Employees' service quality perceptions of Kenyan private universities

EE MANG'UNYI

(School of IT, Management and Governance;
Pietermaritzburg Campus, University of KwaZulu-Natal)

[mangunyie@gmail.com]

KK GOVENDER

(University of KwaZulu-Natal & Regenesys Business School, Johannesburg)

[krishnag@regenesys.co.za]

Abstract

This paper reports on an empirical study conducted among a sample 133 employees of private higher education institutions in Kenya, to examine the relationship between perceived service quality (SQ) and customer satisfaction (CS), using the HEdPERF instrument. Although service quality was measured using six dimensions namely: academic, non-academic, reputation, access, programmes and understanding, by using structural equation modelling, the six SQ dimensions needed to be collapsed into four, since these were significant to the employees' of private universities.

The results partially support the proposed conceptual model that non-academic, access, academic and reputation dimensions have a positive and significant influence on the employees' SQ perceptions, and in turn influences their satisfaction. It can be inferred from the findings that university quality should not only be looked at in terms of academic activities alone, as non-academic aspects also need to be considered since they are deemed important to the employees. Since universities are in both national and international competition, management should aim at ensuring that all services i.e. physical, implicit and explicit are delivered to acceptable standards to realise increased satisfaction.

Key phrases
employee satisfaction; HEdPERF; private higher education; service quality

1. INTRODUCTION

This study deals with the measurement of service quality in the private higher education industry in Kenya, with a focus on the employees' perception of service quality. In most service organisations, every effort is made to increase service quality and satisfy customers and therefore increase the overall organisational performance. The literature on the marketing of services illustrates that service quality is a precursor to customer satisfaction (Hensley and

Sulek 2007:154-156; Herrington & Weaven 2007:404-410; Hishamuddin & Azleen 2008:165-167; Siddiqi 2011:16-19), builds loyalty (Chitty & Soutar 2004:4-5; Govender & Ramroop 2012: 8919-8925; Jones & Sasser 1995; Siddiqi 2011:24-25) and enhances retention and satisfaction (Govender & Ramroop 2011:246-250; Govender & Ramroop 2012:8919-8925; Martensen, Gronhold, Eskildsen & Kristensen 2000:376-378).

Private universities have been acknowledged to attract 'employee-customers' due to strategies such as retention of skilled human capital (Materu 2007:13-14) and unique experience, which has led to a reduction in professional emigration or what is referred to as the brain drain (Odhiambo 2011:311-312). Another factor that attracts 'employee-customers' is that private universities are often associated with quality (Materu 2007:13-14), which most individuals want to align with. In spite of the aforementioned, with increased global competition, quality of the service may play a bigger role in dictating employee commitment and satisfaction.

Although the literature on service quality and customer satisfaction issues in the context of the higher education sector is ever-increasing (Alaba & Olanrewaju 2012:188-194; Calvo-Porral, Levy-Mangin & Novo-Corti 2013:612-614; De Jager & Gbadamosi 2010:251-253; Govender & Ramroop 2012:8917-8926; Hasan & Ilias 2008:163-175; Siddiqi & Azleen 2008:166; Khodayari & Khodayari 2011:38-46; Trivellas & Dargenidou 2009:382-399; Yunus, Ismail, Ishak & Juga 2009:1-18), little research pertains to the employees (as customers) of private HEIs, with respect to their service quality perceptions and satisfaction with the service. In order to address the aforementioned, this paper presents results of an exploratory empirical study to determine the relationship between service quality (SQ) and satisfaction (CS) among academic and administrative staff in Kenyan private universities.

2.   BRIEF LITERATURE REVIEW

2.1   Conceptualising service quality

Zeithaml and Bitner (1996:5) define services including those of higher education as "deeds, processes and performances". Zeithaml, Bitner and Gremler (2006:106-107) define service quality as the focused assessment that reflects the delivery of exceptional service relative to customer expectations, whereas Grönroos (2000:46) regards service quality as a process consisting of a series of intangible activities that normally happen during interactions between the customer and service employees.

Fogli (2006:4) views service quality as a positive or negative global attitude relating to a particular service. In higher education institutions (HEIs) however, some researchers (De Jager

& Gbadamosi 2010: 253; Rasli, Danjuma, Yew & Igbal 2011:6541, 6550) associate experience and the level of satisfaction gained by university employees with their service encounters as an indicator of service quality. Quinn, Lemay, Larson and Johnson (2009:139-140) define service quality in higher education in terms of educational, administration and supporting services.

Although some researchers, inter-alia, (Grönroos 2000:46) view services as an integral part of services marketing others (Wisniewski 2001:380-381), argue that the complexity of both defining and measuring service quality, is one reason that has raised a lot of interest on the subject. In this paper, the researchers define perceived service quality as the ability of a particular service to gratify the anticipated needs of an employee.

2.2   The Higher Education employee as a customer

Mudie and Pirrie (2006:2-4) argue that the characteristics exhibited by higher education (HE) services, namely, intangibility, inseparability, heterogeneity and perishability, are no different from those associated with other services. However, while HE possesses the traditional characteristics of a service offering, the unique characteristics are notable which differentiate it from any other retail service. One such characteristic is the conflicting views on the customer, since various stakeholders *inter alia,* employees, students, parents, sponsors, and the government utilise the services of HE (Becket & Brookes 2006:126; Owlia & Aspinwall 1996:18; Quinn *et al.* 2009:140-142).

Each of the aforesaid customers has access to a HE offering and have diverse requirements (Owlia & Aspinwall 1996:18). Students are possibly as the first and most obvious customers (Becket & Brookes 2006:126) because they pay for the education service, as well as need to prove their eligibility to enjoy the service. Sometimes, the cost of education is met by their parents or guardians and these individuals act as a point of contact for some service interactions with the higher education institution (HEI) (Quinn *et al.* 2009:141).

