

The Relationship between Service Quality Dimensions and Brand Equity: Higher Education Students' Perceptions

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Abstract

Purpose: Since the higher education environment has become highly competitive, the application of marketing principles to the education environment becomes increasingly evident. In order to attract new students and continue business, the institutional brand also gains on importance. Considering the scant literature on the influence of the perceptions of service quality dimensions on brand equity in general and higher education in particular, this exploratory study seeks to determine whether the SERVPERF dimensions of service quality make significant influencers of the overall brand equity of select (South African) universities, and whether the overall service quality significantly influences the overall brand equity.

Design: The authors conducted a survey among a judgmental sample of 400 students from two selected university campuses, using the SERVPERF scale. The data were analyzed with inferential statistical methods, such as multiple regression analysis, with the help of SPSS.

Findings: Tangibles and Empathy were significant and positive influencers of the students' perception of the institutions' overall brand equity and the overall service quality as a significant predictor of the overall brand equity. It also became evident that the overall service quality has a significant and positive influence on the overall brand equity when it comes to the students' perceptions of the surveyed universities.

Implications: Tangibles and Empathy must be closely monitored and carefully managed, while the important role that service quality plays in the overall sense in increasing brand equity perceptions implies that – in the branding efforts of higher education institutions – management and leadership should pay particular attention to offering high levels of service quality to increase the value of their brands.

Research limitations: Only two campuses from one public higher education institution in South Africa was included in the survey, thus any generalization of the research findings must be circumspect.

Originality/value: Management and leadership of higher education institutions must know the service quality dimensions which promote the brand of the institution and manage them to promote a positive image of the institution since these are the dimensions of quality emphasized by the students.

Keywords: service quality; brand equity; service quality dimensions; higher education service quality

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Introduction

Many researchers (Wang, 2012, p. 193; van Schalkwyk and Steenkamp, 2014) alluded to the importance of quality in the South African higher education sector, with Abouchedid and Nasser (2002, p. 198) emphasizing that the service quality of higher education institutions is linked to their success. Marrs, Gajos, and Pinar (2011, p. 965) contend that the economic and financial challenges that affect many institutions of higher learning make them perceive branding as an invaluable strategic marketing attribute in differentiating among quality higher education institutions. A case in point is the re-branding campaign of British higher education in 2000, which aimed to positively differentiate British higher education from its competitors, to attract and appeal to more students at an international level (Hemsley-Brown and Goonawardana, 2007). Similarly, other researchers (Bastedo, 2012, p. 1929) lent credence to the importance of branding and emphasized that the branding of higher education institutions assumes greater levels of significance.

In light of the above, this study seeks to determine whether the service quality dimensions have a significant influence on the overall brand equity in the context of higher education. Furthermore, having reviewed the services literature from 2007 to 2015, it became apparent that – although about ten studies explored the influence of service quality on the brand equity of higher education institutions – no text included South African institutions of higher learning and, moreover, very few attempted to show the statistical relationships between the overall service quality, service quality dimensions, and brand equity. Hence, the primary research question is: Are service quality and its dimensions a significant influencer/predictor of the overall brand equity in select South African universities?

In an attempt to address the above question, the objectives of this exploratory study were to determine whether the SERVPERF dimensions of service quality are significant and positive influencers of the overall brand equity of select South African universities and whether the overall service quality significantly and positively influences the overall brand equity.

Literature Review

Although van Schalkwyk and Steenkamp (2014) argue that service quality is key in South African higher education, regrettably, Nair (2010, p. 105) asserts that “there is lack of a quality ethos in South African higher education, although from a transformation

perspective, higher education establishments should lead the way to establishing quality in all areas." Thus, one of the key goals that the South Africa's Minister of Higher Education and Training has stressed is "to find ways for improving quality" (MacGregor, 2012). Furthermore, Gbadamosi and de Jager (2008, p. 10) vehemently argue that "it becomes essential for South African higher education institutions to practice effective methods for improving service quality, since South African universities have experienced cuts in resources and government subsidies and are under pressure to boost student numbers." Moreover, South African universities of technology and traditional universities compete "head-on" in similar student markets (Badat and Sayed, 2014; Mitra and Edmondson, 2015, p. 388).

