable: OVERALL_BRAND_EQUITY

5.21. Relationship between OVERALL SERVICE QUALITY (OSQ) and OVERALL BRAND EQUITY (OBE)

OVERALL SERVICE QUALITY (OSQ) was included as independent variable in a multiple linear regression equation to ascertain its predictive power relating to OVERALL BRAND EQUITY (OBE). The results of this multiple linear regression are presented below. Based on the model summary below (Table 5.59), OVERALL SERVICE QUALITY (OSQ) predicts 39.8% (R Square=0.398) of the variance in OVERALL BRAND EQUITY (OBE).

Table 5.59: Model Summary for Relationship between OVERALL SERVICE QUALITY (OSQ) and OVERALL BRAND EQUITY (OBE)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.631 ^a	.398	.397	1.12121	1.728

a. Predictors: (Constant), OVERALL_SERVICE_QUALITY

b. Dependent Variable: OVERALL_BRAND_EQUITY

The ANOVA table, Table 5.60 indicates that OVERALL SERVICE QUALITY (OSQ) is a significant predictor of OVERALL BRAND EQUITY (OBE) ($F=260.929$, $p<0.005$).

Table 5.60: Anova for Relationship between OVERALL SERVICE QUALITY (OSQ) and OVERALL BRAND EQUITY (OBE)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	328.017	1	328.017	260.929	.000 ^b
	Residual	495.303	394	1.257		
	Total	823.321	395			

a. Dependent Variable: OVERALL_BRAND_EQUITY

b. Predictors: (Constant), OVERALL_SERVICE_QUALITY

The coefficients (Table 5.61) indicate that OVERALL SERVICE QUALITY (OSQ) is significantly and positively associated with OVERALL BRAND EQUITY (OBE) ($\beta=0.631$, $p<0.05$). The data indicates that a 1-unit increase in OVERALL SERVICE QUALITY (OSQ) will result in a 0.664 unit increase in OVERALL BRAND EQUITY (OBE).

Table 5.61: Coefficients for Relationship between OVERALL SERVICE QUALITY (OSQ) and OVERALL BRAND EQUITY (OBE)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.173	.217		5.414	.000
	OVERALL_SERVICE_QUALITY	.664	.041	.631	16.153	.000

a. Dependent Variable: OVERALL_BRAND_EQUITY

5.22. Relationship between Overall Satisfaction and OVERALL SERVICE QUALITY (OSQ) with OVERALL BRAND EQUITY (OBE)

OVERALL SERVICE QUALITY (OSQ) and OVERALL STUDENT SATISFACTION (OSS) were included as independent variables in a multiple linear regression equation to ascertain their predictive power relating to OVERALL BRAND EQUITY (OBE). The model summary below (Table 5.62) shows that OVERALL SERVICE QUALITY (OSQ) and OVERALL STUDENT SATISFACTION (OSS) predict 57.7% (R Square=0.577) of the variance in the dependent variable OVERALL BRAND EQUITY (OBE).

Table 5.62: Model Summary for Relationship between OVERALL STUDENT SATISFACTION (OSS), Service Quality and OVERALL BRAND EQUITY (OBE)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.760 ^a	.577	.575	.94114	1.940

a. Predictors: (Constant), OVERALL_STUDENT_SATISFACTION, OVERALL_SERVICE_QUALITY

b. Dependent Variable: OVERALL_BRAND_EQUITY

The ANOVA results (Table 5.63) indicate that the model is a significant predictor of OVERALL BRAND EQUITY (OBE) (F=268.262, p<0.05).

Table 5.63: Anova for Relationship between OVERALL STUDENT SATISFACTION (OSS), Service Quality and OVERALL BRAND EQUITY (OBE)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	475.223	2	237.611	268.262	.000 ^b
	Residual	348.098	393	.886		
	Total	823.321	395			

a. Dependent Variable: OVERALL_BRAND_EQUITY

b. Predictors: (Constant), OVERALL_STUDENT_SATISFACTION, OVERALL_SERVICE_QUALITY

The coefficients in Table 5.64, indicate that OVERALL SERVICE QUALITY (OSQ) is significantly and positively associated with OVERALL BRAND EQUITY (OBE) ($\beta=0.232$, $p<0.05$). Furthermore, OVERALL STUDENT SATISFACTION (OSS) is significantly and positively related to OVERALL BRAND EQUITY (OBE) ($\beta=0.581$, $p<0.05$) The data indicates that a 1 unit increase in OVERALL SERVICE QUALITY (OSQ) will result in a 0.245 unit increase in OVERALL BRAND EQUITY (OBE) and a 1 unit increase in OVERALL STUDENT SATISFACTION (OSS) will result in a 0.550 unit increase in OVERALL BRAND EQUITY (OBE). Hence, OVERALL STUDENT SATISFACTION (OSS) has a stronger influence on OVERALL BRAND EQUITY (OBE) than OVERALL SERVICE QUALITY (OSQ) by more than twice as much.

Table 5.64: Coefficients for Relationship between OVERALL STUDENT SATISFACTION (OSS), Service Quality and OVERALL BRAND EQUITY (OBE)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.580	.188		3.090	.002
	OVERALL_SERVICE_QUALITY	.245	.047	.232	5.157	.000
	OVERALL_STUDENT_SATISFACTION	.550	.043	.581	12.892	.000

a. Dependent Variable: OVERALL_BRAND_EQUITY

5.23. Relationship between Overall Satisfaction and OVERALL SERVICE QUALITY (OSQ) (One Overall Measure) with OVERALL BRAND EQUITY (OBE)

OVERALL SERVICE QUALITY (OSQ) and OVERALL STUDENT SATISFACTION (OSS), which was measured by question D7 as one overall measure, were included as independent

variables in a multiple linear regression equation to ascertain their predictive power relating to OVERALL BRAND EQUITY (OBE). The model summary below (Table 5.65) shows that OVERALL SERVICE QUALITY (OSQ) and OVERALL STUDENT SATISFACTION (OSS) measured by D7 in the questionnaire, predict 45.4% (R Square=0.454) of the variance in the dependent variable OVERALL BRAND EQUITY (OBE).

Table 5.65: Model Summary for Relationship between OVERALL STUDENT SATISFACTIONS (OSS), Service Quality and OVERALL BRAND EQUITY (OBE)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.674 ^a	.454	.451	1.07041	1.893

a. Predictors: (Constant), D7 Overall, I am Satisfied to Study Here, OVERALL_SERVICE_QUALITY

b. Dependent Variable: OVERALL_BRAND_EQUITY

The ANOVA results (Table 5.66) indicate that the model is a significant predictor of OVERALL BRAND EQUITY (OBE) (F=162.165, p<0.05).

Table 5.66: Anova for Relationship between OVERALL STUDENT SATISFACTION (OSS) One Overall Measure (D7), Service Quality and OVERALL BRAND EQUITY (OBE)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	371.614	2	185.807	162.165	.000 ^b
	Residual	446.857	390	1.146		
	Total	818.471	392			

a. Dependent Variable: OVERALL_BRAND_EQUITY

b. Predictors: (Constant), D7 Overall, I am Satisfied to Study Here, OVERALL_SERVICE_QUALITY

The coefficients in Table 5.67, indicate that OVERALL SERVICE QUALITY (OSQ) is significantly and positively associated with OVERALL BRAND EQUITY (OBE) ($\beta=0.453$, $p<0.05$). Furthermore, OVERALL STUDENT SATISFACTION (OSS) measured by one overall measure (D7), is significantly and positively related to OVERALL BRAND EQUITY (OBE) ($\beta=0.293$, $p<0.05$). The data indicates that a 1 unit increase in OVERALL SERVICE QUALITY (OSQ) will result in a 0.479 unit increase in OVERALL BRAND EQUITY (OBE) and a 1 unit increase in OVERALL STUDENT SATISFACTION (OSS) will result in a 0.247 unit increase in OVERALL BRAND EQUITY (OBE). In this model, with a one overall measure of OVERALL STUDENT SATISFACTION (OSS) by D7, OVERALL SERVICE QUALITY (OSQ) has a stronger influence on OVERALL BRAND EQUITY (OBE) than OVERALL STUDENT SATISFACTION (OSS) measured by D7.

Table 5.67: Coefficients for Relationship between OVERALL STUDENT SATISFACTION (OSS) One Overall Measure (D7), Service Quality and OVERALL BRAND EQUITY (OBE)

Coefficients^a

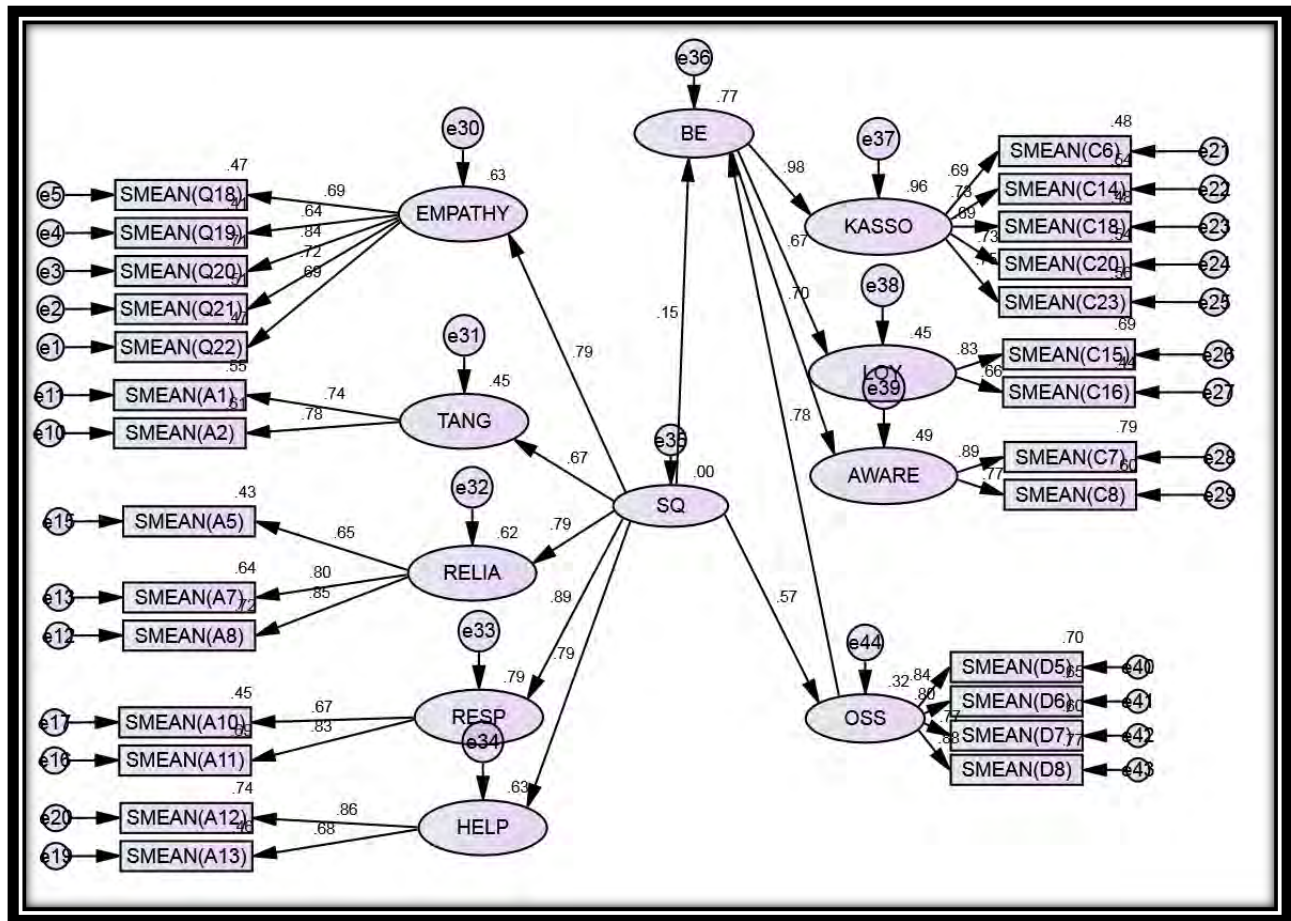
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.922	.212		4.350	.000
OVERALL_SERVICE_QUALITY	.479	.050	.453	9.547	.000
D7 Overall, I am Satisfied to Study Here	.247	.040	.293	6.181	.000

a. Dependent Variable: OVERALL_BRAND_EQUITY

5.24. The Relationships between Service Quality (SERVPERF), OVERALL STUDENT SATISFACTION (OSS) and BRAND EQUITY Aaker’s (1996) Model Depicted by a Structural Model.

The figure 5.9 shows the structural relationships between Service Quality (SQ), OVERALL STUDENT SATISFACTION (4-variable measure), and Brand Equity (BE).

Figure 5.9: Structural Model Depicting the Relationships between Service Quality (SQ) OVERALL STUDENT SATISFACTION (OSS) and Brand Equity (BE)



The reliability measures for Service Quality (SQ) and Brand Equity (BE) have already been provided when the CFA was discussed for those constructs. The reliability for the four variable measure of OVERALL STUDENT SATISFACTION (OSS) (OSS) is provided in Table 5.68.

Table 5.68: Reliability for OVERALL STUDENT SATISFACTION (OSS)

Reliability Statistics

Cronbach's Alpha	N of Items
.890	4

The model fit indices for the Structural Model appear in Table 5.69 hereunder.

Table 5.69: Model Fit Indices for the Structural Model

Measure	Threshold	Indices for Model	Comment
Chi-square/df (cmin/df)	<3 good, <5 sometimes allowed (Hu & Bentler, 1999).	1.856	ACCEPTABLE
p- value	>0.05 (Hu & Bentler).	0.000	NOT ACCEPTABLE
CFI	>0.9 (Hu & Bentler, 1999).	0.950	ACCEPTABLE
GFI	0.9 minimum (Hu & Bentler, 1999).	0.906	ACCEPTABLE
AGFI	Equal to or >0.9 (Hooper et al., 2008 cited in Kats, 2013:103).	0.886	NOT ACCEPTABLE
NFI	>0.9 (Bentler, 1995).	0.898	NOT ACCEPTABLE
RMSEA	<0.06 (Hu & Bentler, 1999).	0.046	ACCEPTABLE

Measure	Threshold	Indices for Model	Comment
PCLOSE	>0.05 (Hu & Bentler, 1999).	0.848	ACCEPTABLE

According to Hooper et al. (2008) cited in Fields and Atiku (2015:288), the advice provided is that if at least four indices are good, a good model fit can be concluded. Hence, based on the fit indices in the table, it can be concluded that the model is a good fit of the data.

Based on Table 5.70, Service Quality (SQ) is positively related to OVERALL STUDENT SATISFACTION (OSS) and a 1 unit increase in SQ will result in a 0.818 unit increase in OSS. In addition, Service Quality (SQ) is significantly related to Brand Equity (BE), and a 1 unit increase in SQ will give rise to a 0.168 unit increase in BE. Lastly, OVERALL STUDENT SATISFACTION (OSS) is significantly related to Brand Equity (BE), and a 1 unit increase in OSS will result in BE increasing by 0.6 units.

Table 5.70: Regression Weights

			Estimate	S.E.	C.R.	P	Label
OSS	<---	SQ	.818	.104	7.897	***	Significant Relationship between Service Quality (SQ) and OVERALL STUDENT SATISFACTION (OSS) (OSS) at 99% confidence.
BE	<---	SQ	.168	.057	2.946	.003	Significant Relationship between Service Quality (SQ) and Brand Equity (BE) at 95% confidence.

			Estimate	S.E.	C.R.	P	Label
BE	<---	OSS	.600	.052	11.593	***	Significant Relationship between OVERALL STUDENT SATISFACTION (OSS) (OSS) and Brand Equity (BE) at 99% confidence.

Source: Compiled by Researcher.

In addition, based on gender, for male students, the relationships between the three constructs SQ, OSS and BE are significant whereas for female students, besides the relationship between SQ and BE, the other relationships are all significant. This is illustrated in Tables 5.71 and 5.72.

Table 5.71: Regression Weights: (Male Students)

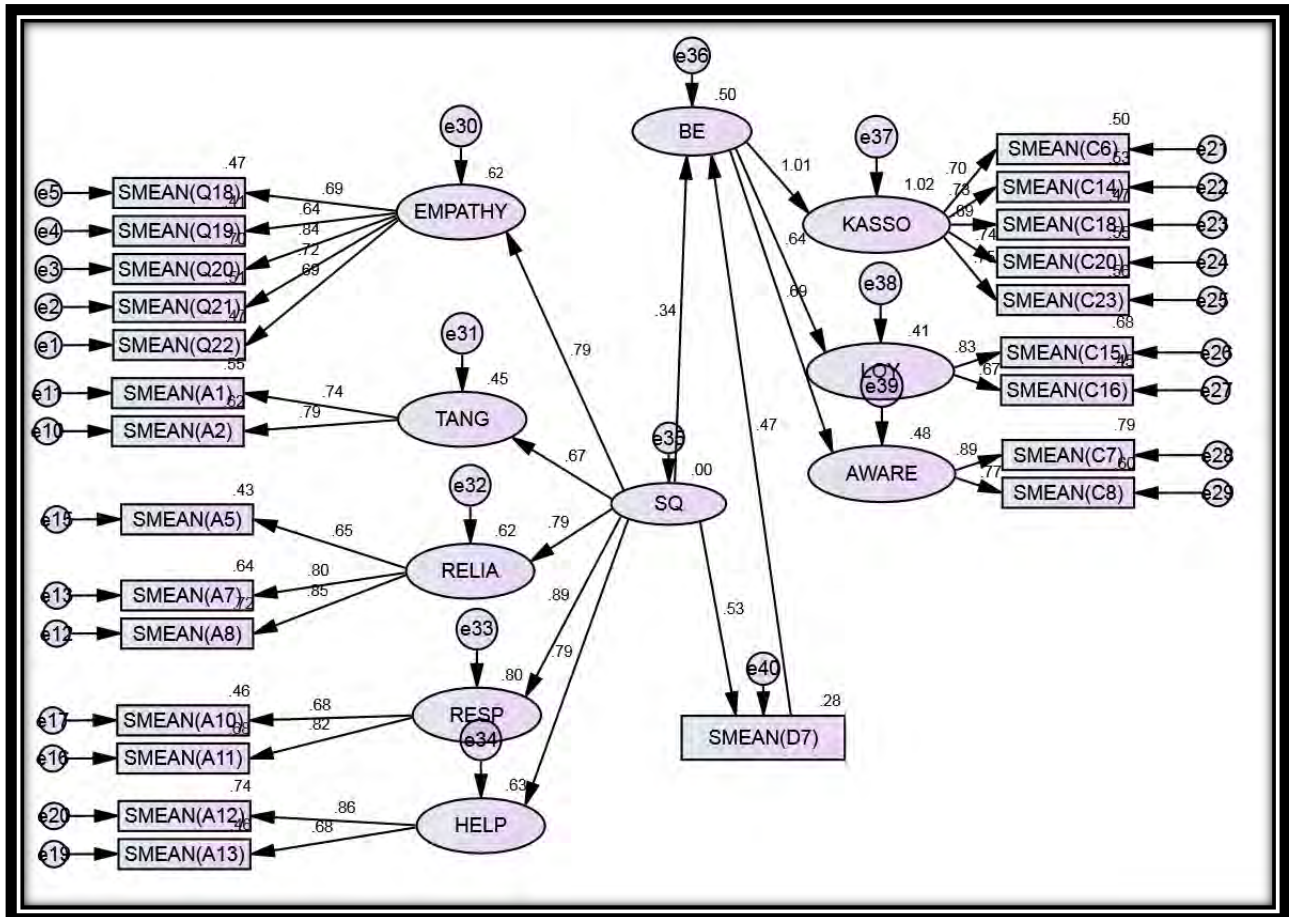
			Estimate	S.E.	C.R.	P	Label
OSS	<---	SQ	.774	.144	5.393	***	
BE	<---	SQ	.195	.080	2.444	.015	
BE	<---	OSS	.704	.090	7.797	***	

Table 5.72: Regression Weights: (Female Students)

			Estimate	S.E.	C.R.	P	Label
OSS	<---	SQ	.841	.144	5.827	***	
BE	<---	SQ	.141	.074	1.914	.056	
BE	<---	OSS	.539	.061	8.805	***	

Figure 5.10 shows the structural relationships between Service Quality (SQ), OVERALL STUDENT SATISFACTION (one variable overall measure – D-7), and Brand Equity (BE).

Figure 5.10: Structural Model Depicting the Relationships between Service Quality (SQ), (OSS) and Brand Equity (BE)



The model fit indices for the structural model above are depicted in Table 5.73.

Table 5.73: Model Fit Indices for the Structural Model

Measure	Threshold	Indices for Model	Comment
Chi-square/df (cmin/df)	<3 good, <5 sometimes allowed (Hu & Bentler, 1999).	1.827	ACCEPTABLE
p- value	>0.05 (Hu & Bentler).	0.000	NOT ACCEPTABLE
CFI	>0.9 (Hu & Bentler, 1999).	0.952	ACCEPTABLE
GFI	0.9 minimum (Hu & Bentler, 1999).	0.918	ACCEPTABLE
AGFI	Equal to or >0.9 (Hooper et al., 2008 cited in Kats, 2013:103).	0.898	NOT ACCEPTABLE
NFI	>0.9 (Bentler, 2009).	0.901	ACCEPTABLE
RMSEA	<0.06 (Hu & Bentler, 1999).	0.046	ACCEPTABLE
PCLOSE	>0.05 (Hu & Bentler, 1999).	0.862	ACCEPTABLE

According to Hooper et al. (2008) cited in Fields and Atiku (2015:288), the advice provided is that if at least four indices are good, a good model fit can be concluded. Hence, based on the fit indices in the table, it can be concluded that the model is a good fit of the data.

Table 5.74: Regression Weights: (Default model)

			Estimate	S.E.	C.R.	P	Label
D7_1	<---	SQ	.950	.118	8.039	***	Significant Relationship between Service Quality (SQ) and OVERALL STUDENT SATISFACTION (OSS) (D7-1) at 99% confidence
BE	<---	SQ	.388	.073	5.319	***	Significant Relationship between Service Quality (SQ) and Brand Equity (BE) at 99% confidence.
BE	<---	D7_1	.301	.035	8.560	***	Significant Relationship between OVERALL STUDENT SATISFACTION (OSS) (D7-1) and Brand Equity (BE) at 99% confidence.

According to the regression weights in Table 5.74, Service Quality (SQ) significantly influences D7-1 (OVERALL STUDENT SATISFACTION), Service Quality (SQ) significantly influences Brand Equity (BE), and D7-1 (OVERALL STUDENT SATISFACTION) significantly influences Brand Equity (BE). Based on the statistics provided in Table 5.74, a 1 unit increase in SQ results in a 0.95 unit increase in D7-1 (OVERALL STUDENT SATISFACTION); a 1 unit increase in SQ will give rise to a 0.388 unit increase in BE and a 1 unit increase in D7-1 (OVERALL STUDENT SATISFACTION) will result in a 0.301 unit increase in BE. Based on the results of the regression weights, OVERALL STUDENT SATISFACTION (D7-1) has a greater influence on Brand Equity (BE) than Service Quality (SQ).

