

Service Quality in Higher Education: A Comparative Study in Tertiary Institutions in Sub Saharan Africa

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Abstract

Supplying quality service is measured to be essential strategy for success in today's competitive environment. Companies that offer superior service achieve increased profits through higher market share and being able to offer premium prices. An exploratory research design was used for this study. The simple random technique was used to select 120 students. Data collected was analysed, interpreted and discussed using Cross tabulations, Regression Analysis, Analysis of Variance (ANOVA) and Coefficient of Determination (R^2). From the analysis of the data, the overall relationship or effect of all the independent variables combined on the dependent variable (overall service delivery for KNUST), the ANOVA statistic which was used showed a very significant effect $\{df (5, 59), F=125.3, \leq .0001\}$ while that of MUCG also showed a very significant effect at the level of $\{df (5, 59), F=377.9, \leq .0001\}$. However, institutes providing higher education in Sub Saharan Africa have not kept pace in terms of service quality and in all parameters, the actual service delivered by them falls short of the perception of the students. Private institution students are more ambitious and better informed than those studying in Public institutions and hence, have higher perception from their institutions, and accordingly, their perceived service quality is greater

than their counterparts in the Public institutions.

Keywords: Quality service, Perception, Tertiary education

1. Introduction

Supplying quality service is measured to be essential strategy for success in today's competitive environment (Parasuraman et al., 1985; Reichheld & Sasser, 1990; Zeithaml et al., 1990, 1996). Companies that offer superior service achieve higher-than-normal growth in their market share (Buzzell & Gale, 1987) and increased profits (through higher market share and being able to offer premium prices) (Philips et al., 1983).

Substantial concern has been expressed about the insufficiency of institutional facilities in the universities to cater for qualified candidates desiring to avail themselves for tertiary education in Sub Saharan Africa (Adjepong, 2001). University education is expected to champion the crusade to achieve economic growth of the country by producing scientists, engineers, physicians, lawyers, scholars, and business executives. The ability of the nation to achieve economic, social, cultural and political developments depends largely on the quality of tertiary education vis-à-vis the quality of students and/or graduates from the universities and other tertiary institutions. Higher education should be considered a part of service industry since the primary focus of tertiary institutions is to provide quality learning experiences to students. With the proliferation of study options available to students internationally including the use of virtual technology to deliver courses, it is no wonder tertiary institutions worldwide are under pressure to provide unique learning experiences to students so as to capture the market share (Gapp & Fisher, 2006; O'Neill & Palmer, 2004). Hence, service quality becomes the means for many institutions to retain student numbers and to capture the educational market.

Quality education should be consistent with the needs and objectives of major stakeholders (students, parents, employers, society and the government) in tertiary education. In Ghana, this problem appears to be compounded as current debates are directed at the quality of graduates trained in Ghanaian universities. The focus of tertiary education is to provide the manpower base required to increase industrial productivity, national and social development and economic growth. Facilities in higher tertiary institutions are inadequate and cannot meet the increasing demand of the growing student learning to be distinguished in profile and outlook MUCG (2001) hence the wakeup call on tertiary institution to deliver quality services to all major players.

In recent times, the media have carried out news reports that suggest that facilities at the various state funded universities need a lot to be desired. This seems to have partly contributed to the problem of congestion on the various university campuses. Whereas student's population is growing, the facilities in the public universities have not seen any major expansion for decades. These are some of the challenging issues that appears to derail the efforts of Ghanaian universities in their attempt to deliver quality education capable of producing quality graduates the meets/exceeds the needs of external stakeholders. The confidence of students, parents, and employers seem to be weakening as these reasons have contributed to the perception that Ghanaian state and private funded universities as it appears have little to offer in terms of developing quality students and graduates trained in the country's universities MUCG (2007).

