The exploration of service quality and its measurement for private higher education institutions

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A B S T R A C T

The strategic importance of service excellence for service industries places the focus on service quality leadership, service quality management systems, service quality dimensions and the measurement of service quality. Many businesses such as private higher education institutions (PHEIs) regard service quality excellence as the single most important and distinct competence for survival and sustainability. The paucity of literature on the topic does not reflect the substantial growth of PHEIs in South Africa, and this paper explores service quality in this context. This exploratory study focuses on service quality (general insights), the need for service quality management and measurement at PHEIs, and the practical value of the SERVQUAL methodologies. The research approach is exploratory in the sense that it involves a literature review and an empirical application of the SERVQUAL instrument at a PHEI. The results (with internal validity) indicate the following three factors: the increasing strategic importance of service quality at PHEIs; good service quality levels at the PHEI studied; and why and how SERVQUAL (and SERVPERF) can benefit PHEIs.

Key words: service quality management, service leadership, service quality dimensions, service quality management systems, private higher education institutions (PHEIs), exploratory study, service quality measurement, SERVQUAL

Introduction

"For success and survival in today's competitive environment, delivering quality service is of paramount importance for any economic enterprise" (Sandhu & Bala 2011: 219). The converse would apply if critics were to regard service quality as over-

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researched, while the problem of weak service quality remains prevalent. Service quality will always be a challenge. Zenger (2013: 74–76) recently reported on the importance of the 'theory of the firm'. He focuses less on competitive advantage (e.g. through service quality) and more on growth that creates value. He discusses value creation in all realms and the challenge for strategists to see the topography of valuable configurations of capabilities, activities and resources. He measures corporate theory by means of 'strategic sights', namely (1) foresight, (2) insight and (3) cross-sight. These 'sights' of service-delivery organisations give a novel perspective on adding value through new and improved services (growing services that create value) as opposed to merely maintaining a basic level of service quality. Service quality will never be over-researched in this context, and especially not in the under-researched field of PHEIs.

The broad context of this paper is service science for the international service and knowledge economies. Many products are transformed into services, which are also referred to as business solutions. The increased importance of the service sector is evident in the statistics of service providers. Recent lists such as Fortune 500 also confirm more service companies than manufacturers, and products seem to be either transformed into services or they obtain a higher service component. The service economy in developing countries is concentrated in education, health services, financial services, hospitality (tourism), human services, telecommunications and information technology. The categories of service industries in the service economy are classified by means of several industry classification standards or industry classification benchmarks. Hefley and Murphy (2008) refer to service science for the service economy in an international applied series providing coverage of the challenges, opportunities, problems, trends and solutions encountered by both scholars and practitioners in the arena of service science. This emphasises the technical, economic, managerial and organisational facets of the service science domain. Service excellence and quality are the underlying theme.

The service sector has gained a great deal of economic significance in the past few decades, and the modern service economy needs to be more dynamic, because of its agile and responsive nature. It operates in a growing economy requiring quick responses from its service-delivery capabilities and many other challenges. Service operations can be categorised into service factories, personal service providers, service shops, professional services and mass service providers. Service packages offered by a university, bank, clinic, dental practice, restaurant, veterinary practice, hotel and architectural firm (to mention a few) can be described in terms of the recipient of the service, the nature of the act (tangible or intangible), and the level of customisation, interaction, personal contact and labour intensity.

There is a strong relationship between 'quality service' and 'service leadership'. According to Milakovich (2006), leadership should know how to continually improve systems, predict customer needs and adopt service cultures to focus on customer-driven quality. It is imperative to achieve high service quality to ensure an organisation's survival in a competitive, profit-driven economy. The role of leadership (or service leadership) is critical in improving service quality (Trivellas & Dargenidou 2009). Most leaders in ancient times were servants of humankind, and many leaders have therefore demonstrated that the most effective followership can be achieved through serving people and being effective stewards. The trait theory of leadership (Gibson, Ivancevich & Donelly 1982) is an attempt to identify specific characteristics (physical, mental, personality) that are associated with service and leadership success. A leader makes an impact on his/her followers (and non-followers) in some kind of service dimension(s) by means of a connection (presence), also referred to as 'in-the-field' leadership. Service leadership precedes the value and performance of the service. Khoshafian (2007) contends that service quality is always associated with the reliability and performance of the service.

Service quality is also the single qualifier or disqualifier for most organisations. According to Wang, Lo and Yang (2004), customer-perceived service quality is one of the primary success factors in gaining a sustained competitive advantage for both manufacturers and service providers.

The benefits of service quality can also be explained by multiple causal relationships. Coetzee, Van Zyl and Tait (2013) report on service quality in the banking sector and elaborate on the general benefits of service quality. They also introduce the causal relationships between service quality, client satisfaction and client loyalty. All the benefits of service quality may be in vain if they are not sought, managed and measured.

Research objectives and methods

This section briefly discusses the research problem, objectives and methods.

Research problem

In the introduction, the generic strategic importance of service quality (for all service industries) was presented. South African higher education institutions have been (and still are) in the news for all the wrong reasons (since the mergers between public universities and technikons), and their service quality continues to be a challenge for numerous reasons. Service quality may be even more important for the rapidly

growing non-subsidised PHEIs in South Africa. These institutions also have to overcome the 'semi-university' perception, and the specific research problem is defined as the increasing need for better service quality leadership, measurement and management at PHEIs. Part of the problem is the paucity of literature on the topic and the fact that service leadership and the management of service quality imply the effective and regular (practical and cost-effective) measurement of service quality. The resolution of and response to the problem and the research method used in the study are discussed next.