Radder and Han (2009, p. 108) argue 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." Similarly, Wang (2012, p. 193) also affirms that "greater pressure is being placed on South African higher education institutions regarding service delivery." Furthermore, success in higher education institutions appears to be linked with service quality (Abouchedid and Nasser, 2002, p. 198).

Higher Education Service Quality

Higher education service quality research is a relatively new area vis-à-vis the commercial sector, with the majority of service quality models used by the higher education sector being adapted and adopted from those employed by the commercial sector (Sultan and Wong, 2013, p. 72). The SERVQUAL, SERVPERF, and HEDPERF models are some of the more common models (Kontic, 2014). Especially the SERVPERF's applicability in higher education is widely acknowledged (Mertova and Nair, 2011; Christiansen, Turkina and Williams, 2013). Based on its appropriateness and extensive use in the higher education sector, this study measured service quality with the SERVPERF model, which counts service quality with twenty-two similar items to the SERVQUAL model, with five wide-ranging dimensions; however, without the expectations facet. Furthermore, SERVPERF does not assess service quality as a "disconfirmation paradigm" like SERVQUAL, but as a perception or attitude.

The use of SERVPERF in higher education is widely documented (Kontic, 2014) and – compared with SERVQUAL – SERVPERF exhibits greater applicability in higher education (Kajan, Dorloff and Bedini, 2012). Furthermore, SERVPERF is simpler in the utilized metrics and has fewer questions compared to SERVQUAL (Kajan et al., 2012), although

both SERVQUAL and SERVPERF use the same five service quality dimensions; namely Reliability, Assurance, Tangibles, Empathy, and Responsiveness. Tangibles include issues such as the appearance of equipment, staff, and buildings; Reliability pertains to the accurateness and timeliness pertaining to the service offering; Responsiveness implies the willingness shown by the marketer in serving customers and the promptness in doing so; Assurance pertains to staff knowledge, courtesy, and ability to convey feelings of trust, composure, and self-assurance; whereas Empathy refers to the care and helpfulness that organizations offer to their customers, as well as the convenience of operating periods (Kontic, 2014).

Overall Service Quality

He and Li (2011, p. 82) differentiate between the overall service quality and specific service quality, and define overall service quality as “consumers’ overall perception of the gap between expectations and actual service performance”; whereas specific service quality as “the individual drivers (Tangibles, Reliability, Responsiveness, Assurance and Empathy) that consumers use to assess overall service quality.” He and Li (2011, p. 87–88) measured overall service quality on the basis of the following questions, which they developed using a confirmatory factor analysis: “X delivers excellent overall service, the offerings of X are of high quality, and X delivers superior service in every way.” This study measured the overall service quality with He and Li’s (2011) operationalization of the construct.

Brand Equity

Brand equity received substantial attention in the literature, particularly its measurement. It is perceived as the final measure of a brand’s success (Spotts, 2014) and the added value that a brand brings to the product (Crane, 2010, p. 131). However, no universal definition of brand equity exists (Ramaswamy and Namakumari, 2009) and there are numerous different perspectives in the literature (Netemeyer et al., 2009). Some popular perspectives of brand equity are “the marketing effects uniquely attributable to the brand” (Keller, 1993, p. 1), “added value” for an organization (Farquhar, 1989, p. 24), a brand’s power in the creation of demand and prompting consumer behavior (Cant, Van and Ngambi, 2010), “is a set of assets and liabilities linked to a brand, and 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” (Aaker, 2009, p. 15).

Brand equity is a topical issue in the marketing of higher education (Menon, Terklz and Gibbs, 2014, p. 81–82). Some researchers (Washburn and Plank, 2002, p. 47) contend that many positive benefits accrue from brand equity such as improved sales, lower costs, higher returns, better brand value, and a more effective marketing mix. Subramaniam, Mamun, Permarupan, and Zainol (2014, p. 67) highlight that many place increased importance on brand equity in service organizations, particularly those that offer identical and difficult to differentiate services, such as higher education. Therefore, branding creates an opportunity for institutions to differentiate their services (Pretorius, 2005), more particularly within the context of the economic and financial limitations that many higher education institutions face (Marrs, Gajos and Pinar, 2011, p. 965).