Service quality in formal education is receiving greater attention in strategic plans of African governments in their quest to achieve global economic integration. Successive governments in the Sub Saharan Africa (past and present) have sought and continue to seek strategies for quality delivery of education in the region (Ankomah et al., 2005). A research on service quality delivery in state and private funded organizations on the transportation and health sectors in Ghana appear to suggest that there is a gap between the state and private funded organization in terms of service quality delivery (Daily Graphic, 2005). This situation is perhaps not different from the tertiary institutions in Sub Saharan Africa as recent media discussions have raised issues on how universities in Ghana are faced with a lot of problems. The problems include curriculum, teaching faculties and facilities, among others, which push against their efforts in their attempt to deliver quality educational services to their customers (www.ghanaweb, 2007).

With these problems on university education in Sub Saharan Africa, the purpose of this study is to investigate the gaps that exist between the state and private funded universities in reference to service quality delivery and its impact on their image using the SERQUAL Model. To identify service delivered in Kwame Nkrumah University of Science and Technology (KNUST) and Methodist University College Ghana (MUCG). Again, to evaluate the quality of service offered by KNUST and MUCG and to perform a comparative analysis of service quality between these Public and Private institutions. The study then contends that Private Universities places much premium on empathy because of the limited number of students it has. The institution is able to care and give individual attention to its student as compared to Public Universities that has a large number of student's populations. Increases in service quality itself is a driver of competition (or advantage) and which in it sense also increase workforce productivity within institutions. By examining this conceptual model of SERQUAL, this research seeks to provide valuable contribution to public policy making on the best service delivery in the academic institutions.

First, a major benefit from this study is that it has the potential to enhance current scholarly understanding of the drivers and consequences of a major service provided in the tertiary institutions. In terms of public policy making, findings from the study may help inform public policy makers and educational experts on key variables, and cause and effect relationships to look at when developing remedial measures to stamp up the service delivery in various Tertiary institutions in Africa to minimize the fall of academic standard in these institutions. Second, an additional benefit from the study is that findings may serve as a source of empirical validation of service quality decision making regarding how service quality could be managed to improve educational standard in Africa. The next section throws light on a review of relevant literature on service quality together with other relevant considerations to the subject matter. Next, the methods used in gathering data and conducting our analysis of the study. We then present the results obtained from the data gathered and our discussion of the findings in the next section. Finally, we provide a summary of our findings, conclusion and recommend specific courses of action that can improve the service quality in our tertiary institutions.

2. Review of the Relevant Literature

2.1 *The Concept of Service Offering*

Unlike tangible products, a service is a complex phenomenon and many fragmented definitions have emerged (Hirvonen, 2007; Jallat & Wood, 2005). Jallat and Wood (2005) defined a service as a simultaneous process, a social interaction, a relationship and an intangible result. Zeithaml et al. (2006), describe services as deeds, processes and performances. According to Kotler and Keller (2006), a service is an act or performance that one party can offer another that is essentially intangible and does not result in the ownership of anything. Fact that various people have diverse opinions when it comes to issues relating to services. However, the various definitions recognize that services are intangible, interactive, experiential and do not involve the transfer of ownership (Kotler & Armstrong, 2006).

2.2 *Characteristics of Service*

From the studies done so far, there have been emerged four special service characteristics that distinguish services from goods. Inseparability, intangibility, variability and perishability are the basic characteristics that differentiate a service from goods (Zeithaml et al., 2000; 2006; Soutar & McNeil, 1996). Zeithaml et al. (1990) cited by Hirvonen (2007) identified intangibility, heterogeneity, perishability and inseparability as the fundamental characteristics that makes services different from goods in terms of how they are produced, consumed and evaluated.

2.3 *Types of Service*

Studies have shown different types of interactions that may occur in an encounter. These are face-to-face interactions, remote interactions, and phone interactions (Liljander & Mattsson, 2002; Zeithaml et al., 2006; Chandon, Leo, & Philippe, 1997; Solomon et al., 1985; Suprenant & Solomon, 1987; Bitner, 1990). It has been suggested that the different categories of service encounters may affect the overall evaluation of the service (Liljander & Mattssons, 2002; Danaher & Mattsson, 1994, 1994b; Liljander et al., 1995).