Research objectives

The focus of this paper was to gain insight into service quality concepts and the need for service quality leadership and management at PHEIs. The primary objective of the study was to explore and validate the values of the SERVQUAL instrument for PHEIs. The secondary objectives were (1) to contribute to the shortage of literature on service quality at PHEIs and (2) to make recommendations for further studies.

The exploratory study therefore focused on (1) service quality (general insights), (2) the need for service quality for PHEIs, and (3) the practical value of the SERVQUAL methodologies.

Method

The exploratory study was based on the following:

- A literature review of (1) the need for service quality at PHEIs and (2) the instruments to measure service quality (e.g. SERVQUAL)
- An empirical study by means of a practical application and validation of the SERVQUAL methodology among students at a South African PHEI.

This empirical study was conducted within the positivist paradigm, and the emphasis was on a highly structured methodology to facilitate replication. A deductive process was followed. The unit of investigation consisted of five delivery sites, while the unit of analysis was students at the five sites. Proportional stratified sampling was used to select the target population (ideal number of respondents) to participate in the service quality survey. The population was segmented according to campuses across South Africa. Each stratum was in proportion to its size in the overall population, in this instance, 5 085 students. A random sample was drawn from each stratum. The standard SERVQUAL questionnaire was used to collect service quality data. The research population (actual number of respondents) of the service quality survey consisted of students from the five campuses (n = 984).

The questionnaires for students were distributed electronically to the campuses via an online survey system. The respondents (students) evaluated service quality on a Likert scale from 1 to 7, in terms of their expectations and perceptions of the quality of service rendered at their campus. The SERVQUAL instrument consists of 22 items (22 items for both the perception and expectation sections) divided into five sections (the five dimensions of service quality), namely tangibles, responsiveness, reliability, assurance and empathy.

Literature review

The literature review and the results of the empirical survey are discussed in the following subsections.

The knowledge economy and the educational services sector

The purpose of higher education institutions is to create and disseminate knowledge and skills to equip, enrich and extend human development and understanding. The expansion of this sector has seen hundreds of additional business and profit-driven PHEIs (private higher education institutions) in South Africa, which have become a core part of the nation's economic infrastructure in their own right, generating employment and output, delivering substantial export earnings (with a growing international student population) and making a dynamic contribution to the growth and improvement of society.

Providing college degrees (and other qualifications) is a launching pad for individual economic security and social inclusion. Higher education institutions must also improve and grow as countries develop from industrial economies to post-industrial knowledge-based economies. This has placed the emphasis on certain performance objectives such as strategic service quality and service excellence. Higher education should be the premier system for preparing and equipping the nation's workers to become highly skilled and professional. South Africa's ability to produce knowledge and disseminate education will increasingly determine its economic competitiveness. The quality of the country's higher education (the product offerings and service quality) must continue to play the lead role in educating the workforce. The integrity of higher education is therefore associated with excellence, professionalism and service quality. Service quality is the single qualifier or disqualifier for most organisations in service industries, and according to Wang et al. (2004), customer-perceived service quality is one of the key success factors for a sustained competitive advantage among both manufacturers and service providers.

Conceptualising service quality in higher education

Service quality cannot be diluted to a few dimensions, because it should reflect the effectiveness of a university as a collective unit. Conceptualising service quality in higher education implies that the concept should be fully understood in the context of the knowledge economy in the broader service economy. Service quality in higher education should therefore also be viewed in terms of the quality of its reputation, its legacy and history, the quality of academics, the scope of the offerings, the throughput rate, research outputs, community engagement, customer retention, the scope of the alumni and their impact on society. Jain, Sinha and Sahney (2011) proposed a model based on the conceptualisation of service quality, which suggests that service quality is a multidimensional and hierarchical construct. Service quality can be narrowed down, and these authors summarised service quality in two primary categories, namely, (1) programme quality (curriculum, university–industry interaction, input quality and academic facilities) and (2) quality of life (non-academic processes, support facilities, campus and interaction quality). Researchers such as Palmer (2008) describe service quality in higher education as the difference between what a student expects to receive and his/her perceptions of actual delivery. Service leadership needs to be profound, and measuring service levels of multiple service dimensions is part of keeping abreast of service excellence.

The need for service excellence in PHEIs

The higher education landscape (both public and private) has changed substantially over the last decade. Quality assurance, customer service and service quality are driving forces in the business community, and higher education institutions have to tussle to gain competitive advantage in terms of service excellence. Service excellence has numerous benefits, and the need for service quality management and measurement is reflected in the growth in student numbers and the high number of South African PHEIs spread across the following provinces: Gauteng (62), Western Cape (31), KwaZulu-Natal (16), Eastern Cape (3), North West (2), Limpopo (2) and Mpumalanga (2) (SAQA 2012).

As indicated, higher education forms part of the international business community engaged by both public and private institutions (Min, Khoon & Leing Tan 2012). Radder and Han (2009) argue that restructuring, competitiveness and changing customer demands have compelled South African higher education institutions to increasingly compete in service quality. The main difference between public institutions and PHEIs is the method of funding, and PHEIs are therefore faced with additional financial difficulties. They do not have the benefit of receiving

government subsidies and have to find alternative ways of obtaining funds, mainly through student fees (Hashim & Mahmood 2011). Various authors have emphasised the strategic importance of service quality in PHEIs. Service excellence may lead to greater returns in the future, improve student enrolments, be a source of a strategic competitive advantage, increase market share and productivity, contribute to the financial stability and viability of the private institution, increase customer (student) satisfaction and decrease the cost of attracting new students. It is also a key factor in building a niche market (Arambewela & Hall 2009; Daud & Sapuan 2012; Hashim & Mahmood 2011; Qureshi, Shaukat & Hijazi 2010; Tahir, Abu Bakar& Ismail 2010; Voon 2006).

