

AN EMPIRICAL EVALUATION OF STUDENT ACCOMMODATION QUALITY IN HIGHER EDUCATION

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ABSTRACT

This paper, which was part of a larger study, aimed at examining student accommodation quality (SAQ) in two public tertiary institutions in Ghana. The study was a cross-sectional survey that involved a convenient sample of 700 tertiary students from College of Technology Education, Kumasi (COLTEK) of the University of Education, Winneba, and Kumasi Polytechnic (K-Poly). A self-administered structured questionnaire was administered to the respondents in a survey that resulted in a 66.6% response rate for analysis. The findings indicate that SAQ items that received unfavourable rating include: bath room, access to transport, toilet, security, kitchen, entertainment, reading room, accommodation fees and searching cost. Moreover, it was found that students at COLTEK seem to be better in terms of SAQ in core facility, while those at K-Poly seem to be better in terms of accommodation cost, and some facilitating and support facilities. The results show that residential SAQ seems to be better than non-residential in terms of the distance to lecture and entertainment, while non-residential SAQ appears to be better in areas such as overall quality, enjoying accommodation and core facilities. Recommendations and implications for management of higher education and student accommodation developers have been discussed. The paper contributes to the literature in the area of management of student accommodation and housing in tertiary education.

Keywords: accommodation, accommodation quality, tertiary institution, Ghana, Kumasi Polytechnic, private participation, hostel providers.

1. Introduction

Globally, student enrolment in higher institutions has been increasing in recent times, and it is estimated that there has been about 160% increase in tertiary education globally (Sharma, 2012). However, in many countries of the world, the provision of accommodation facilitates for tertiary students continues to remain a challenge for the government (Centre for Global Education, 2002). As a result one of the important issues of concern to education management is the issue of students' accommodation globally. In many developed and developing countries, governments are not able to adequately provide accommodation for students who successfully gain admission to pursue various programmes of study in higher institutions. As a results, other educational stakeholders have had to support government efforts, either in partnership with government or by solely providing private accommodation facilities for tertiary students on or off-campus (Centre for Global Education, 2002; Department for Education and Skills, 2003). The situation of private firms' participation in the provision of affordable student accommodation has been a major concern to educational management, marketing management and construction management as it possess the challenges to them in ensuring that students' accommodation facility they provide meets the required standards and conditions and enhances students' learning.

In Ghana, the enrolment rate in tertiary education was estimated at 9.7%, though this may be low as compared to that of developed countries that stood above 50% (Ghana Education Performance Report, 2010, p. 38). This indicates an enormous increase in student intake in universities and polytechnics. The government of Ghana over the last four decades have been encouraging the concept of private participation in socio-economic development in many areas of the economy (Ghana Shared Growth and Development Agenda- GSGDA, 2010). One such area that has received much attention for private participation is education sector in general and the provision of students' accommodation in particular for tertiary students (Asare-Kyire, Appienti, Forkuoh, & Osei, 2012).

In many Ghanaian universities, the management of students' accommodation is the responsibility of the management and administrators of individual higher institutions. For both private and public institutions, top management formulates the overall students' accommodation policies which may differ from one institution to the other. In most institutions, top education management also have established structures that are responsible for managing students' accommodation conditions in the various institutions. Most tertiary institutions have policies that encourages private participation in the provision of student accommodation in order to support the inadequate residential infrastructure provided the government (Asare-Kyire *et al.* 2012). Two of the public institutions in Ghana that have been growing steadily in terms of students' intake in the past decade are the Kumasi Campus of the University of Education, Winneba (referred to as COLTEK), and Kumasi Polytechnic (K-Poly).

The problem of this study is propelled by two important factors. The first is that there is the need to empirically examine the situation of student accommodation quality in developing countries and in Ghana in particular in order to contribute to the literature and inform theory on the service quality provision in students' accommodation context. Second, there is the need to provide empirical feedback to higher education management and student accommodation providers (SAP) regarding students' accommodation quality and how it is affecting students' academic work in higher institutions in developing countries and in Ghana in particular. This is particularly useful in giving empirical bases for developing effective educational strategies as well as hostel construction management strategies for improving the quality of students' accommodation in higher institutions in developing countries.

Over the past three decades despite the fact that student accommodation has been a major concern to government and other educational stakeholders, very little attention has been given to the phenomenon by scholars and practitioners, especially in developing country context. There is scanty empirical

documentation on the quality of student accommodation in developing country context in general, and in Ghana's student accommodation service provision in particular. While students' accommodation quality could be assessed from management perspective, the voice of the students is of paramount importance since they are the end-users or main customers of such accommodation facilities and can, thus, provide a useful feedback and evaluation on their accommodation quality and how it affects their academic performance for management attention.