2.4 *The Concept of Quality*

A review of marketing literature suggests that it is difficult to define quality (Zeithaml & Bitner, 2000). There is no universally accepted definition of the term quality. The term has been variously defined by researchers. Quality may be defined as a property of products or services, or processes producing these products or services (Sahney et al., 2000). They also defined quality as meeting or exceeding customer expectations. Researchers argue that quality is how customers define it (Lovelock & Wirtz, 2007) and must be defined from customer's perspective. Sahney et al. (2004) argues that customer's definition of product quality help identify and establish the relevant bases and criteria for evaluating quality.

A recent definition of "quality" has been provided by Coulson et al. (1990) from customer perspective. They defined quality as: "How consistently the product or service delivered, meets or exceeds the customers' (external and internal) expectations and needs". Brenda

(2000) supports this view and posits that the term quality refers to an attitude about how to conduct business, irrespective of the type of business venture. That attitude centers on two things; the first being meeting or exceeding the customers' wants, needs, and expectations and the second is, doing it in an efficient way. It does no good to produce an excellent product that nobody wants, just as it does no good to produce a high quality product using inefficient processes. The quality concept, then, refers not just to the product or service provided, but also how it is provided.

2.5 Principles of Quality Management

Researchers have identified various critical success factors that will guide the implementation of quality management in an organization (Porter, 1996). Antony et al. (2002) also revealed 11 factors of quality practices. Brady et al. (2001) in their study noted that there are 11 constructs of quality implementation. Sureshchandar et al. (2002) in their research came out with 12 major practices comprising of top management commitment and visionary leadership, human resource management, technical system, information and analysis system, benchmarking, continuous improvement, customer focus, employee satisfaction, union intervention, social responsibility, services capes, and service culture.

2.6 Assessing Service Quality in Higher Education

Most of the published research works have focused on the quality of academic services such as courses and teaching (Athiyaman, 1997; Souter & McNeil, 1996; Oldfield & Baron, 2000). Aldridge and Rowley (1998) argue that management of higher education must not only focus on academic services but must emphasize on the overall student's experience of an institution as a useful dimension of measuring student's satisfaction. Hirvonen (2007) posits that the concept of quality in (higher) education is based on considering the needs of the student. The problem however is, who is the customer in education? There is no clear description of who is the customer in higher education. Some researchers in the field of service quality consider the student as a customer (Helakorpi, 1995; Hirvonen, 2007). Owlia and Aspinwall (1997) argue that the definition of 'customer' of tertiary education is quite different from that in manufacturing or general services since groups such as students, employers, academic staff, government and families are all customers of the education system with a diversity of requirements. To each of these groups of people, the definition may mean different things and so the indicators used to define service quality may be different (Porter & Fuller, 1986; Hughes, 1988; Cheng & Tam, 1997).

Cheng and Tam (1997) define education quality as the character of the set of elements in the input, process, and output of the education system that provides services that completely satisfy both internal and external strategic constituencies by meeting their explicit and implicit expectations. This definition includes the important characteristics of quality espoused in the management literature: inputs, process, output and multiple constituencies of an educational institution whose expectations may vary. It is therefore difficult for an education institution to meet all their expectations and needs at the same time.

2.6.1 Budget and Financing as an Indicator of Educational Quality

Any university that is financially sound is likely to attract and maintain highly qualified staff (lecturers, research experts, administrators etc.) and equally provide better facilities to facilitate teaching and learning. Johnstone (2001) cited in Chen et al. (2007) posits that universities that lower tuition fees in order to attract students may suffer inefficiencies which can ultimately affect education quality.