Although there are numerous ways of measuring brand equity (Lee and Leh, 2011; Subramaniam, Mamun, Permarupan and Zainol, 2014), this study used the multidimensional brand equity scale popularized by Yoo and Donthu (2001); among others, used by Washburn and Plank (2002) and Tong and Hawley (2009). The aforementioned researchers measured the overall brand equity (OBE) by using a four-item measure phrased as follows:

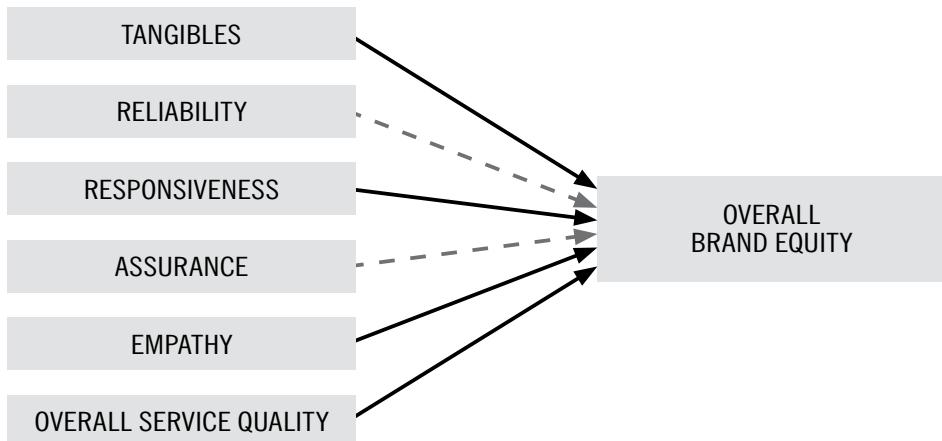
- OBE1: It makes sense to buy X instead of any other brand, even if they are the same,
- OBE2: Even if another brand has the same features as X, I would prefer to buy X,
- OBE3: If there is another brand as good as X, I prefer to buy X,
- OBE4: If another brand is not different from X in any way, it seems smarter to purchase X (Yoo and Donthu, 2001: 14).

Service Quality, Service Quality Dimensions, and Brand Equity

Although several researchers (Chapleo, 2010; Makgosa and Molefhi, 2012; Aggarwal, Rao and Popli, 2013; Ramli, Othman and Salleh, 2015) explored the relationship between service quality issues and brand equity, none attempted to show the influence of the (SERVPERF) service quality dimensions on the overall brand equity. More specifically, no study in the higher education sector attempted to show the influence of the overall service quality on the overall brand equity. Therefore, this study attempts to ascertain whether the SERVPERF service quality dimensions and the overall service quality have any significant positive influence on the overall brand equity. Based on the aforementioned,

the influence of service quality, the service quality dimensions, and the overall service quality, on the overall brand equity is conceptualized as depicted in Figure 1.

Figure 1. Conceptual Model



Source: own elaboration.

Based on the conceptual model above, the following hypotheses are postulated with respect to students at select South African universities:

- H1: The Tangible dimensions of service quality significantly influence students' perceptions of the overall brand equity.
- H2: The Reliability dimensions of service quality significantly influence students' perceptions of the overall brand equity.
- H3: The Responsiveness dimensions of service quality significantly influence students' perceptions of the overall brand equity.
- H4: The Assurance dimensions of service quality significantly influence students' perceptions of the overall brand equity.
- H5: The Empathy dimensions significantly influence students' perceptions of the overall brand equity.
- H6: The overall service quality significantly influences students' perceptions of the overall brand equity.