Similarly, employees (academic and administrative), exercise control in the design of some of the services, and therefore also make use of a number of the HEI's services (Owlia & Aspinwall 1996:18-19; Quinn *et al.* 2009:141). Singh (2000:15, 26) stresses the significance of the service employee in service acts and service quality. There are also other stakeholders in HE who function as customers although for the different interests they have in the higher education process.

Whereas residence halls exclusively serve student-customers' accommodation needs, administrative areas in a university have explicit internal and external customers. For example,

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a research function or office serves internal staff and graduate students as well as government agencies and research sponsors (Quinn *et al.* 2009:141). The involvement of different stakeholders within the HE environment makes the measurement of HE services complicated compared to retail services, including how each employee perceives the indicators of service which may also be conflicting (Becket & Brookes 2006:124-126; Quinn *et al.* 2009:139).

In view of the above mentioned, and since academic and non-academic staff are chief suppliers of different services of the higher education service to the students and other customers this research examines employees' as internal customers of HE with the objective of exploring their perception of service quality, and service satisfaction. The perceived experiences of the employees are important since, it may provide more objective and practical information for assessing making service quality and customer satisfaction in the HE context.

2.3   Service quality and employee satisfaction

Some researchers (Calvo-Porral *et al.* 2013:612-614; De Jager & Gbadamosi 2010:262-264; Govender & Ramroop 2012:1647-1650; Mang'unyi & Govender 2014:2746-2747; Naidoo & Mutinta 2014; Parasuraman, Berry & Zeithaml 1988:16; Ravichandran, Kumar & Venkatesan 2014:28-29) have postulated that a relationship exists between service quality and satisfaction. Furthermore, Ham and Hayduk (2003:228) established that the SERVQUAL dimensions (Reliability, Responsiveness, Empathy, Assurance and Tangibility) had a positive relationship with satisfaction, and Reliability had the strongest relationship.

Having investigated the importance of CS, SQ and service performance in a Taiwan library, Wang and Shieh (2006:205-206) also was found that some (Tangibles, Reliability, Assurance and Empathy) of the SERVQUAL dimensions also had a significant positive effect on the overall satisfaction of customer. Hasan and Ilias (2008:168) also assert that Empathy and Assurance were critical factors that contributed most to satisfaction. Parasuraman *et al.* (1988:31) argue that Reliability and Assurance have a direct relationship with the competence and/or quality of an employee. Marx and Erasmus (2006:63-64) are of the view that processes and personnel are also crucial to service quality and enhance loyalty.

Petzer and De Meyer (2011:7468-7472) found clear relationships between SQ, service satisfaction and behavioural intent, implying that customers' intention towards a service is dependent on previous experiences with the service delivery process.

This eventually results in increased customer satisfaction (Bashir, Machali & Mwinyi 2012:315). Naidoo and Mutinta (2014: 226) found reliability to be lowly ranked by staff in their study at the

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University of KwaZulu-Natal, and this was attributed to lack of understanding of students' needs and wants very well. Further, the Gap scores for all the staff in the study were all negative implying that employee expectations far exceeded their perceptions, in that they were much dissatisfied with service quality provided at the University. In higher learning environments, employee expectations of a university depend on their experiences and individual preferences (De Jager & Gbadamosi 2010:251), and this therefore determines employees' decision-making process for example, for maximum commitment.

In many cases, employees working in higher education institutions are normally found in two environments, namely, academic where staff is concerned mainly with the teaching and research components of academic activities, and administrative, which is generally characterised by support activities offered by administrative staff to the academic functions (Quinn *et al.* 2009:140-141). Employees in service organisations have been widely acknowledged for organisational efficiency, considering their responsiveness and understanding (Parasuraman *et al.* 1988:23), allegiance (Farber & Wyckoff 1991:44), satisfaction (Voss, Tsikriktsis, Funk, Yarrow & Owen 2005:188), contact (Soteriou & Chase 1998:495), motivation (Hays & Hill 2001:337) and competence (Parasuraman *et al.* 1988:23).

In light of the above, the objective of this research was to determine the employees' (in Kenyan private universities) perceptions of service quality using the HEdPERF instrument, as well as to ascertain the relationship between their service equality and satisfaction.

2.4   HEdPERF and service quality measurement

Although in the services literature, service quality has been widely researched, albeit primarily in a business context, the education sector has not been completely left, because education itself falls within the aegis of service industry. By citing Hill (1995), De Jager and Gbadamosi (2010:253) assert that service provision and customer satisfaction in the education sector rely on individual employee and student interfaces (encounters), which lead to a highly diverse service quality experience due to the extensive nature of the service work.

A great deal of debate on service quality and performance measurement has been biased towards 'gap' analysis (Cronin & Taylor, 1994:125), and that much of the enduring debate on the subject has been in favour of application of the 'gap' measures. However, in recent years, performance-based measures (Babakus & Mangold 1992, as cited by Cronin & Taylor 1994:126-127) have also increased in popularity.

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Some researchers (Sunanto, Taufiquarrahman & Pangemanan 2007:4; Rajasekhar, Muninarayanappa & Reddy 2009:214-219; Shekarchizadeh, Rasli & Hon-Tat 2011:70-71) have shown extended use of the SERVQUAL instrument. However, despite its application in higher education, it has not gone without criticism (Buttle 1996:10-24; Alridge & Rowley 1998:199-200; Caruana, Money & Berthon 2000:1340-1341; Grönroos 2001:150-152), for example that the instrument merely captures a snapshot of perceptions at one point in time, and the repeatability of some questions. However, with minimum alterations, the SERVQUAL instrument can still be successfully applied in higher education (Hair, Black, Babbin & Anderson 2006:11-12).