2.6.2 Interactive Network as an Indicator of Educational Quality

It is suggested that students are motivated to learn through communication and socialization (Chen et al., 2007). Adridge and Rowley (1998) posit that the relationship that exist between students and their lecturers on one hand and their fellow students are key issues in determining quality in higher education. Group discussions promote team work and students participation in the learning process (Chickering & Gamson, 1987; Chen et al., 2007). It has been established through research that technical discussions among lecturers and faculty members is an effective way of solving problems. This is an effective way ensuring cooperation among lecturers, sharing of ideas among faculty and gaining new ideas to improve service quality (Massy, 2003; Konidari & Abernot, 2006; Chen et al., 2007). Cooperation among lecturers could create an intelligent team able to accumulate collective experience, knowledge and competence. Researchers believe that frequent student-faculty contact in and out of classes is the key to promote willingness among students to be committed to their studies and to help them get through rough times (Chickering & Gamson, 1987; Chen et al., 2007). Chen et al. (2007) concludes that interactive networking is key to achieving quality in higher education.

2.6.3 Facilities/Infrastructure as an Indicator of Educational Quality

Mavondo et al. (2000) noted that facilities such as library, textbooks, learning and living environment, and other equipment that support teaching and learning processes are relevant to achieving quality in education. Educational providers must ensure that these facilities are adequate and reliable to meet students' needs. Limited access to unreliable equipment prevent students from learning effectively hence students must have access to reliable equipment (Belanger & Jordan, 2000; Chen et al., 2007; Ullah, 2005).

2.6.4 Characteristics of Students as an Indicator of Educational Quality

The quality of students affects the quality of university education. The policies guiding students enrollment is of very significant in this concern. Ullah (2005) proposed the following to guide the selection of quality students to universities. These are; special attention to their problems; proactive policies for the benefit of the disadvantaged; exchanges with secondary education and with the bodies involved in the transition from secondary to higher (university) education to ensure continuity in education.

2.6.5 Management and Administration as an Indicator of Educational Quality

Management of educational institutions including universities means setting realistic goals and formulating plans and strategies to achieve them. Those plans involve setting objectives

for the institution, allocating resources, delivering results, evaluating the impact, and resetting objectives in the light of evaluation (Ullah, 2005)

2.7 SERVQUAL Model

Parasuraman et al. (1988) defined service quality as "... a global judgment or attitude relating to the overall excellence or superiority of the service" and they conceptualized a customer's evaluation of overall service quality by applying Oliver's (1980) disconfirmation model, as the gap between expectations and perception of service performance levels. Furthermore, they propose that overall service quality performance could be determined by the measurement scale SERVQUAL that uses five generic dimensions:

- 1) Tangibles (the appearance of physical facilities, equipment, personnel, and communications materials);
- 2) Reliability (the ability to perform the promised service dependably and accurately);
- 3) Responsiveness (the willingness to help customers and provide prompt service);
- 4) Assurance (the competence of the system and its credibility in providing a courteous and secure service); and
- 5) Empathy (the approachability, ease of access and effort taken to understand customers needs).

According to the studies done by Vaz and Mansori (2013) on the impact of five factors of service quality (responsiveness, reliability, empathy, assurance, tangibility) on students' satisfaction at private universities and colleges. They found out that tangibility has an influence on satisfaction followed by empathy; responsiveness and assurance have a direct and positive effect on students' satisfaction. With regard to the work done by Annamdevula and Bellamkonda (2012) about the determinants to evaluate the service quality in the higher education sector, they were able to developed a new instrument called HiEdQUAL covering various service dimensions from the stand point of students as primary customers. Khan and Nawaz (2011) found that there was a significant relationship between dimensions of service quality i.e. Reliability, Assurance Responsiveness and Empathy, with satisfaction; however the fifth factor, Tangibility, had an insignificant relationship with student satisfaction.

Chopra, Chawla, and Sharma (2014) also observed that higher the level of students' satisfaction greater was their willingness to put more efforts towards their studies. Shekarchizadeh et al. (2011) assessed the service quality perceptions and expectations of international postgraduate students studying in selected Malaysian universities through a gap analysis based on a modified SERVQUAL instrument and five factors in the form of professionalism, reliability, hospitality, tangibles, and commitment were also identified. Again a parallel kind of study was conducted by Barnes (2010) using a modified SERVQUAL instrument to explore expectations and perceptions of service quality among a sample of post-graduate Chinese students at a leading business and management school in the UK. The research findings suggest that the instrument was suitable for use in a Chinese and post-graduate context.