Given that very little is empirically known about student accommodation quality in developing country context, and that hostel accommodation providers, construction management and educational management need to understand students' feedback on student accommodation quality and how it affects their academic work, it becomes important to evaluate SAQ in order to develop strategies and inform policy for improving students' accommodation conditions in Ghanaian tertiary institutions. In view of this, the main problem of this study is to examine students' evaluation of their accommodation quality in two tertiary (or higher education) institutions. This paper sought to address the following specific objectives:

1. To examine favourable and unfavourable SAQ dimensions from the students' perspective.
2. To determine whether SAQ evaluation differs between the two institutions.
3. To determine whether significant differences exist between SAQ evaluation for residential and non-residential accommodation.
4. To suggest ways of improving upon the current student accommodation quality in the two institutions.

2. Literature Review

2.1 Service Quality Concept

Many attempts have been made by scholars and practitioners to define service quality (SQ) from different perspectives. It has been defined as the extent to which a service meets customers' needs or expectations (Asubonteng, McCleary, & Swan, 1996). SQ is defined as a form of attitude, which could be related to satisfaction but not equivalent to it that results from a comparison of expectations with perceptions of performance (Parasuraman, Zeithaml, & Berry, 1988). Grönroos (1982) was one of the first to define the concept of SQ from consumers' perspective and termed it as Consumer Perceived Quality. He defines it as confirmation (or disconfirmation) of a consumer's expectations of service compared with the customer's perception of the service actually received. SQ is not just a corporate offering, but a competitive weapon which is necessary for corporate profitability and survival (Grönroos, 1990). SQ is important to students accommodation providers because as a result of the competition in the industry, student accommodation providers no longer compete only on cost but more importantly on quality of the accommodation service to students. SQ therefore becomes a key differentiator and a competitive advantage in the student accommodation industry as has been found to be a critical business requirement (Voss, 2003)

2.2 Service Quality in Students' Accommodation Contexts

Over the last two decades there have been several attempts by scholars to understand, evaluate and identify key factors that determine accommodation quality in different contexts such as hotels and motels accommodation. A review of existing literature indicates that, results from many previous studies identified different dimensions for service quality in different accommodation research contexts (Bitner, 1992; Choi and Chu, 2001; Clemes *et al.*, 2011; Lockyer, 2005; Tzeng *et al.*, 2002). Many of these previous studies were conducted in the hotel and motel accommodation sector and have identified critical dimensions such as physical environment, customer service, ambient factors, physical facilities, among others (Clemes *et al.*, 2011; Lockyer, 2005; Tzeng *et al.*, 2002). Thus, in the accommodation literature very little empirical studies have been published regarding student users evaluation of their accommodation quality in the student

accommodation context, especially in developing country context. The study hopes to fill this void by providing empirical evidence on student accommodation evaluation based on a proposed conceptual framework on students' accommodation quality in developing country context.

2.3 Dimensions of Student accommodation Quality

Most of such previous studies in the SQ and in particular in the hotel service contexts have been based on the popular service quality model proposed by Parasuraman et al. (1988), known as the SERVQUAL. While the SERVQUAL has been found useful it has been criticized in its applicability and generalizability in many research context. Therefore, in understanding SQ dimensions in student accommodation context, the paper draws on conceptualization of the service product and its components (Edvardsson, 2005; Lovelock and Wirtz, 2007). Normann (1991) and Grönroos (1990) have that it that the service product could be classified into core service products and supplementary service elements. Normann (1991 p. 46) has it that “the core service is the basic reason for a firm to be in the market. It represents the firm’s basic competency in creating value with and for the client. It represents a complex set of benefits which may be difficult to analyze because some are physical, some are psychological and others are emotional” (Normann, 1991 p. 46). Core service is that part of the entire service offering that is supposed to meet the most basic purpose for providing the service.

In the context of student hostel or hall of residence accommodation, the core service refers to the most basic reason for renting a student accommodation for a time period. Thus, the core service will include such things as, bedroom, toilet, and bath facilities since these appear to be so basic that a student seeking hostel accommodation to rent would have to consider them probably first.

Apart from the core service, the service product also consist of other supplementary services (Lovelock & Wirtz, 2007). Supplementary Services have been variously described as auxiliary services by Gronroos (1990) and peripheral by Normann (1991). They draw a distinction between marketing of services - in which a service itself is a core product - and marketing through services i.e. supplementary or customer services which may include logistics services, advice, installation, and upgrades. It relates to the additional benefits that the customer receives from the service. Grönroos (1990) further subdivides supplementary or peripheral services into enabling (facilitating) and enhancing (supporting) services. Facilitating services (and goods) are those which are necessary for the core service to take place. Supporting services (and goods) do not facilitate the delivery of the core service but create added value for the client.