In addition, based on the regression weights in Tables 5.75 and 5.76, Service Quality (SQ), OVERALL STUDENT SATISFACTION (D7-1) and Brand Equity (BE) are significantly related.

However, Service Quality (SQ) satisfies female students' more than male students. However, Brand Equity (BE) for male students is more influenced by Service Quality (SQ) than for female students. In addition, satisfied female students will display a higher perception of brand equity than male students will.

Table 5.75: Regression Weights: (Female Students)

			Estimate	S.E.	C.R.	P	Label
D7_1	<---	SQ	1.087	.172	6.332	***	
BE	<---	SQ	.277	.092	3.011	.003	
BE	<---	D7_1	.305	.044	6.869	***	

Table 5.76: Regression Weights: (Male Students)

			Estimate	S.E.	C.R.	P	Label
D7_1	<---	SQ	.756	.159	4.749	***	
BE	<---	SQ	.530	.115	4.595	***	
BE	<---	D7_1	.294	.055	5.310	***	

The analysis from sections 5.13 to 5.24 addressed objective four of the study which pertains to all the relationships between the study constructs. Overall, Service Quality, Student Satisfaction and Brand Equity are significantly related constructs.

5.25. Summary

This chapter presented the significant findings of the study based both on descriptive as well as inferential statistics. The descriptive analysis provided descriptive statistics and analysed the main study constructs based on means, modal values, frequency distributions, and other descriptive

analytical approaches. Service quality dimensions, the importance placed on the service quality dimensions, OVERALL SERVICE QUALITY (OSQ), OVERALL BRAND EQUITY (OBE), OVERALL STUDENT SATISFACTION (OSS) and the brand equity dimensions were descriptively analysed initially. These analyses pertained to Objectives 1 and 2.

The constructs Service Quality and Brand Equity were explored in terms of their underlying factors/dimensions through exploratory factor analysis and Confirmatory Factor Analysis (CFA). The findings from these analyses addressed Objective 3 of the study.

The last part of the analysis focused on the relationships between Service Quality, Brand Equity and Student Satisfaction, their overall measures and their underlying factors/dimensions. Here, mainly regression analysis was used to conduct the analysis whilst the relationships between the overall measures of Service Quality, Student Satisfaction and Brand Equity were investigated through structural equation modelling. These analyses, essentially predictive in nature, helped to highlight predictive relationships between the important constructs and was helpful in addressing Objective 4.

Chapter 7 discusses the significant findings of the study and reports on these findings relative to the research objectives and hypotheses. The chapter also presents the new conceptual model based on the findings.

CHAPTER SIX

DISCUSSION OF FINDINGS

6.1. Introduction

The previous chapter addressed the research findings; this chapter will discuss these findings in relation to the research objectives and the conceptual and theoretical framework. The discussion will be in accordance with the aim of the study, which was to evaluate the constructs Service Quality, Student Satisfaction, Brand Equity, their overall measures and the interrelationships amongst the components or dimensions of the aforementioned constructs, as perceived by students from select South African universities. Each of the (four) research objectives will be addressed in relation to the significant findings of the study.

6.2. Service Quality, Student Satisfaction and Brand Equity Ratings

Service quality, Student Satisfaction and Brand Equity were analysed descriptively in order to evaluate how students rated these constructs and this relates to **objective one** of the study. A discussion of the evaluation of these constructs ensues.

6.2.1. Service Quality Dimension Ratings

The service quality dimension with the highest rating was “Responsiveness” and the one with the lowest rating was “Empathy.”

It is a well-known fact that Responsiveness of a university and its lecturers plays a crucial role in service quality and it is a dimension that both students and their families place importance on (Boyd, 2012, para 7; Getzlaf et al., 2009:12-13). In Pariseau and McDaniel’s (1997) study into Business Faculties in the USA, Responsiveness was the second highest rated dimension. In contrast, though, a study by Mohammadi and Mohammadi (2014:89) amongst medical students found that Responsiveness was rated as the lowest service quality dimension.

The Responsiveness dimension correlated most highly with the variable ‘willingness to help’. Hence, the more willingness expressed to help students, the more Responsiveness the institution

will be deemed to be. In fact, according to Kwan and Jones (n.d), the capacity to be helpful and show willingness to be helpful to students is deemed to be an important trait of a good lecturer. In addition, such a good lecturer is perceived to be one who clearly shows that he/she is never too busy to assist students wherever possible. In addition, a helpful lecturer is perceived to be one who is willing to answer questions from students even if the questions are 'stupid' but guides students in a patient way so as to lead them to the correct answer (Kwan & Jones, n.d.).

Regarding the low ratings provided for Empathy, a similar finding was obtained in a study on Nigerian higher education (Iro-Idoro et al., 2014). However, in contrast, Empathy was found to be the second most important factor amongst medical students (Mohammadi & Mohammadi, 2014:89). However a low rating for Empathy is a cause for concern as it is regarded as an important dimension of service quality (Avram, n.d., 3-4), bringing about better learning outcomes (Dumansky, 2013), and through "profound empathy" (Cooper, 2011) a more relaxed learning environment and more positive emotions.

An Empathy-related variable that correlated most highly with it was "personal attention provided". This suggests that if the institution provides its students with more personal attention, the perception of Empathy will accordingly increase. Avram (n.d., 3-4) states that an empathetic relationship is considered to be an important ingredient to generating maximum student satisfaction. Empathy involves being skilled in sharing in the feelings and thoughts of other individuals in a particular situation; acting as though one is the other individual. Some of the issues depicting empathy are listening to others, showing interest and attention, making attempts to understand others, and information sharing. In a higher education context, an empathetic teacher must have an understanding of the mind-set of students, be close to them (accessible), show interest in student concerns, and put himself/herself in the student's personal situation. By so doing, the lecturer will be able to win the student's trust and cooperation (Avram, n.d., 3-4). More personal attention and interest given to students could help to improve Empathy ratings.

Assurance was found to be the second most highly rated service quality dimension in this study. This finding parallels that of Green (2014) who also found Assurance to have the highest perception amongst students. This high rating obtained in this study for Assurance is reassuring as

it is regarded as important (Chinunda, 2013:108), and especially more so in a South African context (Rodriguez et al., 2013).

The cluster analysis revealed a four-cluster solution, and two of the largest clusters rated “Responsiveness” relatively high and the majority of the clusters (three out of four) rated “Empathy” relatively low. Those who rated Responsiveness as relatively high were mainly Black male and female students taking Commercial subjects. Although all the clusters scored relatively low ratings for Empathy, two clusters, which comprised just over 39% of the respondents, rated “Empathy” very low. These clusters comprised mainly Black male and female students taking Commercial and Science subjects. Empathy, therefore is a dimension that could be improved on by taking into account the advice provided by the following researchers (Dumansky, 2013; Cooper, 2011).

“State of equipment” correlated most strongly with its related dimension Tangibles and this could suggest that an improvement in the state of equipment could help to improve the low rating for the Tangibles dimension of service quality. An important piece of advice in this regard is according to Krestovics, (2011:189) if the furniture and fittings are old and in a poor state, if maintenance is tardy, and if the premises are unclean and poorly groomed, what message are students and prospective students receiving?

It is reassuring, though, that the ratings for all the service quality dimensions are above 3.5 out of 7 (the highest rating). This suggests that the sample studied rate their respective universities higher than average.

6.2.2. OVERALL SERVICE QUALITY (OSQ) Rating

OVERALL SERVICE QUALITY (OSQ) had an above-average rating. However, the most frequently appearing modal value was 7. This is very re-assuring and indicative of the fact that the majority of students in the sample rate OVERALL SERVICE QUALITY (OSQ) highly.

From a gender perspective, it is apparent that male students are more satisfied with OVERALL SERVICE QUALITY (OSQ) than female students and provided higher average and modal ratings than female students although not significantly different statistically.

6.2.3. OVERALL STUDENT SATISFACTION (OSS) Ratings

OVERALL STUDENT SATISFACTION (OSS) can be deemed as above average for the sample under study. In fact, based on the modal value of 7, it can be inferred that most students rate overall satisfaction as being excellent. The most satisfied students were Black female students studying mainly Science subjects. The least satisfied were Indian female students studying Commerce subjects. This finding is similar to that of Moro-Egido and Panades (2010) based on their findings that women students in specialist programmes are more satisfied.

6.2.4. Brand Equity Ratings

OVERALL BRAND EQUITY (OBE) had an above-average score indicating that the higher education institutions are perceived to be valuable brands. In evaluating brand equity, no significant statistical differences were found between gender and modules registered. However, there were significant differences between race groups in their rating of brand equity, where the highest perceived OVERALL BRAND EQUITY (OBE) was amongst Black students and the lowest amongst White students.

Regarding the brand equity dimensions, Perceived Quality and Leadership together with Awareness, were perceived by respondents to be the highest. This finding is similar to that of (Pretorius, 2007) who undertook a brand equity study at Tshwane University and found “Quality” and “Awareness” to be the most highly rated brand equity dimensions. However, whilst in this study Perceived Quality and Leadership received the highest rating followed by Awareness, in the study by (Pretorius, 2007), Awareness was rated as the higher brand equity dimension.

Regarding Perceived Quality and Leadership as being the most highly rated dimension, Toma (2003:201) suggests that perceived quality can be an important factor which gives a customer a reason to buy because it allows for differentiation, can generate interest in a brand amongst customers, and can allow for the extension of a brand, for example, for business schools such as Harvard, which is perceived as a high quality brand.

In addition, regarding Awareness of the brand as having the second highest rating, Toma (2003:201) contends that in a higher education context, Awareness is a key factor when dealing

with students and donors, as it is an indication that the brand is one that can be taken into account. The aforementioned author contends that, consequently, this awareness of the institution makes the jobs of people who represent the university easier due to the fact that people know something affirmative about their institutions. In addition, according to Iqbal et al., (2012:168), recognition and reputation of the brand are crucial for universities, as they need recognition for what they do. Similarly, Allen and Ebooks Corporation (2007:92) contend that recognition of a University's brand is important within a competitive context.

Based on the findings pertaining to the Brand Equity dimensions, it is inferred that students perceive their universities as offering high quality and have knowledge about their universities. The lowest perceived score was for "Loyalty" indicating that students may not be loyal to their universities, suggesting an area that could be addressed and improved on by the universities concerned.

6.3. Importance of Service Quality Factors

The **second objective** of the study is to determine the service quality dimensions that students place importance on. Higher education marketers should understand the service quality dimensions that students place importance on in that by so doing student needs would be better addressed. The highest importance is placed on "Responsiveness and Reliability," followed closely by "Assurance," and the lowest importance is placed on "Empathy and Tangibles." Similar studies found "Responsiveness" and "Reliability" to be most important (Al-Mushasha and Nassuora, 2012:1474), and no studies in the literature reported "Empathy" and "Tangibles" to be the least important.

The finding for Responsiveness as being the most important service quality dimension is similar to other studies. For example, in Kontic's (2014:646) study into Serbian higher education, Responsiveness was rated as the third most important dimension that students placed emphasis on. In addition, in a study at university library services, Responsiveness emerged as one of three important themes (McClean, 2012). The importance of Responsiveness in a higher education environment has been widely supported and written on by various researchers (Boyd, 2012, para 7; Kwan & Jones, n.d; Getzlaf et al., 2009:12-13).

However, the finding on Responsiveness as being the most important service quality dimension is different to the findings from other studies. For example, Kontic (2014:646) found Assurance to be the most important in a Serbian study; and Calvo-Porrall et al. (2013) found Tangibles to be most important in a Spanish study.

As alluded to, the least important service quality dimension in this study was Tangibles closely followed by Empathy. This finding is unique to this study and different to other studies. Tangibles were the most important dimension at Nigerian Polytechnics (Iro-Idoro et al., (2014), in a Spanish study (Calvo-Porrall et al., 2013), and at a University of Technology (Green, 2014). In addition, the low importance placed on Empathy corresponds with the study findings of Iro-Idoro et al., (2014), but in contrast rated highly in the other studies (Kontic 2014:646; Calvo-Porrall et al., 2013; McClean, 2012).

Regarding the importance of Reliability, this finding closely relates to findings from similar studies (Mohammadi & Mohammadi, 2014:89; Kontic, 2014:646; Al-Mushasha & Nassuora, 2012:1474; Green, 2014) although Iro-Idoro et al., (2014) found Reliability to be the least important service quality dimension.

Concerning the importance placed on the Reliability dimension, there is empirical evidence to support the importance of Reliability. In a study into effective and ineffective lecturers in Zimbabwe, some of the traits that were found relating to ineffective lecturers and hence reliability-related problems, were unfair and biased marking, absenteeism, not providing comments but simply giving a mark, providing marks but not reading the work, ignorance, incompetence, arriving late for lectures, no course outline provided, ill prepared for lectures, and ineffective time management (Chireshe, 2011:267-268). Hence, the lecturer makes an important contribution to reliability.

As regards the importance placed on Assurance, this finding corresponds to that of other researchers (Kontic, 2014:646; Green, 2014). It is important to note that customers want courtesy and want to interact with service personnel who are civil and display good mannerisms, are greeted, spoken to and treated as being important (Chinunda, 2013:108).

It is noteworthy that three of the most important service quality items/variables relate to Reliability and Assurance in this study. Each of the 22-items/variables representing the importance students place on service quality were descriptively analysed and in order of importance, the three most important items/variables were “keeping accurate records” (Reliability dimension), “informing students of when the service will be carried out” (Reliability Dimension) and “employee knowledge in answering questions” (Assurance). However, the least important item/variable was “appearance of employees”. Therefore, an over-emphasis on the appearance of employees is not going to contribute effectively to service quality!

The cluster analysis provided a seven-cluster solution depicting the service quality dimensions with different levels of importance based on gender, race, age and academic fields of study. The largest cluster, comprising 30.4% of the sample, placed the highest emphasis on “Reliability” and comprises mainly of Black female students doing Commercial subjects. Similar importance on “Reliability” is placed by mainly Black female students doing Science subjects, and who make up the fourth largest cluster. The second largest cluster, which comprised 17.6% of the sample, is one that provides very low importance ratings for all the service quality dimensions, suggesting that, relative to the other clusters, the members of this cluster do not place significant importance on service quality and its dimensions, although all importance ratings were above average (i.e. more than the 3.5 on a 7-point scale). The aforementioned cluster is mainly made up of Black female students studying Commercial subjects who place slightly more importance on “Assurance.” Assurance is also a service quality dimension that the two smallest clusters place importance on, and this cluster comprised students mainly studying Commercial and Humanities’ subjects. The third largest cluster comprised 15.1% of the sample, who place most importance on “Responsiveness” and they are relatively older Black males studying Commercial subjects. It is interesting, however, to note that none of the clusters place particularly high importance on “Empathy.” However, no similar findings were found in the literature.

Therefore, it is important to note that in this study, the highest importance is placed on “Responsiveness and Reliability,” followed closely by “Assurance,” and the lowest importance is placed on “Empathy and Tangibles.”

Furthermore, based on the analysis between the actual ratings and importance ratings for each service quality dimension, significant differences or gaps were found for all the service quality dimensions. In particular, Reliability has the highest gap followed by Empathy. It is noteworthy that the second most important service quality dimension to the students in the study is Reliability and in turn, they are receiving low Reliability, hence the large gap score. The finding regarding the highest negative gap pertaining to Reliability corroborates with the findings of Naidoo (2014) who also found the largest gap pertaining to the Reliability dimension. However, Yousapronpaiboon's (2014) research in higher education found Reliability to have the lowest gap. Regarding Empathy as having the second largest gap, this finding is similar to that of Veerasamy et al. (2012) who found Empathy to have the largest gap score. The lowest gap was accounted for by the Tangibles dimension, which is different to the findings of Green (2014) who found Tangibles to have the largest gap at a South African higher education institution, and Yousapronpaiboon (2014) who also reported a highest Tangible's gap at a Thailand higher education institution.

Within the reliability dimension, two items revealed significantly high gap scores. These were "providing the service at the promised time" and "providing the service right the first time". This finding could suggest that the institutions in the study may not be keeping to their promises and their service delivery may not be in accordance with student requirements.

The large gap for Empathy may suggest that students perceive the level of Empathy provided to be low, hence the large gap score for Empathy. Furthermore, the variable within the Empathy dimension with the highest gap score pertains to the provision of "personal attention", which students perceive they are not getting.

Although Tangibles had the lowest gap score, a variable within it pertaining to "the state of equipment" had a very significant gap score. This could be suggestive of the equipment on campus not being in a good state, and hence the large gap.

6.4. Underlying Factors Relating to Service Quality and Brand Equity

Objective 3 places emphasis on determining the key explanatory factors pertaining to the constructs Service Quality and Brand Equity. The discussion of the key explanatory factors for

Service Quality follows in the next section followed by a discussion of the explanatory factors pertaining to Brand Equity.

6.4.1. Underlying Factors/Dimensions for Service Quality

The factor analysis for Service Quality revealed a five-factor solution. Based on the results of the factor analysis, five factors were extracted and cumulatively, these five factors contributed to explaining 50.2% of the variance in the data. Each of these factors was given a name with the first factor being the most important and the last factor being the least important. Factor 1 is 'Empathize and Assure', Factor 2 is "Tangibles", Factor 3 is "Reliability", Factor 4 is "Promptness and Accuracy", and Factor 5 is "Helpfulness".

Linked to the Empathy dimension of the first factor, Calvo-Porrall et al., (2013) found that Empathy was one of the key factors in higher education institutions studied in Spain although Assurance did not feature as important in the finding. In fact, Radder and Han's (2009:110) study into student accommodation found that Assurance was not an important factor in their study. In addition, the finding concerning Empathy is in line with the result of Appreciative Inquiry Method used by McClean (2012) which also found Empathy to be an important theme in higher education library services. On the other hand, though, this finding pertaining to Empathy and Assurance is different to what was found in the e-learning study by Al-Mushasha & Nassuora (2012:1474) which used an adapted SERVQUAL instrument. However, overall though, the finding of Assurance and Empathy as one factor can be considered a unique one when comparing it with other findings in similar studies.

For the second key factor, Tangibles have been found to be an important dimension in other studies as well (Nadiri et al., 2009; Paddey, 2010:6; Calvo-Porrall et al., 2013; Green, 2014). This finding can be explained by the fact that higher education service is intangible, and the Tangibles associated with the service help to make it more mentally palpable.

With regard to the factors Reliability and Responsiveness, these findings are in line with that of Al-Mushasha and Nassuora (2012:1474). However, it is interesting to note that the SERVPERF variables pertaining to Responsiveness did not all load onto the same factor, suggesting that there could be different dimensions to Responsiveness in the higher education context studied. The

Responsiveness factors that loaded onto the last dimension were distinct in that they pertained to the issue of “Help” which perhaps is perceived as a separate, important dimension of service quality by students as compared to the other Responsiveness variables, which had more to do with punctuality-related issues.

In addition, based on the Confirmatory Factor Analysis (CFA), the underlying factors for Service Quality were found to be Empathy, Responsiveness, Reliability, Tangibles and Helpfulness, which is in line with the SERVPERF and SERVQUAL measurements of Service Quality. Assurance was not an important dimension. The absence of Assurance as an unimportant Service Quality dimension in this study is similar to that found in the study by (Radder & Han, 2009:115-116), but difference to that found in the study by Green (2014) who found assurance to be important in the higher education institutions studied.

In addition, of the 22-items/variables in the SERVPERF model, which was used to measure Service Quality in this study, only 14 items/variables were relevant to this study. This finding is unique to this study and could suggest that certain Service Quality (SERVPERF) measures may not apply in a South African higher education context. In fact, Nadiri et al. (2009) found in their study that the 22-item SERVPERF scale loaded onto only two factors, which were Tangibles and Intangibles.

6.4.2. Underlying Factors/Dimensions for Brand Equity

The factor analysis for Brand Equity revealed a four-factor solution. Based on the results of the factor analysis, four factors were extracted and cumulatively contributed 52.9% to the variance in the data set. Each of these factors was given a name with the first factor being the most important and the last factor being the least important. Factor 1 is “Key Associations and Differentiation with Loyalty”, Factor 2 is “Loyalty”, Factor 3 is “Awareness” and Factor 4 is “High Quality and Reliability”.

Key Associations and Differentiation issues showed the strongest loadings, suggesting their key role in the brand equity of the higher education institutions studied. This finding, pertaining to Key Associations, especially in respect of Image-related issues in particular, is in line with the findings of Vukasovič, (2015:87); Mourad et al. (2011:406); and Clarke, (2009:45-46).

The second important brand equity dimension, is Loyalty, and as an important dimension of Brand Equity, relates to similar findings obtained by other researchers (Girard & Boyt, 2014; Mitsis, 2007; Clarke, 2009:45-46; Pinar et al., 2014:6).

The third and fourth factors, which respectively contributed, were Awareness and Perceived Quality, which were also found to be important factors in the study by Pretorius (2007).

In addition, the Confirmatory Factor Analysis (CFA) identified three factors applicable to Brand Equity (BE) which were Key Associations and Differentiation, Loyalty and Awareness. However, Perceived Quality and Leadership were not relevant dimensions/factors in this study. This finding pertaining to Perceived Quality and Leadership is different to the findings pertaining to Engineering students at select Indian universities, where Perceived Quality was one of the key dimensions (John & Senith, 2013).

In addition, it is noteworthy that of the 25 Brand Equity-related variables, only nine variables/items loaded into the confirmatory model forming three dimensions or factors. This finding may suggest that the 25 items adapted from Aaker's (1996) Brand Equity Model do not all apply to the the sample of students studied.

6.5. Relationships between the Constructs and their Dimensions

Determining and evaluating the relationships between the constructs and the factors within the constructs addresses **objective four** of the study.

6.5.1. Service Quality Dimensions as Predictors of OVERALL SERVICE QUALITY (OSQ)

In order to determine the predictive ability of the service quality dimensions, Empathy, Tangibles, Responsiveness, Reliability, and Assurance, they were regressed against OVERALL SERVICE QUALITY (OSQ). It became evident that these dimensions combined, contributed to 34.4% towards predicting overall service in a statistically significant model. Therefore, it is inferred that there could also be other factors predicting OVERALL SERVICE QUALITY (OSQ).

Based on the findings of the regression analysis, it is evident that there were four important predictors of OVERALL SERVICE QUALITY (OSQ) in the higher education context studied.

These were, in order of (predictive) importance, Empathy, Assurance, Responsiveness and Reliability. This finding is similar to that of Chuah, and Sri Ramalu (2011) who found that Responsiveness, Assurance and Empathy were significant predictors of service quality.

However, Tangibles were not a significant positive predictor of OVERALL SERVICE QUALITY (OSQ). In fact, Al-Alak and Alnaser (2012), in their study amongst Business Students in Jordan, found that Tangibles had a significant negative relationship with Service Quality.