3. Methodology of the Study

An exploratory research design was used for the study limited to only Ghana. The target population was composed of students of the Kwame Nkrumah University of science and technology (KNUST) and Methodist University College Ghana (MUCG). Students in KNUST and MUCG were selected using the simple random sampling. K.N.U.S.T was clustered into 6 colleges. The college consist of faculties and departments. The simple random technique was used to select 40 students from each college and 10 students from each level, that is, level 100, 200, 300 and 400 respectively to get a fair representation of the total population size of 240 students, 80 students responded representing 33% of the entire population. On the other hand students of MUCG were also clustered into 2 colleges which also consist of faculties and departments. 80 students were given the questionnaire to answer from the 2 colleges respectively 60 student responded indicating response rate of 75% which is quite high. Data was collected using a questionnaire. The questionnaire comprised of 22-item, proposed by researchers Parasuraman et al. (1988) and a 5 point likert SERVQUAL scale proposed by Babakus et al (1992) on the grounds that it would reduce the “frustration level” of client respondents. This study combines both quantitative and qualitative approach; data collected was analyzed, interpreted and discussed using the following statistical techniques, Cross tabulations, Regression Analysis, Analysis of Variance (ANOVA) and Coefficient of Determination (R²).

4. Results and Discussion

The previous section explored the diverse routes through which service quality impacted on our educational system. This study tries to investigate the gaps that exist between the state and private funded universities in reference to service quality delivery and its impact on their image using the SERVQUAL Model. However these assertion also depend on some policies and instruments used in managing our educational policies that are demanded and the strategies the public sector employs to shape the nature and composition of our educational policies.

Table 1. Cross tabulation on gender and satisfaction with overall service delivery–KNUST

			Satisfaction with overall service delivery					Total
			extremely dissatisfied	somewhat dissatisfied	feel neutral	Somewhat satisfied	extremely satisfied	
gender	male	Count	1	1	23	28	15	68
		% of Total	1.3%	1.3%	28.8%	35.0%	18.8%	85.0%
	female	Count					12	12
		% of Total					15.0%	15.0%
Total		Count	1	1	23	28	27	80
		% of Total	1.3%	1.3%	28.8%	35.0%	33.8%	100.0%

Source: Field survey KNUST 2014.

Table 1 shows relationship with Gender and overall service delivery at Kwame Nkrumah University of Science and technology, out of the 80 respondents 2.6% made up of males were dissatisfied with overall service delivery. 28.8% were neutral on the service delivery to them 53.8% of were satisfied with the overall service delivery representing 85% of the total respondents the remaining 15% were females and the 15.0% were satisfied with overall service delivery.

Table 2. Cross tabulation on gender and satisfaction with overall service delivery–MUCG

			Satisfaction with overall service delivery					Total
			Extremely dissatisfied	Somewhat dissatisfied	Feel neutral	Somewhat satisfied	Extremely satisfied	
gender	male	Count	1	1	21	7	5	35
		% of Total	1.7%	1.7%	35.0%	11.7%	8.3%	58.3%
	female	Count					25	25
		% of Total					41.7%	41.7%
Total	Count	1	1	21	7	30	60	
	% of Total	1.7%	1.7%	35.0%	11.7%	50.0%	100.0%	

Source: Field survey MUCG 2014.

From Table 2 which explains relationship between Gender and overall service delivery at the Methodist University College Ghana 3.4% of males were dissatisfied with overall service delivery 35% were neutral on the service delivery to them, 20% were satisfied with the overall service delivery. The female population represented by 41% were satisfied with the overall service delivery in the institution. In comparing K.N.U.S.T. with MUCG it appeared there is the perception that males population represented by 78.8% were more satisfied with overall service delivery while the female recorded 56.7% in both institutions respectively.