PHEIs in South Africa have not only grown in numbers, but they are also increasingly becoming more competitive and market oriented. To survive in this dynamic environment, they have to be profit driven (Kruss 2004) and have an entrepreneurial orientation. PHEIs represent a relatively new type of business and they must also be dynamic to seek alternative means of growth to ensure their long-term survival in the market (Mabizela 2005). South African PHEIs are not subsidised, and the bottom line for these institutions is that student registrations increase if high service expectations are met. Three case studies of prominent PHEIs in Pretoria conducted by Steenkamp (2013) indicated the lack of service quality management systems, although these PHEIs regard service excellence as a strategic priority. It appears that service excellence is a high priority because of service quality-related challenges as well as service quality management shortcomings.

Regarding the international perspective, Gudlaugsson (2009: 1) reported on a study indicating that students at PHEIs are more demanding, more satisfied with the service they receive and more loyal towards their universities than students at state universities. By contrast, according to Al-Rahimy (2013: 638), students at Jordanian public universities are more satisfied with the quality of service. Coetzee et al. (2013: 5) refer to a similar study in Greece to assess the relationship between service quality in both private and public banks.

Service leadership and service quality measurement are of growing interest to researchers and managers of PHEIs. At present, this interest is characterised by debates about the need for measurement of customer expectations and how these expectations should be measured. The challenge lies in identifying a model (instrument) that most effectively determines the core definition of service quality, which is in turn ultimately determined by internal and external customers. This instrument will ultimately become part of a service quality management system for PHEIs.

Measuring instruments for service quality

The literature presents a number of service quality measurement models (instruments), each of which attempts to capture and annotate the core dimensions of service quality. The gap approach focuses on types of gaps such as the 'delivery gap', which exemplifies the difference between the actual service provided by the employee of the organisation and the specifications (targets) set by management (Dirkse van Schalkwyk 2011).

Service leadership has a direct effect on how vigorously service quality is managed and measured. Service quality can be measured by different means such as the SERVQUAL instrument, which is an established but underutilised instrument in higher education institutions. This instrument is a questionnaire that determines service gaps, with the size of the gap indicating where improvements need to be made. The questionnaire consists of 22 expectation (and matching perception) questions relating to five statistically derived dimensions of service quality. Each item is scored on a scale from 1 to 7, with 1 representing strongly disagree and 7 strongly agree. Typically, tangibles show the smallest gap score, because the physical features (of a service) are easier to control. Chase, Aquilano and Jacobs (2001: 278) regard the instrument as a vital tool kit for virtually every service business and illustrate the outcome (experienced service quality) of SERVQUAL, as depicted in Figure 1.
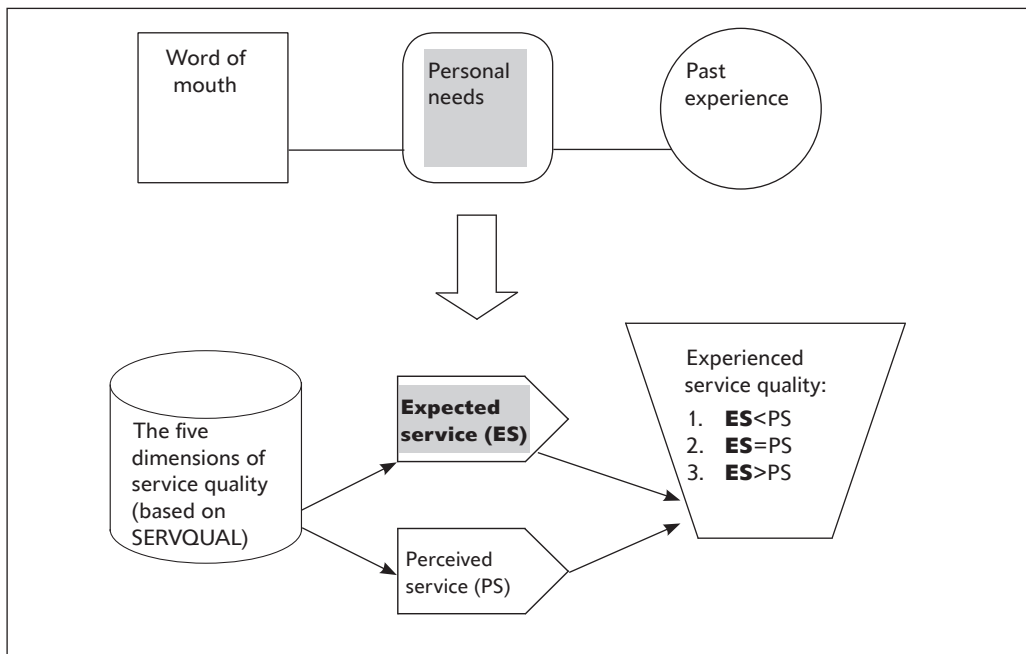

Figure 1: Experienced service quality

Using SERVQUAL indefinitely as a methodology may not be sufficient, and some institutions adapt (improve on) its scope and application. Some institutions believe that it is too generic and its scope may be too narrow. Despite the criticism against it, SERVQUAL is still widely used. The first statements about the instrument were published in 1985 (Parasuraman, Zeithaml & Berry 1985) and it was officially introduced in 1988. The instrument originally consisted of ten dimensions (before these were reduced to five) based on the exploratory research by Parasuraman et al. (1985). These dimensions are tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding/knowing the customer, and access.