In the context of student hostel or hall of residence accommodation, facilitating or enabling services of supplementary services that are necessary for sound accommodation could include utility facilities (e.g. water, electricity, etc.), security, rules and regulations, among others.

Supporting services, on the other hand, may include such value added services desirable at student hostel or hall accommodation like Junior Common Room, entertainment hall/facility, reading room, library, ease of transportation to lectures, garage, among other things. Supporting services are only desirable if they are available but may not be the most important in renting of student accommodation.

Apart from the core and supplementary aspects of student accommodation quality, the cost of the accommodation and the perceived overall quality could be important factors for evaluation of SAQ. In many service provision context, the price or cost paid by customers or users in acquiring a service in general, and the accommodation service in particular has long being found to be an important quality factor in product/service evaluation (Cronin et al., 2000; Gera, 2011; Nimako, 2012). The monetary and searching costs, among other costs, may affect students' choice and evaluation of the quality of the accommodation. Where students pay more, they are more likely to expect better accommodation service quality provision that those who pay less. Therefore, the conceptual framework for understanding SAQ in this study included core and supplementary services, cost and overall quality of student hostel or hall accommodation.

2.4 Conceptual Framework for the study

The conceptual framework for this study is depicted in Figure 1. It indicates the areas or dimensions of student accommodation quality for which student evaluation was measured. Thus, students' evaluation of SAQ was measured in five dimensions, namely: core facility, enabling facility, supporting facility, cost and overall quality. The framework depicts the influence of the type of institution and the type of accommodation on the students' evaluation of accommodation quality that is being investigated in this paper.

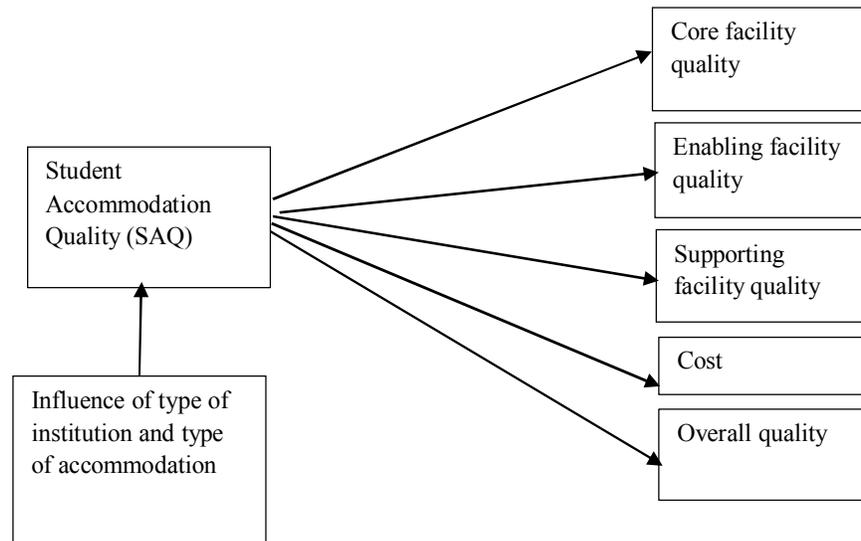


Figure. 1 Conceptual Framework for the study

3. Methodology

3.1 Population and research context

The population consisted of students of two public higher institutions in Ghana, being College of Technology Education, Kumasi Campus of the University of Education, Winneba (COLTEK) and Kumasi Polytechnic (K-Poly). The University of Education, Winneba (UEW) is a Ghanaian public university established in 1992 and mandated to train professional teachers for all levels of education in the country. Currently, it has four main campuses located at Winneba, Kumasi, Asante-Mampong, and Ajumako respectively. The mission of the University is to train competent professional teachers for all levels of education as well as conduct research, disseminate knowledge and contribute to educational policy and development. The vision of the University is to be an internationally reputable institution for teacher education and research. Kumasi Polytechnic is one of the famous Polytechnics in Ghana. It is located at the Garden City of West Africa, the capital city of the Ashanti Region of Ghana (Kumasi). The Polytechnic, known earlier as Kumasi Technical Institute, was established in 1954, but started actual teaching and learning in 1955, dealing mainly with craft courses. It became a Polytechnic on 30th October, 1963 and from then on concentrated on Technician and a few Diploma Programmes. Additionally, a few professional courses were offered. Following the enactment of the Polytechnic Law 1992, PNDC Law 321, Kumasi Polytechnic ceased to exist in its previous form and became a tertiary institution. The Kumasi polytechnic has since 1993 has expanded from three Faculties and one Centre in 2009/2010 to six Faculties, one school and two Institutes in the 2010/2011 academic year.