Table 3 which seeks to identify the relationship between student's level and the perception about overall service delivery at K.N.U.S.T revealed some interesting results from the Cross tabulation. In level 100, 2.6% of the total respondents were dissatisfied with overall service delivery, 25% were also neutral; satisfaction was, however, none. This can be attributed to the fact that they have just spent some few months in the school. Respondent from level 200 were 3.8% and they were neutral about the overall service delivery. In level 300 30.1% of respondents were satisfied with the overall service delivery while in level 400 22.5% were also extremely satisfied with the overall service delivery.

Table 3. Level of students and overall service de livery

			Satisfaction with overall service delivery – KNUST					Total
			extremely dissatisfied	somewhat dissatisfied	feel neutral	somewhat satisfied	extremely satisfied	
level	100	Count	1	1	20			22
		% of Total	1.3%	1.3%	25.0%			27.5%
	200	Count			3	13		16
		% of Total			3.8%	16.3%		20.0%
	300	Count				15	9	24
		% of Total				18.8%	11.3%	30.0%
	400	Count					18	18
		% of Total					22.5%	22.5%
	Total	Count	1	1	23	28	27	80
		% of Total	1.3%	1.3%	28.8%	35.0%	33.8%	100.0%

Source: Field survey KNUST 2014.

Table 4 which discuss students level and their perception about overall service delivery 3.4% represented level 100 students were dissatisfied with overall service delivery 13.3% were also neutral. In level 200 16.7% were neutral about the service being delivered to them. Level 300 students perception also revealed some interesting results 5% were neutral 20% were satisfied with the overall service delivery. In level 400 41.7% were extremely satisfied with overall service delivery. Comparing the perception about overall service delivery in the K.N.U.S.T. and M.U.C.G in terms of levels is not different looking at the pattern the data seems to suggest that there is a relationship between time and overall service delivery.

Table 4. Level of students and overall service delivery

			Satisfaction with overall service delivery – MUCG					Total
			extremely dissatisfied	somewhat dissatisfied	feel neutral	somewhat satisfied	extremely satisfied	
level	100	Count	1	1	8			10
		% of Total	1.7%	1.7%	13.3%			16.7%
	200	Count			10			10
		% of Total			16.7%			16.7%
	300	Count			3	7	5	15
		% of Total			5.0%	11.7%	8.3%	25.0%
	400	Count					25	25
		% of Total					41.7%	41.7%
	Total	Count	1	1	21	7	30	60
		% of Total	1.7%	1.7%	35.0%	11.7%	50.0%	100.0%

Source: Field Survey MUCG 2008.

4.1 Comparative Analysis of Service Quality at KNUST and MUCG

Table 5. Regression analysis for Knust: Overall service delivery

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.709	.171		4.141	.000
level of satisfaction with reliability of service	.240	.176	.299	1.369	.175
satisfied with the level of assurance	.256	.123	.278	2.077	.041
level of satisfaction with appearance of service	-.248	.142	-.286	-1.745	.085
satisfied with the overall empathy in relation to services received	6.794	.175	.086	.389	.699
satisfied with level of service responsiveness	.509	.134	.597	3.791	.000

a Dependent Variable: satisfied with overall service delivery

Source: Field Survey KNUST 2008.

The Table 5 above shows the coefficients for each independent variable representing an estimate of the average change in the dependent variable for a one-unit change in the independent variable remaining constant. The Beta values show the coefficients of the independent variables. The coefficient of the reliability of service is 0.24 meaning, holding all the other independent variables constant, a 1% change in satisfaction with reliability of service will change overall service delivery satisfaction by 0.240.% Significance value is 0.175 which is greater than 0.05 hence the relationship between reliability of service and overall service delivery is insignificant.