SERVQUAL is often still deemed to be too narrow in scope, and not providing the full picture of service quality or service leadership. It is not designed to measure total quality service (TQS), however, and is therefore used for its original purpose. Its main focus is on the primary characteristics of services such as intangibility, inseparability, perishability and heterogeneity. The research conducted on service quality (prior to 1985) suggested the following principles: (1) service quality is more difficult to evaluate (measure) than goods quality; (2) service quality perceptions are the result of a comparison between the expectations of the consumer and actual service performance; and (3) the process of service delivery is also important in the evaluation of service quality.

Foster (2010) lists a number of advantages of using the SERVQUAL instrument. He indicates that it is accepted as a standard for assessing different dimensions of service quality and has been shown to be valid for a number of service institutions. Foster (2010) sees the value of SERVQUAL in its ability to identify several 'gaps' in service delivery. Small incremental improvements should never be underestimated, because closing a single service quality gap (perceived to be insignificantly small) might be the catalyst for breakthrough improvements.

The following are examples of these gaps:

- The gap between service quality specifications and the service that is actually provided
- The gap between customer expectations and management's perception of these expectations
- The gap between management's perception of what customers want and the specifications that management develops to provide the service.

Other models such as SERVPERF are based on SERVQUAL (Chase et al. 2001). If customers have high expectations of service quality in all areas, this method simply uses the 22 perceptions score to measure the service. SERVPERF does not have the

'gap' feature, but it has been shown to effectively measure the performance of the service provider. SERVQUAL remains prominent. The main potential drawback and criticism of SERVQUAL is related to its scope. Kang and James (2004) elaborate on the criticism of the use of SERVQUAL. According to them, it reports only on the service-delivery process and fails to address service-encounter outcomes. Buttle (1996) adds to this criticism by subdividing it into theoretical and practical (operational) components. Theoretical criticism includes elements such as the fact that SERVQUAL focuses on the process of service delivery and not the outcomes of the service encounter. The operational criticisms provided by Buttle (1996) indicate that completing the SERVQUAL questionnaire is a somewhat lengthy process (survey customers complete the questionnaire in one section that measures the expectations with respect to the 22 questions and then another section measuring the perceptions with respect to the same 22 questions), and that the length of the questionnaire could lead to confusion. The literature review in the current study explored several service quality models, and Table 1 provides a summary and comparison of eight models in terms of their features (abbreviated as SQ1 to SQ8).

Table 1: Summary of service quality models and features

	Author	**Model**	**Method of analysis**	**Service quality**
SQ1	Grönroos (1984: 36–44)	Technical and functional quality model	Analysis not reported	Technical and functional quality model
SQ2	Parasuraman et al. (1985)	Gap model	Principal axis factoring applied by means of oblique rotation	Ten dimensions (reliability, security, responsiveness, access, communication, tangibles, courtesy, credibility, competence, understanding/knowing). Later, in 1988 and 1991, the authors proposed and revised the 22-item five-dimension service quality measurement tool SERVQUAL
SQ3	Haywood-Farmer (1988: 19–29)	Attribute service quality model	Analysis not reported	Physical facilities and processes, people's behaviour and conviviality, professional judgement
SQ4	Brogowicz, Delene & Lyth (1990: 27–44)	Synthesised model of service quality	Analysis not reported	Through technical and functional quality defining planning, implementation and control tasks
SQ5	Cronin & Taylor (1992: 55–68)	Performance only model	Principal axis factoring applied by means of oblique rotation and LISREL confirmatory factor analysis	Twenty-two items, the same as SERVQUAL but with performance only statements

Table 1 continued

	Author	Model	Method of analysis	Service quality
SQ6	Mattsson (1992: 18–33)	Ideal value model	Pearson moment correlation, pair-wise intra- and inter-sample median test and chi square test	Through 18 items of value and nine items of customer satisfaction
SQ7	Spreng & Mackoy (1996: 201–214)	Perceived quality and satisfaction model	Factor analysis and structural equation modelling using LISREL	Through desires, perceived performance, expectations and desired congruency (each comprising ten attributes)
SQ8	Philip & Hazlett (1997: 260–286)	PCP attribute model	Analysis not reported	Pivotal attributes, core attributes and peripheral attributes

Source: Adapted from Seth, Deshmukh & Vrat (2005: 913–949)

Measuring service quality with the Pareto principle (a few dimensions responsible for the essence of service quality) in mind promotes the use of SERVQUAL regardless of its limitations. Focusing on the limitations of the service quality models indicates improvement areas, but this should not prevent PHEIs from implementing them. Table 2 focuses on the weaknesses and limitations of the service quality models based on Seth et al. (2005).

Table 2: Limitations of service quality models

Model no./type	Select weaknesses/limitations
SQ1: Technical and functional quality model	The model does not offer an explanation of how to measure functional and technical quality.
SQ2: Gap model	Exploratory study. The model does not explain the clear procedures for the measurement of gaps at different levels.
SQ3: Attribute service quality model	The model is not able to measure service quality. It does not provide a practical procedure to help management identify service quality problems or a practical means of improving service quality.
SQ4: Synthesised model of service quality	The model needs empirical validation. It also needs to be reviewed for different types of service settings.
SQ5: Performance only model	The model needs to be generalised for all types of service settings. The quantitative relationship between consumer satisfaction and service quality needs to be established.
SQ6: Ideal value model of service quality	Fewer items are used for value and customer satisfaction. The model needs to be defined for all types of service settings.
SQ7: Model of perceived quality and satisfaction	The model does not highlight how service quality is achieved and operationalised. It is weak in providing directions for improvements in service quality.
SQ8: PCP attribute model	The model fails to provide the general dimensions of three levels of attributes and lacks empirical validation.