Research Methodology

The population comprised undergraduate students from selected university campuses of one of the largest residential universities in KwaZulu-Natal, South Africa. The sampling frame based on the study discipline along with the courses offered within such disciplines at each university campus because – for confidentiality – student names, email addresses, telephone numbers, and other significant personal details were unavailable. However, what was available were the details of the students' study disciplines along with the different courses offered in such disciplines.

Of the two university campuses selected for the survey, the total combined student population was under 20 000. The authors estimated a sample of 377 based on Sekaran and Bougie's (2010, p. 296). However, the authors targeted the sample of 400 across both campuses with the aim of keeping participation from both campuses in equal proportions, that is 200 students from each campus. Considering the problems associated with probability sampling (Denscombe, 2014, p. 33) and the lack of a sampling frame or student list (Blaikie, 2009, p. 178), the authors used judgemental sampling. The sampling procedure listed the broad study disciplines and the key qualifications within each discipline, namely business, humanities, and applied sciences. The researchers located subjects/courses within the disciplines that were targeted for "in-class" administration of the questionnaire.

Data Collection

Data were collected after obtaining the gatekeeper's permission from each campus administrator and an ethical clearance from the University of KwaZulu-Natal. The students were briefed on the nature and purpose of the study and they had to provide an informed consent to participate in the study. They received fifteen minutes to complete the questionnaire in class, after permission the lecturers allowed the administration of the questionnaires during their lectures.

The SERVPERF dimensions were rated on a scale, in which 1 = low and 7 = high rating. The overall service quality and overall brand equity sections of the questionnaire were framed on a 7-point Likert scale, in which 1 = strong disagreement and 7 = strong agreement with various statements. The questions that measured each construct were previously validated as reflected in Table 1.

Table 1. Constructs Measured in the Questionnaire

Construct	Questions	Previously Validated
Service Quality	Section A, Questions 1 to 22	Cronin and Taylor (1994)
Tangibles	Section A, Questions 1 to 4	Zeithaml, Bitner and Gremler (2009, p. 152)
Reliability	Section A, Questions 5 to 9	Zeithaml, Bitner and Gremler (2009, p. 152)
Responsiveness	Section A, Questions 10 to 13	Zeithaml, Bitner and Gremler (2009, p. 152)
Assurance	Section A, Questions 14 to 17	Zeithaml, Bitner and Gremler (2009, p. 152)
Empathy	Section A, Questions 18 to 22	Zeithaml, Bitner and Gremler (2009, p. 152)
Overall Brand Equity	Section D, Questions 1 to 4	Yoo and Donthu, (2001); Washburn and Plank, (2002); Tong and Hawley (2009)
Overall Service Quality	Section D, Questions 9 to 11	He and Li (2011)

Source: Author's own compilation.

Findings

The findings are based on a 100% response rate (all 400 students). The authors subjected the research constructs to reliability analysis by determining the Cronbach's alpha values. As shown in Table 2, one may consider the constructs reliable, as the Cronbach alpha values exceed 0.7 (Andrew, Pedersen and McEvoy, 2011, p. 202). The instrument was validated by previous researchers as reflected in Table 2.

Table 2. Reliability Scores of the Research Constructs

Variables	Cronbach's Alpha Scores	Number of Items	Validated By
Service Quality	.928	22	Cronin and Taylor (1994);
Tangibles	.709	4	Zeithaml, Bitner and Gremler (2009, p. 152)
Reliability	.829	5	Zeithaml, Bitner and Gremler (2009, p. 152)
Responsiveness	.777	4	Zeithaml, Bitner and Gremler (2009, p. 152)
Assurance	.830	4	Zeithaml, Bitner and Gremler (2009, p. 152)

Empathy	.728	5	Zeithaml, Bitner and Gremler (2009, p. 152)
Overall Service Quality	.910	3	He and Li (2011)
Overall Brand Equity	.848	4	Yoo and Donthu, (2001); Washburn and Plank (2002); Tong and Hawley (2009).

Source: Author's own compilation.

