INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT

IJRCM

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REVIEW OF LITERATURE

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STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESES

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

RECOMMENDATIONS/SUGGESTIONS

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CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

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- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

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AN ASSESSMENT OF QUALITY OF SERVICE DELIVERY IN ETHIOPIAN PUBLIC HIGHER EDUCATION INSTITUTIONS

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ABSTRACT

The study assesses the status of quality of service delivery in public higher education institutions in Ethiopia. Quantitative research approach/design was used. Data were collected from academic staff and regular students at six public higher education institutions using the SERVQUAL scale and through focus group discussions. The research findings indicated that the quality of service delivery were to be very poor. The findings also indicate that reliability, tangibles and empathy present the service quality dimensions that require the most urgent attention. It is further recommended that for effective implementation of the BPR/BSC process, the importance of the provision of different training and guiding documents, continuous monitoring of activities and top management support should be kept in mind.

KEYWORDS

service quality**,** SERVQUAL, Importance Performance Analysis (IPA), assessment, Business process re-engineering (BPR).

BACKGROUND

The "massification" of higher education in Ethiopia poses a number of challenges regarding the attempt to provide quality service. These challenges have contributed to the growing government interest in establishing policy mechanisms to satisfy customers'. Currently, quality and related issues (quality assessment, quality assurance, stakeholder satisfaction and service quality improvement) in Ethiopian higher education are high on the national agenda. Service quality has become a key strategic issue at HEI management level.

To bring quality in service delivery it is better to understand what service quality is. One way of understanding service quality is to understand the characteristics of service quality. The four well-documented characteristics of service provide a clear understanding of what service quality is (Parasuraman *et al*., 1985). The first characteristic is intangibility, which refers to the fact that services are performed, which cannot be measured, counted or inventoried. Thus, it is difficult for institutions to know how stakeholders perceive and evaluate the service quality of their institutions. The second characteristic is heterogeneity, which indicates that there is variation in the perception of service quality from producer to producer, stakeholder-to-stakeholder or even over time. What the stakeholders perceive may be completely different from what the institutions may deliver. Hence, assuring uniformity in quality is difficult. The third characteristic is the inseparability of production and consumption. In some service organisations quality occurs at the time of service delivery, mostly in the form of the interaction between the stakeholders and the contact person from the service organisation. In some cases, the inputs of stakeholders become important for the quality of service delivery. Prakash and Mohanty (2012) and Hill (1995) add a fourth characteristic, namely perishability. They go on to state that perishability refers to the fact that goods/service can be consumed only as long as the activity or the process continues. That means that services cannot be stored for a long period like products and are stopped when the organisation discontinues the process.

Many stakeholders are involved in higher education. The primary stakeholders in the Ethiopian higher education sector are direct beneficiaries students, academic and administrative staff, the university management, research collaborators, other institutions, funding organizations and potential employers. Secondary stakeholders include former graduates, part-time instructors, professional associations, international organisations, visiting professors, employing organisations and adjunct staff (HU, 2009b). One of the driving forces of BPR (business process re-engineering) implementation in Ethiopian public higher education institutions as service quality improvement strategy is the failure to satisfy external (government and community) and internal (students and staff) stakeholders of the universities (HU, 2008).

LITERATURE REVIEW

The degree of service quality delivery mostly depends on reliable assessment and measurement techniques (Nadiri, Kandampully & Hussain, 2009; Quinn *et al.*, 2009). The measurement of service quality is a prerequisite for improvement, because "... you cannot improve what you cannot measure" (Owlia, 2010). However, finding the appropriate instrument for measuring service quality is a controversial matter, according to Abdullah (2006). Accordingly, a few conceptual models for measuring customer satisfaction on service quality have been developed. Namely, the SERVQUAL model (Parasuraman, *et al*., 1988) reveals the gap between customer perceptions and expectations of service quality, while the SERVPERF model (Cronin & Taylor, 1992) only gives an indication of the perceptions of service quality. The EP model (Teas, 1993a, b) also measures the gap between perceived service quality and the ideal quality of service, while the importance-performance analysis model (Martilla & James, 1977) describes the absolute performance measure of customer perceptions. On the other hand, the HEdPERF (Higher Education Performance) model is (Firdaus, 2006) employed to identify valid determinants of service quality in higher education institutions (Firdaus, 2006).