3.2 Sampling and Data Collection

A convenient sample size of 700 respondents was chosen for the study, being 350 students from each of the two institutions. In order to collect data of high quality that reflect customers' opinion, a survey was conducted from the two institutions. To improve representativeness, data were collected from users of residential and non-residential student accommodation types. Out of the 700 questionnaire administered, a usable 466 were obtained representing 66.57% response rate for analysis. Out of the 466, 231 were obtained from COLTEK, while 235 were obtained from K-POLY constituting 49.57% and 50.43% respectively. Data were collected in September 2012 during the second semester of the 2012/2013 academic year.

3.3 Research Instrument

A self-administered, structured questionnaire was developed based on feedback from preliminary focus group interviews and the literature reviewed. The instrument was pre-tested to a sample of twenty (10) students for refinement in order to get a more effective instrument. It was finally administered to the target population through personal contact by researchers for nearly two weeks in student hostels and on-campus halls of residence. Respondents were asked to rate the quality of accommodation condition on a six point performance scale, ranging from very poor, poor, fair, good, very good, and excellent, coded 1 to 6 respectively. Moreover, the questionnaire items contained several sections as it was used for a larger study. It also contained a section for demographic variables (gender, age, education, income, marital status, student accommodation type), and a section for items of evaluation for the five dimensions of SAQ identified namely: core facility, enabling facility, supporting facility, cost and overall quality. The measurement items for the five dimensions of SAQ had 18 items that are depicted in Table 2. For the validity and reliability of the instrument, the face and content validity were verified and established by two experts in research methodology. The Cronbach alpha reliability for all the 18 items were generated using SPSS 16.0; it produced a value of 0.888, which is above the recommended minimum of 0.7 (Straub, *et al.*, 2004).

3.4 Data analysis methods

All responses from the structured questionnaire were analysed using SPSS 16.0. Descriptive statistics (frequency, mean and standard deviation) were used to rank the items of SAQ. Moreover, One sample t-test method was used to determine significance of the mean ratings to ascertain favourable and unfavourable evaluation for each item of SAQ. Finally, since the data did not meet the assumptions of parametric data analysis (e.g. ANOVA and independent sample test), Kruskal-Wallis ANOVA method was used instead of ANOVA or Independent sample test to determine whether significant differences exist in student evaluation of SAQ in the two institutions and for residential and non-residential student accommodation.

A detailed description of procedure for interpreting the one-sample t-test results is presented. For the one-sample t-test, a significant level of 0.05 was pre-determined, and a hypothetical mean of four was chosen as it could be used as an indicator of rating for *agreement* or favourable evaluation for each item of SAQ measured by the questionnaire. A rating of one, two or three indicates *no agreement* or unfavourable quality evaluation. The mean differences (Mean df) refer to the differences between the hypothetical mean (4) and the mean ratings for each item. A negative mean difference implies that the mean rating of an item is less than the hypothetical mean of four, while a positive mean difference implies that the mean rating of an item is greater than the hypothetical mean of four. The significance values (p-values) for each item show whether the negative or positive mean differences are significant or not. A negative mean difference that is significant indicates that the mean rating for that item is significantly less than the hypothetical mean, which implies there is no significantly favourable evaluation of the SAQ item. Conversely, a negative mean difference that is not significant indicates that the mean rating is equal to the hypothetical mean, which implies that there is at least some significantly favourable perception. A positive mean difference that is significant indicates that the mean rating for the item is significantly greater than the hypothetical mean,

implying that there is significantly favourable evaluation of SAQ for the item. A positive but non-significant mean difference indicates that there is at least some significantly favourable perception for the item.

4. Results

4.1 Respondents' characteristics

The characteristics of the respondents are presented in Table 1.