Recognising the difficulties associated with using the SERVQUAL instrument to measure service quality in the higher education environment, Firdaus (2005:575) presented six sub-dimensions of service quality, and conceptualised the HEdPERF model, which has increased in use in the last decade as measure for service quality in the context of HE. Firdaus (2006:37-38) modified the HEdPERF instrument to a six factor structure with 41 items, since it was argued that HE has clear and distinct dimensions, namely; academic aspects, reputation, non-academic aspects, access, program issues and understanding. Although some researchers, inter-alia, (Kimani, Kagira and Kendi 2011:102-103; Mang'unyi & Govender 2014:2743-2744) have demonstrated its validity and reliability in a Kenyan population, there is still room for improving the HEdPERF instrument.

Several studies based on SQ and customer satisfaction (Firdaus 2006:35; Kimani *et al.* 2011:102; Khodayari & Khodayari 2011:38; Govender & Ramroop 2012: 8921; Calvo-Porral *et al.* 2013:601) employed different instruments, and virtually few have applied the HEdPERF dimensions in higher education environments. Firdaus' (2005:575-576; 2006:37) factor analysis approach identified SQ dimensions and existing associations between quality and satisfaction, and among the quality constructs.

Kimani *et al.'s* (2011:102-103) correlation method with six HEdPERF SQ construct measurements resulted in the realisation that a positive perception of service quality by the students in Kenyan universities impacts their overall satisfaction. In the current study, six sub-dimensions of HEdPERF were used as determinants of SQ, and each dimension was hypothesized to have a positive relationship with service quality. In other words, these sub-dimensions were hypothesized to have greater levels of association and influence on the employee-customer satisfaction. Considering that the HEdPERF is an industry specific framework used to measure service performances within the higher education setting (Firdaus,

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2005:575), it is relevant to employees who are found both in the academic and non-academic environments thus central to the current study.

3. THE CONCEPTUAL MODEL

The literature, for example Parasuraman *et al*. (1988:16) has shown that in service organisations, employees' perceived SQ among other related factors, are important determinants of excellence of the service organisations. This paper strives to bring to the fore an understanding of the service institutions' dynamics, by investigating the inter-relationships among the HEdPERF perceived SQ dimensions (academic, non-academic, programme, reputation, access, and understanding), and customer satisfaction via employee perspectives as illustrated in the following conceptual research framework (Figure 1).
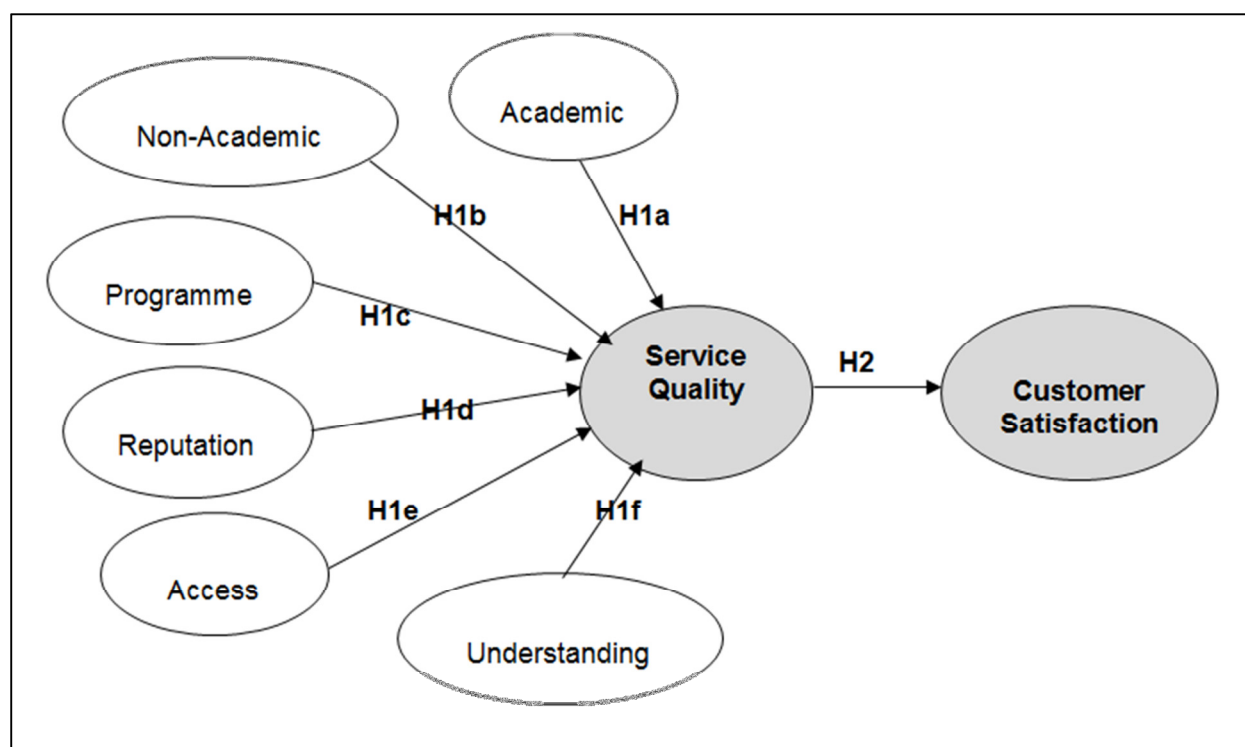

FIGURE 1:   The conceptual framework

Source: Authors' own elaboration 2013

It is also important to acknowledge that the HEdPERF instrument adapts performance-based attitudinal items and was born from the inadequacies of previous instruments such as the SERVQUAL (Sultan & Tarafder, 2007: 130-131) and is an adaptation of the standard SERVPERF (performance-based approach). Further, the modified HEdPERF items used in this study were adapted from the HEdPERF framework and some generated from review of relevant

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literature. Therefore, the generic measure of service quality for example SERVQUAL may not be totally suitable for assessing perceived quality in higher education at this point (Firdaus, 2006:35). The development of the relevant hypotheses will be explained in the next section.

