

The Impact of Accommodation Location on Students Performance in General Chemistry at the Copperbelt University

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Abstract: - The purpose of the study was “to investigate the impact of accommodation location on student’s performance in General Chemistry at the Copperbelt University.” The study objectives were; To investigate the ratio between the accommodated students and non-accommodated for CH110 students in the school of mathematics and natural sciences for each intake, To identify where students not accommodated on campus stay, To compare the performance of the students on campus to those outside campus in General Chemistry. This study was a cross sectional survey design using both quantitative and qualitative methods to collect data from the school of mathematics and natural sciences, lists of students who were accommodated in 2015 and 2016 on campus from the accommodation department and answers from students through the questionnaire use. The two variables were; accommodation location (independent) and academic performance (dependent). The sample (781) was drawn from the Copperbelt University a place which is in Kitwe district of the copperbelt province. Data was gathered using a questionnaire and later analyzed using both descriptive and inferential statistics of Analysis of the t-test. The results collected for 2015 and 2016 intake were analyzed using the SPSS version 23. The findings suggested that “there is no significant relationship between students accommodation location and their academic performance” because the sample independent test value of significant was greater than the p value of 0.05. The recommendations were that the university should build more hostels, given allowance to outside accommodated students and set the timetable that favors them.

I. INTRODUCTION

Students’ accommodation has been identified as one of the essential components of tertiary institutions. The availability of accommodation for students enables tertiary institutions to attract large number of students of different nationalities and backgrounds to pursue higher education (Kolawole & Boluwatife, 2016).

Background of the Study

The Copperbelt University is considered to be the second highest institution of learning in Zambia and offers many programmes to students from all parts of Africa. The university has about 15000 students with an average enrolment of 2500 number of students in all the programmes compared to the average number of students who graduate every year from the time it started operating. The male and

female blocks are in the ratios 3:1 translating into the proportions of 75% and 25%.

The current problem at the Copperbelt University is the shortage of accommodation for both male and female students. This problem of accommodation at the institution has affected the students’ performance at all level (first years to fourth or fifth year).

Adriane (2007), explained that students residing on campus are attributable to factors such as closer proximities to classrooms of learning, easy accessibility to libraries, campus wide internet connectivity, quick laundry services, social interaction with fellow hall residents, greater bonding opportunities, participation in university social activities, sporting arenas for relaxation, and many more which off campus students might not be privilege to experience in a greater sense.

Statement of the Problem

Performance in public universities is something which everyone expects to be of higher quality because of the roles the sector plays to provide services to the students in relation to quality lecturing and skills provided in CH110. Accommodation location plays a critical role in ensuring that the given services are well cemented when students are by the rooms or hostels. Those who fail to perform better according to the university regulations, are told to carry the course. For this reason, the researcher will try to explain other researches done before, and to research how accommodation location plays a vital role in ensuring that the CH110 concepts are fully understood by the students.

CH110 is one of the courses in the School of Mathematics and Natural Sciences which has showed high fail rate despite its importance, greatness of practical and great lecturers attached to it.

The shortage of accommodation leave students with no choice but to find accommodation outside and this denies them facilities such as closer proximities to classrooms of learning, easy accessibility to libraries, campus wide internet connectivity, quick laundry services, social interaction with fellow hall residents, greater bonding opportunities, participation in university social activities, sporting arenas for

relaxation, and many more which off campus students might not be privileged to experience in a greater sense.

Objectives of the Study

- To investigate the impact of students' accommodation location on their academic performances in General chemistry
- To investigate the ratio between the accommodated students and non-accommodated for CH110 students in the school of mathematics and natural sciences for each intake
- To identify where students not accommodated on campus stay.
- To compare the performance of the students on campus to those outside campus in General Chemistry
- To suggest ways in which learners outside the campus can be made to fully have access to facilities that students accommodated on campus have access to.

Research Questions

- What is the impact of students' accommodation location on their academic performances in General chemistry?
- What is the ratio between the accommodated students and non-accommodated for CH110 students in the school of mathematics and natural sciences for each intake?
- Where do stay if they are not accommodated on the university campus?
- How the performance of students on campus is compared to those outside campus in General Chemistry?