There is no universally agreed single model suitable to all circumstances to be employed in HEI service quality management and measurement (Becket & Brooks, 2008; Nadiri *et al.,* 2009; O'Neill & Palmer, 2004). Therefore, this research makes use of the two most popular models (SERVQUAL and IPA) to assess the service quality in Ethiopian higher education. According to Parasuraman *et al.* (1985; 1988), the SERVQUAL model is also referred to as the disconfirmation paradigm or the gap model. The model shows the gap between stakeholder perceptions and their expectations of service quality in order to assess service quality. The wider the gap between stakeholder expectations and perceptions, the larger the weakness in service quality (Parasuraman *et al*. 1985).

According to Parasuraman *et al*. (1985) regardless of the type of service, stakeholders basically used similar criteria in evaluating service quality. These criteria seem to fall into 5 dimensions of service quality, which are labelled by Parasuraman *et al.* as "service quality determinants". According to Parasuraman *et al.* (1985), judgements of service quality by stakeholders depend on how they perceive the actual service delivery, with respect to what they expected. The five service quality dimensions are: tangibles, reliability, responsiveness, assurance and empathy.

The Importance- Performance Analysis (IPA) also used to assess the service quality delivery. For a service sector practitioner it is important to be able to measure the extent of satisfaction and the importance of service attributes to users. Accordingly, satisfaction is a function to the fulfilment of the needs of stakeholders by all the service attributes (Schneider & White, 2004). Thus, it is of considerable importance for the management section firstly, to identify service attributes that are in need of improvement and then to improve these areas, thereby increasing stakeholder satisfaction. According to Joseph and Joseph (1997), the IPA paradigm is the most suitable model for measuring service quality satisfaction in educational institutions.

BPR IMPLEMENTATION AS SERVICE QUALITY IMPROVEMENT

Business Process Reengineering (BPR) in 2003 as part of the civil service reform was launched in all public organisations and in 2008 in PHEIs in order to bring radical change to the quality of service delivery (Getachew & Common, 2006; Adebabay, 2011). Even though all the public universities in Ethiopia have officially

declared that they have implemented the BPR process in order to solve several problems related to service quality delivery that are identified by HEIs, Naod's (2011) findings indicate that only 40% of the BPR process was implemented by public universities.

Business Process Re-engineering (BPR) as a quality improvement initiative is commonly applied in the business sector for attaining efficiency, effectiveness and for making the activities customer-focused. It is a new phenomenon in the HE context (Walker & Black, 2000). For Vakola and Rezqui (2000), BPR provides an opportunity for monitoring and evaluating the progress of the re-engineering effort. Regarding the aims of BPR, Selladurai (2002) as well as Tissan and Heikkila (2001) deem it an improvement of business processes through the implementation of radical and rapid changes by removing the way of doing through replacement and formation of new processes.

Before the implementation of BPR, Hawassa University and Mekelle University's BPR teams found so many problems related to service quality. Some of the problems are: staff lacked professional training and that the institutions were understaffed and that the service rendered was not stakeholder-oriented. In addition, procurement procedures were lengthy, leading to delays in service provision. Other areas of concern were security on campus and the lack of fencing around campuses, hygiene at campus cafeterias, waste and sewerage removal and too few personnel. Further problems were the lack of staff punctuality and problems of ethics, the absence of vehicles for waste removal, the lack of timely maintenance of the pipelines and toilets, and the problem of sustained checking of despatching and receiving of goods, guests and vehicles (HU, 2009b; MU, 2008). All these problems render the current work situation of HEIs difficult and laborious in terms of providing satisfactory service quality to stakeholders.

Inevitably, these problems have forced the universities to restructure the activities of the institutions and to start implementing quality improvement initiatives themselves using BPR as a tool. In Ethiopian PHEIs, radical changes have taken place as a result of BPR processes in order to bring about improvement in the performance of the institutions. Based on the BPR redesigns in terms of the BPR principles, public HEIs are now claiming that they are progressing in terms of attaining increased stakeholder satisfaction and improved service quality. However, the following research questions were raised:

1. Have PHEIs attained the service quality delivery as the expectation of the stakeholders (academic staff and students)?
2. What is the perception of both academic staff and student towards the implementation of BPR as service quality improvement?
3. Are the HEIs trying to improve the quality of service delivery as the BPR team recommended?
4. Which areas of service quality require more attention and priority?