Service Quality and Brand Equity

Multiple regression analysis was conducted to determine whether the SERVPERF dimensions were significant predictors of the Overall Brand Equity (OBE). It is evident from the model summary in Table 3 that Empathy, Tangibles, Responsiveness, Reliability, and Assurance predict 22.3% of the variation in the OBE.

Table 3. SERVPERF Dimensions as Predictors of OBE

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

Source: SPSS output for data.

The ANOVA results in Table 4 shows that the SERVPERF service quality dimensions are significant predictors of the OBE ($F=22.651$, $p<0.005$), and that the model is a good fit.

The coefficients (Table 5) show that Empathy ($\beta=0.167$, $p<0.05$), and Tangibles ($\beta=0.199$, $p<0.05$) are significant and positive predictors of the OBE, while the other SERVPERF dimensions are not. In addition, it is evident that a 1-unit increase in Empathy will result in 0.174 unit increase in the OBE and a 1-unit increase in Tangibles will produce a 0.260 unit increase in the OBE. The results indicate that Tangibles have the most important impact on the OBE.

Table 4. SERVPERF Predictors of OBE

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

Source: SPSS output for data.

Table 5. SERVPERF Dimensions' Predictors of OBE

	Model	Unstandardized Coefficients		Beta	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	1.140	.334		3.410	.001		
	Tangibles	.260	.072	.199	3.632	.000	.654	1.529
	Reliability	.040	.075	.036	.531	.596	.440	2.272
	Responsiveness	.090	.078	.077	1.156	.248	.443	2.257
	Assurance	.136	.087	.112	1.557	.120	.383	2.613
	Empathy	.174	.062	.167	2.802	.005	.554	1.806

a. Dependent Variable: OVERALL _ BRAND _ EQUITY

Source: SPSS output for data.

Moreover, Pearson's correlation tests conducted between the OBE and the 22-item service quality measures. Since the service quality dimensions of Empathy and Tangibles were found to be significant predictors of OBE, only the most significant variables within these dimensions and their correlation with the OBE are reported below:

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).

Overall Service Quality and Brand Equity

To determine whether the Overall Service Quality (OSQ) was a significant and positive predictor of the OBE, multiple linear regression analysis was conducted. Based on the model summary in Table 6, the OSQ predicts 39.9% of the variation in the dependent variable (OBE).

Table 6. Influence of Overall Service Quality on 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

Source: SPSS output for data.

Table 7 shows that the OSQ is a significant predictor of the OBE ($F=260.929$, p<0.005), and that the model is a good fit.

Table 7. Influence of the OSQ on the 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

Source: SPSS output for data.

The coefficients (Table 8) show that overall service quality is a significant and positive predictor of overall brand equity ($\beta=0.631$, p<0.05). The data shows that a 1-unit rise in the OSQ will produce a 0.664 unit increase in the OBE.

Table 8. Relationship between OSQ and OBE

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	1.173	.217		5.414	.000
	OVERALL _ SERVICE _ QUALITY	.664	.041	.631	16.153	.000

a. Dependent Variable: OVERALL _ BRAND _ EQUITY

Source: SPSS output for data.

Based on the findings, the conclusions regarding the decision on the research hypotheses are captured in Table 9.

Table 9. Decision on the Hypotheses

HYPOTHESES	DECISION
H1: The Tangible dimensions of service quality significantly influence the perceptions of the overall brand equity.	ACCEPT
H2: The Reliability dimensions of service quality do not significantly influence the perceptions of the overall brand equity.	REJECT
H3: The Responsiveness dimensions of service quality do not significantly influence the perceptions of the overall brand equity.	REJECT
H4: The Assurance dimensions of service quality do not significantly influence the perceptions of the overall brand equity.	REJECT
H5: The Empathy dimensions of service quality significantly influence the perceptions of the overall brand equity.	ACCEPT
H6: The Overall service quality significantly influences/predicts overall brand equity.	ACCEPT

Source: Author's own compilation.