Hypothesis

- **H₀**: There is no significant relationship between students' accommodation location on their academic performance
- **H₁**: There is a significant relationship between students 'accommodation location on their academic performance

Significance of the Study

The study will be beneficial to the following individuals

- (a) *The Student*: the findings and recommendation of the study will informed students and help them to understand the impact of how accommodation location affects students' performance at any institution of learning which has the similar standards and conditions like the copperbelt university.
- (b) *The Lecturers*: this study will help the lecturers to identify student who are residing outside the campus and know how they can frame the timetable to help both(inside and outside accommodated) students. The table should not have too early classes and late

classes because it will make students from outside to go to their boarding houses late or to be late to class.

- (c) *The Parents*: parents will benefit from the knowledge of accommodation location because it will help them to know the price range of boarding houses and their location as they plan for their child's accommodation outside the Copperbelt University. In addition, students will be helped in knowing the areas outside the campus that students occupy if not accommodated on campus before they start looking for outside accommodation
- (d) *The Government and University Authority*: the s authority will be encouraged to pay more attention how accommodation location affects students' academic performance. Pro-active measures which may include enacting building of hostels for the university and introduce the boarding house allowance to students who are not accommodated on campus. This will benefit the university on knowing how to help students not accommodated on campus to have full access to university facilities.
- (e) *The Society*: this study will create awareness of the presence of students in the areas they reside. This will make the community to see value and to help the students in the manner they can.

II. LITERATURE REVIEW

In a study conducted by (Araujo and Murray) 2010 they concluded that the advantages of staying on campus tend to improve student performance. The result reveals that being on campus could have a positive impact on academic performance of students during their time of academic period. Bowman, Robert L, Partin, Kenneth E (1993) in their study also revealed that residing on campus for a new student tend to make them more progressive in academics with higher performance. By focusing on areas of reading comprehension, critical rational and mathematics, Ahmad Sanusi Hassan (2012), observed also that new students who lived on campus, experienced greater improvement more than students that stay off-campus.

Allen et al.(2007) concluded that in dormitories student's persistent interaction and connection with the institution's local community improve their tendency to have improved learning outcomes. However, other researchers have a deviation to some of these above researches. Joseph Mhiliwa (2005) explained that some students living outside the campus perform better than those in campus. He also found out that students living outside the campus with close walking distance to the institution also perform better than those living on campus. Also, a study conducted by Bowman and Partin (2013) on the influence of student residency on academic performance concluded that there is a big significant influence on residency location of students on their academic performance respective of where the students live either on campus or outside the campus.

Ratio between the Accommodated Students and Non-Accommodated for CH110 Students in the School of Mathematics and Natural Sciences for Each Intake

The ratio of students accommodated on campus to off campus depends on the hostels the college or university has. In most cases the students accommodated outside are more than the students accommodated on campus. According to Somen & Somen (2013) the rental expenses plays a vital role among students when making a choice whether to reside off the campus. Muslim, Karim & Abdullah (2012) explained that the majority of the students' population rent accommodation on the outside. Off-campus living opportunities that are closer to campus generally are more expensive (Li, Sheely, & Whalen, 2005). According to Jabar, Yahya, Isnani, & Abu (2012) for those who are accommodated outside need to rent a house and look for housemates in order to save cost.. Non-residence students will have a lack of advantages as they need to share with other colleagues and stay at inconvenient places (Jabar et al, 2012). Muslim et al (2012) believe that by living off-campus, students are required to live in a family housing such as apartment, condominium, terrace, semi-detached and detached-house.

Where Students Not Accommodated On Campus Stay

Like stated above the Copperbelt University is in the Riverside area of Kitwe district. The neighboring townships of Riverside area are; Chipata Compound, Kwacha, Kwacha East, Bulangililo, Nkana East, Parklands, Zambia Compound and Musonda Compound. On average the distance to these places is 2.5 Kilometers from the Copperbelt University and the average cost of transport on public vehicles is K6 to be dropped off by the station which needs an average time of 10 minutes to reach the lecture rooms. These townships are the areas where students reside if not accommodated on campus. This translates into the following issues:

- Students residing from outside the campus cover on average of 5 Kilometers on movements to and from Copperbelt University
- A student needs about K12 per day for food which translates into K200 per month
- Other expenses on food to stay on campus up to the time classes will end are not calculated but on average K10 is used per day

The cheapest areas where students find accommodations are Chipata Compound, Zambia Compound and Musonda Compound because in these areas rooms are rented at K450 per month. Kwacha, Kwacha East and Bulangililo rooms are rented at K450 per month while Riverside and Parklands bed spaces are rented at K750 per month.