METHODOLOGY

Quantitative approach was used as the study design. From the 31 MoE owned universities (MoE 2012) six universities were selected using simple random sampling techniques: Hawassa, Mekelle, Addis Ababa, Wolaita Sodo, Dilla and Debre Brehan. A representative sample of 1200 students and 240 academic staff from all six public universities were selected for the survey study. The selection of academic staff and students for the survey study was also based on the principle of random sampling.

The modified, self-administered SERVQUAL survey questions (Parasuraman *et al.* 1991) were used to gather information related to the perceptions of, importance of service quality improvement and priority areas. The questionnaire had four parts: The first paragraph dealt with the demographic information of the respondents. The second part contained 22 items designed to measure stakeholder expectations (E) of service quality improvement. The third part presented questions that were designed to measure stakeholder perceptions (P) of service quality improvement and which comprised the 22 questions that mirrored those of part one. The final part required respondents to specify the importance of the various attributes based on the 22 items for expectation and perception.

The same SERVQUAL questionnaire was used to assess the IPA scale. The IPA questionnaire requested respondents to rate the importance of the service attributes from the vantage point of users of the service (higher education service quality improvement). Respondents were requested to rate the importance of each service attribute in improving the quality of service of the institution. Respondents rated the importance on a 5-point Likert rating scale where a rating of '1' indicated very low importance, up to a rating of '5' indicating a rating of utmost importance. Likewise respondents were requested to rate service attributes on perceived service performance on a 5–point satisfaction scale where a rating of '1' indicated total dissatisfaction with performance on attribute of service up to a rating of '5' indicating total satisfaction with a service delivery improvement attribute.

DATA ANALYSIS AND INTERPRETATION

The mean difference between perception and expectation was calculated for both the academic staff's and the students' data sets. In addition, the data were analysed, by using a factor analysis firstly. The purpose of factor analysis is to describe the covariance relationships of variables (Johnson & Wichern, 1998; Hair, Black, Babin & Anderson, 2010) and to examine the dimensionality of the service quality *concept.*

In addition to factor analysis, quantitative data of the present study was also analysed using the Importance Performance Analysis (IPA) technique. IPA analysis uses a grid system to visually display the importance-performance balance of service attributes as perceived by stakeholders/users of services. The grid is divided into four quadrants of varying perceived importance-performance balance.

INTERPRETATION AND ANALYSIS OF DATA

A total of 1440 questionnaires were distributed and 1427 questionnaires were returned. In total, 1423 questionnaires were found to be acceptable as reliable responses to generate data for the quantitative analyses. This accounted for the response rate of 98.8%. The study employed Principle Factor analysis and Maximum Likelihood, with an oblique rotation. The oblique transformation was selected because there was reason to believe that the factors that probably underlie the data were dependent.

TABLE 1: SIGNIFICANCE TESTS

Significance Tests Based on 1423 Observations			
Test	**DF**	**Chi-Square**	**Pr >ChiSq**
H0: No common factors	231	9487.1897	<.0001
HA: At least one common factor			

- Reliability criteria: Akaike Information criterion, Schwarz's Bayesian criterion and Tucker and Lewis's reliability coefficients.

Chi-Square without Bartlett's Correction	524.07686
Akaike's Information Criterion	223.06696
Schwarz's Bayesian Criterion	-512.31321
Tucker and Lewis's Reliability Coefficient	0.93423

DECIDING ON FACTOR LABELS

Factors are labeled according to the concept or aspect of quality service delivery which the variables that underlie the factor represent. The four labels of the factors in the current study were therefore assigned as follows:

Factor 1: the subset of variables, q5-q9, describe aspects of reliability loaded into factor 1.