4. HYPOTHESES

The value of the academic characteristics has been identified in most service quality studies conducted in higher education (De Jager & Gbadamosi 2010:258, 260; Kimani 2011:103; Govender & Ramroop 2011:245; Mang'unyi & Govender 2014:2746-2747). Access was considered most important in higher education by Kimani (2011:103), Mang'unyi and Govender (2014: 2746-2747).

The importance of understanding the needs for example of employees was highlighted by several researchers, namely, Watsch (2003); Chitty and Soutar 2004:4-5; De Shields, Kara and Kaynak 2005: 134-137; Adela, 2009:9-11. Reputation has also been identified as another valuable aspect in the higher education sector to enhance employee retention (Martensen *et al.* 2000:376-378; Mang'unyi & Govender 2014:2746-2747), and to build their loyalty (Chitty & Soutar, 2004:5).

The 'non-academic' aspects of the HE industry have also been recognised to influence employee obligation. For example, De Jager and Gbadamosi (2010:261) and Kimani (2011:103) outlined that it is important to make available facilities *vis-à-vis* trust and support from administration. Furthermore, academic programmes which are the 'products' offered by a higher education institution have been considered an important dimension (Firdaus 2006:42-43; Kimani 2011:103). Based on the aforementioned arguments, the literature provides a foundation to hypothesize that relationships exist between HEdPERF employee SQ and the aforementioned dimensions in private higher education in Kenya. Thus, we hypothesize as follows:

H1: **The HEdPERF service equality constructs** (academic aspects, non-academic aspects, programme aspects, reputation, access and understanding) influence the private higher education institutions employees' perception of the overall service quality. Flowing from H1, the following sub-hypotheses are formulated with respect to private higher education employees:

H1a: There is a positive relationship between academic activities and service quality.

H1b: There is a positive relationship between non-academic activities and service quality.

H1c: There is a positive relationship between academic programmes and service quality.

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H1d: There is a positive relationship between reputation and service quality.

H1e: There is a positive relationship between access and service quality.

H1f: There is a positive relationship between understanding and service quality.

Several studies (Hensley & Sulek 2007:159-161; Herrington & Weaven 2007:413-415; Hishamuddin & Azleen 2008:167-168; Calvo-Porral *et al.* 2013:612-614; Ravichandran *et al.* 2014:28-29; Mang'unyi & Govender 2014:2746-2747) in the higher education sector that have examined the association between service quality and satisfaction, have shown that service quality is a precursor of customer satisfaction. Positive word-of-mouth communication by satisfied customers may attract new customers, who may in turn spread the positive word to other people by word-of-mouth (Prugsamatz, Pentecost & Ofstad 2006:141).

High levels of service quality are related to increased customer satisfaction and thus lead to loyalty (Chitty & Soutar 2004:5; Siddiqi 2011:22-23, 25), and retention (De Shields *et al.* 2005:134-136). Furthermore, there will be continuous patronage as long as quality remains an integral tool for service delivery at university (Rasli *et al.* 2011:6547-6550; Siddiqi 2011:25). Since the perceived SQ has a strong influence on CS, it is therefore proposed (H2) that there is a positive association between the private university employees' perceived service quality and their satisfaction.

5.   RESEARCH METHODOLOGY

5.1   Population and sampling

The study's target population was all academic and administrative employees of select private universities in Kenya. Through a cross-sectional survey, the sample target for the study was determined as 250 academic and administrative employees from four different private universities out of a total of seventeen universities. The four universities were selected based on geographical location and ownership thus faith-based (12) and 'commercial' (5) categories and were included using a stratified purposeful random sampling technique. A pre-defined sample size calculator proposed by Krejcie and Morgan (1970:608), in (Sekaran 2006:293) was used to obtain the sample size.

Within each stratum, simple random sampling was implemented to select participants in the survey from the academic and administrative strata. To participate in the study, the employees had to be full-time members of either academic or administrative category in their respective institutions. Thereafter, samples were selected considering respective divisions and or sections they worked in.

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5.2   Research instrument

A 7-point Likert scale, where 1 = strongly disagree and 7 = strongly agree, was used to measure the SQ dimensions, general SQ, and satisfaction. The scales used were adapted developed around Firdau's (2005:575; 2006:42-43) model:

- "non-academic aspects" which looked at the functions performed by administrative staff which are essential to enable students to fulfill their study obligations;
- "academic aspects" represented factors related to the responsibilities of academics and or teaching faculty;
- "reputation" referred to the ability of higher learning institutions to project a professional image;
- "access" referred to issues *inter- alia,* approachability, ease of contact, availability and convenience;
- "programme issues" looked at the importance of offering wide ranging and reputable academic courses and or specialisations, with flexible structure and syllabi;
- "understanding" measured issues relating to knowing students' specific needs in terms of counselling and health services;
- "general quality" determined opinions about the general service quality;
- "general satisfaction" aimed to understand the satisfaction the employee derived from their service responsibilities and duties, their colleagues and their institutions.