The coefficient of satisfaction with assurance of service is 0.256. This means that holding all the other independent variables constant, a 1% change in satisfaction with affect service delivery satisfaction by 0.256%. The significance value for this variable is 0.041. This variable is significant in explaining the overall satisfaction of service delivery because the significance value is less than 0.05.

The coefficient of satisfaction with appearance service is -0.0248, the meaning is that, the variable has a negative relationship with overall satisfaction of service delivery (they move in the opposite direction). A 1% increase in satisfaction with appearance of service will reduce overall satisfaction of service delivery 0.0248% holding all the other independent variables constant. The significance value for this variable is 0.085. This variable is not significant in explaining the overall service delivery satisfaction because the significance value is greater than 0.05. The coefficient of satisfied with the level of empathy of service is 6.794, this means that. a 1% increase in satisfied with the level of empathy of service will increase overall service delivery satisfaction by 6.794% holding all the other independent variables constant. The significance value for this variable is 0.699. This variable is not significant in

explaining the overall service delivery satisfaction because the significance value is greater than 0.05.

The coefficient of satisfaction with level of responsiveness of service is 0.509, this means that holding all the other independent variables constant, a 1% change in satisfaction with level of responsiveness of service will change overall service quality also by 0.509%. The significance value for this variable is 0.00. This variable is significant in explaining the overall service delivery satisfaction because the significance value is less than 0.05. To test the overall relationship or effect of all the independent variables combined on the dependent variable (overall service delivery for KNUST), the ANOVA statistic which was used showed a very significant effect {df(5, 59), $F=125.3, \leq .0001$ }

The Table 6 above shows the coefficients for each independent variable representing an estimate of the average change in the dependent variable for a one-unit change in the independent variable, all other independent variables remaining constant. The Beta values show the coefficients of the independent variables.

The coefficient of reliability of service is -0.346, this means that holding all the other independent variables constant variable has a negative relationship with overall satisfaction of service delivery (they move in the opposite direction). A 1% change in satisfaction with reliability of service will reduce overall service delivery satisfaction by -0.346%. The significance value for this variable is 0.008. This variable is significant in explaining the overall satisfaction of service delivery because the significance value is less than 0.05.

Table 6. Regression analysis for MUCG: Overall service delivery

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.153	.126		1.216	.229
level of satisfaction reliability of service	-.346	.126	-.319	-2.744	.008
satisfied with the level of assurance	.254	.124	.220	2.047	.046
level of satisfaction appearance of service	8.811E-02	.099	.086	.887	.379
satisfied with the overall empathy in relation to services received	.561	.106	.565	5.293	.000
satisfied with level of service responsiveness	.405	.088	.442	4.625	.000

a Dependent Variable: satisfied with overall service delivery

Source: Field survey of MUCG 2014.

The coefficient of satisfaction with assurance of service is 0.254, the meaning is that, the variable has a positive relationship with overall satisfaction of service delivery. A 1% increase in satisfaction with assurance of service will increase overall satisfaction of service

delivery 0.254% holding all the other independent variables constant. The significance value for this variable is 0.046. This variable is significant in explaining the overall service delivery satisfaction because the significance value is less than 0.05.

The significance value for this variable is 0.379. This variable is insignificant in explaining the overall service delivery satisfaction because the significance value is greater than 0.05.

The coefficient of satisfied with the level of empathy of service is 0.561, this means this variable has a positive relationship with overall service delivery satisfaction (they move in the same direction). A 1% increase in satisfied with the level of empathy of service will increase overall service delivery satisfaction 0.561% holding all the other independent variables constant. The significance value for this variable is 0.000. This variable is significant in explaining the overall service delivery satisfaction because the significance value is less than 0.05.

The coefficient of satisfaction with level of responsiveness of service is 0.405, this means holding all the other independent variables constant, a 1% change in satisfaction with level of responsiveness of service will change overall service quality also by 0.405%. The significance value for this variable is 0.000. This variable is significant in explaining the overall service delivery satisfaction because the significance value is less than 0.05.