Performance of the Students on Campus to Those Outside Campus In General Chemistry

Results of previous studies on the effect of accommodation on students' academic performance are somewhat mixed. Thompson, Samiratedu, & Rafter, (1993) examined the effects

of on-campus residence on first-time college students and found that freshman students who lived on campus had higher retention, a greater degree of academic progress, and higher academic performance. Agron, (1997) reported that studies in North America indicate that students in hall of residence had higher Grade Point Averages, higher retention of their grades, are able to take on more credit hours and had the ability to form connections with the faculty members on campus. They also had a higher propensity to be more involved in students' leadership and politics on campus. Nabaseruka, (1997) also indicated that accommodation has a significant effect on the academic performance of students and in schools where accommodation facilities were good, the performance of students was also high compared to schools where accommodation facilities were poor. Other studies also found evidence of an increase in cumulative GPAs of students who lived in on-campus housing than their counterparts in off-campus housing. This was because students who lived on campus were more able to benefit from the university provided resources such as computer and information technology, university clubs, exercise facilities, and other extra-curricular activities [Araujo & Murray, (2010); and Owolabi, (2015)].

Theoretical Framework

This study was also done by guru as cited in the literature review which argues that performance of students is better when the accommodation is inside the university. Other researchers further elaborated the theory of accommodation location as a key to the improved results of students. The Copperbelt University has the challenge of accommodation and most of the students end up being accommodated outside because the numbers of bed spaces are not enough. This drove the researcher to carry out the study in order to see what extent this has reached, to know how students survive if not accommodated on bus and to give suggestions based on the results found.

Conceptual framework

In this study, the dependent variable was academic performance and it was defined as observable manifestation of knowledge, skills, concepts and understanding ideas that makes a student to clear or pass General Chemistry. The Copperbelt University test the skill and knowledge acquired by students by preparing exams. The papers are marked by Copperbelt University and produce results.

In this context, therefore, academic performance obtained was measured by copperbelt senate. Accommodation location was defined as a place where boarding students reside. Accommodation was defined as ventilation of rooms, state of security, and lighting system in the rooms and the spacing in the rooms where students reside and enables them to do the studies. Accommodation was categorized into inside accommodation (students who stay within the copperbelt university campus) and outside accommodation (students who stay off the copperbelt university campus).

The accommodation location was connected to academic performance because it is an important tool that supports a student's performance. The location of the accommodation determines the facilities that a student will have access to. Those residing on campus have a lot of access to university facilities (near classes, near library, free internet etc.) compared to outside accommodated students who cover long distance to find classes. Most of the outside accommodated student performs well through motivation.

III. RESEARCH METHODOLOGY

The descriptive survey research design will be used in this study. The research intends to investigate if accommodation location has any impact on students' academic performance in General Chemistry for the Copperbelt University students. In a survey, the results for students between 2015 and 2016 were used to undertake the study. This meant that the researcher concentrated on collecting results from the school of mathematics and natural sciences for students who took General Chemistry (CH110) and these results were compared to the accommodation. Students who were accommodated and not accommodated had their results separated to analyze the difference in performance. All the Findings that were obtained from the analysis of students' performance were generalized to plan how students accommodated on campus differ to those living outside campus in terms of academic performance.

The research was made to target first years in the School of Mathematics and Natural Sciences who took General Chemistry between 2015 and 2016.

Data Collection and Instruments

The set of instruments that were used to collect the information consisted of the following.

Questionnaire

The questions were mostly close-ended questions but there were also a few open-ended questions to allow the respondents to express in their own words other factors that they believed might have influenced their choice of residential accommodation. The questionnaire was developed from the literature reviewed. The close-ended questions in the questionnaires sought the views of respondents on some statements about factors that could have influenced their choice of residential accommodation. Their views were captured on a 5-point likert scale with probability levels of 5= excellent, 2 = very good, 3 = good, 4-satisfactory 5 = unsatisfactory.

These well-structured questions were given to both students (on campus and outside campus students). The questionnaire was mostly meant to capture responses from the students in relation to the impact of their accommodation location on their academic performance. The answers provided were analyzed using qualitative descriptive analysis for qualitative information.