5.3   Data collection procedures

The researchers explained the intention of the study and the research procedure to the employees of the sampled institutions. Two hundred and fifty questionnaires were distributed to both academic and administrative employees of the four universities, in equal proportion per university in late September 2013 to January 2014. Furthermore participants voluntarily completed the questionnaire at their places of employment, at their own time and these were collected or dropped off at designated areas as agreed with the researcher. A standard protocol for administering the questionnaire was used – either by the researcher or a trained research assistant. Absolute confidentiality of the responses was guaranteed and upheld.

5.4   Data analysis

The researchers used SPSS AMOS 21 to conduct exploratory factor analysis (EFA), structural equation modeling (SEM) test the hypotheses, since Schumacker and Lomax (2004:7) asserted that SEM is clear and testable, and competing models can be analysed, synthesised and understood and, their effect whether direct, indirect or both can be investigated.

6. RESEARCH RESULTS

Of the 250 questionnaires administered, 133 were usable, which represents are response rate which exceeds 50%. Table 1 shows that the majority (59.4%) of the employees (respondents) were in administrative positions, and academics comprised 40.6% of the sample, and of these, 54.9% were male and female comprised the rest.

TABLE 1:   Socio-demographic characteristics of employee sample

Variable	Value label	Frequency	Valid percent (%)
Education qualification	Diploma	18	13.5
	Bachelor's degree	39	29.3
	Master's degree	38	28.6
	PhD (ongoing)	23	17.3
	PhD	15	11.3
Gender	Male	73	54.9
	Female	59	44.4
Occupational groups	Academic	54	40.6
	Administrative	79	59.4
Age group	< 30 years	26	19.5
	30 – 39	63	47.4
	40 – 49	42	31.6
	>50	1	.8
University service experience	0 – 4 years	54	40.6
	5 – 10 years	51	38.3
	11 – 15 years	19	14.3
	16 + years	8	6.0
Management level of non-teaching staff	Senior management	9	6.8
	Middle management	56	42.1
	Technical staff	13	9.8
	No response	55	41.4

Source: Survey results 2013

With regard to age of the respondents, the majority (47.4%), were middle aged (30 to 39 years) or younger, 31.6% were aged between 40 to 49 years, and 19.5% were below 30 years. The vast majority (78.9%) had been employed for up to 10 years in their respective institutions, and 27.8% of academic staff (respondents) had PhDs. In terms of positions, 42.1% were middle managers, 9.8% technical posts, and 6.8% senior managers.

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Further, the measures of central tendency (mean=M) and dispersion (standard deviation=SD) for the service quality dimension measures in respect to academic and non-academic employees are shown in Table 2.

TABLE 2:   Descriptive statistics of employee quality dimensions

Employee respondents	N	Minimum	Maximum	Mean	Std. deviation
Non-academic aspects	133	0	7	5.41	1.277
Academic	133	0	7	5.24	1.69
Reputation	133	1	7	5.34	1.307
Access	133	2	7	5.42	1.253
Programme issues	133	2	7	6.05	.927
Understanding	133	0	7	5.40	1.362

Source: Calculated from survey results 2013

Table 2 shows that academic service dimension was perceived the lowest (M=5.24) among the quality dimensions. The dimension had the lowest ranking by staff in the study. In regard to the standard deviation in responses from highest to lowest, the following was established:

Academic (SD=1.69), Understanding (SD=1.362), Reputation (SD=1.307), Non-Academic (SD=1.277), Access (SD=1.253) and Programme (SD=0.927).

Despite the highest standard deviation being recorded for academic service quality variable, the maximum scores clearly indicate that majority of the employee respondents strongly agreed (maximum=7) for all service quality dimensions.

6.1   Instrument reliability and availability

The Cronbach coefficient alphas were calculated using Stepwise Reliability Analysis, and Cronbach alpha values greater than 0.7 were accepted as reliable measures of internal consistency – multiple measurements of a variable (Sekaran & Bougie 2010:325; Hair *et al.* 2006:137; Hoe 2008:77-78). Table 3 which summarises the outcome of stepwise reliability analysis shows that the scales are fairly reliable since all the Cronbach alphas exceeded 0.7.

Construct and discriminant validity (Hair *et al.* 2006:771) were determined through Exploratory Factor Analysis (EFA) using the Principal Component Analysis with oblique rotation (Browne, 2001:132-142). The results of the validity measures are as illustrated in Table 4.

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TABLE 3:   Instrument reliability

Instrument	Final no. of items	Final Cronbach alpha coefficients
Non-academic aspects	18	0.758
Academic aspects	13	0.763
Reputation	10	0.870
Access	11	0.853
Programmes	4	0.817
Understanding	3	0.807
Overall satisfaction	7	0.819

Source: Calculated from survey results 2013

TABLE 4:   Rotated factor loadings for employee measurements

	Satisfaction factor(1)	Quality of programmes factor(2)	Academic quality factor(3)	Health quality factor(4)	Credibility factor(5)
NOACD1	.607	.040	.124	-.073	.002
NOACD2	.387	.345	.154	.503	-.134
NOACD3	.727	.015	.113	.192	-.123
NOACD4	.844*	.103	.234	.163	-.031
ACD1	.131	.171	.786	.026	.134
ACD2	.206	.061	.652	-.091	.243
ACD3	-.095	-.135	.739	.175	-.222
ACD4	.269	.045	.823*	.042	-.013
REP1	.758	.235	.191	.192	.121
REP2	.662	.468	.172	.050	.060
ACC1	.794	.119	-.081	.264	.065
ACC2	.678	.157	.229	.388	-.016
ACC3	.668	.372	.065	.238	.151
SAT1	.544	.422	-.014	.158	.066
SAT2	.755	.210	.017	.155	.292
PROG1	.364	.714	.050	.166	-.151
PROG2	.414	.657	-.015	.138	.162
PROG3	.047	.831*	.006	.182	.008
PROG4	.055	.769	.095	.230	.021
QUALGEN	.080	-.010	.097	.172	.873*