However, the finding of Tangibles not being an important predictor of OVERALL SERVICE QUALITY (OSQ) is contrary to the findings of other studies. Sultan and Wong (2011:11) found facilities (Tangibles) service quality to be a core service quality dimension in a study of Central Queensland University. In a study into Spanish higher education, Calvo-Porrall et al., (2013) found that Tangibles was one of the two most important service quality dimensions. Green (2014) also found that Tangibles was an important service quality dimension in a South African study into A University of Technology. Due to the intangible nature of services, customers will make inferences regarding quality based on aspects of the service environment such as the people, place, equipment used and other tangible cues. Hence, services marketers need to be able to manage the physical evidence, which can translate into converting the intangible service into concrete benefits (Rama, 2011:9). In the light of this, Krestovics, (2011:189) contends that the servicescape influences a student's decision to patronize one higher education institution over another and has an effect on student inclination to stay and communicates to students purposefully or unintentionally. In addition, it (i.e. the servicescape) can also add value to a student's encounter with the institution through contributing to image and perception. Krestovics, 2011:189). The finding of Tangibles not being an important predictor of service quality is unique to this study. Hence, for the sample of students studied, any attempt to use Tangibles to influence Service Quality positively vis-à-vis the other service quality dimensions is unlikely to be effective.

Regarding the most important predictor of OVERALL SERVICE QUALITY (OSQ), namely, Empathy, some studies have revealed similar importance (Calvo-Porrall et al., 2013; McClean, 2012; Radder & Han, 2009:116). No similar studies in higher education, especially in a predictive context, have shown Empathy to be a key predictor of OVERALL SERVICE QUALITY (OSQ).

The finding of Assurance, as another significant predictor of OVERALL SERVICE QUALITY (OSQ) is similar to the Jordanian study by Al-Alak and Alnaser (2012) who found it to be the largest contributor to Service Quality. also unique to this study context. Similarly, another study found (not in a predictive context though as is evident in this study), that Assurance was perceived to be a key Service Quality dimension (Green, 2014), although a different study found Assurance not to be important (Radder & Han, 2009:110).

Regarding the finding pertaining to Responsiveness as a significant predictor of OVERALL SERVICE QUALITY (OSQ), quantitative and qualitative studies found similar perceptions (Al-Mushasha & Nassuora, 2012:1474; McClean, 2012). Again, this finding is different, especially in a South African higher education context.

Reliability was also found to be an important and significant predictor of OVERALL SERVICE QUALITY (OSQ) by Al-Mushasha & Nassuora (2012:1474). However, no South African study has been conducted in this area within a higher education context.

This finding suggests that due to four out of five of the SERVPERF dimensions being significant predictors of Service Quality in this study, SERVPERF has shown applicability in this study as a measure of Service Quality. This finding is consistent with the fact that SERVPERF is a suitable tool in measuring Service Quality in higher education as alluded to by other researchers (Mertova & Nair, 2011; Christiansen et al., 2013).

6.5.2. Service Quality Dimension Influence on OVERALL STUDENT SATISFACTION (OSS)

Higher education marketers need to understand which dimensions of service quality predict OVERALL STUDENT SATISFACTION (OSS), so that they could focus on such dimensions to improve OVERALL SERVICE QUALITY (OSQ). In order to determine the predictive ability of the service quality dimensions, Empathy, Tangibles, Responsiveness, Reliability, and Assurance were regressed against OVERALL STUDENT SATISFACTION (OSS).

It is noteworthy that these service quality dimensions when combined, contributed 25.6% towards predicting OVERALL STUDENT SATISFACTION (OSS) in a statistically significant model.

Therefore, it is inferred that there could also be other factors that predict OVERALL STUDENT SATISFACTION (OSS).

Three service quality dimensions contributed significantly to OVERALL STUDENT SATISFACTION (OSS). These were, in order of importance, Empathy, Tangibles and Responsiveness. Reliability and Assurance were not found to be significant predictors of OVERALL STUDENT SATISFACTION (OSS). For the one variable measure of OVERALL STUDENT SATISFACTION (OSS) – D7, Responsiveness and Empathy were significant predictors.

The finding of Empathy as a strong predictor of Student Satisfaction in this study is similar to that of Malik (2010) that was conducted in Punjab. Similarly, the student housing study by Radder and Han (2009:116) also found Empathy to be an important influence on Student Satisfaction. However, in contrast, Nel and Cant (2014) found that “Empathy” was the weakest dimension associated with student satisfaction.

The finding pertaining to Tangibles as a predictor of Student Satisfaction is similar to Malik’s (2010) Punjab study, Kundi et al.’s (2014) study in Pakistan, and the study by Shah (2013) with a less significant influence. However, Tangibles were not a significant predictor of OVERALL STUDENT SATISFACTION (OSS) measured by one variable D7.

Reliability is also not a significant predictor of OVERALL STUDENT SATISFACTION (OSS). This is contrary to the findings by (Malik, 2010 and Shah, 2013).

The finding that Assurance had no significant predictive ability on student satisfaction unique to this study. In fact, a number of studies have, to the contrary, found Assurance to have a significant influence on Student Satisfaction (Nel & Cant’s, 2014, Shanmuga & Jeyakumaran, 2015; Kundi et al., 2014; Shah, 2013; Malik, 2010). Nel and Cant (2014), however found that Assurance has a weak influence on Student Satisfaction.

Evidently, there is a dearth of literature in the higher education field, particularly in South Africa, that evaluates the predictive power of the service quality dimensions used in this study against student satisfaction. Upon examination of South African research into service quality and student

satisfaction, it was evident that not even one studied the predictive power of the service quality dimensions of student satisfaction.

Overall, though, Responsiveness seems to have shown the most positive effect on OVERALL STUDENT SATISFACTION (OSS). More specifically, ‘willingness to help’, ‘promptness of service’, and ‘informing students as to when the service will be delivered’, have significant bearings on OVERALL STUDENT SATISFACTION (OSS). However, this finding is unique to this study in that the study by Shah, (2013) found no influence between Responsiveness and Student Satisfaction. Linking this finding with the descriptive analysis, where Responsiveness was rated the highest and deemed to be the most important dimension of service quality, it is inferred that the above average levels of Student Satisfaction in this study is mainly due to the influence of Responsiveness.

6.5.3. Predictors of OVERALL BRAND EQUITY (OBE) Based On Brand Equity Dimensions

The independent dimensions of Brand Equity, namely, Perceived Quality and Leadership, Awareness, Loyalty and Key Associations and Differentiation were found to explain a major portion of the variance (62.2%) in the dependent variable OVERALL BRAND EQUITY (OBE). However, only two dimensions, Key Associations and Differentiation and Loyalty were found to be significant predictors of OVERALL BRAND EQUITY (OBE). The aforementioned result is similar to the finding from the factor analysis and Confirmatory Factor analysis conducted in this study, which revealed that Key Associations and Differentiation and Loyalty were key underlying dimensions of Brand Equity. Based on the findings, the influence of Key Associations and Differentiation on Brand Equity was twice as much as that of Loyalty.

Key Associations and Differentiation, as a significant predictor of Brand Equity was also found to be a significant dimension in a study by Vukasovič, (2015:87) in Slovenia. In addition, reputation (related to Key Associations and Differentiation), was an an important Brand Equity factor as determined in the study by Pinar et al., (2014). Mitsis, (2007) also found that value (related to Key Associations and Differentiation) was a significant antecedent to Brand Equity in an Australian-based higher education study.

Loyalty was also an important predictor of OVERALL BRAND EQUITY (OBE). This finding corroborates with similar findings of (Clarke, 2009:45-46, in Australian Higher Education; Pinar et al., 2014, in USA; Mitis, 2007, Australia).

It is interesting to note, however, that Key Associations and Differentiation's influence on Brand Equity is slightly more than twice as much as that of Loyalty. Hence, more focus on issues such as admiration, trust and image as the more important Key Associations could help in enhancing the Brand Equity of the institutions relative to the sample studied.

6.5.4. Service Quality Dimensions as Predictors of OVERALL BRAND EQUITY (OBE)

Empathy and Tangibles were the only two service quality dimensions that were found to be significant predictors of the OVERALL BRAND EQUITY (OBE). Of the two predictors, 'Tangibles' had a stronger effect on the OVERALL BRAND EQUITY (OBE), than Empathy.

Of the four variables measuring Tangibles, only one – the visual appeal of physical facilities – had a significant and positive effect on the OVERALL BRAND EQUITY (OBE). Hence, this would suggest that the higher education institutions studied could increase/improve their brand equity by improving their physical facilities. This finding is similar to the study conducted amongst Iranian higher education institutions, where Moghaddam et al. (2013), found that physical facilities had a significant and positive bearing on brand equity although that study, did not use the SERVPERF dimensions of service quality. In fact, Krestovics, (2011:189) contends that the servicescape influences a student's decision to patronize one higher education institution over another and has an effect on student inclination to stay and communicates to students purposefully or unintentionally. In addition, it (i.e. the servicescape) can also add value to a student's encounter with the institution through contributing to image and perception, which are Brand Equity-related issues.

Regarding the Empathy dimension, three variables would seem to offer significant contributions to the OVERALL BRAND EQUITY (OBE). These are, 'personal attention provided by employees', 'having the student's best interests', and 'convenience of operating hours'.

There is a dearth of information pertaining to the predictive effect of the service quality dimensions on the OVERALL BRAND EQUITY (OBE) both internationally and in South African higher education. A literature review between 2009 and 2015 did not reveal any studies on the predictive power of the service quality dimensions on the OVERALL BRAND EQUITY (OBE).

6.5.5. Service Quality Dimensions as Predictors of the Predictors of OVERALL BRAND EQUITY (OBE)

OVERALL BRAND EQUITY (OBE) was found to have a significant relationship with KEY Associations and Differentiation and Loyalty. A regression analysis was conducted to ascertain whether the service quality dimensions have a predictive effect on Key Associations and Differentiation, as the logic would be that if service quality can help to improve Key Associations and Differentiation and Loyalty, it can also indirectly help to contribute to greater OVERALL BRAND EQUITY (OBE).

Only two Service Quality dimensions – Tangibles and Empathy had a significant and positive influence on Loyalty. However, not specifically relating to each service quality dimension, Rojas-Me'Ndez et al. (2009) found that service quality has an indirect effect on student Loyalty mediated by trust and commitment. Similarly, Loyalty has also been shown to be significantly influenced by Service Quality (Fares et al., 2013). In addition, Kuo and Ye (2009) who studied Taiwanese higher education showed a significant relationship between Service Quality and Loyalty. Jarrel (2012) also found that Service Quality has a significant effect on Brand Equity and Loyalty.

In terms of the effect of empathy on Loyalty, there is no empirical finding in the literature supporting this. Hence, this finding can be deemed unique to this study. Nevertheless, Zeithaml et al. (2009) does show, in a conceptual model, that there is a relationship between Service Quality and Loyalty.

For Key Associations and Differentiation, four dimensions of Service Quality – Tangibles, Reliability, Assurance and Empathy were found to be significant predictors. Assurance, as a predictor seems to be the most important contributor. More specifically, 'employee knowledge in answering questions' and 'feeling safe' were found to be significant and if these areas are effectively addressed, there is a possibility of universities being able to use Key Associations and

Differentiation to their advantage and differentiate themselves more effectively, hence improving Brand Equity. This finding is also deemed unique to this study, as no similar finding exists in the literature.

6.5.6. RELATIONSHIP BETWEEN OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) AND OVERALL BRAND EQUITY (OBE)

OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) (both measures) as well as OVERALL BRAND EQUITY (OBE) were found to relate significantly and positively. These relationships can be supported with findings from similar studies for service quality's influence on brand equity (Kuo & Ye, 2009; Mourad et al., 2011; Iqbal et al., 2012; Jarrel, 2012; Ramli et al., 2015; Vukasovič, 2015) and for student satisfaction and brand equity (Achour & Kachkar, 2013:589; Jarrell, 2012; Guild, 2011).

6.5.7. Service Quality (SQ), OVERALL STUDENT SATISFACTION (OSS) and Brand Equity (BE)

According to Mackay et al. (2013), there is limited research on brand equity in service industries. In addition, from an examination of the existing literature addressing the constructs of student satisfaction and brand equity, there is evidently a dearth of relevant literature on the subject with no relevant studies done in a South African context

Based on the Confirmatory Factor Analysis (CFA), the underlying dimensions for Service Quality (SQ) and Brand Equity (BE) loaded differently from the dimensions in the original models which were SERVPERF and Aaker's (1996) Brand Equity model. Based on this, the modified constructs of Service Quality (SQ) and Brand Equity (BE) were analysed together with OVERALL STUDENT SATISFACTION (OSS), for significant associations using a Structural Equation Model (SEM). The results revealed that all these constructs were significantly related although the OVERALL STUDENT SATISFACTION (OSS) has a greater influence on Brand Equity (BE), than Service Quality (SQ). However, Service Quality (SQ) had a stronger influence on the OVERALL STUDENT SATISFACTION (OSS), than it had on Brand Equity (BE). As alluded to earlier, there is a dearth of information pertaining to a predictive relationship between Service Quality, Student Satisfaction and Brand Equity. Especially in a South African context, no studies

have been undertaken in a higher education context depicting these predictive relationships. There are only studies in the literature that bear a close similarity to this part of the study. These are Jarrell's (2012) that found Service Quality correlated strongly with Brand Equity and the relationship was mediated by Student Satisfaction. Another similar study by Fares et al., (2013) showed significant relationships between Service Quality, Student Satisfaction and Loyalty of students. Based on this, this finding can be considered as unique especially in a South African context.

The discussion of the findings pertaining to this study are summarized in Table 6.1.

Table 6.1: Summary of Key Findings Pertaining to each Research Objective

OBJECTIVE	SUMMARY OF FINDINGS
<p>1. To evaluate service quality, student satisfaction and brand equity at select universities in Kwazulu-Natal.</p>	<p>1a. Key service quality factors were in descending order: Responsiveness, Assurance, Reliability, Tangibles, and Empathy. However, ratings for each service quality dimension were above average.</p> <p>1b. Overall Service quality, OVERALL STUDENT SATISFACTION (OSS) and OVERALL BRAND EQUITY (OBE) were rated as above average.</p> <p>1c. No difference of OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) and brand equity across demographic categories except for race.</p>

OBJECTIVE	SUMMARY OF FINDINGS
<p>2. To determine and analyse the importance placed on explanatory factors/dimensions for service quality at select universities in KwaZulu-Natal.</p>	<p>2 a. Key service quality dimensions based on importance to the student in descending order: Responsiveness, Reliability, Assurance, Empathy and Tangibles.</p> <p>2 b. Statistically significant negative gaps exist for all service quality dimensions. The largest gap negative gaps are for Reliability and Empathy.</p>
<p>3. To determine the key explanatory factors for service quality and brand equity as perceived by students at select universities in KwaZulu-Natal.</p>	<p>3 a. Based on factor analysis, 5 main service quality factors are: Factor 1 ‘Empathize and Assure’, Factor 2 Tangibles, Factor 3 Reliability, Factor 4 ‘Promptness and Accuracy’ and Factor 5 ‘Helpfulness.’ However, CFA found 4 factors – Empathy, Reliability, Responsiveness, Tangibles and Helpfulness.</p> <p>3 b. Based on a factor analysis, 4 main factors for Brand Equity are: Factor 1 Key Associations and Differentiation, Factor 2 Loyalty, Factor 3 Awareness and Factor 4 Perceived Quality. However, CFA found 3 factors – Key Associations and Differentiation, Loyalty and Awareness.</p>

OBJECTIVE	SUMMARY OF FINDINGS
<p>4. To evaluate the predictive relationships between service quality, student satisfaction and brand equity (including their overall measures); also including the predictive relationships between their constituent factors/dimensions at select South African universities.</p>	<p>4a. Significant and positive relationships found between Empathy, Responsiveness, Reliability and Assurance with OVERALL SERVICE QUALITY (OSQ).</p> <p>4b. Significant and positive relationships found between Empathy, Responsiveness, and Tangibles with OVERALL STUDENT SATISFACTION (OSS), and between Empathy and Responsiveness with D7.</p> <p>4c. Significant and positive relationships found between Empathy and Tangibles with OVERALL BRAND EQUITY (OBE).</p> <p>4d. Significant and positive relationships found between Key Associations and Differentiation and Loyalty with OVERALL BRAND EQUITY (OBE).</p> <p>4e. The relationship between the dimensions of brand equity and OVERALL BRAND EQUITY (OBE) differ for male and female students.</p> <p>4f. Empathy and Tangibles significantly predict Loyalty.</p>

OBJECTIVE	SUMMARY OF FINDINGS
	<p>4g. Empathy, Assurance, Reliability and Tangibles significantly predict Key Associations and Differentiation.</p> <p>4h. OVERALL STUDENT SATISFACTION(OSS) and OVERALL SERVICE QUALITY (OSQ) are significant predictors of OVERALL BRAND EQUITY (OBE).</p> <p>4i. Service Quality (SQ), OVERALL STUDENT SATISFACTION (OSS) and Brand Equity (BE) are significantly and positively associated.</p>

6.6. Decision on the Research Hypotheses

The research hypotheses relate mainly to objective four, which is, to evaluate the relationships between Service Quality, Student Satisfaction and Brand Equity at select South African universities. Decisions pertaining to the hypotheses stemming from the research objectives are presented in the tables below.

Table 6.2: The Effect of Tangibles, Reliability, Responsiveness, Assurance and Empathy on the overall higher education service quality

HYPOTHESIS	DECISION –
H1.1: Tangibles have a significant positive effect on OVERALL SERVICE QUALITY (OSQ).	REJECT HYPOTHESIS
H1.2: Reliability has a significant positive effect on OVERALL SERVICE QUALITY (OSQ).	ACCEPT HYPOTHESIS
H1.3: Responsiveness has a significant positive effect on OVERALL SERVICE QUALITY (OSQ).	ACCEPT HYPOTHESIS
H1.4: Assurance has a significant positive effect on OVERALL SERVICE QUALITY (OSQ).	ACCEPT HYPOTHESIS
H1.5: Empathy has a significant positive effect on OVERALL SERVICE QUALITY (OSQ).	ACCEPT HYPOTHESIS

Table 6.3: The Effect of Service quality and its dimensions on OVERALL STUDENT SATISFACTION (OSS)

HYPOTHESIS	DECISION –
H2.1: Tangibles have a significant positive effect on OVERALL STUDENT SATISFACTION (OSS).	REJECT HYPOTHESIS (ACCEPT FOR ONE OVERALL SATISFACTION MEASURE).
H2.2: Reliability has a significant positive effect on OVERALL STUDENT SATISFACTION (OSS).	ACCEPT HYPOTHESIS
H2.3: Responsiveness has a significant positive effect on OVERALL STUDENT SATISFACTION (OSS).	ACCEPT HYPOTHESIS
H2.4: Assurance has a significant positive effect on OVERALL STUDENT SATISFACTION (OSS).	REJECT HYPOTHESIS.
H2.5: Empathy has a significant positive effect on OVERALL STUDENT SATISFACTION (OSS).	ACCEPT HYPOTHESIS

Table 6.4: The Effect of the brand equity dimensions on the OVERALL BRAND EQUITY (OBE).

HYPOTHESIS	DECISION
H3.1: Perceived Quality AND LEADERSHIP have a significant positive effect on OVERALL BRAND EQUITY (OBE).	REJECT HYPOTHESIS

HYPOTHESIS	DECISION
H3.2: Awareness has a significant positive effect on OVERALL BRAND EQUITY (OBE).	REJECT HYPOTHESIS
H3.3: Loyalty have a significant positive effect on OVERALL BRAND EQUITY (OBE).	ACCEPT HYPOTHESIS
H3.4: Key Associations and Differentiation have a significant positive effect on OVERALL BRAND EQUITY (OBE).	ACCEPT HYPOTHESIS

Table 6.5: The effect of Service quality dimensions on the OVERALL BRAND EQUITY (OBE)

HYPOTHESIS	DECISION
H4.1: Tangibles have a significant positive effect on OVERALL BRAND EQUITY (OBE).	ACCEPT HYPOTHESIS
H4.2: Reliability has a significant positive effect on OVERALL BRAND EQUITY (OBE).	REJECT HYPOTHESIS
H4.3: Responsiveness has a significant positive effect on OVERALL BRAND EQUITY (OBE).	REJECT HYPOTHESIS
H4.4: Assurance has a significant positive effect on OVERALL BRAND EQUITY (OBE).	REJECT HYPOTHESIS
H4.5: Empathy has a significant positive effect on OVERALL BRAND EQUITY (OBE).	ACCEPT HYPOTHESIS

Table 6.6: The Effect of Service quality dimensions on OVERALL BRAND EQUITY (OBE) (Key Associations and Differentiation)

HYPOTHESIS	DECISION
H5.1: Tangibles have a significant positive effect on Key Associations and Differentiation.	ACCEPT HYPOTHESIS
H5.2: Reliability has a significant positive effect on Key Associations and Differentiation.	ACCEPT HYPOTHESIS
H5.3: Responsiveness has a significant positive effect on Key Associations and Differentiation.	REJECT HYPOTHESIS
H5.4: Assurance has a significant positive effect on Key Associations and Differentiation.	ACCEPT HYPOTHESIS
H5.5: Empathy has a significant positive effect on Key Associations and Differentiation.	ACCEPT HYPOTHESIS

Table 6.7: The effect of Service quality dimensions on the dimensions of OVERALL BRAND EQUITY (OBE) (Loyalty)

HYPOTHESIS	DECISION –
H5.1: Tangibles have a significant positive effect on Loyalty.	ACCEPT HYPOTHESIS
H5.2: Reliability has a significant positive effect on Loyalty.	REJECT HYPOTHESIS

HYPOTHESIS	DECISION –
H5.3: Responsiveness has a significant positive effect on Loyalty.	REJECT HYPOTHESIS
H5.4: Assurance has a significant positive effect on Loyalty.	REJECT HYPOTHESIS
H5.50: Empathy has a significant positive effect on Loyalty.	ACCEPT HYPOTHESIS

Please note: No hypotheses are reported for Perceived Quality and Leadership, and Awareness, as these were found not to be significant predictors.

Table 6.8: OVERALL SERVICE QUALITY (OSQ) as a predictor of OVERALL BRAND EQUITY (OBE)

HYPOTHESIS	DECISION
H6: OVERALL SERVICE QUALITY (OSQ) positively and significantly predicts OVERALL BRAND EQUITY (OBE).	ACCEPT HYPOTHESIS

Table 6.9: OVERALL STUDENT SATISFACTION (OSS) as a predictor of OVERALL BRAND EQUITY (OBE)

HYPOTHESIS	DECISION
H: 7: OVERALL STUDENT SATISFACTION (OSS) positively and significantly predicts OVERALL BRAND EQUITY (OBE).	ACCEPT HYPOTHESIS

Table 6.10: The association between Service Quality (SERVPERF model) and OVERALL STUDENT SATISFACTION (OSS)

HYPOTHESIS	DECISION
H8.1: Service Quality is significantly associated with OVERALL STUDENT SATISFACTION (OSS)	ACCEPT HYPOTHESIS
H8.2: OVERALL STUDENT SATISFACTION (OSS) is significantly and positively associated with Brand Equity.	ACCEPT HYPOTHESIS.
H8.3: Service quality is significantly and positively associated with Brand Equity.	ACCEPT HYPOTHESIS.