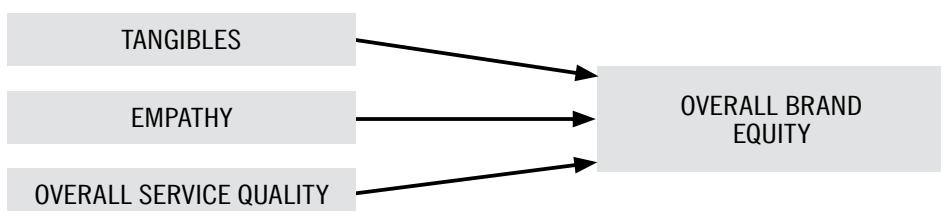
Discussion of Key Findings

It became evident that the two SERVPERF dimensions – Tangibles and Empathy – significantly and positively relate to the overall brand equity. To the best of the researchers' knowledge, only one previous study (Moghaddam et al., 2013) showed that the Tan-

gible dimensions of service quality significantly and positively influences brand equity. Therefore, it would be prudent that the Tangible elements of the educational service be effectively managed to increase the positive impact on the institutions' overall brand equity. This would entail emphasizing the "servicescape" issues such as the furniture, interior, and exterior appearances, equipment and its condition, including buildings and their color schemes, along with other tangible cues such as marketing brochures or business cards (Bennett et al., 2002; qtd. in Naidoo and Mutinta, 2014). Krestovics (2011, p. 189) also argues that the "servicescape" influences student patronage of the institution, thus affecting a student's inclination to join or stay, as well as the student's perception of the image of the institution.

Furthermore, based on the significant and positive influence of the Empathy dimensions of service quality on the overall brand equity, one may argue that the more empathetic an institution is in its dealings with students, the higher would be the students' perceptions of its brand equity. Dumansky (2013) recommends the following when developing "empathy" in higher education settings, namely learning students' names, listening to students, and conducting student surveys to understand their needs and best interests, experience with the subject, and their reasons for enrollment in the course. Moreover, students' emphasis on personal attention is corroborated by Ramsden (2008, p. 7), who advised that keeping and increasing the level of personal attention to students is an important point raised in the UK higher education.

Figure 2. Revised Model



Source: Author's own compilation.

It also became evident to the authors that the students' perceptions of the surveyed universities and the overall service quality have a significant and positive influence on the overall brand equity. This finding is significant for higher educational institutions in that it points to the important role that service quality plays in the overall sense of increasing brand equity perceptions. Therefore, in the branding efforts of higher education institutions, management and leadership should pay particular attention to offering high levels of service quality to increase the value of their brands. This find-

ing corroborates other recent studies, which show how service quality influences brand equity (Vukasović, 2015).

Based on the significant results, the following revised validated model emerges (Figure 2).

Conclusions and Recommendations

This study attempted to ascertain whether the service quality dimensions of the SERVPERF model – as well as the students' perceptions of the overall service quality – influenced the overall brand equity of higher education institutions. The effects of the study show that the Tangible and Empathy dimensions and the Overall Service Quality are significant positive predictors of the Overall Brand Equity. Based on the findings, the authors make the following recommendations for higher education leaders and managers:

- Pay particular attention to the tangible cues such as the appearance of the university buildings (both inside and outside), gardens, furniture, and other tangibles, because they contribute to the most positive perception of the service and significantly shape the overall brand equity.
- Ensure that the equipment used by students like computers is in a good state. Antiquated equipment or slow Wi-Fi may negatively contribute to the overall brand equity.
- As much as possible, provide personal attention to students as this will help to augment the overall brand equity. There should be a balance of the “high-tech/high-touch” approach to student administration and support.
- Wherever possible, demonstrate to students that the institution has their best interests at heart by taking the requisite steps to collect feedback from students, so that their needs can be understood and effectively addressed.

Limitations of the Study

As with all sample surveys, the above findings should be interpreted with caution and not generalized in a “wholesale” manner, because the study based only on the responses of students from two university campuses of a single higher education institution in South Africa. Future researchers should consider using a more extensive sample size that would cover a wider range of higher education institutions and probability sampling methods so as to extrapolate the findings onto a wider spectrum of higher education institutions in South Africa.

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