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	Satisfaction factor(1)	Quality of programmes factor(2)	Academic quality factor(3)	Health quality factor(4)	Credibility factor(5)
UND1	.169	.371	.014	.813*	.091
UND2	.230	.280	-.042	.778	.131
UND3	.474	.056	.180	.567	.230

*Highest factor loadings

Note: NOACD = non-academic, ACD = academic, REP = reputation, ACC = access, PRG = programme, UND = understanding, SAT = Satisfaction, OvrQual = overall quality, QUALGEN = quality general

Source: Calculated from survey results 2013

From Table 4, it is evident that the data loaded onto five factors with factor loadings exceeding 0.4, which were appropriately labelled as follows:

Factor 1 - *Satisfaction*, Factor 2 -*Quality of Academic Programmes*, Factor 3 -*Academic Quality*, Factor 4 - *Health Quality,* and Factor 5 -*Credibility*.

Since the factors loadings exceeding 0.4 it is apparent that the items in the research instrument are ideal measures of validity (Hair *et al*. 2006:734; Hoe 2008:77-78). The conceptual research model illustrated in Figure 1 was tested using AMOS 21 to explore the hypothesized relationships. The model was found to be adequate and this was confirmed by the chi-square value (85.448, degrees of freedom = 82), and its corresponding p-value (0.375). Comparing the p-value with level of significance of 0.05, the p-value was greater than 0.05 hence, the model was declared adequate since values of p-value, exceeding 0.05 (Hair *et al*. 2006; Hoe 2008:77-78).

6.2   Structural Equation Modelling (SEM) results

Furthermore, the structural equation modelling was conducted and evaluated on the basis of goodness of fit indices which are reflected in Table 4, inter alia, the comparative fit index (CFI), root mean square error of approximation (RMSEA) and the ratio of Chi-square value to the degrees of freedom (CMIN/DF) ratio (Hoe 2008:77-78).The CFI value exceeded 0.95, which showed the model fitted the data well.

Furthermore, the small RMSEA values, particularly less than 0.04, also indicate that the model fitted the data well (Hair *et al*. 2006:748), and the CMIN/DF values which are less than 3 show a better model fit (Hair *et al*. 2006:748; Hoe 2008:77-78; Schumacker & Lomax 2004).

With regard to incremental fit measures, namely, the normed fit index (NFI), relative fit index (RFI), incremental fit index (IFI) and Tucker-Lewis index (TLI), where all values exceeded 0.90, further confirming that the model fitted the data well (Hoe 2008:77-78). In conclusion, the CFI =

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0.997, CMIN/DF = 1.042 and RMSEA = 0.018, as shown in Table 5, indicate that the model fitted the data well, thus, the suitability of the proposed employee service quality model. To test the research hypotheses and investigate the relationship between perceived university SQ and employee satisfaction, we conducted covariance analysis.

TABLE 5: Goodness-of-fit Indices for the employee structural model

Fit index	Acronym	Calculated values	Desired range
Absolute fit measures			
Chi-square test (CMIN)	X^2	85.448 (p=.375)	P>.05 (non-significant)
Degrees of freedom	Df	82	≥ 0
Ratio of Chi-square/degrees of freedom	X^2/df(CMIN/DF)	1.042	2 to 3
Root mean square error of approximation	RMSEA	.018	<.04
Incremental/relative fit measures			
Normed fit index	NFI	.924	>.90
Relative fit index	RFI	.903	>.90
Incremental fit index	IFI	.997	>.90
Tucker-Lewis index	TLI	.996	>.90 to >.95
Comparative fit index	CFI	.997	>.90

Source: Adapted from Hair et al. 2006: 748

Figure 2 shows the structural model between university service quality and employee perceived quality with the resulting maximum likelihood standardised estimators. The model illustrates that some HEdPERF SQ dimensions (non-academic, reputation, academic, access) impact employee perceived SQ, and consequently influence employee satisfaction. Figure 2 represents an exhaustive reporting of results of various hypotheses postulated by way of a (snapshot) path diagram. The decisions on the various hypotheses are explained in the next section.