The literature review indicates that the majority of service quality models support the notion that service quality is measured by comparing the customer's service quality expectations with service quality perceptions or experiences. Furthermore, the SERVQUAL instrument seems to have the most support in the service quality research field (Seth et al. 2005). Despite the criticisms and weaknesses, the literature indicates that SERVQUAL is still the most widely applied instrument in service quality research. The results of the literature review were also based on recent marketing and quality management literature (Gryna, Chua & De Feo 2007; Kotler 2000; Palmer 2008; Prideaux, Moscardo & Laws 2006; Wilson, Zeithaml, Bitner & Gremler 2008) and the following journal articles: Baki, Basfirinci, Cilingir and Murat (2009); Bayraktaroglu and Atrek (2010); Chau and Kao (2009); Etgar and Fuchs (2009); Gilmore and McMullan (2009); Kumar, Kee and Manshor (2009); Lai, Hutchinson, Li and Bai (2007); Ruiqi and Adrian (2009); and Wong, Rexha and Phau (2008).

The literature review indicates that there is no other universally accepted service quality model or a clear operational definition of how to measure service quality. Wide use of the SERVQUAL instrument indicates that consensus has been reached in terms of its basic values and application possibilities. No other instrument appears to be superior to SERVQUAL, and researchers believe it will dominate the field of service quality research for many years to come (Wisniewski 2001). Its few limitations should not hinder its application, and both the straightforward and customised applications of its methodology in different service contexts (such as PHEIs) merit more attention.

Coetzee et al. (2013: 8) elaborate on the BANKSERV instrument developed by Avkiran for the banking sector. The BANKSERV instrument does not adopt the expectations–perceptions disconfirmation methodology. This instrument is an example of an industry-specific tool and possibly indicates the need for less generic instruments. The rapid growth of the South African higher education landscape undoubtedly indicates the need for a service quality management system (based on various international quality management system standards such as ISO 9000) for which a measuring instrument similar to BANKSERV (such as UNIVSERV for higher education institutions) could be central.

The paucity of literature on service quality measurement in PHEIs indicates a need for further research and development. The literature review also highlights the need for broader scope in terms of a holistic approach to service quality measurement. Total quality management (TQM) has a strong internal customer focus: the philosophy is simply that quality starts internally at the source and 'at home'. A model (or framework) is therefore needed to measure internal service quality among staff

members towards developing a TQS framework. It would be unthinkable to expect effective external service delivery without sound internal service quality. Gržinić (2007) refers to a framework for the development of an internal service quality measure, namely INSQPLUS. A combination of these approaches could contribute towards a total quality service (TQS) framework. No such framework exists in the South African PHEI context.

Empirical survey, results and analysis

Researchers such as Foster (2010) indicate that SERVQUAL is accepted as a standard for assessing different dimensions of service quality and has been shown to be valid for a variety of service institutions. The researchers in the current study could find no such study at a South African PHEI, and decided to apply and validate the instrument at one PHEI.

To address the research problem (promote service quality leadership, measurement and management at PHEIs, determine the values of SERVQUAL and validate the SERVQUAL instrument), the researchers obtained access to a PHEI (one of the largest JSE-listed private 'universities' in South Africa) that has a service quality management system in place and regards SERVQUAL as the primary measuring instrument that it intends using in the future. The researchers enlisted the cooperation of the PHEI, which had a positive effect on the response rate from students at all the main campuses. The unit of analysis was selected on the basis of the following factors: the need for high service quality; the accessibility and cooperation of the institution; good response rates; and future partnerships with the researchers. The response rates were as follows:

Campus 1: 104 (from a student population of 415) = 26%
Campus 2: 276 (from a student population of 1 604) = 17%
Campus 3: 336 (from a student population of 1 916) = 18%
Campus 4: 148 (from a student population of 726) = 21%
Campus 5: 120 (from a student population of 424) = 28%.

Reliability is the degree to which data collection (tools and techniques) produces consistent results when the unit being measured has not changed. There are numerous synonyms to describe reliability such as 'dependable', 'consistent', 'stable', 'trustworthy' and 'predictable'. The Cronbach's alpha is a measure of the internal consistency of a set of items comprising a scale. The closer the Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale will

be. Tables 3 and 4 represent the Cronbach's alpha coefficient for both the expectation and perception dimensions of the SERVQUAL instrument.

Table 3: Reliability statistics for expectation dimensions

Dimension	Cronbach's alpha	No. of items
Tangibles	.773	4
Reliability	.856	5
Responsiveness	.790	4
Assurance	.888	4
Empathy	.854	5
Overall	*.953*	*22*

Table 4: Reliability statistics for perception dimensions

Dimension	Cronbach's alpha	No. of items
Tangibles	.837	4
Reliability	.913	5
Responsiveness	.863	4
Assurance	.930	4
Empathy	.897	5
Overall	*.971*	*22*

Tables 3 and 4 indicate that all the scales for both the expectation and perception dimensions demonstrate acceptable internal consistency.