Table 1 Respondents' characteristics

Variable	Category	No.	%
Gender	Male	285	61.2
	Female	181	38.8
Age group (years)	Below 20 years	10	2.1
	20-35 years	432	92.7
	36-45 years	20	4.3
	45+	4	0.9
Education	Diploma	186	39.9
	Bachelor	269	57.7
	Masters	11	2.3
Marital status	Single	418	89.7
	Married	48	10.3
Accommodation type	Residential	156	33.5
	Non-residential	310	66.5
Type of institution	COLTEK	231	49.57
	K-POLY	235	50.43

For the characteristics of the respondents, in terms of gender, 61.2% of the respondents were males and 38.8% were females. 2.1% were below 20 years, 92.7% of the respondents were within the ages of 20-35 years, 4.3% were between 36 and 45 years, and 0.9% were 45 years and above. This implies that majority of them were in the economically active population. All respondents were educated with about 39.9% of them pursuing Diploma programmes, 57.7% of them pursuing bachelor's degree, and 2.3% pursuing master's degree programmes. In terms of marital status, 89.7% of them were singles, who were not married while 10.3% of them were married. Generally, this depicts that most of them respondents were young bachelors and spinsters who are preparing for responsible family life. In terms of accommodation type, 66.5% were using non-residential student accommodation facility, notably private hostels, while 33.5% were using residential student accommodation, notably halls of residence on campus. The greater percentage of non-residential students is a reflection of the existing situation in Ghana where majority of the tertiary students had to choose non-residential accommodation because of inadequate residential campus accommodation. Out of the 466 respondents, 231 were obtained from COLTEK, while 235 were obtained from K-POLY constituting 49.57% and 50.43% respectively.

4.2 Overall rating and differences between Institutions

The results of student accommodation quality evaluation within each institution is presented in Table 2. It shows the ranking of the items of SAQ based on the mean rating. It also shows the one-sample t-test indicating the significance of the means for judging whether the items of SAQ received significantly favourable or unfavourable rating. Finally, the table depicts the analysis of the differences between the ratings of SAQ items in the two higher institutions.

Rank	Item of	Full Sample			One-Sample Test (df = 465)		Sub-groups		Kruskal-Wallis ANOVA		
		Mean	Standard deviation (SD)	t	Sign.	Mean df	COLTEK Mean Rank	K-POLY Mean Rank	X ²	df	Sig.
1 st	Electricity/light	4.39	1.79	4.74	0.00	0.39	211.42	255.20	12.739	1	0.00*
2 nd	Distance to lecture	4.34	1.76	4.18	0.00	0.34	225.08	241.78	1.843	1	0.175
3 rd	Overall quality	4.32	1.65	4.17	0.00	0.32	243.08	224.11	2.383	1	0.123
4 th	Enjoying hostel	4.15	1.64	2.04	0.04	0.15	250.37	216.92	7.455	1	0.006*
5 th	Water supply	4.14	1.93	1.56	0.12	0.14	235.50	231.53	0.105	1	0.746
6 th	Bed room facility	3.93	1.78	-0.83	0.41	-0.07	249.72	217.56	6.884	1	0.009*
7 th	Rules and regulations	3.88	1.47	-1.70	0.09	-0.12	232.20	234.78	0.045	1	0.832
8 th	Physical environment	3.88	1.74	-1.52	0.13	-0.12	242.98	224.18	2.346	1	0.126
9 th	Bath room facility	3.81	1.72	-2.42	0.02	-0.19	248.83	218.43	6.117	1	0.013*
10 th	Access to transport	3.71	1.83	-3.39	0.00	-0.29	215.52	251.17	8.396	1	0.004*
11 th	Toilet facility	3.50	1.90	-5.72	0.00	-0.50	248.21	219.04	5.616	1	0.018*
12 th	Security facility	3.40	1.80	-7.19	0.00	-0.60	215.50	251.19	8.440	1	0.004*
13 th	Kitchen facility	3.24	1.82	-9.06	0.00	-0.76	224.00	242.84	2.350	1	0.125
14 th	Entertainment	2.97	1.70	-13.00	0.00	-1.03	229.83	237.11	0.356	1	0.551
15 th	Reading room facility	2.95	1.87	-12.15	0.00	-1.05	228.95	237.98	0.551	1	0.458
16 th	Garage facility	2.62	1.69	-17.63	0.00	-1.38	218.77	247.97	5.998	1	0.014*
17 th	Accommodation fees	2.34	0.97	-36.90	0.00	-1.66	209.59	257.59	16.779	1	0.000*
18 th	Searching cost	2.29	1.33	-27.89	0.00	-1.71	235.77	231.27	0.143	1	0.705

Table 2: Overall rating and differences between groups of institutions

* p-value is significant at 0.05. Scale: 1 – Very poor, 2 – Poor, 3 – Fair, 4 – Good, 5 – Very good, 6 - Excellent