Based on the findings pertaining to each of the hypotheses, a revised model (Figure 6.1.) is presented hereunder. All the arrows in the model depict significant positive relationships between the dimensions/factors and constructs and constructs and constructs in the model.

Figure 6.1: Revised Model of the Relationship between Service Quality Dimensions, OVERALL STUDENT SATISFACTION (OSS), Brand Equity Dimensions and OVERALL BRAND EQUITY (OBE).

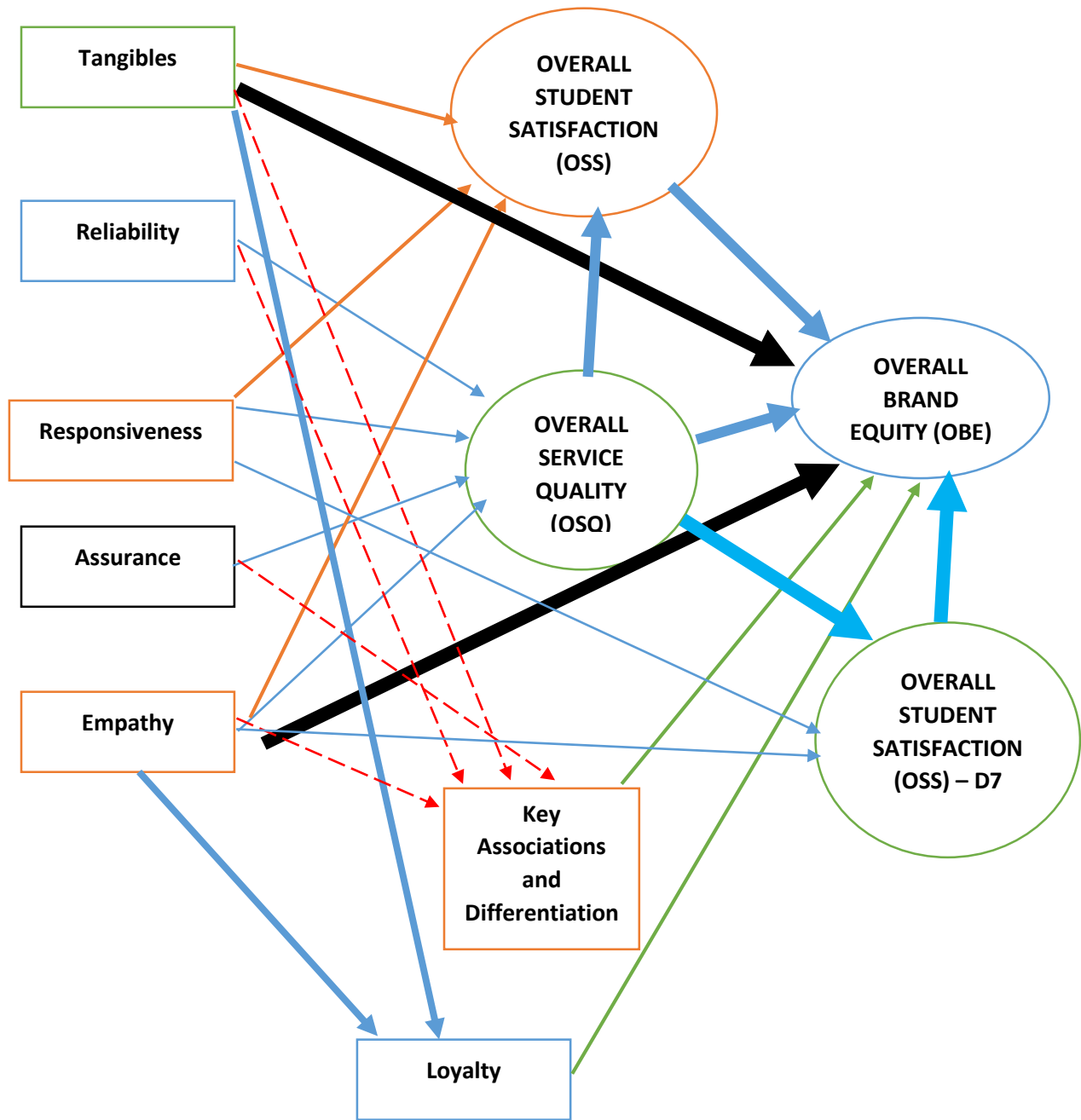
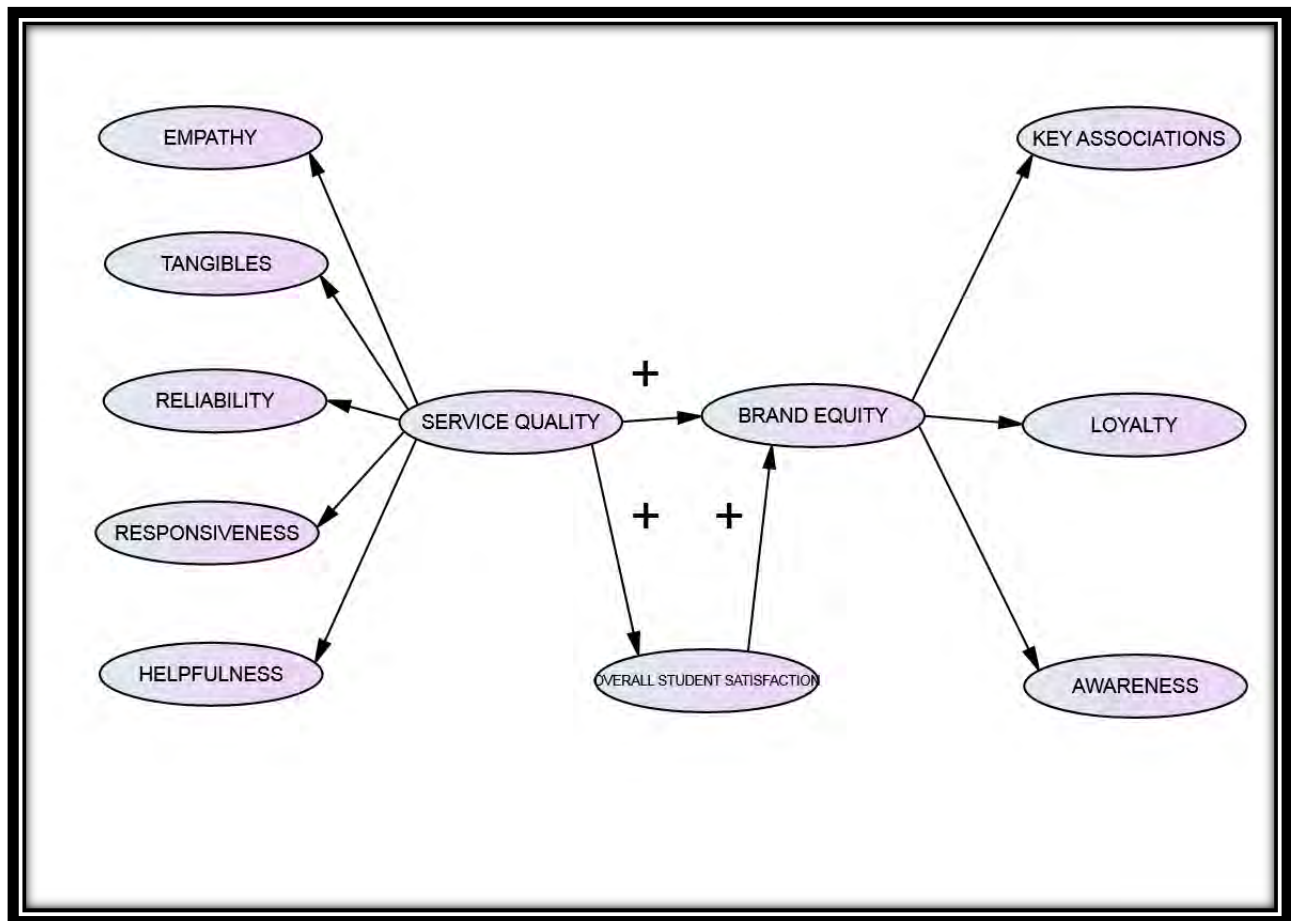


Figure 6.2 depicts the significant and positive relationships between Service Quality, Brand Equity, and OVERALL STUDENT SATISFACTION. This is a revised model from the one that was conceptualized, in that the Service Quality (SQ) dimensions and Brand Equity (BE) dimensions are different from the original models that these were based on. In addition, the Relationships between Service Quality, Student Satisfaction and Brand Equity are significant and positive. This finding is unique to this study.

Figure 6.2: Revised Model on the Relationship between Service Quality, OVERALL STUDENT SATISFACTION and Brand Equity



6.7. Summary

From a service quality perspective, the study showed that Responsiveness is a strength and Tangibles and Empathy are weakness; although the service quality dimension ratings overall were

above average. More specifically, although the study sample perceived their universities as making them feel safe, but providing better equipment and giving more personal attention to students are areas that can be improved on.

The respondents perceived OVERALL SERVICE QUALITY (OSQ) as being above average and the most frequent perceptions were that of excellence in this area. OVERALL STUDENT SATISFACTION (OSS) was also rated as being above average and more frequently excellent, with Black students showing the greatest satisfaction, but significantly lower satisfaction ratings were evident amongst White students.

OVERALL BRAND EQUITY (OBE) was also rated as above average with higher brand equity perceptions amongst Black students and significantly lower perceptions amongst White students.

The most important service quality dimensions were Responsiveness, Reliability and Assurance, whilst the least important were Empathy and Tangibles. However, significant negative gaps were found for all the service quality dimensions, especially, Reliability and Empathy.

The underlying factors relating to service quality were in order of importance, Empathy and Assurance, Tangibles, Reliability, and Responsiveness with emphasis on help and punctuality. For brand equity on the other hand, the underlying factors or dimensions were in order of importance, Key Associations and Differentiation, Loyalty, Awareness and Perceived Quality and Leadership.

As regards the significant predictors of OVERALL SERVICE QUALITY (OSQ), with the exception of Tangibles, all the other service quality dimensions were significant and positive predictors.

Empathy and Responsiveness were the only two positive significant predictors of OVERALL STUDENT SATISFACTION (OSS). However, when student satisfaction was measured as an overall measure, in addition to Empathy and Responsiveness, Tangibles was also a significant positive predictor.

Only two Brand Equity factors/dimensions predicted OVERALL BRAND EQUITY (OBE) significantly and positively. These were Key Associations and Differentiation, and Loyalty.

With the exception of Responsiveness, all the other four service quality dimensions predicted Key Associations and Differentiation positively and significantly whilst only two service quality dimensions, Tangibles and Empathy, predicted Loyalty.

Regarding the overall measures, OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) and OVERALL BRAND EQUITY (OBE) were significantly and positively related. Finally, a significant positive relationship was found between Service Quality, Brand Equity and OVERALL STUDENT SATISFACTION (OSS).

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.1. Introduction

The previous chapter dealt with a discussion of the significant findings of the study, and this chapter presents the conclusions, recommendations, limitations of the study and directions for future research.

The focus of this chapter is to reflect on the primary aim of this study and by focusing on the key issues contained in the problem statement, which was to evaluate Service Quality, Student Satisfaction and Brand Equity and their interrelationships at select South African universities. Based on the findings of this study with respect to the key constructs studied, recommendations will be made regarding how these constructs can be managed more effectively and improved on, if necessary.

7.2. Key Findings

The ratings for each service quality dimension were above average (i.e. the mean rating was greater than 3.5), with Responsiveness and Assurance being the most highly rated dimensions. The inference from the aforementioned is that service is prompt and helpful and delivers confidence and trust, as the aforementioned dimensions were items measured using the SERVPERF instrument. However, due to the relatively low ratings for Tangibles and Empathy, the results indicate that there can be improvement in the appearance of the physical facilities and by offering more personalized attention.

Due to the above-average rating for the OVERALL SERVICE QUALITY (OSQ) and the excellent modal ratings, it is inferred that the higher education institutions studied are excelling in service quality provision. Service quality is generally a priority in the higher education context, thus it may be concluded that the institutions studied are performing relatively well in this area and should continue doing so in the future.

Regarding the importance placed on the different service quality dimensions, the most important dimensions were Responsiveness, Reliability and Assurance, whilst Tangibles and Empathy were the least important dimensions.

The “gap” analysis revealed that there are significant gaps between the importance ratings and actual (perceived) ratings for each Service Quality dimension. This means that there is room for improvement of service quality through improvement of the dimensions used to measure it. The most significant gaps were for Reliability and Empathy suggesting that particular attention needs to be given to these dimensions in order to improve their service quality ratings.

The key explanatory factors for service quality obtained through the factor analysis and the CFA procedure were Empathy, Reliability, Responsiveness, Tangibles and Helpfulness. It is noteworthy that the dimension Assurance did not load into the model and is hence is not an underlying Service Quality factor in this study. Although most of the SERVPERF dimensions applied to this study, based on their factor loadings, not all the factors loaded exactly as per the dimensions of the SERVPERF model. Consequently, it is concluded that the SERVPERF model does not apply in its entirety to the study context, and there is a possibility that other factors and items may be more applicable in measuring service quality.

Similarly, the explanatory factors used to measure Brand Equity did not load exactly according to Aaker’s (1996) model. In fact, of the 25 items or variables in Aaker’s (1996) model, only nine items or variables loaded into the model suggesting that there were 16 items from Aaker’s (1996) model that did not apply as underlying items in this study. In addition, the main factors underlying Brand Equity in this study were three factors as opposed to the four factors in Aaker’s (1996) model. The Brand Equity factors or dimensions applicable to this study were Key Associations and Differentiation, Loyalty and Awareness.

OVERALL SERVICE QUALITY (OSQ) was significantly influenced by four factors, namely, Empathy, Responsiveness, Reliability and Assurance. Tangibles is not a significant predictor of OVERALL SERVICE QUALITY (OSQ). In addition, Empathy and Assurance had the strongest influence on OVERALL SERVICE QUALITY (OSQ) whilst Responsiveness had the weakest influence.

The four item/variable measure of OVERALL STUDENT SATISFACTION (OSS) was significantly and positively influenced by Tangibles, Responsiveness and Empathy (in order of importance). The one item/variable overall measure of OVERALL STUDENT SATISFACTION (OSS) measured by variable D7 was significantly and positively influenced by, in order of importance, Responsiveness and Empathy.

Of the five Service Quality dimensions, only two dimensions had a significant and positive influence on OVERALL BRAND EQUITY (OBE). These dimensions were Tangibles and Empathy. More specifically, Tangibles had a stronger influence on OVERALL BRAND EQUITY (OBE) than Empathy.

OVERALL BRAND EQUITY (OBE) was also found to be significantly and positively influenced by Key Associations and Differentiation, and Loyalty. However, Key Associations and Differentiation were found to have a more significant influence on Brand Equity, compared to Loyalty. The most significant Key Associations were 'admiration' of the brand, the brand being 'more competitive', being a 'better competitor' than other higher education brands' and 'providing and having good reason' to support the institution. The most significant Loyalty-related items were 'recommending' the brand to others and making the brand 'a first study choice'. Loyalty was significantly predicted by Empathy and Tangibles. For Key Associations and Differentiation, four factors or dimensions, namely, Tangibles, Reliability, Assurance and Empathy, were significant predictors. Assurance, as a predictor seems to be the most important contributor to Key Associations and Differentiation. More specifically, 'employee knowledge in answering questions' and 'feeling safe' were found to be significant and if these areas are effectively addressed, there is a possibility of the universities studied being able to use Key Associations and Differentiation to their advantage and differentiate themselves more effectively, hence improving brand equity.

The OVERALL SERVICE QUALITY (OSQ) and OVERALL STUDENT SATISFACTION (OSS) were found to be significant predictors of OVERALL BRAND EQUITY (OBE). However, student satisfaction is a more significant predictor of OVERALL BRAND EQUITY (OBE), than OVERALL SERVICE QUALITY (OSQ). Moreover, when student satisfaction was measured as a single overall measure (i.e. D7), although it (OSS) significantly predicted OVERALL BRAND

EQUITY (OBE), but OVERALL SERVICE QUALITY (OSQ) was a stronger predictor of OVERALL BRAND EQUITY (OBE), than OVERALL STUDENT SATISFACTION (OSS) measured by D7.

Finally, positive and significant relationships were found between Service Quality (revised SERVPERF model), both measures of OVERALL STUDENT SATISFACTION (OSS), and Brand Equity (revised Aaker, 1996 model).

7.3. Recommendations

7.3.1. Closing the Service Quality Gaps

It is recommended that interventions be put into place to close all the negative gaps where the perceived ratings for each service quality dimension falls short of the importance rating for that service quality dimension. The largest gap pertains to the Reliability dimension of service quality. Of the five variables or items that measure Reliability, four have shown significant negative “gaps” between their actual ratings and the importance that students attach to each. The item/variable ‘providing the service as promised’ can be achieved by stressing to academic staff the need to start and end their lectures according to schedule. In addition, it is important that lecturers have consultation times and are available for student consultation during those times. Important events such as examinations, tests, tutorials, and assignments, must be clearly communicated through schedules, which are strictly adhered to.

The item ‘providing the service in the correct manner the first time’, can be addressed by staff, both academic and non-academic, being selected based on a set of criteria pertaining to ‘being able to do the job effectively and efficiently.’ In addition, staff must be trained in their respective fields thereby, equipping them to be able to provide the service in the correct manner.

‘Showing sympathy to solving student problems’ is an item that can be addressed by making it clear to students that the institution and its staff are sympathetic to their problems and would, if they can, try their best to address and resolve student problems. The institution and its staff should visibly be seen to make genuine efforts to resolve student problems as effectively and efficiently

as possible. The use of technology and staff training programs could be other possibilities in reducing problems.

The service quality item ‘keeping promises’ can be addressed by creating a sense of accountability amongst staff to keep to what has been promised to students whether explicit or implicit. If promises have not been kept, appropriate avenues for students to get recourse and address their grievances need to be created and clearly communicated to students.

The second largest negative gap was for Empathy, which was measured using five variables, three of which produced significant negative gaps. These gaps were for the following variables: ‘employees understanding of student specific needs’; ‘the institution having students’ best interests’; and ‘personal attention provided by staff’.

It is recommended that the institutions engage in dialogue with their students in order to understand their needs. An example would be having students to inter-alia, complete evaluation surveys of lectures, curricula, and administration-related issues. This research can also be beneficial in understanding the students’ best interests.

‘Personal attention’ is probably one of the more important requirements for students who go to a university campus for lectures as opposed to being students at a distance learning institution. Lecturers and tutors need to create schedules for students, so that they (students) are able to approach them (lecturers and tutors) to consult on important issues on a one-on-one basis, particularly for difficult subjects where simply reading a textbook is not enough in understanding the subject matter. Wherever possible, and in relevant areas, the institutions need to be able to create opportunities for students to obtain personal attention on issues that they seek help, guidance and advice on.

The third largest negative gap was for Responsiveness, which dimension was measured by four variables of which three produced significant negative gaps. These were ‘employees never too busy to help’; ‘willingness to help’; and ‘promptness of the service’. The recommendation to address Responsiveness gaps is to inculcate a marketing and service culture amongst staff, particularly those who are in contact positions. They need to be educated and trained on the fact that students are one of the important “customers” of the institution and like any customer, need

to be treated in a way that aims to be, within reason, compatible with their needs. A culture of willingness to help needs to be nurtured and instilled amongst staff, and even if student problems cannot be directly solved by a staff member, such a member of staff needs to be helpful in directing the student to an appropriate person or department that would be able to help. In addition, emphasis should be placed on rendering the service in a prompt, effective and efficient way. Again, staff who are correctly trained, educated and indoctrinated will be in a better position in rendering prompt service.

The second smallest negative gap was for Assurance. Assurance was measured through four variables, three of which were significantly negative. These variables were ‘confidence instilled by employees’; ‘feeling safe in transacting with the institution’; and ‘courteous employees’. In the light of this, the recommendation is that employees instill confidence in students. In order to do this, employees should be well qualified and trained so that they are able to, through the provision of lectures, curriculum advice, and the like instill confidence in students. In addition, in helping students to feel safe on campus, the institutions should invest in security-related issues. Security guards, security fencing, controlled access, and the like are some of the issues that would be necessary to focus on, thus helping to provide a sense of safety to students on campus. Furthermore, courtesy amongst employees needs to be encouraged through training and policy. For example, it can be made compulsory for contact staff to enroll for courses in marketing, customer care and service. Moreover, policies and codes of conduct could be designed (if not already) to accentuate on courtesy as being an important cornerstone of the institution’s vision and mission.

The smallest negative gap exists for the dimension Tangibles, which was measured by four variables. Three gaps existed, one positive and two negative. These gaps were a positive gap for ‘appearance of employees’, and negative gaps for ‘state of equipment’ and ‘visual appeal for physical facilities’. Appearance of employees was rated higher than the importance placed on the variables. Hence, it may be surmised that focusing strongly on physical appearance of staff may not warrant the effort as students do not consider it very important. For the negative gaps, since the ‘state of equipment’ showed a large negative gap, it is recommended that this area be improved on greatly. If possible, the institutions need to invest in the different types of equipment necessary

for students to obtain a quality education. This may mean investing in laboratory apparatus, computer hardware and software for university LANS, amongst other things. Furthermore, it is also recommended that physical facilities on campus be enhanced. For example, more visually appealing signage, buildings (may require painting, maintenance both outside and inside), maintaining lawns, gardens, roads, pathways, etcetera.

7.3.2. Recommendations for Importance Ratings of Service Quality Dimensions

In order of importance, students placed importance on Responsiveness, Reliability, Assurance, Empathy and Tangibles. With regard to Responsiveness the highest importance was placed on ‘informing students of when the service will be performed’; for Reliability, it was ‘keeping accurate records’; for Assurance, it was ‘employee knowledge in answering questions’; for Empathy it was on ‘convenience of operating hours’; and the most important Tangibles-related variable was ‘visual appeal of materials’.

In order to address the issue of ‘informing students of when the service will be performed’, it is important to have clear lines of communication with students. This can be via emails, the University web site, notice boards on campus, course handouts, and the Learner Management Systems such as Moodle, amongst other things.

To address the issue of ‘keeping accurate records’, it is recommended that staff be trained and educated on issues pertaining to record keeping. In addition, the use of modern technology, control systems and effective auditing procedures could go a long way in assisting with maintaining accurate records. Assistance and advice from professionals such as Information Technology Officers would also be recommended as a possible way of keeping and enhancing the accuracy of records.

Pertaining to the issue of ‘employee knowledge in answering questions’, all employees should be educated and trained in their respective fields and interventions to assist all employees to develop the necessary skills in order to conduct their jobs effectively and efficiently should be put into place. Employees that are able to guide, assist and educate students by having the requisite knowledge in answering student questions would not only contribute positively to the image and

reputation of the institution, but also help students become more assured of the service quality at the institution.

Regarding the ‘convenience of operating hours’, it is recommended that, as far as possible, lecturers should design their consultation times with the convenience of students in mind. There should also be flexibility built into the schedule to allow students who cannot meet lecturers during the allotted consultation times, to be able to meet them outside the scheduled times. Even the scheduling of lectures and tutorials could be planned with the convenience of the student in mind.