The SERVQUAL methodology was empirically tested and validated by means of its practical application in order to determine its overall values, secondary values and user friendliness. The survey was conducted on five campuses of the particular PHEI. The results indicated in Tables 5 and 6 are significant for strategic management (the principals of the campuses) and the design of a campus-wide service quality management system. The results in terms of perceptions versus expectations (Table 5) were followed by a gap analysis (Table 6).

The standard deviation is the square root of the average amount that each of the individual values varies from the mean set of values (Salkind 2009).

Table 5 gives the mean and standard deviation for each dimension overall as well as for each campus. All the values for the items measured for both expectations and perceptions have roughly the same variation, with all the standard deviations being around 2.

Table 5: Mean and standard deviation per dimension of the five PHEI campuses

Overall (n = 984)	Perceptions		Expectations	
	Mean	SD	Mean	SD
Tangibles	3.7520	1.6137	3.9225	1.4851
Reliability	3.5900	1.7041	3.6199	1.6003
Responsiveness	3.8104	1.6500	4.1024	1.5161
Assurance	3.7243	1.7234	3.8838	1.6220
Empathy	3.7959	1.6866	3.8681	1.5578

Campus 1 (n = 104)	Perceptions		Expectations	
	Mean	SD	Mean	SD
Tangibles	3.5929	1.5860	3.7556	1.5026
Reliability	3.5850	1.7148	3.5702	1.6457
Responsiveness	3.8480	1.6786	3.8926	1.6208
Assurance	3.9212	1.7433	3.9255	1.5843
Empathy	3.9696	1.7600	3.9399	1.6350

Campus 2 (n = 276)	Perceptions		Expectations	
	Mean	SD	Mean	SD
Tangibles	3.6147	1.6485	3.7645	1.5121
Reliability	3.5190	1.7583	3.5053	1.5788
Responsiveness	3.8454	1.7152	4.1754	1.5384
Assurance	3.6831	1.7850	3.8796	1.6657
Empathy	3.8345	1.7510	3.8696	1.5945

Campus 3 (n = 336)	Perceptions		Expectations	
	Mean	SD	Mean	SD
Tangibles	3.8598	1.6350	4.0512	1.4793
Reliability	3.5426	1.6988	3.4864	1.5933
Responsiveness	3.7859	1.5968	4.0665	1.4292
Assurance	3.7173	1.7148	3.8461	1.6191
Empathy	3.7113	1.6447	3.7970	1.4902

Campus 4 (n = 148)	Perceptions		Expectations	
	Mean	SD	Mean	SD
Tangibles	3.9396	1.5185	4.1256	1.4791
Reliability	3.9269	*1.6947*	4.1536	1.6402
Responsiveness	3.9621	1.7145	4.2725	1.5728
Assurance	3.8787	1.6985	4.1553	1.6373
Empathy	4.0663	1.7259	4.1765	1.6326

Table 5 continued

Campus 5 (n = 120)	Perceptions		Expectations	
	Mean	**SD**	**Mean**	**SD**
Tangibles	3.6535	1.5906	3.8208	1.3884
Reliability	3.4690	1.5599	3.6399	1.4640
Responsiveness	3.5606	1.5337	4.0056	1.5264
Assurance	3.4604	1.5965	3.6313	1.5160
Empathy	3.4447	1.4675	3.6183	1.4506

According to Table 5, for the total group and for each campus individually, the calculated dimension scores have more or less the same variance, with standard deviations around 1.7.

The basic data collection and statistical calculations (means and standard deviations) are the most important phases prior to gap analysis. Reliability tests can be performed and attempts made to improve (decrease) standard deviations after the above-mentioned phases. This is essential before the next phase (gap analysis) can be performed to ensure a more accurate picture of service gaps. Table 6 provides a summary of the 22 gaps, namely the positive and negative gap scores (the areas of concern) at the PHEI.

Tangibles (items 1–4)

The positive image projected by the PHEI through the attractiveness and visual appeal of the physical facilities (for which the perception exceeds the expectation) is not supported by the way the personnel dress (they are expected to dress professionally, but are perceived not to do so), the quality of the materials (they are expected to suit the image of the PHEI, but are perceived not to) and the contemporaneousness of the equipment (it is expected to be up to date, but perceived not to be).

Reliability (items 5–9)

The PHEI can be trusted to do what it has promised correctly and timeously, but it does have problems with record-keeping, and the personnel are not as sympathetic and reassuring as they are expected to be.

Responsiveness (items 10–13)

The PHEI is not perceived to be willing to assist students as expected, and students are not informed when services will be provided. Regarding the promptness of service delivery and responses to students' requests by the PHEI personnel, the students' perceptions are only slightly lower than their expectations.