6.2.1 Discussion of SEM results

Causal path properties and standardised coefficients are illustrated in Figures 2/3, while the significance of the standardised coefficients and the critical ratios (CR) for the hypotheses are shown in Table 6. The acceptable p-value limit is 0.0001.
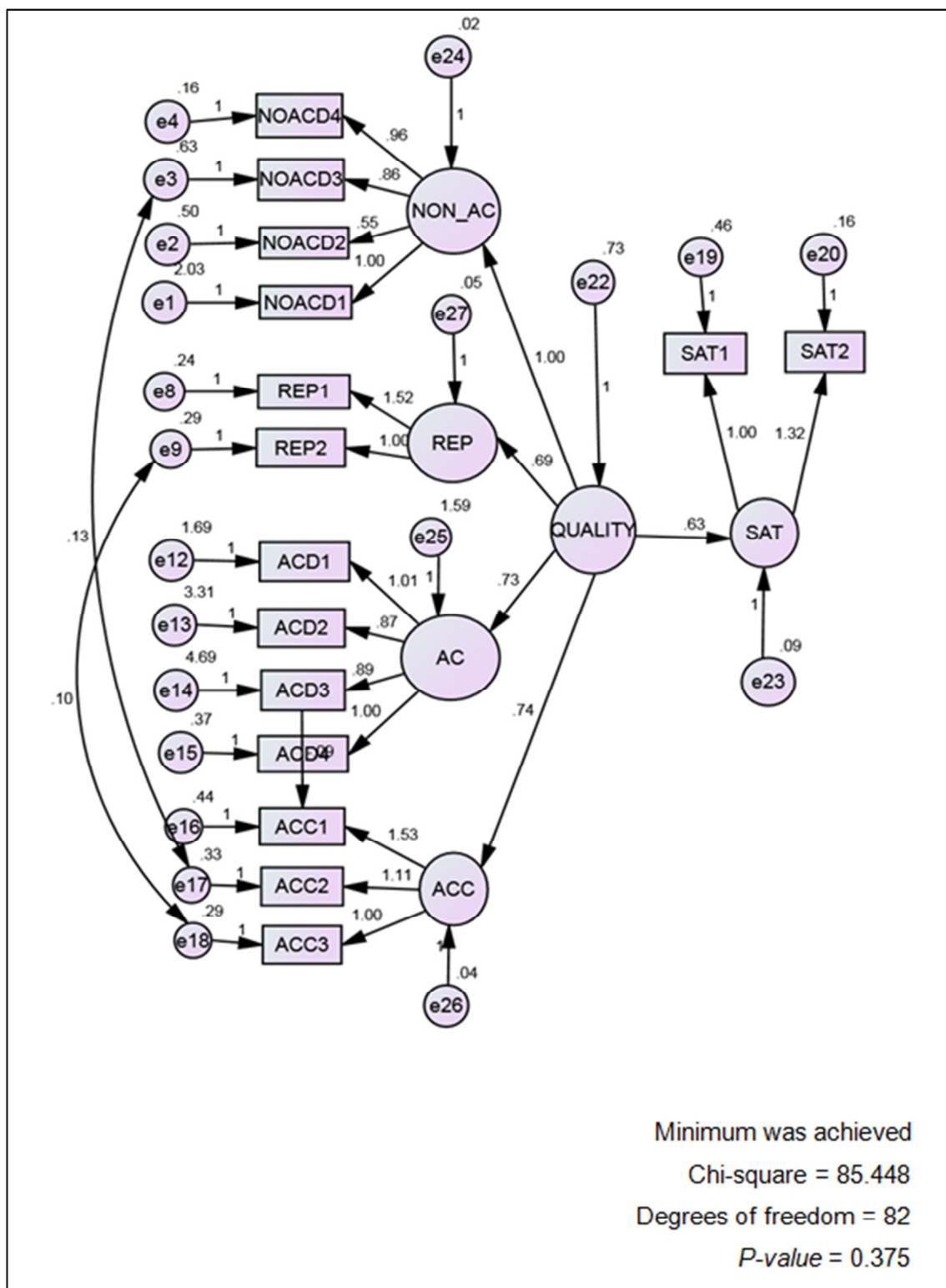
FIGURE 2: Employee-customer – service quality hypothesized model and the standardised loadings

Source: Calculated from survey results 2013

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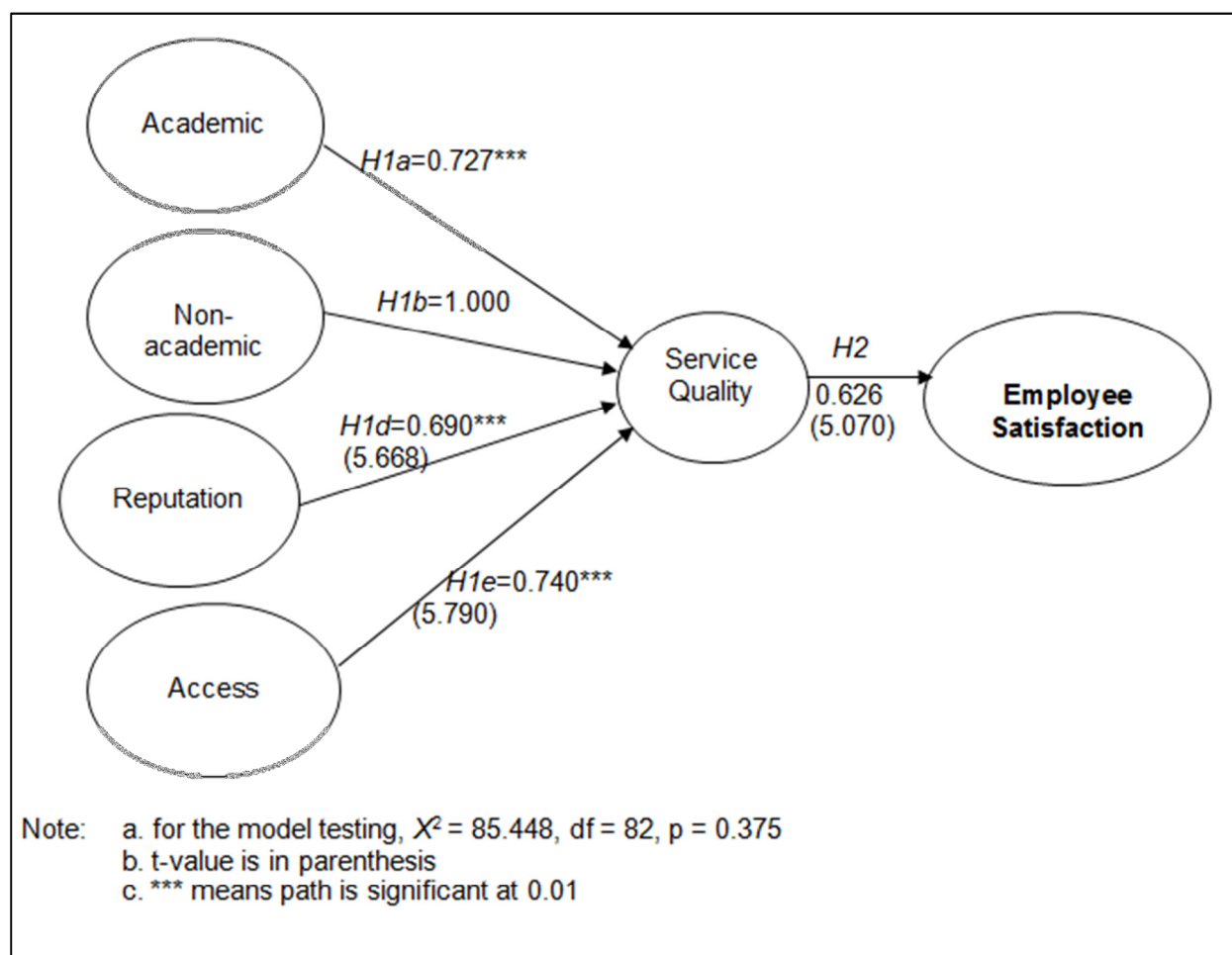ISBN 1815-7440