The mark schedules

The final exam results from the School of Mathematics and Natural Science for first years who took General Chemistry (CH110) for 2015 and 2016 were used to collect data of students' academic performance. The computer numbers were used to identify students who were accommodated within or outside campus for 2015 and 2016 from the lists of accommodated students which was provided by the accommodation department. The researcher then compared the similarities and differences in academic performance of students who lived on campus and those who lived off campus. In analyzing the data collected, Chi-square was used to see the comparison.

List of accommodated students

The accommodation list for sample of students who were accommodated on campus in the years 2015, 2016 and 2017 intakes will be collected from the accommodation department

Research design

Location of the study

The study was conducted at the Copperbelt University of Kitwe district in the Copperbelt Province, Zambia.

Target population and study sample and sampling procedure

Target population refers to the group of individuals from which a sample to use in the study will be taken. A good sample will have a characteristic of being a true representation of the all population. The study population and sample targeted all be the first years who studied General Chemistry (CH110) at CBU in 2015 and 2016 academic year.

Purposive sampling was used to collect the sample because of the reasons started below

- The years 2015 and 2016 are close and the data may be there in storage compared to years below 2015.
- The Lecturers who took first years in 2015 to 2016 may be available to assist with the information or data required.

Validity and reliability

Validity is the accuracy and meaningfulness of inference which were based on research results. In this study, the validity of the research findings of involved the use of more than one method. And this involved employing the questionnaire, collection of continuous assessments marks and final exam results. The questionnaire was used to obtain the actual feeling on what students consider better between outside or inside campus stay. Another method of validating is the collecting of results from different lecturers who taught students between 2015 and 2016.

Lastly, the approach employed varied with the students and years of study. The use of students between 2015 and 2016 gave a good sample and variety in understanding how accommodation location affects the academic performance.

According to Mulusa (1990), reliability is a measure of accuracy of the findings and suggests the truthfulness of the collected data whereas validity is the measure of acceptability that outcomes are likely to be adopted for similar cases or areas covering same domains. The researcher used questionnaire method to enhance instrument reliability.

Data analysis techniques

Data analysis is the systematic process or technique which describes and illustrates, condenses and remembers and evaluates data. Shamo and Resnik (2003) says these are various procedures which provides a way of drawing inductive inferences from data and distinguishing the phenomenon of interest and statistical fluctuations present in the data. Data analysis involves organizing what we have observed, heard and read, to make sense of the acquired knowledge. They maintain that, as one does so he/she categories, synthesizes, search for patterns and interprets the data collected. Bogdan & Biklen (1992) quoted from Athanas (2004) defined data analysis as a systematic process involving working with data, organizing and breaking them into manageable units. It is also concerned with synthesizing data, searching patterns, discovering what is important, what is to be learned and deciding what to tell others. In this study, data analysis continued throughout the data collection phase. Data analysis in this study took Kvale's (1992) approach which contends that, data analysis in interview needs to follow five steps, which are, categorization of meaning, condensation of meaning, structuring of meaning through narratives and interpretation of meaning.

Quantitative data was analyzed by using SPSS software package version 23 and Microsoft Excel because these perform a wide variety of statistical procedures.

Independent sample t-test was also done to test the level of degree of significance between the group means being compared at the 0.05 level of significance.

IV. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Data collection was done using the instruments

Questionnaire analysis

Questionnaires were used to capture the attitude of students toward the issue of living inside or outside. This was given in order to capture the challenges faced by the students living inside or outside campus

The questionnaires were given to two groups of students, the first set of hundred questionnaires were given to students residing on campus, and the other hundred were given to students living outside campus

The questionnaires were given to the 2018/2019 students from the School of Mathematics and Natural Sciences. To be specific the students who take CH110 were used in the study.

The data was collected and analyzed using the SPSS version 23.

The questions in the questionnaire were analyzed using the objectives stated in chapter one of the research.

Impact of students' accommodation location on their academic performances

The questionnaires response provided the following on how accommodation has an impact on academic performance.

- There is a big relationship between students' academic performance to accommodation location.
- Those who stay inside campus perform better than the students outside campus.
- This 100% of the students said that staying on campus is better than staying outside campus and the performance will be good if they are staying on campus than outside. The supporting reasons was that
 - Students on campus have classroom and library near them and more access to university facilities.