First of all, a look at the descriptive analysis in Table 2 shows that, the first to fourth ranked items received a significantly more favourable rating among the students. These items are first provision of light ($\bar{x} = 4.39$ SD = 1.79, mean df = 0.39 p = 0.00), distance to lectures ($\bar{x} = 4.34$, SD = 1.76 mean df = 0.34 p = 0.00), overall quality of the accommodation ($\bar{x} = 4.32$, SD = 1.65 mean df = 0.32 p = 0.00) and how student tenants enjoyed their accommodation ($\bar{x} = 4.15$, SD = 1.64 mean df = 0.15 p = 0.04) respectively. The fifth, sixth, seventh and eighth items of SAQ received at least significantly favourable (good) evaluation from the students with either an insignificantly positive or negative mean difference. These items are water supply ($\bar{x} = 4.14$, SD = 1.93 mean df = 0.14, p = 0.12), bed room facility ($\bar{x} = 3.93$, SD = 1.78 mean df = -0.07 p = 0.41), Rules and regulation, ($\bar{x} = 3.88$ SD = 1.47, mean df = -0.12 p = 0.09), and physical environment of accommodation ($\bar{x} = 3.88$, SD = 1.74 mean df = -0.12 p = 0.13). The rest of the items, being the ninth, tenth to the eighteenth item of SAQ had significantly negative mean differences implying that these items received significantly lower or unfavourable rating by the respondents. These items are Bath room facility, ($\bar{x} = 3.81$, SD = 1.72, mean df = -0.19, p = 0.02), Access to transport, ($\bar{x} = 3.71$, SD = 1.83, mean df = -0.29, p = 0.00), Toilet facility, ($\bar{x} = 3.50$, SD = 1.90, mean df = -0.50, p = 0.00), Security ($\bar{x} = 3.40$, SD = 1.80, mean df = -0.60, p = 0.00), Kitchen facility, ($\bar{x} = 3.24$, SD = 1.82, mean df = -0.76, p = 0.00), Entertainment, ($\bar{x} = 2.97$, SD = 1.70, mean df = -1.03, p = 0.00), Reading room facility ($\bar{x} = 2.95$, SD = 1.87, mean df = -1.05, p = 0.00), Garage facility ($\bar{x} = 2.62$, SD = 1.69, mean df = -1.38, p = 0.00), Accommodation fees, ($\bar{x} = 2.34$, SD = 0.97, mean df = -1.66, p = 0.00), and Searching cost ($\bar{x} = 2.29$, SD = 1.33, mean df = -1.71, p = 0.00).

Secondly, the results of the Kruskal-Wallis ANOVA test show that respondents from COTELK and K-POLY differ in their rating of SAQ in nine items. Out of the nine, students from COLTEK rated four items more favourable/better than K-POLY, which are enjoying hostel (COLTEK, mean rank = 250.37, K-POLY, mean rank = 216.92, p = 0.006), bedroom facility, (COLTEK, mean rank = 249.72, K-POLY, mean rank = 217.56, p = 0.009), Bathroom facility (COLTEK, mean rank = 248.83, K-POLY, mean rank = 218.43, p = 0.013), and Toilet facility (COLTEK, mean rank = 248.21, K-POLY, mean rank = 219.04, p = 0.018).

Furthermore, out of the nine items of SAQ, students from K-POLY rated five items more favourable/better than COLTEK, which are Electricity/light (K-POLY, mean rank = 255.20, COLTEK, mean rank = 211.42, p = 0.00) Access to transport (K-POLY, mean rank 251.17, COLTEK, mean rank = 215.52, p = 0.004), Security (K-POLY, mean rank = 251.19, COLTEK, mean rank = 215.50, p = 0.004), Garage facility (K-POLY, mean rank = 247.97, COLTEK, mean rank = 218.77, p = 0.014), and Accommodation fees, (K-POLY, mean rank = 257.59, COLTEK, mean rank = 209.59).

Moreover, the two institutions rated the remaining nine items significantly similarly (p \geq 0.05). these SAQ items are Distance to lecture (COLTEK, mean rank = 225.08, K-POLY, mean rank = 241.78, p = 0.175), Overall quality (COLTEK, mean rank = 243.08, K-POLY, mean rank = 224.11, p = 0.123), Water supply (COLTEK, mean rank = 235.50, K-POLY, mean rank = 231.53, p = 0.746), Rules and regulations (COLTEK, mean rank = 232.20, K-POLY, mean rank = 234.78, p = 0.832), Physical environment (COLTEK, mean rank = 242.98, K-POLY, mean rank = 224.18, p = 0.126), Kitchen facility (COLTEK, mean rank = 224.00, K-POLY, mean rank = 242.84, p = 0.125), Entertainment (COLTEK, mean rank = 229.83, K-POLY, mean rank = 237.11 p = 0.551), Reading room facility (COLTEK, mean rank = 228.95, K-POLY, mean rank = 237.98, p = 0.458), and Searching cost (COLTEK, mean rank = 235.77, K-POLY, mean rank = 231.27, p = 0.705).