Concerning the high importance placed on the ‘visual aspects’ of materials, the recommendation is that all materials disseminated by the institution to its students should have the element of a marketing appeal. These materials, whether course handouts, assignment and project details, lecture notes and slides, and all other relevant paraphernalia should be clear, error-free, and look professional. This could be an effective way of image building and creating a positive perception of the institution based on tangible cues that are visually appealing.

7.3.3. Recommendations Regarding the Explanatory Factors of Service Quality and Brand Equity

Based on the revised SERVPERF model in this study, in measuring service quality, emphasis should be placed on Empathy, Tangibles, Reliability, Responsiveness and Helpfulness. Assurance and its related variables/items were not applicable as a dimension measuring Service Quality. It is recommended that this revised Service Quality model be applied in other Service Quality studies in South African higher education to assess its validity. Furthermore, the extracted factors explain slightly over 50% of the variance in the data suggesting that there are other factors, not in the model, that may explain the balance of the variance in the data. Hence, it is recommended, in future studies, that other Service Quality models be combined with SERVPERF in developing a new model that can not only explain more of the variance in the data, but one that could introduce new service quality dimensions applicable to a South African context.

The four-dimension Brand Equity model of Aaker (1996) in this study was revised into a three-dimensional model with Key Associations and Differentiation, Loyalty and Awareness and it is recommended that these dimensions be used in measuring Brand Equity in the context of this

study. However, it is also recommended that the applicability of the revised Brand Equity model in this study be applied to other studies in a South African context to assess its validity. In addition, the combined factors in the Brand Equity model explained close to 53% of the variance in the data suggesting that there could be other brand equity-related dimensions that may explain more of the variance. Hence, it is recommended that in future studies, different Brand Equity models be combined to develop a new model that explains a higher percentage of the variance.

7.3.4. Recommendations for the Predictive Relationship between the Service Quality Dimensions and OVERALL SERVICE QUALITY (OSQ)

OVERALL SERVICE QUALITY (OSQ) could be enhanced by improvements in Empathy, Assurance, Reliability and Responsiveness. However, due to Empathy and Assurance being the strongest predictors of the OVERALL SERVICE QUALITY (OSQ), these dimensions should be considered first in any attempt to improve OVERALL SERVICE QUALITY (OSQ). Furthermore, a proactive stance should be taken in attempting to measure and obtain feedback on these significant Service Quality dimensions through student evaluations, and any problems pertaining to these service quality dimensions should be timeously addressed.

7.3.5 Recommendations for Predictive Relationship between Service Quality Dimensions and OVERALL STUDENT SATISFACTION (OSS)

In enhancing the OVERALL STUDENT SATISFACTION (OSS), it is recommended that particular emphasis be placed on Tangibles, Responsiveness and Empathy. When overall satisfaction was measured by only one variable (D7), the recommendation would be that emphasis should be placed on Responsiveness and Empathy.

It is recommended that student satisfaction surveys become an important component, not just for evaluating academic curricula, but also to evaluate the student's total experience with the university. Questions used in these surveys should be more aligned to the service quality dimensions that have been shown to have a predictive effect on OVERALL STUDENT SATISFACTION (OSS) in order to learn more about the specifics of these dimensions. The knowledge gained from such surveys could prove to be beneficial in planning and strategizing the marketing effort to create, maintain and improve student satisfaction.

7.3.6. Recommendations on Key Associations and Differentiation

It is recommended that in the context of this study, greater attention be channeled to the dimensions of Key Associations and Differentiation, and Loyalty as these are significant in influencing OVERALL BRAND EQUITY (OBE). The Key Associations and Differentiation that the universities can focus on, in order of importance, are creating a perception that the institution's brand is better than that of competition's, providing impelling reasons to study at the institution, creating admiration for the institution's brand, creating trust for the institution, creating interest in the institution, enhancing the institution's personality, and creating credibility for the institution's brand.

It is recommended that the institutions studied find effective and efficient ways in positively enhancing the areas of Key Associations and Differentiation. In this regard, possible approaches could be through integrated marketing efforts, which combine a number of promotional methods to create the desired influence.

Advertising, public relations, sales promotions and publicity are some of the methods that can be used to create positive associations in the minds of students with their universities and help differentiate their institutions positively vis-à-vis other institutions. For example, through publicity and by showing evidence of the institution obtaining accolades in research, excellence in teaching and student achievements, can help to create a positive image in the minds of students about their institutions. Publicity which reflects positive world rankings of universities and positive research outputs vis-à-vis other universities could help to create and enhance perceptions amongst students that their institutions are better than that of competitors. Hence, through showcasing excellence, can help position the institutions positively in the minds of their students.

School open days, school visits, and students who have had positive experiences with the university can be used, amongst other approaches, to market the university and provide compelling reasons for prospective students to choose a particular university over another for study purposes.

Creating admiration for the university can be achieved through the promotion of inter-alia, achievements in academic excellence, research, teaching, sporting, and community engagement. University public relations departments should be continuously striving to find news about the

institution that could contribute to admiration for the institution. In addition, it is recommended that in order to improve Key Associations and Differentiation, the following service quality dimensions can be focused on in the following order of importance. Firstly, by employees having knowledge in answering questions and making students feel safe in transacting with institution, thus creating Assurance. Secondly, by the institution being attentive to the best interests of students and providing personal attention to students will address Empathy. Thirdly, making physical facilities visually appealing and having equipment that is usable and in good condition will help to enhance Tangibles. Lastly, being sympathetic to solving student problems and keeping accurate records to enhance Reliability.

7.3.7. Recommendations on Loyalty

It is recommended that Loyalty can be enhanced by paying particular attention to getting students to reach a point where they recommend the institution and view the institution as their first choice.

Furthermore, Service Quality dimensions that have a significant influence on Loyalty could be addressed in improving Loyalty. These dimensions are Empathy and Tangibles. Empathy-related issues such as employees understanding student specific needs, having the students' best interests, and providing personal attention to students where possible, could help to enhance Loyalty. Furthermore, improvements in Tangibles-related items such as the visual appeal of physical facilities and the state of equipment could help to enhance Loyalty.

7.3.8. Recommendations Regarding the OVERALL SERVICE QUALITY (OSQ), OVERALL STUDENT SATISFACTION (OSS) and OVERALL BRAND EQUITY (OBE)

OVERALL SERVICE QUALITY (OSQ) and OVERALL STUDENT SATISFACTION (OSS) have been found to contribute largely to the variance in their relationship with OVERALL BRAND EQUITY (OBE). Moreover, the contribution to the OVERALL BRAND EQUITY (OBE) by the OVERALL SERVICE QUALITY (OSQ) on its own is far less than the contribution made by the OVERALL STUDENT SATISFACTION (OSS). Based on this, it is recommended that any effort to enhance OVERALL BRAND EQUITY (OBE) should focus on enhancing both the OVERALL SERVICE QUALITY (OSQ) and OVERALL STUDENT SATISFACTION (OSS).

Based on the significant relationships between Service Quality, OVERALL STUDENT SATISFACTION (OSS) and Brand Equity. Improvements in Empathy, Responsiveness, Reliability and Tangibles could enhance Service Quality, which in-turn could enhance OVERALL STUDENT SATISFACTION (OSS) and Brand Equity.

7.3.9. Recommendations for Service Quality (revised SERVPERF model), OVERALL STUDENT SATISFACTION (OSS) and Brand Equity (revised Aaker, 1996 model)

Based on the significant relationships between Service Quality, OVERALL STUDENT SATISFACTION (OSS) and Brand Equity, improvements in Empathy, Responsiveness, Reliability and Tangibles could play a significant role in enhancing Service Quality, which in-turn will enhance OVERALL STUDENT SATISFACTION (OSS) and Brand Equity

7.4. Limitations of the Study

The limitations of the study have been mainly in the areas of the sample, the constructs used, time and cost limitations.

7.4.1. Sample

The study was based on a select sample chosen through judgement and convenience. Hence, the findings are limited to the 400 participants and should not be generalized beyond this context. Nevertheless, the findings could have relevance to South African higher education institutions.

7.4.2. Construct Measurements

Despite there being various models to measure service quality as alluded to in the literature review chapter, this study used an adapted SERVPERF model. The use of this model, however, was justified in the literature review and research methodology chapters.

Similarly, there are many different ways of conceptualizing and measuring brand equity; however this study used the Aaker (1996) model. The use of the Aaker (1996) model was also justified in the literature review chapter.

7.4.3. Time and Cost Constraints

The study was limited in terms of the time and budget and consequently only two university campuses were included in the survey.

7.5. Directions for Future Research

It is recommended that similar studies be conducted with other South African universities using larger more representative samples to determine whether the results of this study corroborate. A more effective scale needs to be developed to measure Service Quality at South African universities by initially starting with focus group and in-depth interviews to understand the most relevant issues in a South African higher education context. Thereafter, these issues could be incorporated together with the combined issues from different Service Quality models to determine the most applicable and suitable factors in measuring service quality at South African higher education institutions. In addition, the same process needs to be followed in order to develop applicable and suitable measures for Brand Equity in South African higher education institutions

References

- Aaker, D. (1996). Measuring Brand Equity across Products and Markets. *California Management Review*; Spring; 38(3), 102-120.
- Aaker, D. (2009). *Managing Brand Equity*. New York: Simon & Schuster.
- Aaker, D. (2012). *Building Strong Brands*. New York: Simon and Schuster.
- Aaker, D. A. (1991). *Managing Brand Equity: Capitalizing on the Value of a Brand Name*. New York.:Free Press.
- Abdullah, F. (2006). Measuring service quality in higher education: three instruments compared. *International Journal of Research & Method in Education*, 29(1), 71-89.
- Abdullah, F. (2006). Measuring service quality in higher education: HEdPERF versus SERVPERF. *Marketing Intelligence and Planning*, 24(1), 31-47.
- Abouchedid, K., & Nasser, R. (2002). Assuring quality service in higher education: registration and advising attitudes in a private university in Lebanon. *Quality Assurance in Education*, 198-206.
- Academy of Marketing Science & In Spotts, H. E. (2014). *Marketing, technology and customer commitment in the new economy: Proceedings of the 2005 Academy of Marketing Science (AMS) Annual Conference*.
- Adamson, G., & Polgar, J. (2012). *Enhancing enterprise and service-oriented architectures with advanced web portal technologies*. Hershey PA: Information Science Reference.
- Adil, D., Al Ghaswyneh, O. F. M., & Albkour, A. M. (2013). SERVQUAL and SERVPERF: a review of measures in services marketing research. *Global Journal of Management and Business Research*, 13(6), 65-76.

- Aggarwal Sharma, A., Rao, V. R., & Popli, S. (2013). Measuring consumer-based brand equity for Indian business schools. *Journal of Marketing for Higher Education*, 23(2), 175-203.
- Ahmed, S., & Masud, M. (2014). Measuring service quality of a higher educational institute towards student satisfaction. *American Journal of Educational Research*, 2(7), 447-455.
- Ahuja, M., Mahlawat, S., & Masood, R. Z. (2011). Study of Service Quality Management With SERVQUAL Model: An Empirical Study of Govt/Ngo's Eye Hospitals in Haryana. *Indian Journal of Commerce & Management Studies*. 11 (2), 310-318.
- Ailawadi, K., Lehmann, D., & Neslin, S. (2003). Revenue Premium as an Outcome Measure of Brand Equity. *Journal of Marketing*, 67, 1-17.
- Akturan, U. a. (2007). Profiling young adults: decision-making styles of college students for apparel products. *Journees Normandes de Recherche sur la Consommation: Societe et consommations*, 1 – 13.
- Al-Alak, B., & Alnaser, A.S. (2012). Assessing the Relationship between Higher Education Service Quality Dimensions and Student Satisfaction, *Australian Journal of Basic and Applied Sciences*, 6(1): 156-164.
- Albright, S. C., Winston, W. L., & Zappe, C. J. (2009). *Data analysis & decision making with Microsoft Excel*. Mason, Ohio: South-Western/Cengage Learning.
- Al-Hawari, M., & Ward, T. (2006). The effect of automated service quality on Australian banks' financial performance and the mediating role of customer satisfaction. *Marketing Intelligence & Planning*, 24(2), 127-147.
- Allen, M., & Ebooks Corporation. (2007). *The next generation of corporate universities: Innovative approaches for developing people and expanding organizational capabilities*. San Francisco: Jossey-Bass.
- Al-Mushasha, N. F., & Nassuora, A. B. (2012). Factors determining e-learning service quality in Jordanian higher education environment. *Journal of Applied Sciences (Faisalabad)*, 12(14), 1474-1480.

- Alnaser, A., & Almsafir, M. (2014). Service quality dimensions and students satisfaction. *Journal of Advanced Social Research*, 4(6), 1-17.
- Alves, H., & Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management & Business Excellence*, 571-588.
- AMA, A. M. (n.d.). *Dictionary*. American Marketing Association Retrieved at <https://www.ama.org/resources/Pages/Dictionary.aspx?dLetter=B> (Retrieved October 7, 2015).
- Amandeep, T., & Ghorbani, A. (2014). *Market Research Methodologies: Multi-Method and Qualitative Approaches: Multi-Method and Qualitative Approaches*. Hershey PA: IGI Global.
- Andreatta, B. (2012). *Navigating the research university: A guide for first-year students*. Boston, MA: Wadsworth/Cengage Learning.
- Andrew, D., Pedersen, P., & McEvoy, C. (2011). *Research Methods and Design in Sport Management*. Human Kinetics.
- Arambewela, R., & Hall, J. (2009). An empirical model of international student satisfaction. *Asia Pacific Journal of Marketing and Logistics*, 21(4), 555-569.
- Avram, E. (n.d.). *Student satisfaction in higher education and empathy in relationship with them*. from <http://ftp.repec.org/opt/ReDIF/RePEc/hmm/v1i1/1/12.pdf>. (Retrieved November 2, 2015).
- Awasthi, A. K. (2013). *Statistics*. India: Lulu Com.
- Babin, B., & Griffin, M. (1998). The nature of satisfaction: an updated examination and analysis. *Journal of Business Research*, 41(2), 127-136.
- Badat, S., & Sayed, Y. (2014). Post-1994 South African education the challenge of social justice. *The ANNALS of the American Academy of Political and Social Science*, 652(1), 127-148.
- Bai, B., Law, R., & Wen, I. (2008). The impact of website quality on customer satisfaction and purchase intentions: Evidence from Chinese online visitors. *International Journal of Hospitality Management*, 27(3), 391-402.

- Bailey, K. (1994). *Methods of Social Research*. New York: The Free Press.
- Bansal, H. S., & Taylor, S. (2015). Investigating the relationship between service quality, satisfaction and switching intentions. In *Proceedings of the 1997 Academy of Marketing Science (AMS) Annual Conference* (pp. 304-313). Springer International Publishing.
- Barnes, B. R. (2007). Analysing service quality: The case of post-graduate Chinese students. *Total Quality Management & Business Excellence*, 18(3), 313-331.
- Bastedo, M. (2012). *The Organisation of Higher Education: Managing Colleges for a New Era*. JHU Press.
- Bayraktaroglu, G., & Atrek, B. (2010). Testing the superiority and dimensionality of SERVQUAL vs. SERVPERF in higher education. *The Quality Management Journal*, 17(1), 47.
- Beard, D. (2010). Successful applications of the balanced scorecard in higher. *Journal of Education for Business*, 37-41.
- Bentler, P. M. (1995). *EQS structural equations program manual*. Encino, Calif: Multivariate Software, Inc.
- Bentler, P.M. and Bonnet, D.C. (1980), Significance Tests and Goodness of Fit in the Analysis of Covariance Structures, *Psychological Bulletin*, 88(3), 588-606.
- Berkley, B., & Gupta, A. (1995). Identifying the information requirements to deliver quality service. *International Journal of Service Industry Management*, 6(5) , 16-35.
- Berry, L. (2000). Cultivating Service Brand Equity. *Journal of the Academy of Marketing Science*, 28(1), 128-137.
- Bezuidenhout, G., & De Jager, J. (2014). Clients' service perceptions of private higher education institutions in South Africa: An importance performance analysis for strategic managers. *African Journal of Business Management*, 8(2), 55-67.

- Bigalke, T. W., & Zurbuchen, M. S. (2014). *Leadership for social justice in higher education: The legacy of the Ford Foundation International Fellowships Program*. Palgrave Macmillan.
- Bisschoff, C. (2001). Customer service factors of a Telematic Learning BBA degree. *South African Journal of Education, 21* (4), 228-233.
- Blaikie, N. (2009). *Designing social research: The logic of anticipation*. Cambridge: Polity.
- Black, K. (2012). *Business statistics: For contemporary decision making*. Hoboken, NJ: Wiley
- Bond, C. (2010). Engagement with social media and outcomes for brands: A conceptual framework. In *ANZMAC Annual Conference*.
- Bolton, R., & Drew, J. (1991). A multistage model of customers' assessments of service quality and value. *Journal of Consumer Research, 17*, 375-384.
- Boyd, R. (2012, June 18). *Customer Service in Higher Education: Finding a Middle Ground*. Retrieved November 4, 2015, from PennState Division of Undergraduate Studies: <https://dus.psu.edu/mentor/2012/06/customer-service-in-higher-education/>
- Brady, M., & Cronin, J. (2001). Some new thoughts on conceptualizing perceived service quality: a hierarchical approach. *Journal of Marketing, 65*(3), 34-49.
- Brink, H., Van, . W. C., & Van, R. G. (2007). *Fundamentals of research methodology for health care professionals*. Kenwyn: Juta.
- Brochado, A. (2009). Comparing alternative instruments to measure service quality in higher education. *Quality Assurance in education, 17*(2), 174-190.
- Broderick, A. J., & Vachirapornpuk, S. (2002). Service quality in internet banking: the importance of customer role. *Marketing Intelligence & Planning, 20*(6), 327-335.
- Brogowicz, A. A., Delene, L. M., & Lyth, D. M. (1990). A synthesised service quality model with managerial implications. *International Journal of Service Industry Management, 1*(1), 27-45.
- Brown, J. D. (2000). *Using surveys in language programs*. New York: Cambridge University Press.

- Brown, S., & Swartz, T. (1989). A gap analysis of professional service quality. *Journal of Marketing*, 53(2), 92-98.
- Brown, T. A. (2014). *Confirmatory factor analysis for applied research*. Place of publication not identified: Guilford.
- Browne, M. W. and Cudeck, R. (1993). *Alternative ways of assessing model fit*. In Bollen, K. A. and Long, J. S. (eds.) *Testing Structural Equation Models*. Newbury Park, CA: Sage.
- Browne, BA; Kaldenberg, DO; Browne, WG; Brown, D. (1998). Student as customer: factors affecting satisfaction and assessments of institutional quality. *Journal of Marketing for Higher Education*, 8(3), 1-14.
- Bryman, A. (2012). *Social Research Methods*. New York: Oxford University Press.
- Budiendra, R., & Wandebori, H. (2012). Influence of facility and service quality on faculty of pharmacy student satisfaction. *2nd International Conference on Business, Economics, Management and Behavioral Sciences BEMBS'2012*, (pp. 70-74). Bali.
- Buller, J. L. (2015). *The essential academic dean or provost: A comprehensive desk reference*. San Francisco: John Wiley & Sons.
- Burger, M. (2012). *Brand Equity and Brand Value: Explanation and Measurement*. Norderstedt: Books on Demand.
- Burns, A. (2012). *Study Resource for Burns' Marketing Research: Facts 101, Marketing Research*. Content Technologies, Inc.
- Buttle, F. (1996). SERVQUAL: review, critique, research agenda. *European Journal of marketing*, 30(1), 8-32.
- Byrne, B.M. (2006). *Structural equation modeling with EQS: Basic concepts, applications and programming (2nd edition)* Mahwah, NJ: Erlbaum.

- Calvo-Porrall, C., Lévy-Mangin, J. P., & Novo-Corti, I. (2013). Perceived quality in higher education: an empirical study. *Marketing Intelligence & Planning*, 31(6), 601-619.
- Cant, M. C., Van, H. N., & Ngambi, H. C. (2010). *Marketing management: A South African perspective*. Cape Town, South Africa: Juta Academic.
- Carducci, B. J. (2006). *The psychology of personality*. Oxford: Blackwell
- Carson, D., Gilmore, A., Perry, C., & Gronhaug, K. (2001). *Qualitative Marketing Research*. London: Sage Publications.
- Çerri, S. (2012). Assessing the quality of higher education services using a modified SERVQUAL scale. *Annales Universitatis Apulensis Series Oeconomica*, 14(2), 664-679.
- Carver, R. H., & Nash, J. G. (2009). *Doing data analysis with SPSS version 16*. Belmont, CA: Brooks/Cole Cengage Learning.
- Chapleo, C. (2010). Branding a university: adding real value or 'smoke and mirrors'? In: Molesworth, M., Scullion, R. and Nixon, E., eds. *The Marketisation of Higher Education*. London: Routledge.
- Chuah, C. W., & Sri Ramalu, S. (2011). Students satisfaction towards the university: Does service quality matters? *International Journal of Education*, 3(2), 1-15.
- Chen, X. (2006). *Customer Satisfaction, Customer Bargaining Power, and Financial Performance* (Doctorate Dissertation), University of Southern California. Retrieved from USC Libraries.
- Cheng, Y., & Tam, W. (1997). Multi-models of quality in education. *Quality Assurance in Education*, 22-31.
- Chieng, F., & Goi, C. (2011). Customer-based brand equity: a literature review. *Journal of Arts Science & Commerce*, 33-42.
- Chinunda, E. (2013). *Customer Service: The Kingpin of Business Success in Africa*. Xlibris Corporation
- Chirico, J. A. (2010). *Sociological research exercises for the global age*. Los Angeles: SAGE/Pine Forge.

- Chireshe, R. (2011). Effective and ineffective lecturers: University students' perspective in Zimbabwe. *Anthropologist*, 13(4), 265-269.
- Chiu, S., Cheng, C., Yen, T., & Hud, H. (2011). Preliminary research on customer satisfaction models in Taiwan: A case study from the automobile industry. *Expert Systems with Applications* 38 , 9780-9787.
- Cho, J. (2007). *The Effects of Individual, Family, Social, and Cultural Factors on Spousal Abuse in Korean American Male Adults*. ProQuest.
- Christiansen, B., Turkina, E., & Williams, N. (2013). *Cultural and technological influences on global business*. Hershey PA: Business Science Reference.
- Christmann, E. P., & Badgett, J. L. (2009). *Interpreting assessment data: Statistical techniques you can use*. Arlington, Va: NSTA Press.
- Chui, W. (2007). *Research Methods for Law*. Edinburgh: Edinburgh University Press.
- Churchill Jr, G. A., & Surprenant, C. (1982). An investigation into the determinants of customer satisfaction. *Journal of marketing research*, 491-504.
- Ciavolino, E., & Calcagni, A. (2015). Generalized cross entropy method for analysing the SERVQUAL model. *Journal of Applied Statistics*, 42(3), 520-534.
- CIRP International Conference on Life Cycle Engineering, Dornfeld, D. A., & Linke, B. S. (2012). *Leveraging technology for a sustainable world: Proceedings of the 19th CIRP Conference on Life Cycle Engineering, University of California at Berkeley, Berkeley, USA, May 23-25, 2012*. Heidelberg: Springer.
- Clarke, K. (2009). *Building Customer-Based Brand Equity in Higher Education. Applying Brand Equity Theory to an International Higher Education Marketing Context* (Master Thesis). Sweden: Lund University.