Factor 2: Two subsets of variables, namely q10-q12 (not q13) and q1-q3 (not q4) load into factor 2 – this corresponds to the *responsiveness and tangibles* dimensions of the service quality delivery which seem to be related to effectiveness and efficiency of service delivery – and the materials used in service delivery. The factor was labeled *service delivery/process.*

Factor 3: the subset of variables, q14-q17 described the construct of *assurance* of a service and was labeled "*assurance*"

Factor 4: the subset of variables, q19-q21, (not q20) describe the concept of *empathy and was therefore labeled "empathy".*

Thus, an exploration of the underlying constructs of higher education institutions service quality delivery revealed four dimensions: service *reliability, delivery, assurance* and *empathy.* The table below shows the rotated factor loadings for the four-factor model of best fit.

TABLE 2: ROTATED FACTOR PATTERN FOR THE 4-FACTOR SERVQUAL PERCEPTION DATA FACTOR ANALYSIS

Perceptions Scale items	Factor loading factors			
	1	2	3	4
q12		64		
q10		65		
q2		73		
Q3		43		
q1		64		
q11		59		
Q4	41			
q18		49		
q8	63			
q7	63			
q6	61			
q5	60			
q9	41			
q3				
q21				75
q22				63
q20				62
q19				41
q14			52	
q16			57	
q17			61	
q13			50	
q15			69	

Printed factor leadings are multiplied by 100 and rounded to the nearest integer.
Loadings less than 40 are suppressed to facilitate pattern recognition (Field, 2005).
Extraction Method: Common factor analysis: Maximum Likelihood (Principal Axis factoring used in preliminary phase).
Rotation Method: ProMax (Oblimin with Kaiser Normalization used in preliminary phase). 4 factors extracted
**Items: P1 - P4 (Tangibles)*
P14 - P17 (Assurance)
P5 - P9 (Reliability)
P18 - P22 (Empathy)
P10 - P13 (Responsiveness

Calculation of perceived and experienced service delivery quality construct-scores to assess the gap between perceptions and expected service (the service quality gap)

The mean differences, referred to as the 'gap scores', are included in Table 3 for the entire sample. In table 4 the mean difference scores are presented in such a way as to compare academic staff and students on the different dimensions. Tables 5 thus reflect how respondents perceive service: if the gap score deviates considerably from zero, a discrepancy between the experienced and expected level of quality service delivery for a service quality dimension is indicated. In Table 3 t-test results testing the null hypothesis that the mean difference score for a service quality dimension does not deviate statistically significantly from zero (in other words that expectations and experience do not differ) are included in the last column of the table.

TABLE 3: SERVICE QUALITY GAP ANALYSIS FOR ALL RESPONDENTS: MEAN EXPECTED, EXPERIENCED AND GAP SERVICE QUALITY CONSTRUCT SCORES FOR THE FIVE SERVQUAL SERVICE DELIVERY DIMENSIONS

	Perceived experience		Expectation		Gap		H_0: gap=0
	Mean	Std	Mean	Std	Mean	Std	
Entire dataset: (academic staff and students)							
Tangibles	3.58	1.68	6.48	.77	-2.90	.23	-59.68***
Reliability	3.21	1.75	6.56	.75	-3.34	.20	-67.93***
Responsiveness	3.41	1.66	6.57	.70	-3.16	.19	-68.74***
Assurance	3.34	1.78	6.55	.74	-3.21	.26	-61.67***
Empathy	3.65	1.69	6.54	.77	-2.88	.23	-58.57***
Significance level: *** : 0.1% ; ** : 1%; * : 5% level of significance							

Table 3 indicates that on all the quality service dimensions, perceived experience fell statistically significantly short of expectations if all respondents are jointly considered. The statistical significance associated with the null hypothesis on all dimensions was statistically highly significant and the alternative hypothesis of a difference between expectations and perceived experience was accepted in each case.