Table 6: Gap analysis of all campuses across all dimensions

Items of all dimensions	n = 984		
		Perceptions	**Expectations**
	Gap score	**Mean**	**Mean**
The PHEI has up-to-date equipment.	-0.1011	3.5194	3.62.5
The PHEI's physical facilities (e.g. buildings and furniture) are attractive, visually appealing and stylish.	0.0317	3.4035	3.3718
Personnel at the PHEI are well dressed and neat at all times.	-0.3484	4.2537	4.6021
The materials of the PHEI (e.g. pamphlets and study material) suit the image of the college.	-0.2620	3.8480	4.1100
When the PHEI promises to do something by a certain time, it does so.	0.1850	3.4177	3.2327
When students have problems, the personnel of the PHEI are sympathetic and reassuring.	-0.1016	3.5266	3.6282
The PHEI is always dependable and provides the service correctly the first time.	0.0084	3.4759	3.4675
The PHEI provides services at the time it promises to do so.	0.0291	3.3611	3.3320
The PHEI keeps its records accurately (e.g. accounts, academic reports, etc.).	-0.2390	4.1690	4.4080
The PHEI tells students when services will be rendered.	-0.5227	3.8810	4.4037
Students receive fast (prompt) service delivery from the PHEI's personnel.	-0.0424	3.4988	3.5412
Lecturers at the PHEI are willing to assist students.	-0.5725	4.3008	4.8733
Personnel of the PHEI are not too busy to respond to students' requests promptly.	-0.0153	3.6007	3.6160
Students can trust the personnel of the PHEI.	-0.2238	3.6536	3.8774
Personnel at the PHEI inspire confidence.	-0.1121	3.7991	3.9112
Personnel at the PHEI are polite.	-0.1808	3.7635	3.9443
Personnel receive adequate support from the PHEI's management to improve the performance of their services.	-0.1185	3.7078	3.8263
Students receive individualised attention from administrative personnel (e.g. doing something extra for students).	-0.0872	3.6909	3.7781
Lecturers give students individual attention.	-0.1410	4.0948	4.2358
Personnel of the PHEI know what the needs of their students are (e.g. recognising students as customers).	0.0439	3.6860	3.6421
PHEI personnel have the students' best interests at heart.	0.0239	3.6069	3.5830
PHEI personnel are easily accessible to students (e.g. easily available to see or to contact by phone, email, etc.).	-0.1980	3.9261	4.1241

Assurance (items 14–17)

The PHEI personnel cannot be fully trusted; they are not particularly polite and they do not inspire as much confidence as expected. This could be explained by the perception that they do not receive as much support from management to improve their performance and service-delivery quality as one would expect.

Empathy (items 18–22)

Even though the PHEI is perceived to recognise the needs of its students and to have their best interests at heart, the personnel are perceived not to project this goodwill, in that they perform below the expected level of service for students, owing to the perceived inaccessibility of personnel, lack of individual attention to students and unwillingness to show empathy towards the needs of individual students.

Figure 2 depicts the differences between expectations and perceptions for all dimensions and for all the campuses of the PHEI collectively.

It would appear that, on average and in general, the PHEI fares the best with respect to reliability to deliver what it promises timeously, and worst with respect to the responsiveness and willingness of the personnel to assist and inform students when services will be rendered. The PHEI also seems to fare poorly with respect to the projected image of its materials and the dress code of the personnel.

Conclusions and recommendations

The conclusions and recommendations refer to the following: (1) the general research objective (to gain insight into service quality concepts and the need for service quality leadership and management at PHEIs); (2) the primary objective (to explore and validate the value of the SERVQUAL instrument for PHEIs); and (3) the secondary objectives (to try to overcome the gap in the literature on service quality at PHEIs and make recommendations for further studies).

Service quality research on South African PHEIs is extremely limited, as shown by the available literature. All the insights on service-delivery organisations bring a totally new perspective on adding value through new and better services (growing services that create value), as opposed to merely maintaining a basic level of service quality. Service leadership precedes the value and performance of services. According to Wang et al. (2004), customer-perceived service quality is one of the main success factors for gaining a sustained competitive advantage over manufacturers and service providers.
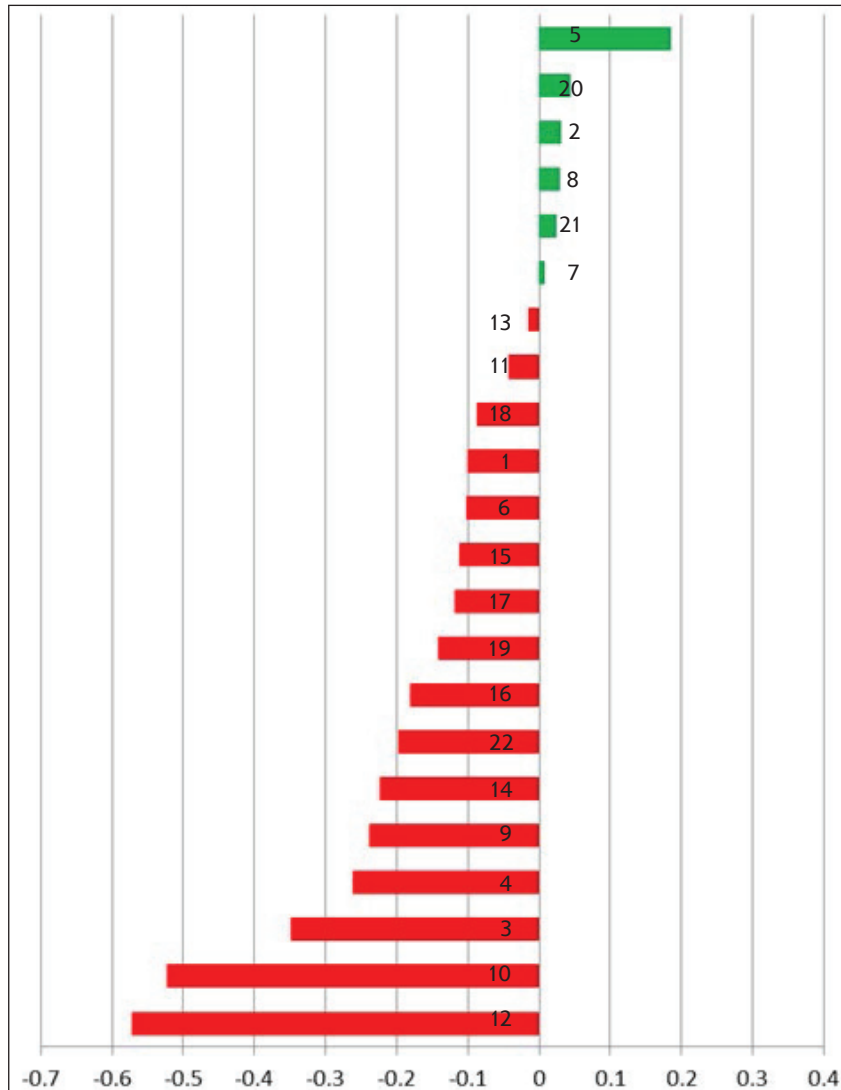
Key:
1. Equipment; 2. Facilities; 3. Dress code; 4. Materials; 5. Keeping promises; 6. Sympathy; 7. Dependability; 8. Punctuality; 9. Record-keeping; 10. Timing of services; 11. Promptness; 12. Assistance; 13. Responses to requests; 14. Trust; 15. Confidence; 16. Politeness; 17. Management support; 18. Individualised attention (administrative); 19. Individualised attention (academic); 20. Students' needs; 21. Students' interests; 22. Accessibility of personnel