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FIGURE 3:   Path coefficients of the structural equation

Source: Authors' own elaboration from survey results 2013

According to Figure 3, not all of the HEdPERF SQ variables were associated with the employees' perception of the private universities' service quality. Thus, the main hypothesis (H1) is partially supported through the academic, non-academic, reputation and access dimensions. With regard to the secondary hypotheses and as reflected in Table 6, only *H1a, H1b, H1d and H1e* are also supported, which imply that academic activities, non-academic activities, reputation and access, respectively would be positively related to the perceived service quality. Thus it was observed that similar to previous empirical studies (Firdaus 2005:569-581; Firdaus 2006:42-43; Owlia & Aspinwall 1996:18-19, Parasuraman et al. 1988:12; Mang'unyi & Govender 2014:2746-2747), issues like access (inter alia ease of contact, availability of both academic and administrative staff and convenience) contributes to higher perceived SQ from the employees' standpoint. The ability to project a professional image (reputation) was found to be important (De Jager & Gbadamosi 2010:253-259) in HE industry and it creates loyalty (Chitty & Soutar 2004:1-5).

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Furthermore, the aforementioned results are positively related to Firdaus' (2006:42-43) determinants of SQ, where the academic and non-academic characteristics were found to be important quality indicators, and thus confirming the views of earlier researchers (Leblanc & Nguyen 1997:72-79; Soutar & McNeil 1996:72-82). The statistical results also confirm H2, in that the employees' perceived service quality is related to their satisfaction, since the path coefficient is 0.626 (t=5.070; p<0.0001).

Furthermore, the findings imply that when quality increases by one unit employee satisfaction increases by 0.626. These findings which supported hypothesis are consistent with earlier studies (Ojo 2010:88-100; Rasli *et al.* 2011:6541-6553; Rajasekhar *et al.* 2009:220-227) supporting the proposition of a strong relationship between service quality and employee satisfaction. It became apparent that the rest of the HEdPERF quality items (programme and understanding) did not load onto the model, and were therefore dropped. Thus hypotheses *H1b and H1d* could not be confirmed through this study.

TABLE 6:   Model parameter estimation and levels of statistical significance

Relationship			Hypothesis	Std. parameter	SE	*t*-Value
Academic	<---	Employee quality	*H1a*(+)	.727	.183	3.969***
Non-academic	<---	Employee quality	*H1b*(+)	1.000	Fixed	Fixed
Access	<---	Employee quality	*H1e*(+)	.740	.128	5.790***
Reputation	<---	Employee quality	*H1d*(+)	.690	.122	5.668***
Employee satisfaction	<---	Employee quality	*H2* (+)	.626	.124	5.070***

Note: *** means <0.0001

Source: Calculated from survey results 2013

7.   RECOMMENDATIONS

The results of this study on 'employee-customer' satisfaction provide a rationale for the study, since it can help the university to improve service quality. Universities could also improve their SQ by increasing employee satisfaction through 'manipulation' of the abovementioned dimensions of the service provider since it has been acknowledged universally that SQ is an antecedent of satisfaction.

Emphasizing these critical dimensions of SQ implies that the university will be making headway towards a better assessment of its quality and satisfaction. Furthermore, the findings will also

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help the university to better understand what dimensions have a greater influence on SQ, and in turn influences employee satisfaction. This can be achieved through creating an enabling environment for the employees as service providers which will increase their satisfaction levels. By so doing, the employees will endeavour to delight and satisfy their internal customers (other employees) and external customers which include students.

The findings have to be tempered by the fact this study was only conducted among respondents from four private universities. Future research may focus on a comparative study with government sponsored public universities to investigate whether there are significant differences in perceived service quality and employee satisfaction among private and public university staff.

8. CONCLUSION

The empirical evidence implies that the SQ dimensions indirectly and or directly impact on customer satisfaction. The findings also reveal that with regard to the conceptual framework herein, only four HEdPERF variables namely, non-academic, access, reputation, and academic influenced the SQ and satisfaction. Notably, this study has provided a basis for further explorations to probe the nature and value of academic, non-academic, reputation and access dimensions as criteria that employees consider in evaluating their satisfaction with university services in a developing country context. Additionally, for more rigorous findings, it is recommended that future research using the HEdPERF tool focus on satisfaction level in SQ among different stakeholders for both public and private universities and across other cultural contexts.

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