TABLE 4: MEAN GAP SCORES FOR THE FIVE SERVQUAL SERVICE DELIVERY DIMENSIONS OF ACADEMIC STAFF COMPARED TO STUDENTS

	Gap score Academic staff		Gap score Students		Gap		t-statistic (Sattertwaite)
	Mean	Std	Mean	Std	Mean	Std	
Entire dataset: (academic staff and students)							
Tangibles	-2.92	1.27	-2.90	1.50	-0.01	1.46	-0.07 (-0.07)
Reliability	-3.71	1.35	-3.28	1.50	-0.42	1.47	-3.24 (-3.46) ***
Responsiveness	-1.94	1.18	-3.22	1.41	1.27	1.37	10.47 (11.75)***
Assurance	-3.00	1.43	-2.86	1.48	-0.15	1.47	-1.15 (1.18)
Empathy	-3.07	1.39	-3.18	1.38	0.11	1.38	-0.95 (-0.94)
Significance level: *** : 0.1% ; ** : 1%; * : 5% level of significance							

The t-test results comparing the mean dimension gap scores for staff and students in Table 4 indicate statistically significant (on the 0.1% level of significance) gap scores for staff and students on the reliability and responsiveness dimensions. On the responsiveness dimension, the gap between expectations and

perceived experience for students were statistically greater than that of staff – staff expectations appear more realistic. On the reliability dimension the mean gap score for staff was statistically significantly greater than that of students.

TABLE 5: MEAN PERCEIVED *EXPERIENCED* SERVICE QUALITY SCORES FOR THE FIVE SERVQUAL SERVICE DELIVERY DIMENSIONS OF ACADEMIC STAFF COMPARED TO STUDENTS

	Academic staff		Students		Gap		t-statistic (Sattertwaite)
	Mean	Std	Mean	Std	Mean	Std	
Entire dataset: (academic staff and students)							
Tangibles	3.38	1.19	3.41	1.32	-0.03	1.30	-0.29 (-0.31)
Reliability	2.74	1.14	3.31	1.41	-0.57	1.37	-4.69 (-5.38)***
Responsiveness	3.46	1.17	3.69	1.37	-0.24	1.33	-1.99 (-2.21)*
Assurance	3.47	1.09	3.60	1.40	-0.13	1.36	-1.05 (-1.23)
Empathy	3.13	1.06	3.38	1.34	-0.25	1.29	-2.16 (-2.50)
Significance level: *** : 0.1% ; ** : 1%; * : 5% level of significance							

Table 5 indicates that the mean perceived experience scores for staff on the reliability and the responsiveness dimensions were statistically significantly less in agreement than the students' perceived experience. In summary it can be concluded that, the gap response pattern of academic staff and students also differed statistically significantly from each other.

The major contributor to differences between stakeholder perceptions and expectations of service quality is the *reliability* construct. This is consistent with the findings of a study by Brysland and Curry (2001) on the ability of the public service provider to deliver dependable and accurate service as promised. *Reliability* of services is an essential component of quality service delivery and the considerable mean gap scores for the *reliability* construct clearly signals that stakeholders perceive that they did not receive the services stated in the BPR documents.