To test the overall relationship or effect of all the independent variables combined on the dependent variable (overall service delivery for MUCG), the ANOVA statistic was used which showed a very significant effect {df (5, 59), $F=377.9, \leq .0001$ }.

5. Summary of Major Findings and Its Implications

The following sections discuss briefly the major findings of the current research based on the five service quality dimensions and its implications.

In relation to overall service delivery relating to the 5 SERQUAL dimensions in Kwame Nkrumah University of Science and Technology responsiveness which explains 50.9% as shown in Table 6 emerged the most important determinant. This was followed by assurance and reliability 25.6% and 24.0%. On the contrary there is a negative relationship between overall service delivery and appearance in Kwame Nkrumah University of Science and Technology but the dimension do not explain the variations in overall service delivery of Kwame Nkrumah University of Science and Technology since it is not statistically significant as shown in Table 5.

Table 6 which shown the regression for Methodist University College using the 5 dimensions of SERQUAL empathy with 56.1% emerge as the most important determinant of overall service delivery followed by responsiveness 40.5%, assurance 25.4%, appearance or tangibles 8.81%. However there is a negative relationship between overall service delivery and service reliability -34.6% but it is statistically significant.

The study has implications for entrepreneurs in the education industry, who need to comprehend that the institutions are built on assurance, appearance empathy responsibility and reliability services that integrate the resource and derive values out of them. The present

focus on infrastructure needs to shift to other components of service quality in the Private institutions something that disturb the stakeholders and lack of reliability and empathy on the part of public institutions, if these institutions have to survive, they cannot continue to give precedence to economic gain over students' satisfaction from their services. The transition from the traditional mindset towards education, to a market-led approach to delivering educational needs a second generation approach; otherwise the upcoming globalization of quality education can become challenging for these institutes in the Sub Saharan Africa. For the regulators, the study suggests that their evaluation and accreditation of the institutions of higher education must not be confined only to the physical infrastructure. They must help and regulate the private sector to build the systems that can deliver better services to the aspirants of higher learning in the continent.

5.1 Conclusions

Increased access to institutions of higher learning combined with a larger number of such institutions has given students more options which results in them evaluating these institutions thoroughly before taking admission. Students are well-informed and ambitious, and they have a perception of their educational institutions to provide them education service of outstanding quality. However, institutes providing higher education in Sub Saharan Africa have not kept pace in terms of service quality and in all parameters, the actual service delivered by them falls short of the perception of the students. From the study done Private institution students are more ambitious and better informed than those studying in Public institutions and hence, have higher perception from their institutions, and accordingly, their perceived service quality is greater than their counterparts in the Public institutions. Of the dimensions of service quality, most of the students in Public institution perceive that their institutions lack in terms of appearance, empathy and reliability of service. There is a short fall of insight between the students and their institutions, as has been the tradition in the public institution in Ghana. A similar short fall of insight exists in the appearance of service for student in private institutions in terms of infrastructure facilities in these institutions.

5.2 Recommendations of the Study

In relation to reliability of service Private Tertiary Institutions needs to pay more attention to delivery of promises more accurately and on time if they need to increase overall service delivery of their students. On assurance although both Public and Private tertiary institutions do inspire confidence and trust in their students, Private Tertiary Institution in Africa need to do much because they are always new in the system compare to Public institution and students confidence and trust should be very high in these institutions. Tangibility as a service which deals with the provision of physical facilities, equipment and appearance of personnel, Public Tertiary Institutions needs to improve on their physical facilities as well as lecturer and student ratio due to the large number of students they admit. Private institutions should place more emphasis on responsiveness to students' demands and requests.

5.3 Further Research

The aim of this research was to investigate the perceptions of service quality among students

in both Public and Private Tertiary institutions in Sub Saharan Africa. Therefore researchers aspiring to work in this area can look for expectation of service quality in institutions of higher education in both Public and Private Tertiary institutions in Sub Saharan Africa so that we can deduced the gap between the perception and the expectations of service quality in this area.

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