Figure 2: Gap analysis of all dimensions across all campuses

This study revealed that service-quality leadership will become increasingly important, because the world economy is dominated by service industries, and the industrial design and engineering of services will continue to be innovative and new. Services are becoming core business, and service quality a strategic priority. The management and measurement of service quality will increase in significance, especially for fast-growing South African PHEIs that have to compete with subsidised public institutions. Service leadership and service quality measurement will continue to be an area of growing interest to both researchers and managers of PHEIs.

Barnes (2007) provides evidence that SERVQUAL is a tried-and-tested instrument that has been successfully applied in various service industries and that its strengths more than outweigh its weaknesses. Carrillat, Jaramillo and Mulki (2007) concur by stating that SERVQUAL and SERVPERF are equally reliable instruments in assessing service quality. PHEIs seem to welcome the extended use of SERVQUAL to improve their reputation and maintain their credibility as higher education players in the South African education landscape. This article indicates the potential for the further utilisation of SERVQUAL. In itself, the instrument fosters reliability and ultimate validity if the response rates are satisfactory. SERVQUAL could be the catalyst for a holistic approach to service-quality management. The main value of this study is its focus on the service concept. Whoever utilises the instrument has to examine several elements of service (described by the service dimensions), such as tangibles, core services and peripheral services.

The SERVQUAL instrument was successfully tested and validated. The empirical study indicated the practical value of the SERVQUAL instrument in terms of user friendliness and clarity on positive or negative service quality gaps. The overall positive findings (small service gaps) at the campuses of the PHEI studied not only provide a broad picture (and point of departure), but also indicate several areas of concern that could be immediately addressed (to close these quality gaps). A more in-depth study would enable the researchers to confirm the hypothesised five-factor structure of the SERVQUAL instrument through exploratory and/or confirmatory factor analysis and to test a hierarchical service-quality model, such as a total quality service (TQS) model.

The results indicate that SERVQUAL is reliable, relatively easy to use and ideal for professional service providers such as PHEIs. Service quality management can immediately focus on the negative gap scores (e.g. to communicate to students when services will be rendered and to improve the assistance provided by lecturers, as indicated in this study). This study also points to the hypothesis that service quality is at a satisfactory level at PHEIs and perhaps even at a higher level than at public universities.

The value of SERVQUAL for PHEIs can be summarised as follows:

- It can be used for sporadic broad screening purposes (to establish the current status of the institution).
- It can be used for regular detailed gap analysis and improvement as part of a service quality management system.
- It can be used as part of a total quality service model.
- It can be tailor made for industry-specific needs.

It is therefore recommended that PHEIs make greater use of SERVQUAL because of its multiple values. It is also recommended that a more comprehensive and in-depth study (at doctoral level) be conducted among the leading PHEIs in South Africa. Such a study could improve SERVQUAL, for example by using the original ten dimensions of Parasuraman et al. (1985: 41–50), focusing on a broader spectrum of service-quality dimensions as part of the development of a total quality service framework for South African PHEIs. Such a study could, inter alia, also test the hypothesis that the level of service quality at South African PHEIs is in fact higher than service quality at public universities, and that service quality is considered more important at PHEIs. The research would make reference to the study by Gudlaugsson (2009: 1), who found that students at private universities are more demanding, more satisfied with the service they receive and more loyal to their university than students at state universities. This possible future study could also compare different respondent groups. Coetzee et al. (2013: 5) refer to a similar study conducted in Greece to assess the relationship between service quality in both private and public banks. The proposed study could focus on the following four possible areas for improvement:

- SERVQUAL could be customised for industry-specific use (Baxter 2004: 24–27) as has been done with BANKSERV (Coetzee et al. 2013). A combination of SERVQUAL and other models (as equally reliable instruments) could also be considered.
- In order to broaden its scope, SERVQUAL could be adapted to focus on and measure the quality of service perceived by the internal customer (personnel) and/or the ability of the service operation.
- The lengthy data-capturing process is a concern. Some critics have suggested making the process more fun.
- SERVQUAL (or the new revised and improved version) could be incorporated into a service quality management system in a total quality service (TQS) framework (per industry such as PHEIs). The instrument developed for measuring TQS by Saravanan and Rao (2006: 733–749) could be used as a point of departure. These

authors identify 12 TQS dimensions as critical from a management perspective, covering all aspects of total quality management (TQM) in service organisations.

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