- Clemes, M. D., Gan, C., & Ren, M. (2010). Synthesizing the effects of service quality, value, and customer satisfaction on behavioral intentions in the motel industry: An empirical analysis. *Journal of Hospitality & Tourism Research*, 35(4), 530-568.
- Clow, K. E., & James, K. E. (2014). *Essentials of marketing research: Putting research into practice*. Thousand Oaks, Calif: SAGE.
- Cooper, B. (2011). *Empathy in education: Engagement, values and achievement*. New York, NY: Continuum.
- Crane, F. G. (2010). *Marketing for entrepreneurs: Concepts and applications for new ventures*. Thousand Oaks, Calif: Sage Publications.
- Cronin, J. J., & Taylor, S. (1994). SERVPERF versus SERVQUAL: reconciling performance-based and perceptions minus-expectations measurement of service quality. *Journal of Marketing*, 58(1), 125-131.
- Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of retailing*, 76(2), 193-218.
- Cronin, J., & Taylor, S. (1992). Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing*, 56(3), 55-68.
- Cronin, J., Brady, M., & Hult, G. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Crouch, S., & Housden, M. (2013). *Marketing Research for Managers*. Oxford: Butterworth/Heinemann.
- Cubillo, J., Sanchez, J., & Cervino, J. (2006). International students' decision-making process. *International Journal of Educational Management*, 20(2), 101-115.
- Dabholkar, P. (1996). Consumer evaluations of new technology-based self-service options: An investigation of alternative models of service quality. *Intern. J. of Research in Marketing*, 13, 29-51.

- Dabholkar, P. (1996). Consumer evaluations of new technology-based self-service options: an investigation of alternative models of service quality. *International Journal of Research in Marketing, 13*, 29-51.
- Dabholkar, P. A., Shepherd, C. D., & Thorpe, D. I. (2000). A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of retailing, 76*(2), 139-173.
- Davcik, N. S., Da Silva, R. V., & Hair, J. F. (2015). Towards a unified theory of brand equity: conceptualizations, taxonomy and avenues for future research. *Journal of Product & Brand Management, 24*(1), 3-17.
- Davis, P., Lu, V., & Veale, R. (2009). Importance of service quality across different services types: an exploratory study of Australian and Chinese consumers. *ANZMAC, 1-9*.
- de Jager, J., & Gbadamosi, G. (2010). Specific remedy for specific problem: measuring service quality in South African higher education. *Higher Education, 60*(3), 251-267.
- de Jager, K., & Nassimbeni, M. (2005). Information Literacy and Quality Assurance in South African Higher Education Institutions. *Libri, 31-38*.
- Dell. (n.d.). *Reliable Service Delivery Benefits Students and Staff*. Retrieved November 10, 2015, from Dell: <http://software.dell.com/documents/imperial-college-london-uses-foglight-to-reliably-deliver-critical-services-to-thousands-of-students-and-staff-members-casestudy-26366.pdf>
- Denscombe, M. (2014). *Good research guide: For small-scale social research projects*. Maidenhead, England: McGraw-Hill/Open University Press.
- DeShields, O. J., Kara, A., & Kaynak, E. (2005). Determinants of business student satisfaction and retention in higher education: applying Herzberg's two-factor theory. *International Journal of Educational Management, 128-139*.
- Diedericks, R., de Klerk, N., Bevan-Dye, A.L. (2015) Students' perceptions of service quality at a South African traditional university and a university of technology. *J Soc Sci, 43*(2): 161-171.

- Diedericks, R. (2012). *Students' perceptions of service quality at two South African higher education institutions* (Doctoral dissertation, North-West University).
- Dirkse van Schalkwyk, R., & Steenkamp, R. (2014). The exploration of service quality and its measurement for private higher education institutions. *Southern African Business Review*, 18(2), 83-107.
- Dixon, J. C., Singleton, R., & Straits, B. C. (2015). *The process of social research*. New York: Oxford University Press.
- Dominic, P. D. D., Goh, K. N., Wong, D., & Chen, Y. Y. (2010). The importance of service quality for competitive advantage-with special reference to industrial product. *International Journal of Business Information Systems*, 6(3), 378-397
- Douglas, J., & McClelland, R. (2008). The development of a conceptual model of student satisfaction with their experience in higher education. *Quality Assurance in Education*, 19-35.
- Douglas, J., Douglas, A., & Barnes, B. (2006). Measuring student satisfaction at a UK university. *Quality Assurance in Education*, 14 (3), 251-267.
- Duffy, J. A., & Kilbourne, W. (2015). Perceived Service Quality in Long-Term Care Facilities: Is Quality in the Eye of the Beholder? In *Proceedings of the 1993 Academy of Marketing Science (AMS) Annual Conference* (pp. 414-418). Springer International Publishing.
- Dumansky, T. (2013, December 9). *Empathy and Teaching*. Retrieved November 2, 2015, from Yale Teaching Centre (Centre for Teaching and Learning): <http://yalegtc.blogspot.co.za/2013/12/empathy-and-teaching.html>
- Dunne, E., & Owen, D. (2013). *The Student Engagement Handbook: Practice in Higher Education*. Bingley: Emerald Book Publishing Limited.
- Eggs, H., & Society for Research into Higher Education. (2003). *Globalization and reform in higher education*. Maidenhead, Berkshire: Open University Press.

- Ehrmann, T. (2013). *Network governance: Alliances, cooperatives and franchise chains*. Berlin: Physica-Verlag.
- Eid, R. (2013). *Managing Customer Trust, Satisfaction, and Loyalty through Information Communication Technologies*. Hershey: IGI Global.
- El Rawas, A., & El Sagheir, N. M. The impact of internal service quality dimensions on students'satisfaction: a case study of the Arab Academy for Science, Technology and Maritime Transport (AASTMT).
- Elliott, K., & Healy, M. (2001). Key Factors Influencing Student Satisfaction Related to Recruitment and Retention, *Journal of Marketing for Higher Education*, 1-11.
- Elliott, K., & Shin, D. (2002). Student Satisfaction: an alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24(2), 197-209.
- Elliott, R., & Percy, L. (2007). *Strategic brand management*. Oxford: Oxford Univ. Press.
- Emel, K. (2014). A Review on Dimensions of Service Quality Models. *Journal of Marketing Management*, 2(2), 79-93.
- Engel, R. J., Schutt, R. K., & Engel, R. J. (2010). *Fundamentals of social work research*. Los Angeles: SAGE.
- Eom, S., & Wen, J. (2006). The determinants of students' perceived learning outcomes and satisfaction in university online education an empirical investigation. *Decision Sciences Journal of Innovative Education*, 215-235.
- Ernst, C.P. H. (2015). *Factors driving social network site usage*. Frankfurt: Springer.
- Esposito, V. V. (2010). *Handbook of partial least squares: Concepts, methods and applications*. Berlin: Springer.
- Eto, H. (2015). *New business opportunities in the growing e-tourism industry*. Hershey (USA): IGI Global.
- Everitt, B. (2011). *Cluster analysis*. Chichester, West Sussex (U.K): Wiley

- Fabrigar, L. R., & Wegener, D. T. (2012). *Exploratory factor analysis*. Oxford: Oxford University Press.
- Faganel, A. (2010). Quality perception gap inside the higher education institution. *International Journal of academic research*, 2(1), 213-215.
- Fares, D., Achour, M., & Kachkar, O. (2013). The Impact of Service Quality, Student Satisfaction, and University Reputation on Student Loyalty: A Case Study of International Students in IIUM, Malaysia. *Information Management and Business Review*, 5(12), 584-590.
- Farquhar, P. (1989). Managing Brand Equity. *Marketing Research*, 24-33.
- Feinberg, F., Kinnear, T., & Taylor, J. (2008). *Modern Marketing Research: Concepts, Methods and Cases*. Mason: Cengage.
- Fields, Z and Atiku, S.O. (2015). Testing and Operationalizing a Model to Measure Creativity, *Int J Edu Sci*, 9(3): 283-296.
- Foreman, D. I., & Corder, G. W. (2013). *Nonparametric statistics for non-statisticians: A step-by-step approach*. Hoboken, N.J: Wiley.
- Fornell, C. (1992). A national customer satisfaction barometer: the Swedish experience. *The Journal of Marketing*, 6-21.
- Fourie, M., van der Westhuizen, L., Alt, H., & Holtzhausen, S. *Quality teaching and learning in South African universities: Policies and practices*. Orange Free State: Unit for Research into Higher Education, University of the Orange Free State.
- Frost, F. A., & Kumar, M. (2000). INTSERVQUAL-an internal adaptation of the GAP model in a large service organization. *Journal of Services Marketing*, 14(5), 358-377.
- Furey, S., Springer, P., & Parsons, C. (2014). Positioning university as a brand: distinctions between the brand promise of Russell Group, 1994 Group, University Alliance, and Million+ universities. *Journal of Marketing for Higher Education*, 24(1), 99-121.

- Gallifa, J., & Batallé, P. (2010). Student perceptions of service quality in a multi-campus higher education system in Spain. *Quality Assurance in Education*, 18(2), 156-170.
- Ganguli, S., & Roy, S. K. (2011). Generic technology-based service quality dimensions in banking: Impact on customer satisfaction and Loyalty. *International Journal of Bank Marketing*, 29(2), 168-189.
- Gbadamosi, G., & de Jager, J. (2008). Measuring service quality in South Africa higher education: developing a multidimensional scale. Spain: Global Business and Technology Association, 8-12.
- Getzlaf, B., Perry, B., Toffner, G., Lamarche, K., & Edwards, M. (2009). Effective Instructor Feedback: Perceptions of Online Graduate Students. *Journal of Educators Online*, 6(2), 1-22.
- Ghodeswar, B. (n.d.). Consumer Decision-Making Styles Among Indian Students. *Alliance Journal of Business Research*, 36–48.
- Gibbs, P., & Maringe, F. (2008). *Marketing tertiary education*. Milton Keynes: Open University Press.
- Gidley, J., Hampson, G., & Wheeler, L. (2010). From access to success: an integrated approach to quality higher education informed by social inclusion theory and practice. *Higher Education Policy*, 123–147.
- Giese, J. L., & Cote, J. A. (2000). Defining consumer satisfaction. *Academy of Marketing Science Review*, 1(1), 1-22.
- Giese, J., & Cote, J. (2002). Defining consumer satisfaction. *Academy of Marketing Science Review*, 1-24.
- Goetsch, D. L., & Davis, S. B. (2014). *Quality management for organizational excellence*. Pearson.
- Goi, M. T. (2014). Brand Identity, Brand Equity and Performance. *Proceedings of 3rd Asia-Pacific Business Research Conference 25 - 26 February 2013, Kuala Lumpur, Malaysia*, 1-8.
- Gold, M., & Moler, J. Measuring and Comparing the Brand Equity of Pomona College and the 5-C Colleges.

- Gong, Q. (2010). *Quality, Satisfaction and Loyalty: a Comparison of SERVQUAL and SERVPERF for Educational Service in China*. Shanghai: IEEE.
- Govender, K., & Ramroop, S. (2012). The relationship among the postgraduate research climate, service experience, quality and satisfaction. *Ave African Journal of Business Management*, 6(30), 8917-8926.
- Grebennikova, L., & Shah, M. (2013). Monitoring Trends in Student Satisfaction. *Tertiary Education and Management*, 2-22.
- Green, P. (2014). Measuring service quality in higher education: A South African case Study. *Journal of International Education Research (JIER)*, 10(2), 131-142.
- Green, P., & Ramroop, S. (2014). Prioritising factors influencing service quality at Durban University of technology: AHP approach. *Journal of Social Science, Kamla Raj*, 40(2), 243-250.
- Grönroos, C. (1984). A Service Quality Model and its Marketing Implications. *European Journal of Marketing*, 18(4), 36 – 44.
- Grosse, E. (2002). *Interview Skills for Managers*. USA: ASTD Press.
- Gruber, T., Fuß, S., Voss, R., & Gläser-Zikuda, M. (2010). Examining student satisfaction with higher education services: Using a new measurement tool. *International Journal of Public Sector Management*, 23(2), 105-123.
- Gulid, N. (2011). Student loyalty toward master's degree business administration curriculum at Srinakharinwirot University. *American Journal of Business Education (AJBE)*, 4(8), 49-56.
- Gummesson, E., & Grönroos, C. (2012). The emergence of the new service marketing: Nordic School perspectives. *Journal of Service Management*, 23, 479-497.
- Günör, H. (2007). *Observing and registering emotional satisfaction of customer contacts: For customer satisfaction & Loyalty*. Amsterdam: Vossiuspers.

- H Shaari, Z., & Areni, C. (2009). Brand architecture for business schools: is the university or the benefactor the brand? *Online Proceedings ANZMAC 2009*.
- Haemmoon, O. (1999). Service quality, customer satisfaction, and customer value: a holistic perspective. *Hospitality Management 18*, 67-82.
- Hafeez, S., & Muhammad, B. (2012). The Impact of Service Quality, Customer Satisfaction and Loyalty Programs on Customer's Loyalty: Evidence from Banking Sector of Pakistan. *International Journal of Business and Social Science*, 3(16), 200-209.
- Hair, J., Celsi, M., Money, A., Samouel, P., & Page, M. (2011). *Business Research Methods*. New York: M.E. Sharp, Inc.
- Hanaysha, J. R., Abdullah, H. H., & Warokka, A. (2011). Service quality and students' satisfaction at higher learning institutions: the competing dimensions of Malaysian universities' competitiveness. *The Journal of Southeast Asian Research*, 1-10.
- Hancock, G.R., & Mueller, R.O. (2010). *The Reviewer's Guide to Quantitative Methods in Social Sciences*. Oxon:Routledge.
- Hanneman, R., Kposowa, A. J., & Riddle, M. (2013). *Basic statistics for social research*. San Francisco, CA: Jossey-Bass.
- Hao, J. X., Yu, Y., Law, R., & Fong, D. K. C. (2015). A genetic algorithm-based learning approach to understand customer satisfaction with OTA websites. *Tourism Management*, 48, 231-241.
- Harmse, C. (2012). *Service quality in a landlord-small business relationship in shopping centres* (Doctoral dissertation, University of Pretoria).
- Harrington, D. (2009). *Confirmatory factor analysis*. Oxford: Oxford University Press.
- Harris, C., & Paddey, M. (2010). International students' perceptions of service quality in tertiary institutions – an exploratory study. *International Research Symposium in Service Management*, 1-15.

- Harvey, L., & Williams, J. (2010). Fifteen years of quality in higher education (Part Two). *Quality in Higher Education*, 81-113.
- Hassanzadeh, A., Kanaani, F., & Elahi, S. (2012). A model for measuring e-learning systems success in universities. *Expert Systems with Applications*, 10959–10966.
- Haywood-Farmer, J. (1988). A conceptual model of service quality. *International Journal of Operations & Production Management*, 8(6), 19-29.
- He, H., & Li, Y. (2011). Key service drivers for high-tech service brand equity: The mediating role of overall service quality and perceived value. *Journal of Marketing Management*, 27(1-2), 77-79.
- Hefer, Y., & Cant, M. (2014). Measuring service quality: the student as primary consumer. *International Business & Economics Research Journal*, 13(6), 1251-1260.
- Hemsley-Brown, J., & Goonawardana, S. (2007). Brand harmonization on the international higher education. *Journal of Business Research*, 60(9), 942-948.
- Hennig-Thurau, T. (2004). Customer orientation of service employees: Its impact on customer satisfaction, commitment, and retention. *International Journal of Service Industry Management*, 15(5), 460-478.
- Hennig-Thurau, T., Langer, M., & Hansen, U. (2001). Modeling and managing student Loyalty. *Journal of Service Research*, 3(4), 331-344.
- Hibbert, L., van der Walt, C. (2014). *Multilingual universities in South Africa: Reflecting society in higher education*. London: Multilingual Matters Publ.
- Hill, N., Roche, G., & Allen, R. (2007). *Customer satisfaction: The customer experience through the customer's eyes*. London: Cogent.
- Hinterhuber, A., & Liozu, S. (2013). *Innovation in Pricing: Contemporary Theories and Best Practices*. Oxon: Routledge.
- Hö hsmann, F. (2014). *Service quality from the guest's view*. Norderstedt: Books on Demand.

- Hom, W. (2000). *An Overview of Customer Satisfaction Models*. California: Chancellor's Office, California Community Colleges.
- Homburg, C., & Giering, A. (2001). Personal Characteristics as Moderators of the Relationship Between Customer Satisfaction and Loyalty—An Empirical Analysis. *Psychology & Marketing*, 43-66.
- Homburg, C., Hoyer, W. D., & Koschate, N. (2005). Customers' reactions to price increases: do customer satisfaction and perceived motive fairness matter? *Journal of the Academy of Marketing Science*, 33(1), 36-49.
- Høst, V., & Knie-Andersen, M. (2004). Modeling customer satisfaction in mortgage credit companies. *International Journal of Bank Marketing*, 22(1), 26-42.
- Hu, L.T. & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1): 1-55.
- Hu, H., Kandampully, J., & Juwaheer, T. (2009). Relationships and impacts of service quality, perceived value, customer satisfaction, and image: an empirical study. *The Service Industries Journal*, 111-125.
- Huiqun, L., & Xin, Z. (no year). *A Literature Review and Critique on Customer Satisfaction*. Dezhou, China.
- Hyman, M. R., & Sierra, J. J. (2010). *Marketing research kit for dummies*. Hoboken, N.J: Wiley
- Iannario, M., & Piccolo, D. (2010). A New Statistical Model for the Analysis. *Quality Technology & Quantitative Management* 7(2), 149-168.
- Iannario, M., & Piccolo, D. (2010). A new statistical model for the analysis. *Quality Technology & Quantitative Management*, 7(2), 149-168.
- Iqbal, M., Rasli, A., & Hassan, I. (2012). University branding: a myth or a reality. *Pakistan Journal of Commerce and Social Science*, 6(1), 168-184.

- Iro-Idoro, C. B., Ayodele, K. O., & Orija, J. I. (2014). Students Perception of Service Quality Encountered and their Future Enrichment: Implication for Academic Quality Assurance in Nigeria Polytechnics. *International Review of Management and Business Research*, 3(2), 929.
- Jarrell, C. (2012). *An Examination of Possible Relationships between Service Quality and Brand Equity in Online Higher Education*. Nortcentral University.
- Jayasundra, C. (2009). *Developing an Model for Predicting Customer Satisfaction in Relation to Service Quality in University Libraries in Sri Lanka* (Doctoral Dissertation). Pretoria: UNISA.
- Jiewantoa, A., Laurensb, C., & Nellohc, L. (2012). Influence of service quality, university image, and student satisfaction toward WOM Intention: a case study on Universitas Pelita Harapan Surabaya. *Procedia - Social and Behavioral Sciences*, 40, 16-23.
- John, S. F., & Senith, M. S. (2013). Factor branding in selection of higher educational institutions in India. *IOSR Journal of Business and Management*, 9(5), 45-50.
- Johnson, B., & Christensen, L. B. (2012). *Educational research: Quantitative, qualitative, and mixed approaches*. Thousand Oaks, Calif: SAGE Publications.
- Joseph, M., Mullen, E. W., & Spake, D. (2012). University branding: understanding students' choice of an educational institution. *Journal of Brand Management*, 20(1), 1-12.
- Kajan, E., Dorloff, F.-D., & Bedini, I. (2012). *Handbook of research on e-business standards and protocols: Documents, data, and advanced web technologies*. Hershey PA: Business Science Reference.
- Kapferer, J. (2008). *The New Strategic Brand Management: Creating and Sustaining Brand Equity*. London: Kogan Page.
- Kardaras, D., & Karakostas, B. (2012). *Services customization using web technologies*. Hershey, PA: Business Science Reference.
- Kärnä, S. (2004). Analysing customer satisfaction and quality in construction—the case of public and private customers. *Nordic Journal of Surveying and Real Estate Research*, 2, 67-80.

- Kats, Y. (2013). *Learning management systems and instructional design: Best practices in online education*. Hershey, Pa: IGI Global.
- Kayastha, A. (2011). *A study of graduate student satisfaction towards service quality of universities in Thailand* (Masters in Business Administration dissertation, Webster University).
- Keller, G. (2011). *BSTAT*. Mason, Ohio: South-Western.
- Keller, K. (1993). Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. *Journal of Marketing*, 57(1), 1-22.
- Keller, K. (2009). *Keller's Customer-Based Brand Equity Model*. Retrieved September 3, 2015, from EURIB, European Institute for Brand Management: www.eurib.org/.../v_-_Customer_based_brand_equity_model__EN_.pdf.
- Keller, K., & Lehmann, D. (2006). Brands and branding: research findings and future priorities. *Marketing Science*, 740-759.
- Kelly, P. J., Ruiz-Janecko, Y., & Guttmacher, S. (2013). *Community-based health interventions*. San Francisco, Calif: Jossey-Bass.
- Khodayari, F., & Khodayari, B. (2011). Service quality in higher education. *Interdisciplinary Journal of Research in Business*, 1(9), 38-46.
- Kilbourne, W. E., Duffy, J. A., Duffy, M., & Giarchi, G. (2004). The applicability of SERVQUAL in cross-national measurements of health-care quality. *Journal of Services Marketing*, 18(7), 524-533.
- Kirk, R. E. (2008). *Statistics: An introduction*. Belmont, CA: Thomson/Wadsworth.
- Kitchen, P. (1999). *Marketing Communications: Principles and Practice*. London: Thomson Learning.
- Kolb, B. M. (2008). *Marketing research: A practical approach*. Los Angeles: SAGE

- Kontic, L. (2014). Measuring Service Quality in Higher Education: The Case of Serbia. In *Human Capital without Borders: Knowledge and Learning for Quality of Life; Proceedings of the Management, Knowledge and Learning International Conference 2014* (pp. 645-654). ToKnowPress.
- Krestovics, M. (2011). *Business Practices in Higher Education: A Guide for Today's Administrators*. New York: Routledge.
- Krishnaswamy, K. N., Appa, L. S., & Mathirajan, M. (2006). *Management research methodology: Integration of principles, methods and techniques*. New Delhi: Pearson Education. Library.
- Krkljes, O. (2011). *University Education Branding: The Case of University of Novi Sad, Faculty of Science*. Slovenia: University of Ljubljana.
- Kucukemiroglu, O. (1997, March). Market segmentation by using consumer lifestyle dimensions and ethnocentrism-An empirical study. *European Journal of Marketing*, 470-487.
- Kumar, V., & In Shah, D. (2015). *Handbook of research on customer equity in marketing*. Northampton: Edward Elgar Publishing.
- Kundi, G. M., Khan, M. S., Qureshi, Q. A., Khan, Y., & Akhtar, R. (2014). Impact of Service Quality on Customer Satisfaction in Higher Education Institutions. *Industrial Engineering Letters*, 4(3), 23-28.
- Kuo, Y. K., & Ye, K. D. (2009). The causal relationship between service quality, corporate image and adults' learning satisfaction and Loyalty: a study of professional training programmes in a Taiwanese vocational institute. *Total Quality Management*, 20(7), 749-762.
- Kwan, K., & Jones, J. (n.d.). *What Students Expect of their Teachers*. Retrieved November 10, 2015, from What Students Expect of their Teachers: <http://teaching.polyu.edu.hk/datafiles/R2.pd>
- Labbé, E. E. (2011). *Psychology moment by moment: A guide to enhancing your clinical practice with mindfulness and meditation*. Oakland, CA: New Harbinger Publications
- Laczniak, E. (2004). Developing the brand equity of Jesuit higher education. *Conversations on Jesuit Higher Education*, 25(4), 3-8.