4.3 Differences in residential and non-residential accommodation quality

The results of student accommodation quality evaluation between residential and non-residential are presented in Table 3. Out of the eighteen items there were significant differences in eight items. First of all, a look at the analysis in Table 3 shows that, the second and the fourteenth items of the SAQ items received significantly more favourable ratings among the residential students than the non-Residential. These items are first, the distance to lecture (Residential, mean rank = 300.47, Non-Residential, mean rank = 199.80, $p = 0.000$), and Entertainment (Residential, mean rank = 267.85, Non-residential= 216.22, $p = 0.000$). For the remaining six SAQ items, the Non-residential respondents rated them better than their residential counterparts. These items are Overall quality (Non-residential, mean rank = 243.84, Residential, mean rank = 212.96, $p = 0.018$), Enjoying accommodation (Non-residential, mean rank 243.74, Residential, mean rank= 213.15 $p = 0.018$), Water supply (Non-residential, mean rank = 252.32, Residential, mean rank = 196.11, $p = 0.000$), Bedroom facility (Non-residential, mean rank = 259.07, Residential, mean rank = 182.68, $p = 0.000$), Bath room facility (Non-residential, mean rank = 255.40, Residential, mean rank = 189.97 $p = 0.000$), and Toilet facility, (Non-residential, mean rank = 255.99, Residential, mean rank = 188.81 $p = 0.000$).

There were no significant differences in the ratings for the remaining ten items, implying that these items received significantly similar ratings by the respondents ($p \geq 0.05$). These items are first, Electricity/light (Residential, mean rank = 232.43, Non-residential, mean rank = 234.04, $p = 0.901$), Rules and regulations (Residential, mean rank = 231.45, Non-residential= 234.53, $p = 0.811$), Physical environment (Residential, mean rank = 220.47, Non-residential, mean rank = 240.06, $p = 0.132$), Access to transport (Residential, mean rank = 238.56, Non-residential, 230.95, $p = 0.560$), Security (Residential, mean rank = 235.44, Non-residential, mean rank = 232.52, $p = 0.823$), Kitchen facility (Residential, mean rank = 226.11, Non-residential= 237.22, $p = 0.393$), Reading room facility (Residential, mean rank = 240.63, Non-residential, mean rank = 229.91, $p = 0.405$), Garage facility (Residential, mean rank = 242.13, Non-Residential, mean rank = 229.16, $p = 0.304$), Accommodation fees (Residential, mean rank = 239.84, Non-residential, mean rank = 230.31, $p = 0.448$) and Searching cost (Residential, mean rank = 228.08, Non-residential, mean rank = 236.23, $p = 0.518$).

Ranking	Item of	Residential	Non-Residential	Difference between sub-groups		
		n = 156	n = 310	Kruskal-Wallis ANOVA		
		Mean rank	Mean rank	X ²	df	Sign.
1	Light/Electricity	232.43	234.04	0.015	1	0.901
2	The distance to lecture	300.47	199.80	59.665	1	0.000*
3	Overall quality	212.96	243.84	5.636	1	0.018*
4	Enjoying accommodation	213.15	243.74	5.555	1	0.018*
5	Water supply	196.11	252.32	18.652	1	0.000*
6	Bed room facility	182.68	259.07	34.610	1	0.000*
7	Rules and regulations	231.45	234.53	0.057	1	0.811
8	Physical environment	220.47	240.06	2.267	1	0.132
9	Bath room facility	189.97	255.40	25.243	1	0.000*
10	Access to transport	238.56	230.95	0.340	1	0.560
11	Toilet facility	188.81	255.99	26.525	1	0.000*
12	Security facility	235.44	232.52	0.050	1	0.823
13	Kitchen facility	226.11	237.22	0.729	1	0.393
14	Entertainment	267.85	216.22	15.973	1	0.000*
15	Reading room facility	240.63	229.91	0.692	1	0.405
16	Garage facility	242.13	229.16	1.055	1	0.304
17	Accommodation Fees	239.84	230.31	0.575	1	0.448
18	Searching cost	228.08	236.23	0.419	1	0.518

5. Discussion and Implications of Results

5.1 Favourable and unfavourable SAQ conditions

Based on the data analysis, the study found that the following SAQ items received favourable or better rating: provision of light, distance to lectures, overall quality of the accommodation, and how student tenants

enjoyed their accommodation, overall quality of the accommodation. These are followed by water supply, bed room facility, rules and regulation, and physical environment of accommodation. The rest of the items, item of SAQ items received significantly unfavourable rating, namely, bath room facility, access to transport, toilet facility, security, kitchen facility, entertainment, reading room facility, garage facility, accommodation fees and searching cost. Unfavourable accommodation quality could raise a lot of complaints from students that may pose challenge to their academic work (Crie, 2003).