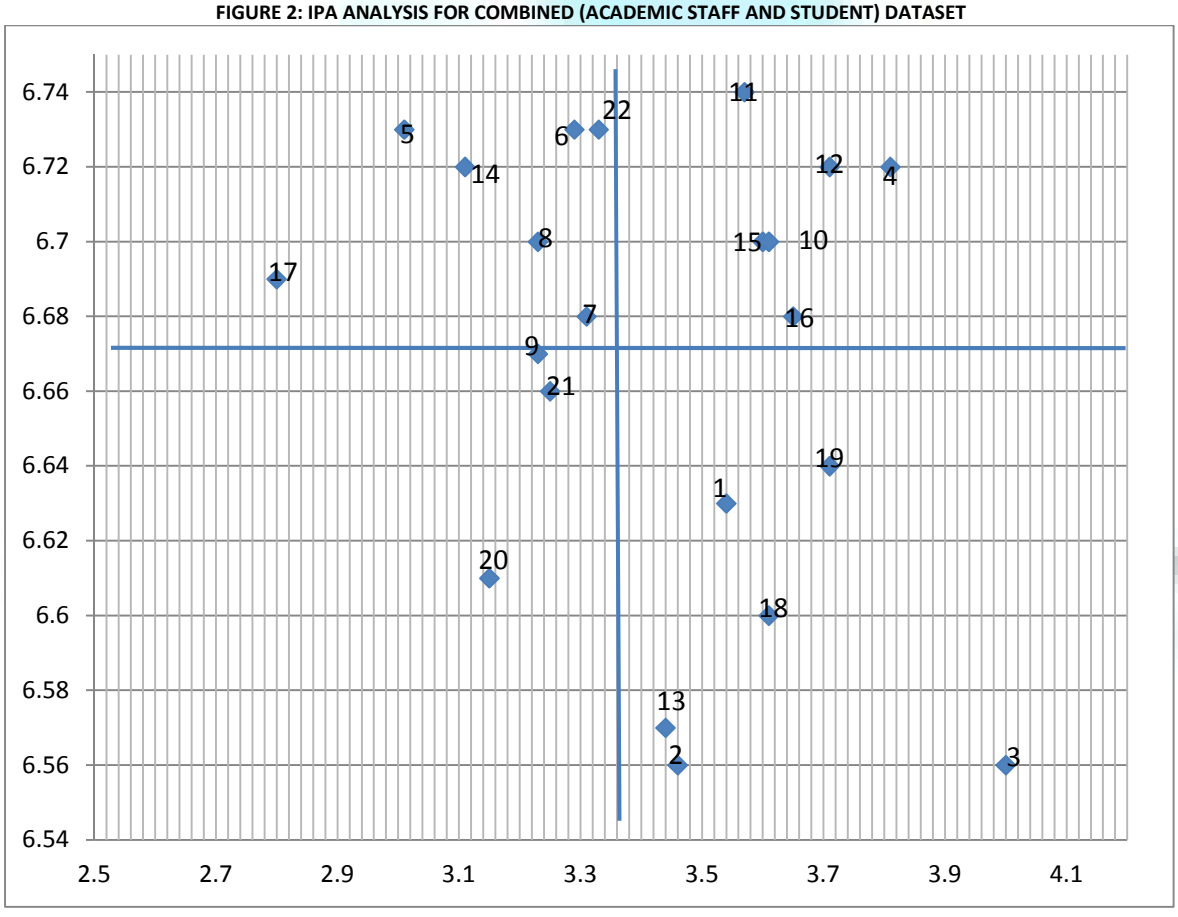
A considerable gap between perceived experience and expected service delivery was also reported for the *Assurance* construct of service quality delivery. This service construct refers to readiness for provision of individualised care and attention to stakeholders. It is interesting to note that the third largest gap score for the three groups was *responsiveness*. This illustrates the institution's willingness to assist its stakeholders by providing prompt service.

The negative values of the overall mean gap scores (as set out in Tables 3 - 5 above) for the constructs of *reliability, responsiveness, assurance, tangibles* and *empathy* all indicate that service delivery fall short of expectations. The negative gaps scores indicate that respondents' expectations are higher than what they perceive to experience.

The overall mean importance and mean performance rating values of the 22 importance-performance service attribute mean ratings were mapped to the IPA grid system Figures 1 depict the importance-performance balance of the 22 service attributes for the entire sample. The grid was interpreted to identify critical service improvement areas according to the quadrant in which certain service attributes fell. The quadrants are numbered from "A" to "D".

Quadrant A identifies service attributes perceived to be important, but underperforming and quadrant C identifies service attributes perceived not to be that important but underperforming as well. Quadrant B identifies service attributes that are perceived to be important and which performs well and quadrant D identifies service attributes that perform well but are less important.

FIGURE 2: IPA ANALYSIS FOR COMBINED (ACADEMIC STAFF AND STUDENT) DATASET



DEDUCTIONS DERIVED FROM FIGURE 1

As indicated in the previous paragraph, service attributes perceived by the academic staff and students to be critical in delivering quality service, group together in quadrant A, namely, *attributes perceived to be important but underperforming.* According to figure1 the attributes include question items no 5,6,7,8,9,14,17 and 22. These items prove that this quadrant contains a substantial number of items from the *reliability* dimension (q5, q6, q7, q8, q9) which is related to the

ability of the service provider to deliver dependable and accurate service as promised. A number of items in this quadrant also resort under *assurance* (q14, q17) and these critical items describe the service provider's knowledge and ability to provide confidence to stakeholders

Furthermore attributes that group together in quadrant C, namely, *service attributes perceived as not very important but also underperforming* will impact on service quality although to a somewhat lesser extent and include service attributes of questionnaire items 20 and 21 which describe personal or individual attention received by stakeholders. These above listed attributes identified by all the respondents indicate the areas of improvement to quality service delivery.