- Ladhari, R. (2008). Alternative measures of service quality: a review. *Managing Service Quality*, 18(1), 65-86.
- Ladhari, R. (2009). A review of twenty years of SERVQUAL research. *International Journal of Quality and Service Sciences*, 1(2), 172-198.). A review of twenty years of SERVQUAL research. *International Journal of Quality and Service Sciences*, 1(2), 172-198.
- Lam, S. S., & Woo, K. S. (1997). Measuring service quality: a test-retest Reliability investigation of SERVQUAL. *International Journal of Market Research*, 39(2), 381.
- Lamb, C. W., Hair, J. F., & McDaniel, C. (2013). *Marketing*. Mason, OH: South-Western/Cengage Learning.
- Lamb, C. W., Hair, J. F., & McDaniel, C. (2014). *MKTG 7*. Mason, Ohio: South-Western.
- Lambooy, J. V. (2011). Implications of Branding Initiatives in Higher Education Among Trademarked Institutions in California.
- Lasser, W., Mittal, B., & Sharma, A. (1995). Measuring customer-based brand equity. *The Journal of Consumer Marketing*, 12(4), 11-19.
- Lazibata, T., Bakovića, T., & Duževića, I. (2014). Total quality management & business excellence. *Total Quality Management*, 25(8), 923-934.
- Le, R. M. K., & Corbett, M. (2009). *Research methods in political science: An introduction using MicroCase*. Boston, MA: Thomson/Wadsworth.
- Lee, G., & Leh, F. (2011). Dimensions of Customer-Based Brand Equity: A Study on Malaysian Brands. *Journal of Marketing Research and Case Studies* , 1-10.
- Lee, J. (2006). Measuring service quality in a medical setting in a developing country: the applicability of SERVQUAL. *Services Marketing Quarterly*, 27(2), 1-14.
- Leng, C. a. (2010). *How Does National Culture Impact on Consumers' Decision-Making Styles? A Cross-Cultural Study in Brazil, the United States and Japan*. Brazilian Administration Review.

- Letcher, D., & Neves, J. (2010). Determinants of undergraduate business student satisfaction. *Research in Higher Education Journal*, 28 (3), 254-264.
- Levy, G. D., & Valcik, N. A. (2012). *Benchmarking in institutional research*. San Francisco: Jossey-Bass.
- Lewis-Beck, M., Bryman, A., & Liao, T. (2004). *The Sage Encyclopedia Of Social Science Research Methods*. London: SAGE.
- Lindenau-Stockfisch, V. (2011). *Lean Management in Hospitals: Principles and Key Factors for Successful Implementation*. Hamburg: Bachelor + Master Publ.
- Lisch, R. (2014). *Measuring service performance: Practical research for better quality*. Farnham: Gower.
- Liu, Y., 2008. *An Analysis Service Quality, Customer Satisfaction and Customer Loyalty of Commercial Swim Clubs in Taiwan*, Alabama: ProQuest.
- Liu, Z., 2008. *Research on University Brand Equity Evaluation Based On Perceived Service Quality*, s.l.: s.n.
- Liu, Z., 2015. *"Made In Italy" branding In China*. s.l.:Lampi di stampa.
- Lovelock, C., Patterson, P., & Wirtz, O. (2014). *Services Marketing*. Melbourne: Pearson.
- Luo, J. (2012). *Soft computing in information communication technology*. Berlin: Springer.
- MacGregor, K., 2012. *University World News*. [Online] Available at:<http://www.universityworldnews.com/article.php?story=20120115093819516> [Accessed 8 September 2015].
- Mackay, N., Spies, H., Williams, C., van Rensburg, L. J., & Petzer, D. J. (2013). The influence of service brand equity on the strength of brand relationships in the fast food industry. *Southern African Business Review*, 17(2).
- Mai, L. (2005). A Comparative Study Between UK and US: The Student Satisfaction in Higher Education and its Influential Factors. *Journal of Marketing Management*, 859-878.

- Makgosa, R., & Molefhi, B. A. (2012). Rebranding an institution of higher education in Botswana. *Business and Economic Research*, 2(2).
- Malhotra, N. (2007). *Marketing Research: An Applied Orientation*. London: Pearson.
- Malik, M. (2010). The impact of service quality on students' satisfaction in higher education institutes of Punjab. *Journal of Management Research*, 2(2), 1-11.
- Manafi, M., Saeidinia, M., Gheshmi, R., Hojabri, R., Fazel, O., & Jamshidi, D. (2011). Brand Equity Determinants in Educational Industry: A study of large universities of Malaysia. *Interdisciplinary Journal of Contemporary Research in Business*, 3(7), 769.
- Marrs, M., Gajos, R., & Pinar, M. (2011). Utilizing Brand Audit To Develop University Brand: A Case Study. *ASBBS Annual Conference* (pp. 964-975). Las Vegas: Proceedings of ASBBS.
- Matthews, T. D., & Kostelis, K. T. (2011). *Designing and conducting research in health and human performance*. San Francisco: Jossey-Bass.
- Mattsson, J. (1992). A Service Quality Model Based on an Ideal Value Standard. *International Journal of Service Industry Management*, 3(3), 18 - 33.
- Maxfield, M. G., & Babbie, E. R. (2015). *Research methods for criminal justice and criminology*. Belmont, CA. Wadsworth.
- McClellan, R. (2012). *Proceedings of the 11th European Conference on Research Methods: University of Bolton, UK, 28-29 June, 2012*.
- McClelland, J. D. (2008). The development of a conceptual model of student satisfaction with their experience in higher education. *Quality Assurance in Education*, 16 (1), 19-35.
- McColl-Kennedy, J. R. (2015). Customer Satisfaction, Assessment, Intentions and Outcome Behaviors of Dyadic Service Encounters: A Conceptual Model. In *Proceedings of the 1998 Academy of Marketing Science (AMS) Annual Conference* (pp. 48-54). Springer International Publishing.

- McDonald, M., Payne, A., & Frow, P. (2011). *Marketing plans for services: A complete guide*. Chichester, West Sussex, UK: John Wiley.
- Menon, M., Terklz, D., & Gibbs, P. (2014). *Using Data to Improve Higher Education: Research, Policy and Practice*. Springer.
- Merican, F., Suhaiza, Z., & Fernando, Y. (2009). Development of MBA program-service quality measurement scale. *International Review of Business Research Papers*, 5(4), 280-291.
- Merican, F., Zailani, S., & Fernando, Y. (2009). Development of MBA program-service quality measurement scale. *International Review of Business Research Papers*, 5(4), 280-291.
- Mertova, P., & Nair, C. S. (2011). *Student feedback: the cornerstone to an effective quality Assurance system in higher education*. Oxford England: Chandos Publishing.
- Milne, G. R., & McDonald, M. A. (1999). *Sport marketing: Managing the exchange process*. Sudbury, Mass: Jones and Bartlett.
- Minh Tuan, N. (2012). Effects of service quality and price fairness on student satisfaction. *International Journal of Business and Social Science*, 3(19), 132-150.
- Mishra, A. (2010). Consumer decision-making styles and young-adult consumers: an Indian exploration. *Isletme Arastirmalari Dergisi*, 2(3), 45 – 62.
- Mitra, J., & Edmondson, J. (2015). *Entrepreneurship and Knowledge Exchange*. New York: Routledge.
- Mitsis, A. (2007). *Antecedents to student-based brand equity: student brand Loyalty and perceived quality in higher education* (Doctoral Dissertation). Retrieved from Victoria University (Melbourne, Vic.).
- Moghaddam, A., Asadollah, H., Garache, M., Charmahali, A. (2013). Designing and explaining brand equity model in higher education. *European Online Journal of Natural and Social Sciences*, Česká Republika, 2, Jul. 2014. Retrieved October 7, 2015 from <http://european-science.com/eojnss/article/view/1529>.

- Mohammadi, A., & Mohammadi, J. (2014). Educational Service Quality in Zanjan University of Medical Sciences from Students' Point of View. *World Journal of Education*, 4(5), 86-93.
- Mok, K. (2003). Decentralization and marketization of education in Singapore a case study of the school excellence model. *Journal of Educational Administration*, 348-366.
- Mokhlis, S. a. (2009). Consumer decision-making styles in Malaysia: an exploratory study of gender differences. *European Journal of Social Sciences*, 10(4), 574 – 584.
- Morgan, R. (2000). A consumer-oriented framework of brand equity and Loyalty. *International Journal of Market Research*, 42(1), 65-78.
- Moro-Egido, A., & Panades, J. (2010). An analysis of student satisfaction: full-time. *Soc Indic Res*, 363-378.
- Motala, S. (2001). Quality and indicators of quality in South African education: a critical appraisal. *International Journal of Educational Development*, 21, 61–78.
- Mourad, Ennew, C., & Kortam, W. (2010). Descriptive Evidence on the Role of Corporate Brands in Marketing Higher Education Services. *Service Science* 2(3), 154-166.
- Mourad, M., Ennew, C., & Kortam, W. (2011). Brand equity in higher education. *Marketing Intelligence & Planning*, 29(4), 403-420.
- Multicultural Marketing Conference, In Chebat, J.-C., In Oumlil, A. B., & Academy of Marketing Science. (2015). *Proceedings of the 1998 Multicultural Marketing Conference: Montreal, Quebec, Canada, September 17-20, 1998*.
- Munro, B. H. (2005). *Statistical methods for health care research*. Philadelphia: Lippincott Williams & Wilkins.
- Mwatsika, C., & Khomba, J. K. (2013). Understanding MBA service quality in postgraduates' own terms: An exploratory analysis of top-of-the mind definition. *African Journal of Business Management*, 7(44), 4407-4419.

- Nadiri, H., Kandampully, J., & Hussain, K. (2009). Students' perceptions of service quality in higher education. *Total Quality Management*, 20(5), 523-535.
- Naidoo, V. (2011). Managerial issues associated with service quality – the case of the University of KwaZulu Natal. *International Conference on Business and Economics Research* (pp. 127-131). Singapore: IACSIT Press.
- Naidoo, V. (2014). Service quality perceptions of students at a South African university. *Mediterranean Journal of Social Sciences*, 5(27), 199.
- Naidoo, V. (2015). A comparative study between staff and student perceptions on service quality. *Journal of Contemporary Management*, 12, 40-60.
- Naidoo, V., & Mutinta, G. (2014). An Investigation into service quality delivery at the University of KwaZulu-Natal. *Journal of Social Science*, 38(3), 219-229.
- Nair, C. S. (2010). *Leadership and management of quality in higher education*. Oxford: Chandos Publishing.
- Naumann, E., Jackson, D. J., & Rosenbaum, M. (2001). How to Implement a Customer Satisfaction Program. *Business Horizons*, 37-46.
- Negi, R. (2009). Determining Customer Satisfaction through Perceived Service Quality: A Study of Ethiopian Mobile Users. *International Journal of Mobile Marketing*, 4(1), 31-38.
- Nell, C., & Cant, M. (2014). Determining Student Perceptions Regarding the Most Important Service Features and Overall Satisfaction with the Service Quality of a Higher Education Institution. *Management*, 19 (2), 63-87.
- Nestor, P., & Schutt, R. K. (2015). *Research methods in psychology: Investigating human behavior*. London: Sage Publications Ltd.
- Netemeyer, R., Krishnan, B., Pullig, C., Wang, G., Yagci, M., Dean, D., Wirth, F. (2004). Developing and validating measures of facets of customer-based brand equity. *Journal of Business Research*, 57, 209-224.

- Nie, N. Z. (2011). Consumer Decision-making style and purchase behavior in UK's digital camera market. *International Conference on Advancements in Information Technology*.
- Oduaran, A. (2011). Service quality and students' satisfaction with the professional teacher development programmes by distance mode in a South African university. *South African Journal of Higher Education*, 25(11)
- Oh, H. (1999). Service quality, customer satisfaction, and customer value: A holistic perspective. *International Journal of Hospitality Management*, 18(1), 67-82.
- Oh, H. (2009). *Handbook of Hospitality Management*. Oxford: Routledge.
- Oja, M. (2011). Student satisfaction and student performance. *Journal of Applied Research in the Community College*, 19(1), 50.
- Oldfield, B., & Baron, S. (2000). Student perceptions of service quality in a UK university business and management faculty. *Quality Assurance in Education*, 85-95.
- Oliver, R. (1993). Cognitive, Affective, and Attribute Bases of the Satisfaction Response. *Journal of Consumer Research, Inc.*, 418-430.
- Olsen, S. O. (2002). Comparative evaluation and the relationship between quality, satisfaction, and repurchase Loyalty. *Journal of the Academy of Marketing Science*, 30(3), 240-249.
- Ong, A. D., & Van, D. M. H. M. (2007). *Oxford handbook of methods in positive psychology*. Oxford: Oxford University Press.
- Palli, J., & Mamilla, R. (2012). Students' opinions of service quality in the field of higher education. *Creative Education*, 3(4), 430-438.
- Panda, T. K. (2008). *Marketing management: Text and cases: Indian context*. New Delhi: Excel Books.
- Pappu, R., Quester, P., & Cooksey, R. (2005). Consumer-based brand equity: improving the measurement – empirical evidence. *Journal of Product & Brand Management*, 14(3), 143-154.

- Pappu, R., & Quester, P. (2006). Does customer satisfaction lead to improved brand equity? An empirical examination of two categories of retail brands. *Journal of Product & Brand Management*, 15(1), 4-14.
- Parasuraman, A., Grewal, D., & Krishnan, R. (2007). *Marketing research*. Boston, MA: Houghton Mifflin Co.
- Parasuraman, A., Zeithaml, V., & Berry, L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, Vol. 49, No. 4 (Autumn, 1985), 41-50.
- Pariseau, S. E., & McDaniel, J. R. (1997). Assessing service quality in schools of business. *International Journal of Quality & Reliability Management*, 14(3), 204-218.
- Parker, C., & Mathews, B. P. (2001). Customer satisfaction: contrasting academic and consumers' interpretations. *Marketing Intelligence & Planning*, 19(1), 38-44.
- Payne, A., & McDonald, M. (2012). *Marketing Planning for Services*. New York: Routledge.
- Pergamon Flexible Learning., & Elearn Limited (Great Britain). (2009). *Managing markets and customers*. Amsterdam: Elsevier/Pergamon Flexible Learning.
- Petruzzellis, L., D'Uggento, A., & Romanazzi, S. (2006). Student satisfaction and quality of service in Italian universities. *Managing Service Quality*, 16 (4), 349-364.
- Philip, G., & Hazlett, S. (1997). The measurement of service quality: a new P-C-P attributes. *International Journal of Quality & Reliability Management*, 14(3), 260-286.
- Pike, S., & Larkin, I. (2010). Longitudinal evaluations of student satisfaction with a postgraduate unit using importance-performance analysis. *Journal of Teaching in Travel and Tourism*, 215-231.
- Plichta, S. B., & Garzon, L. S. (2009). *Statistics for nursing and allied health*. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins Health.
- Pinar, M., Trapp, P., Girard, T., & E. Boyt, T. (2014). University brand equity: an empirical investigation of its dimensions. *International Journal of Educational Management*, 28(6), 616-634.

- Piotraschke, F. (2008). *Brand Portfolio Management, basic principles and recent trends shown in context of Unilever, a consumer goods company*. München: GRIN Verlag GmbH.
- Pitt, L. W. (1995). Service Quality: A Measure of Information Systems Effectiveness. *MIS Quarterly*, 19(2), 173-187.
- Pitt, L., Watson, R., & Kavan, B. (1995). Service quality: a measure of information systems effectiveness. *MIS Quarterly*, 19(2), 173-187.
- Pizam, A., & Ellis, T. (1999). Customer satisfaction and its measurement in hospitality enterprises. *International journal of contemporary hospitality management*, 11(7), 326-339.
- Poutziouris, P., Smyrnios, K., Klein, S., & International Family Enterprise Research Academy. (2006). *Handbook of research on family business*. Cheltenham, UK: Edward Elgar.
- Pretorius, L. (2007). *The Impact of Branding and Brand Equity on the Tshwane University of Technology* (Masters Dissertation). Tshwane: Tshwane University of Technology.
- Privitera, G. J. (2014). *Statistics for the behavioral sciences*. California: Sage Publications.
- Quinn, A., Lemay, G., Larsen, P., & Johnson, D. (2009). Service quality in higher education. *Total Quality Management*, 139–152.
- Raab, G. (2008). *Customer relationship management: A global perspective*. Aldershot, Hampshire, England: Gower.
- Radder, L. L., & Pietersen, J. (2006). Decision-making styles of young Chinese, Motswana and Caucasian Consumers in South Africa: An Exploratory Study. *Tydskrif vir Gesinsekologie en Verbruikerswetenskappe*, 34, 20 – 31.
- Radder, L., & Han, X. (2009). Service quality of on-campus student housing: a South African experience. *International Business & Economics Research Journal*, Number 11, 107-120.

- Rahman, M. S., Khan, A. H., & Haque, M. M. (2012). A conceptual study on the relationship between service quality towards customer satisfaction: Servqual and Grönroos's service quality model perspective. *Asian Social Science*, 8(13), 201.
- Rai, A. K. (2013). *Customer relationship management: Concepts and cases*. New Delhi: PHI Learning
- Rajamanickam, M. (2001). *Statistical methods in psychological and educational research*. New Delhi: Cocept Publishing.
- Ramaswamy, V. S., & Namakumari, S. (2009). *Marketing management: Global perspective, Indian context*. Delhi: Macmillan.
- Rama, M. R. K. (2011). *Services marketing*. New Delhi: Pearson.
- Ramli, M.F., Othman, A.R., & Salleh, S.M (2015). Perceived Quality and Loyalty Towards PubHEI's of International Students in Malaysia's. Understanding the Role of Emotional Attachment as a Mediator. *International Journal of Administration and Governance*, 1(4), 51-57.
- Rapert, M., Smith, S., Velliquette, A., & Garretson, J. (2004). The meaning of quality: expectations of students. *Journal of Education for Business*, 17-24.
- Rau, P. L. P. (2015). *Cross-Cultural Design Applications in Mobile Interaction, Education, Health, Transport and Cultural Heritage: 7th International Conference, CCD 2015, Held as Part of HCI International 2015, Los Angeles, CA, USA, August 2-7, 2015, Proceedings, Part II*. Cham: Springer International Publishing. *Cross-Cultural Design Applications in Mobile Interaction, Education, Health, Transport and Cultural Heritage: 7th International Conference, CCD 2015, Held as Part of HCI International 2015, Los Angeles, CA, USA, August 2-7, 2015, Proceedings, Part II*. Cham: Springer International Publishing.
- Rauterberg, M., INTERACT, International Federation for Information Processing, IFIP TC.13 International Conference on Human-Computer Interaction, & INTERACT '03. (2003). *Human-computer interaction*. Amsterdam: IOS Press.

- Ravindran, D. R. (2009). Study on decision-making styles of consumers in malls. *IMS Manthan*, 4(2), 103 – 109.
- Razi-ur-Rahim, M. (2013). Service quality, student satisfaction and branding for business schools. *Prestige International Journal of Management & IT- Sanchayan*, 2(1), 2278-8441.
- Reid, R. D., & Bojanic, D. C. (2010). *Hospitality marketing management*. Hoboken, New Jersey: John Wiley & Sons.
- Remenyi, D. (2007). *ECEG 2007: 7th European conference proceedings on e-government*. Academic Conferences Limited.
- Rhoten, D., & Calhoun, C. J. (2011). *Knowledge matters: the public mission of the research university*. New York: Columbia University Press.
- Rodrigues, D. L. L. R. (2012). *Comparative Study of Service Quality Metrics: An Empirical Study in the Service Sector*. Munich: GRIN Verlag GmbH.
- Rodrigues, L. L. R. (2013). *Service quality measurement: Issues and perspectives*. Hamburg: Anchor Academic Pub.
- Rodriguez, L., Kramer, S., & Sherriff, B. (2013). Investigating risk and protective factors to mainstream safety and peace at the University of South Africa. *African safety promotion*, 11(1), 39-60.
- Rogerson, P. A. (2014). *Statistical Methods for Geography: A Student's Guide*. London: Sage.
- Rojas-Me´Ndez, J., Vasquez-Parraga, A., Kara, A., & Cerda-Urrutia, A. (2009). Determinants of student Loyalty in higher education: a tested relationship approach in Latin America. *Latin American Business Review*, 10, 21-39.
- Roll, M. (2006). *Asian brand strategy: How Asia builds strong brands*. Basingstoke (England): Palgrave Macmillan.
- Romesburg, H. C. (2004). *Cluster analysis for researchers*. Lulu Pr.

- Rovai, A., & James, R. (2010). Why some distance education programs fail while others succeed in a. *Internet and Higher Education* 13, 141–147.
- Rubin, A., & Babbie, E. (2013). *Brooks/Cole Empowerment Series: Essential Research Methods for Social Work*. Belmont: Cengage.
- Russell, M. (2005). Marketing Education - A review of service quality perceptions among International students. *International Journal of Contemporary Hospitality Management*, 65-77.
- Rutland, M. (2013). *Relaunch: How to stage an organizational comeback*. Colorado Springs: David C. Cook.
- Saepudin, A., & Marlina, A. (2013). The effects of institution service quality on student satisfaction of Smpn 3 Cibadak, Sukabumi. *International Journal Of Scientific & Technology Research*, 2(3), 162-172.
- Samervel, R. (2012, August 9). *Forum rejects plea, says student is not 'consumer'*. Available from <http://timesofindia.indiatimes.com/city/mumbai/Forum-rejects-plea-says-student-is-not-consumer/articleshow/15411139.cms>. [Retrieved November 2, 2015].
- Sarstedt, M., & Mooi, E. (2014). A concise guide to market research: The process, data, and methods using IBM SPSS statistics.
- Santos, J. (2003). E-service quality: a model of virtual service quality dimensions. *Managing Service Quality: An International Journal*, 13(3), 233-246.
- Sarin, S. (2013). *Business marketing: Concepts and cases*. New Delhi: McGraw Hill Education.
- Schellong, A. (2008). *Citizen relationship management: A study of CRM in government*. Frankfurt am Main: Lang.
- Schoefer, K., & Ennew, C. (2005). The impact of perceived justice on consumers' emotional responses to service complaint experiences. *Journal of Services Marketing*, 261-270.