We make the following recommendations towards improving the SAQ condition in these two institutions, especially in the areas that received unfavourable rating from the respondents.

1. The management of student accommodation and hostel providers for the two educational institutions should ensure that the SAQ items that received unfavourable evaluation are significantly improved in accordance with the requirements and standards of accommodation facility conditions for student accommodation laid down in the prescribed regulations.
2. There should be periodic inspection and monitoring of student accommodation condition existing in student residence on campus and off-campus by school management to ensure that hostel providers are putting in place the appropriate student accommodation facilities and keeping to the require standard or condition.
3. There should also be several feedback outlets or mechanisms for taking students complaints and concerns regarding their accommodation conditions.
4. There should be periodic meeting of hostel providers and management of the higher institutions to discuss pertinent issues affecting their delivery of quality student accommodation services as well as the concerns about how to improve facility quality for students in residential and non-residential accommodation.

5.2 Differences in accommodation condition between the two institutions

The results of the study also show that some differences exist in the rating of SAQ in nine items between the respondents in the two institutions. Students from COLTEK seem to have a more favourable/better SAQ than K-Poly in areas such as enjoying hostel, bedroom facility, Bathroom facility and Toilet facility. On the other hand, out of the nine items of SAQ, students from K-Poly seem to have more favourable/better SAQ than COLTEK in areas such as electricity/light, access to transport, security, garage facility and accommodation fees. SAQ conditions seem to be similar in the two institution in areas such distance to lecture, overall quality, water supply, rules and regulations, physical environment, kitchen facility, entertainment, reading room facility and searching cost. These findings imply that students at COLTEK seem to be better in terms of SAQ in core facility quality, while those at K-Poly seem to have better cost of in terms of accommodation cost, and some facilitating and support facilities.

5.3 Differences in residential and non-residential accommodation quality

The results of the study show that residential SAQ seems to be better than non-residential in terms of the distance to lecture and Entertainment. The explanation is that residential accommodation tend to be built on campuses of tertiary institutions in Ghana and elsewhere in West Africa, therefore, in terms of distance to lecture it is expected that students would find it closer to lecture than the non-residential accommodation that tend to be situated away from the main campuses of tertiary institution in Ghana. Again, it appears that entertainment for students on campus tend to be better organised and supervised by student groups due to the collectivist perception than non-residential accommodation where student residents tend to be more individualist oriented. In this case, many of the non-residential students either go for entertainment

programmes organised on-campus or they go outside campus to nearby cities for their own entertainment arrangements.

The study found that non-residential SAQ appears to be better than residential SAQ in areas such as overall quality, enjoying accommodation, and the core facilities such as water supply, bedroom facility, bath room facility and toilet facility. This picture is probably as a result of the fact that non-residential accommodation providers want to remain competitive (Grönroos, 1990), and as private individuals who may want to ensure high quality in core or basic facilities in order to attract more student residents or charge high accommodation fees. Aside this, in Ghana, non-residential students are expected in their various hostels to do the cleaning and scrubbing themselves while for residential accommodation labourers are hired to do the cleaning for students. It might be that hired cleaners do not seem to do the cleaning of bathrooms, toilet and the environment as expected, and therefore, this may account for the poor rating of residential students for core quality of their accommodation.

Moreover, the results indicate that residential and non-residential accommodation quality did not differ in many areas such as provision of electricity/light, rules and regulations, physical environment, access to transport, security, kitchen facility, reading room facility, garage facility, accommodation fees, and searching cost.

6. Conclusion and Limitations

The aim of the study was to examine students' evaluation of their accommodation quality in two public tertiary institutions in Ghana. The paper concludes that the management of the two tertiary institutions should ensure that SAQ items that received unfavourable rating should be improved considerably and that management should put in efforts to do a periodic monitoring of existing SAQ condition at various student accommodation facilities provided by private hostel developers. While the implications of the study can be learned by other practitioners and scholars in similar context, the findings reported in this paper are limited to the specific context of COLTEK and K-Poly. Therefore, it is cautioned that generalisation of the findings may not be applicable to other universities in Ghana or even the other campuses of UEW.

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