SUMMARY OF THE TWO ANALYSIS APPROACHES

The following table, table 7, summarises the most critical findings derived from the mean gap score analyses and IPA results.

TABLE 7: SUMMARY OF THE MOST CRITICAL FINDINGS DERIVED FROM THE TWO ANALYSIS APPROACHES FOLLOWED IN THE STUDY: MEAN GAP SCORE ANALYSES AND IPA RESULTS

Type of analysis & risk criteria	Datasets		
	All respondents	**Academic staff**	**Students**
Approach 1: **Mean gap scores** Service quality dimensions **with large mean gap scores** indicating poor quality service delivery	Ha : Mean dim. gap scores stats sign > 0	T tests: that identify statistically significant differences in mean dimension gap scores for students & staff	
	Largest mean gap scores: Reliability Assurance Responsiveness	Reliability Assurance	Reliability Responsiveness
Approach 2: **IPA analysis** SERVQUAL items which fall into either quadrant A or C **(**the two critical dimensions in that order)	**Quadrant A** SQ attributes in QA: 5, 6, 7, 8, 9, 14 & 17 • reliability (q5, q6, q7, q8, q9) • Assurance (q14, q17) **Quadrant C:** • empathy (q20, 21)		

The gap and IPA analyses findings for all respondents (second column of Table 7) correspond and indicate that *reliability, assurance* and *empathy* present the service quality dimensions that require the most urgent attention and that service improvement should focus on these areas since the mean dimension gaps for these dimensions were the largest and proved to be statistically significantly different from zero.

The findings are echoed in columns 3 and 4 of Table 7 where staff/student differences were brought into consideration and areas of experience-expectation discrepancies for staff and students are displayed more prominently. The IPA analysis indicated that reliability, *assurance* and *responsiveness -expectations* were critical issues where academic staff was concerned.

CONCLUSION

In this study, the major contributors to the gap between stakeholders' perception and expectations of service quality were the *reliability* and *assurance* dimensions followed by the *responsiveness* dimension. The *reliability* dimension of service quality is an essential component of quality service delivery and the considerable mean gap scores for the *reliability* construct clearly signal that stakeholders hold the perception that the services had not improved as stated in the BPR "TO BE" document. Stakeholders also expressed their dissatisfaction with the *assurance* service quality dimension. This finding implies that the *assurance* dimension of the institution does not comply with the improvement plan set by the "TO BE" design of the BPR documents of the universities (MU, 2008; HU, 2008).

Similar to the findings of the gap analyses, the overall IPA findings indicated that almost all elements of the *reliability* and *assurance* dimensions of service quality improvement grouped within the domain of high importance to service quality and low experience of quality service received" the domain of service dimensions that needs critical attention and improvement.

Therefore to maximise the satisfaction of stakeholders, the service delivery dimensions of *reliability, assurance* (and to a lesser extent *responsiveness, empathy,* and *tangibles* as indicated by staff and students) should be given top priority and immediate attention in improving service quality at Ethiopian PHEIs. These indicators suggest service delivery improvement areas to PHEI management.

In order to achieve greater success with their service quality delivery and to improve stakeholder satisfaction, it is suggested that the institutions have standardised assessment instruments to periodically assess the experience of service quality delivery. Since no such instrument currently exists for the Ethiopian higher education sector, the use of the SERVQUAL scale is recommended as an interim improvement-assessment tool. Secondly, the institutions have to re-identify and re-assess aspects of service attributes periodically in future, which stakeholders indicate as crucial towards customer service satisfaction. As in the current study, these attributes should be the criteria for improvement strategies for service quality improvement and meeting stakeholder expectations. This strategy assists HEI management to determine those areas that appear to have the biggest influence on stakeholder satisfaction. It can assist management on decisions regarding redeployment of resources (human, material and money) from the less important areas to critically important areas (that is, in IPA terminology, from quadrant D to quadrant A).

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