- Schumacker, R., & Lomax, R. (2010). *A Beginner's Guide to Structural Equation Modelling*. New York: Routledge.
- Scupola, A. (2013). *Mobile opportunities and applications for e-service innovations*. Hershey, PA: Information Science Reference.
- Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill-building approach*. Chichester: Wiley.
- Seng, E., & Ling, T. (2013). A Statistical analysis of education service quality dimensions on business school students' satisfaction. *International Education Studies*, 6(8), 136-146.
- Serenko, A. (2011). Student satisfaction with Canadian music programmes: the application of the American customer satisfaction model in higher education. *Assessment & Evaluation in Higher Education*, 281–299.
- Seth, N., Deshmukh, S., & Vrat, P. (2005). Service quality models: a review. *International Journal of Quality & Reliability Management*, 22(9), 913-919.
- Shah, F.T. (2013). Service Quality and Customer Satisfaction in Higher Education in Pakistan, *Journal of Quality and Technology Management*, IX (II), 73-89.
- Shahin, A., & Samea, M. (2010). Developing the models of service quality gaps: a critical discussion. *Business Management and Strategy*, 1(1), 1-11.
- Shanmuga, P. & Jeyakumaran, M. (2015). Service Quality Dimensionality in Higher Education Institutions (HEIs): An Analytical Approach from Students' Perspective, *International Journal of Technology and Educational Marketing (IJTEM)*, 5(1), 1-18.
- Sharma, D., Patel, A., & Sabharwal, S. A study on service quality in higher education: A conceptual framework. *Altius Shodh Journal of Management & Commerce*, 1-8.
- Shin, J., & Teichler, U. (2013). *The Future of the Post-Massified University at the Crossroads*. Springer.

- Shukla, P. (2010). *Essentials of Marketing Research - Part 1: Approach, Research Design and Sampling*. Ventus Publishing.
- Siddiqi, K. (2011). Interrelations between service qualities attributes, customer satisfaction and customer Loyalty in the retail banking sector in Bangladesh. *International Journal of Business and Management*, 6(3), 12-36.
- Siddique, A., Karim, K., & Rahman, M. (2011). Customers' perception about the determinants of service quality of foreign and domestic banks: an empirical study on Bangladesh. *Journal of Business and Technology (Dhaka)*, 6(1), 1-14.
- Silva, F. H., & Fernandes, P. O. (2011). Importance-performance analysis as a tool in evaluating higher education service quality: the empirical results of ESTiG (IPB). *Creating Global Competitive Economies: A 360-Degree Approach*, 306-315.
- Simon, C., & Sullivan, M. (1993). The Measurement and Determinants of Brand Equity: A Financial Approach. *Marketing Science*, 12(1), 28-52.
- Singh, K. (2007). *Quantitative social research methods*. Los Angeles: Sage Publ.
- Sinkovics, R. K. (2010). A comparative examination of consumer decision styles in Austria. *Journal of Marketing Management*, 26(11 – 12), 1021 – 1036.
- Smadi, Z. (2011). The consumer decision-making styles of mobile phones among university level students in Jordan. *International Bulletin of Business Administration*, Issue 10, 104 – 121.
- Smith, S. L. J., & CAB International. (2010). *Practical tourism research*. Wallingford: CABI. 168.
- Søgaard, V. (1996). *Research in church and mission*. Pasadena, Calif: William Carey
- Sohail, M., & Shaikh, N. M. (2004). Quest for excellence in business education: a study of student impressions of service quality. *International Journal of Educational Management*, 18(1), 58-65.
- Sohail, M., Rajadurai, J., & Abdul Rahman, N. (2003). Managing quality in higher education: a Malaysian case study. *The International Journal of Educational Management*, 141-146.

- Soteriou, A. C., & Stavrinides, Y. (1997). An internal customer service quality data envelopment analysis model for bank branches. *International Journal of Operations & Production Management*, 17(8), 780-789.
- Souca, M. L. (2011). SERVQUAL—Thirty years of research on service quality with implications for customer satisfaction. *Marketing from Information to Decision*, (4), 420-429.
- Spreng, R. A., & Mackoy, R. D. (1996). An empirical examination of a model of perceived service quality and satisfaction. *Journal of retailing*, 72(2), 201-214.
- Sproles, G. A. (1987). A Short Test of Consumer Decision-Making Styles. *The Journal of Consumer Affairs*, 5, 7 – 14.
- Stange, K. (2012). Ability sorting and the importance of college quality to student achievement: evidence from community colleges. *Association for Education Finance and Policy*, 74-105.
- Statistics, Leard. (2013, December 12). *Multiple Regression Analysis using SPSS*. Retrieved November 8, 2015, from Laerd Statistics.com: <https://statistics.laerd.com/spss-tutorials/multiple-regression-using-spss-statistics.ph>.
- Statistics, Solutions (2013, December 12). *Factor Analysis*. Retrieved November 8, 2015, from <http://www.statisticssolutions.com/academic-solutions/resources/directory-of-statistical-analyses/factor-analysis/>
- Statwiki. (n.d.). Confirmatory Factor Analysis. Retrieved October 8, 2015, from Statwiki: http://statwiki.kolobkreations.com/wiki/Confirmatory_Factor_Analysis.
- Subramaniam, A., Mamun, A., Permarupan, P., & Zainol, N. (2014). Effects of brand Loyalty, image and quality on brand equity: a study among Bank Islam consumers in Kelantan, Malaysia. *Asian Social Science*, 10(14), 67-73.
- Sultan, P., & Wong, H. (2013). Antecedents and consequences of service quality in a higher education context: a qualitative research approach. *Quality Assurance in Education*, 70-96.

- Sultan, P., & Wong, H. Y. (2011). Service quality in a higher education context: antecedents and dimensions. *International Review of Business Research Papers*, 7(2), 11-20.
- Sumaedi, S., Bakti, I., & Metasari, N. (2011). The effect of students' perceived service quality and perceived price on student satisfaction. *Management Science and Engineering*, 5(1), 88-97.
- Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1997). Retail service quality and perceived value: A comparison of two models. *Journal of Retailing and Consumer Services*, 4(1), 39-48.
- Takaro, A., 2014. Measuring Service Quality and Students' Satisfaction-A Case Study on Hawassa University. *SPC ERA International Journal of Business and Management*, 2(3).
- Tan, B., Wong, C., Lam, C., Ooi, C., & Ng, F. (2010). Assessing the link between service quality dimensions and knowledge sharing: Student perspective. *African Journal of Business Management*, 4(6), 1014-1022.
- Tan, K. C., & Kek, S. W. (2004). Service quality in higher education using an enhanced SERVQUAL approach. *Quality in higher education*, 10(1), 17-24.
- Taylor, B., Sinha, G., & Ghoshal, A. (2006). *Research Methodology*. Delhi: Prentice Hall.
- Teas, K.R. (1993). Consumer expectations and the measurement of perceived service quality. *Journal of Professional Services Marketing*, 8(2), 33-53.
- Teas, K.R. (1993). Expectations, performance evaluation and consumers' perceptions of quality. *Journal of Marketing*, 57(4), 18-24.
- Teh, G. M., & Salleh, A. H. M. (2011). Impact of brand meaning on brand equity of higher educational institutions in Malaysia. *World*, 3(2), 218-228.
- Thomas, S. (2011). What Drives Student Loyalty in Universities: An Empirical Model from India. *International Business Research*, 4(2), 183-192.
- Thorson, E., & Moore, J. (2013). *Integrated Communication: Synergy of Persuasive Voices*. New Jersey: Psychology Press, 2013.

- Toma, D. (2003). *Football U: Spectator Sports in the Life of the American University*. University of Michigan Press.
- Tong, X., & Hawley, J. (2009). Measuring customer-based brand equity: empirical evidence from the sportswear market in China . *Journal of Product & Brand Management*, 18(4), 262-271.
- Tripathi, P., & Mukerji, S. (2013). *Marketing strategies for higher education institutions: Technological considerations and practices*. Hershey, Pa: IGI Global (701 E. Chocolate Avenue, Hershey, Pennsylvania, 17033, USA).
- Tu, Y., Wang, C., & Chang, H. (2012). Corporate Brand Image and Customer Satisfaction on Loyalty: An Empirical Study of Starbucks Coffee in Taiwan. *Journal of Social and Development Sciences*, 3(1), 24-32.
- Uys, H. H. M., & Basson, A. A. (1991). *Research methodology in nursing*. Pretoria: Haum.
- van Schalkwyk, R. D., & Steenkamp, R. J. (2014). The exploration of service quality and its measurement for private higher education institutions. *Southern African Business Review*, 18(2), 83-107.
- Vaughan, E., & Woodruffe-Burton, H. (2011). The disabled student experience: does the SERVQUAL scale measure up? *Quality Assurance in Education*, 19(1), 28-49.
- Vavra, T. G. (1997). *Improving your measurement of customer satisfaction: A guide to creating, conducting, analyzing, and reporting customer satisfaction measurement programs*. Milwaukee, Wisconsin: ASQ Quality Press.
- Veerasamy, D., Govender, J. P., & Noel, D. T. (2012). International students' expectations and perceptions of service quality: the case of a higher education institution in South Africa. *Journal of Economics and Behavioral Studies*, 4(10), 588-594.
- Verma, H. V. (2006). *Brand management: Text and cases*. New Delhi: Excel Books.
- Verma, H. V. (2008). *Services marketing: Text and cases*. India: Dorling Kindersley.
- Verma, H. V. (2012). *Services marketing: Text and cases*. New Delhi: Pearson Education.

- Voss, R., Gruber, T., & Szmigin, I. (2007). Service quality in higher education: The role of student expectations. *Journal of Business Research*, 60(9), 949-959.
- Vukasovič, T. (2015). Managing Consumer-Based Brand Equity in Higher Education. *International Research Journal*, 13(1), 75-90.
- Wagner, W., Halley, F., & Zaino, Z. (2011). *Adventures in Social Research*. New York: Pine Forge Press.
- Walker, J. T., & Maddan, S. (2009). *Statistics in criminology and criminal justice: Analysis and interpretation*. Sudbury, Mass: Jones and Bartlett Publishers.
- Walsh, G. M.-T. (2001). German Consumer Decision-Making Styles. *The Journal of Consumer Affairs*, 35(1), 73 – 95.
- Wang, J. (2012). *Advancing the service sector with evolving technologies: Techniques and principles*. Hershey, PA: Business Science Reference.
- Washburn, J., & Plank, R. (2002). Measuring brand equity: an evaluation of a consumer-based brand equity scale. *Journal of Marketing theory and practice*, 10(1), 46-62.
- Webber, J. (2011, July 11). *Students are not consumers*. Retrieved November 2, 2015, from New Statesman: <http://www.newstatesman.com/blogs/cultural-capital/2011/07/students-work-education>
- Wesley, S. L. (2006). Consumer decision-making styles and mall shopping behavior: building theory using exploratory analysis and comparative method. *Journal of Business Research*, 59, 535 – 548.
- Westbrook, R. A. (1980). Intrapersonal Affective Influences on Consumer Satisfaction with Products. *Journal of Consumer Research*, 7(1), 49-54.
- Weiner, I. B. (2003). *Handbook of psychology: 2*. Hoboken, NJ: Wiley.
- Wickramasinghe, N. (2013). *Lean thinking for healthcare*. New York: Springer.
- Wilkins, S. (2013). Assessing student satisfaction in transnational higher education. *International Journal of Educational Management*, 143-156.

- Wood, R., & Brotherton, B., 2008. *The SAGE Handbook of Hospitality Management*. California: Sage.
- Woodruff, R., Cadotte, E., & Jenkins, R. (1983). Modeling consumer satisfaction processes using experience-based norms. *Journal of Marketing Research*, 20(3), 296-304.
- Woodside, A.G., Frey, L.L., & Daly, R.T. (1989). Linking service quality, customer satisfaction, and behavioral intention. *Journal of Health Care Marketing*, 9(4), 5-17.
- Woodside, A. G., Megehee, C., & Ogle, A. (2009). *Advances in culture, tourism and hospitality research: Volume 3*. Bingley: Emerald.
- Xu, J., Yasinzai, M., Lev, B., & International Conference on Management Science and Engineering Management, ICMSEM. (2013). *Proceedings of the Sixth International Conference on Management Science and Engineering Management: Focused on electrical and information technology*. Berlin: Springer with Tsinghua University Press.
- Yadav, J. (2012). Service Quality towards Student Satisfaction: An Empirical Investigation in Selected Management Institutions of Sangli City. *Ninth AIMS International Conference on Management*, (pp. 113-117).
- Yang, W. L. (n.d.). A Comparative Study Of Consumer Decision-Making Styles in Leisure Farm with Different Tourists' Backgrounds. *Journal of Global Business Management*, 6(2), 1-10.
- Yap, S. F., & Kew, M. L. (2007). Service quality and customer satisfaction: antecedents of customer's re-patronage intentions. *Sunway Academic Journal*, 4, 59-73.
- Yellin, L. L. (2008). *Sociology writer's guide*. Boston, Mass: Allyn and Bac.
- Yilmaz, I. (2009). Measurement of service quality in the hotel industry. *International Journal of Tourism and Hospitality Research*, 20(2), 375-386.
- Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of business research*, 52(1), 1-14.

- Yoo, B., Donthu, N., & Lee, S. (2000). An Examination of Selected Marketing Mix Elements and Brand Equity. *Journal of the Academy of Marketing Science*, 195-211.
- Yousapronpaiboon, K. (2014). SERVQUAL: Measuring higher education service quality in Thailand. *Procedia-Social and Behavioral Sciences*, 116, 1088-1095.
- Yusof, A., Hassan, Z., Abdul Rahman, S., & Ghouri, A. (2012). Educational Service Quality at Public Higher Educational Institutions: A Proposed Framework and Importance of the Sub-dimensions. *International Journal of Economics Business and Management Studies - IJEBMS*, 36-49.
- Zabadi, A. M. (2013). Implementing Total Quality Management (TQM) on the Higher Education Institutions—A Conceptual Model. *Journal of Finance and Economics*, 1(1), 42-60.
- Zeithaml, V., Bitner, M., & Gremler, D. (2009). *Services Marketing - Integrating Customer Focus Across the Firm*. Singapore: McGraw-Hill.
- Zhu, F. X., Wymer, W., & Chen, I. (2002). IT-based services and service quality in consumer banking. *International Journal of Service Industry Management*, 13(1), 69-90.

APPENDIX A: QUESTIONNAIRE

QUESTIONNAIRE – SURVEY OF SERVICE QUALITY, STUDENT SATISFACTION AND BRAND EQUITY

Thank you for agreeing to participate in this study. The questions in this questionnaire pertain to the higher educational institution you are studying at referred to as the “institution” in the questionnaire. This questionnaire is made up of four (5) sections – A, B, C, D and E. The questionnaire should take you no more than 15 minutes to complete.

SECTION A

Please answer the questions in this section by placing a cross (X) in the most appropriate column. This section rates **SERVICE QUALITY** at your institution based on how you perceive it where 1 represents a poor score whilst 7 represents an excellent score.

	SERVICE QUALITY RATING						
	Poor			Excellent			
	1	2	3	4	5	6	7
1. Current state of equipment	1	2	3	4	5	6	7
2. Visual appeal of physical facilities	1	2	3	4	5	6	7
3. Appearance and dress of employees	1	2	3	4	5	6	7
4. Visual appeal of materials e.g. course handouts	1	2	3	4	5	6	7
5. Keeping promises	1	2	3	4	5	6	7
6. Sympathetic to and showing interest in solving student problems	1	2	3	4	5	6	7
7. Providing the service right the first time	1	2	3	4	5	6	7
8. Providing the service at the promised time	1	2	3	4	5	6	7
9. Keeping accurate records	1	2	3	4	5	6	7
10. Informing students of when service will be performed	1	2	3	4	5	6	7
11. Promptness of service from university employees	1	2	3	4	5	6	7
12. Willingness of employees to help	1	2	3	4	5	6	7
13. Employees never too busy to help	1	2	3	4	5	6	7

	SERVICE QUALITY RATING						
	Poor			Excellent			
	1	2	3	4	5	6	7
14. Confidence instilled by employees in me	1	2	3	4	5	6	7
15. Feeling safe in transacting with the institution	1	2	3	4	5	6	7
16. Courteous employees	1	2	3	4	5	6	7
17. Employee knowledge in answering my questions	1	2	3	4	5	6	7
18. Provides me with individual attention	1	2	3	4	5	6	7
19. Convenience of operating hours	1	2	3	4	5	6	7
20. Personal attention provided by the institution's employees to me	1	2	3	4	5	6	7
21. Institution having my best interests	1	2	3	4	5	6	7
22. Institution's employees understanding of my specific needs	1	2	3	4	5	6	7

SECTION B

Please answer the questions in this section by placing a cross (X) in the most appropriate column. This section rates **IMPORTANCE** that you place on each aspect of service quality at your institution based on your perceptions where 1 represents a low importance and 7 represents a high importance.

	IMPORTANCE RATING						
	Low			High			
	1	2	3	4	5	6	7
1. Current state of equipment	1	2	3	4	5	6	7
2. Visual appeal of physical facilities	1	2	3	4	5	6	7
3. Appearance and dress of employees	1	2	3	4	5	6	7
4. Visual appeal of materials e.g. course handouts	1	2	3	4	5	6	7
5. Keeping promises	1	2	3	4	5	6	7
6. Sympathetic to and showing interest in solving student problems	1	2	3	4	5	6	7
7. Providing the service right the first time	1	2	3	4	5	6	7
8. Providing the service at promised time	1	2	3	4	5	6	7

	IMPORTANCE RATING						
	Low						High
	1	2	3	4	5	6	7
9. Keeping accurate records	1	2	3	4	5	6	7
10. Informing students of when service will be performed	1	2	3	4	5	6	7
11. Promptness of service from university employees	1	2	3	4	5	6	7
12. Willingness of employees to help	1	2	3	4	5	6	7
13. Employees never too busy to help	1	2	3	4	5	6	7
14. Confidence instilled by employees in me	1	2	3	4	5	6	7
15. Feeling safe in transacting with the institution	1	2	3	4	5	6	7
16. Courteous employees	1	2	3	4	5	6	7
17. Employee knowledge in answering my questions	1	2	3	4	5	6	7
18. Providing me with individual attention	1	2	3	4	5	6	7
19. Convenience of operating hours	1	2	3	4	5	6	7
20. Personal attention provided by the institution's employees to me	1	2	3	4	5	6	7
21. Institution having my best interests	1	2	3	4	5	6	7
22. Institution's employees understanding of my specific needs	1	2	3	4	5	6	7

SECTION C

Please answer the questions in this section by placing a cross (X) in the most appropriate column. The less you agree with a statement, the lower the score and the more you agree with a statement, the higher the score.

	Strongly disagree			Neither		Strongly agree	
Statement	1	2	3	4	5	6	7
1. The institution's brand is of high quality	1	2	3	4	5	6	7
2. The likelihood of the institution being reliable is very high	1	2	3	4	5	6	7
3. The institution's brand must be of a very good quality	1	2	3	4	5	6	7
4. In my opinion, the institution is a leading brand	1	2	3	4	5	6	7
5. The institution is growing in popularity	1	2	3	4	5	6	7
6. I believe that the institution is innovative and very advanced	1	2	3	4	5	6	7
7. I am more aware of this institution's brand than that of others	1	2	3	4	5	6	7
8. I can easily recognise the institution over others	1	2	3	4	5	6	7
9. The characteristics of the institution comes to mind quite easily	1	2	3	4	5	6	7
10. I know what the institution's brand looks like	1	2	3	4	5	6	7
11. I will not study at another institution if this institution is available	1	2	3	4	5	6	7

Statement	Strongly disagree			Neither	Strongly agree		
	1	2	3	4	5	6	7
12. This institution is my first study choice	1	2	3	4	5	6	7
13. I consider myself to be loyal to this institution	1	2	3	4	5	6	7
14. I would recommend this institution to others	1	2	3	4	5	6	7
15. I would not switch to another institution in the future	1	2	3	4	5	6	7
16. I will still study at this institution even if its fees are higher than that of other institutions	1	2	3	4	5	6	7
17. I believe that this institution provides good value for money.	1	2	3	4	5	6	7
18. I have good reasons to support this institution over competing ones.	1	2	3	4	5	6	7
19. This institution has a good personality	1	2	3	4	5	6	7
20. This institution's brand is interesting	1	2	3	4	5	6	7
21. I have a positive image of people who study at this institution	1	2	3	4	5	6	7
22. I trust this institution's brand	1	2	3	4	5	6	7
23. I admire this institution's brand	1	2	3	4	5	6	7
24. I believe that this institution has credibility	1	2	3	4	5	6	7
25. I believe that this institution's brand is better than that of other institutions	1	2	3	4	5	6	7

SECTION D

Please answer the questions in this section by placing a cross (X) in the most appropriate column. The less you agree with a statement, the lower the score and the more you agree with a statement, the higher the score.

Statement	Strongly disagree			Neither		Strongly agree	
	1	2	3	4	5	6	7
1. It is sensible to study at this institution instead of competing institutions even if they are the same	1	2	3	4	5	6	7
2. Even if another institution offers the same services as the institution I am studying at, I will still prefer to choose this institution.	1	2	3	4	5	6	7
3. If there is another institution which is as good as the institution I am studying at, I will still prefer to choose the institution I am studying at.	1	2	3	4	5	6	7
4. If another institution is not different from the institution I am studying at, it still seems smarter to study at the institution I am presently studying at.	1	2	3	4	5	6	7
5. I am happy to have registered at this university	1	2	3	4	5	6	7
6. If given the choice again, I will still study at this university	1	2	3	4	5	6	7
7. Overall I am satisfied with this university	1	2	3	4	5	6	7
8. I believe that my choice to register at this university is a good one	1	2	3	4	5	6	7

		Strongly disagree			Neither		Strongly agree	
Statement		1	2	3	4	5	6	7
9.	The institution I am studying at delivers excellent overall service	1	2	3	4	5	6	7
10.	The offerings of the institution I am studying at are of a high quality	1	2	3	4	5	6	7
11.	In every way, the institution I am studying at delivers excellent service	1	2	3	4	5	6	7

SECTION E

Please complete this section by providing answers to the questions below.

1. What is your age? _____.
2. What is your gender? _____.
3. What degree/diploma are you registered for? _____
4. What is your race? _____.

THANK YOU FOR YOUR CO-OPERATION IN COMPLETING THIS QUESTIONNAIRE.

APPENDIX B: ETHICAL CLEARANCE APPROVAL



13 June 2014

Mr Sanjay Shantilal Soni (842847277)
School of Management, IT & Governance
Pietermaritzburg Campus

Protocol reference number: HSS/0431/014D
Project title: Service quality, student satisfaction and brand equity: A case study of select South African universities

Dear Mr Soni,

Full Approval – Expedited Application

In response to your application dated 23 April 2014, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Professor KK Govender
Cc Academic Leader Research: Professor Brian McArthur
Cc School Administrator: Ms Debbie Cunynghame

Humanities & Social Sciences Research Ethics Committee

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