The ratio of accommodated students to non-accommodated at the Copperbelt University

The students accommodated on campus are less compared to students accommodated outside campus. The Copperbelt University has over 12000 students compared to 2187 hostels rooms on campus. Over 10000 students stay outside campus.

Areas where students stay if not accommodated on campus stay.

From the questionnaire's responses, 183 Students answered Riverside. 17 Students said Musonda Compound. The statistics responses revealed that riverside (91.5%) and Musonda Compound (8.5%). These two places were picked because riverside and musonda compound are near to the university. In addition, musonda compound has cheaper accommodation

Performance of the students on campus to those outside campus

107 stated that they can perform good if accommodated on campus while 93 students said excellent.

This meant that 100% of the students could perform well if accommodated inside than outside. The main reasons that were indicated for these choose of the answer were influenced by the classes being near, easy access to the internet of the university and easy access to the library materials. The responses on how students can perform if accommodated outside campus had a representation of 97% said unsatisfactory and 3% said good. This in conclusion shows that students on campus perform better than outside students accommodated students.

Ways in which learners outside the campus can be made to fully have access to facilities that students accommodated on campus have access to.

There are more challenges staying outside campus than being accommodated on campus. Students outside campus spend more money on water and electricity, transport, buying of bundles for internet, poor nutrition and less access to the university facilities.

The students from the questionnaire's responses gave the following suggestion

- The university through bursary should help outside accommodated students with extra allowance to help them pay for transport, rentals and bills (electricity and water)
- The university should come up with the mobile internet that can be allowing students from outside to have access to the internet if when they are not on campus.
- The university should build more hostels

4.2 Accommodation list analysis

The accommodation list for the intakes 2015, 2016 and 2017 were collected from the accommodation department. The lists were collected because the researcher wanted to know the first year students of CH110 who were accommodated on campus in the academic years stated above.

Table 4.0.0: shows the number of students who were accommodated on campus and off campus from the sample of 281 that was collected from 2015.

| Accommodation type | Number of students |
|--------------------|--------------------|
| Inside | 33 |
| Outside | 248 |
| Total | 281 |

The percentage of students who were accommodated on campus was 11.74% and those accommodated outside campus was 88.26%. This means that the ratio of students accommodated on campus to those accommodated outside was 2:15.

The table below shows the numbers of students who were accommodated on campus and those who were accommodated outside for the intake of 2016.

Table 4.0.1: ratios of students with respect to accommodation type

| Accommodation type | Number of students |
|--------------------|--------------------|
| Inside | 30 |
| Outside | 266 |
| Total | 296 |

The percentage of students who were accommodated on campus was 10.14% and those accommodated outside campus was 89.86%. This means that the ratio of students

accommodated on campus to those accommodated outside was 2:17.

The data collected from the sample of accommodation department, showed that from the 846 students who were sample from 2015, 2016 and 2017, 71 students from the total of 864 were accommodated on campus represented by a percentage of 8.22% compared to 91.78% of students who were accommodated outside campus.

The accommodation lists were compared to the list of final results for exams. This was meant to see how accommodation location influences the performance in CH110

4.3 Results

Final results for 2015, 2016, 2017 academic years for students who took Chemistry were collected. From 2015 intake 281 students were collected as sample, while in 2016 intake 296 students were collected as a sample and in 2017 intake 269 students were collected as a sample.

4.3.1 The CH110 results for 2015 were collected and analyzed in relation to the type of accommodation.

The results analysis of 33 students who were accommodated inside from the sample of 281 students collected.

Table 4.0.3: results analysis by grade and percentage

| GRADE | NUMBER OF STUDENTS | PERCENTAGE REPRESENTATION |
|-------|--------------------|---------------------------|
| A | 0 | 0.00% |
| A+ | 0 | 0.00% |
| B | 4 | 12.12% |
| B+ | 2 | 6.06% |
| C | 15 | 45.45% |
| C+ | 8 | 24.24% |
| D | 4 | 12.12% |
| Total | 33 students | 100% |

The table above for 33 students who were accommodated from the sample of 281 that were collected from the 2015 intake showed the following.

- 4 students failed representing a fail rate of 12.12%.
- 29 students passed CH110 and this was presented by 88.8%.
- The difference between those who failed and those who passed was 76.68.
- The performance was good because almost 90% of the accommodated students cleared or passed the CH110.

The bar chart for shows the performance of inside students in relation to grades distribution

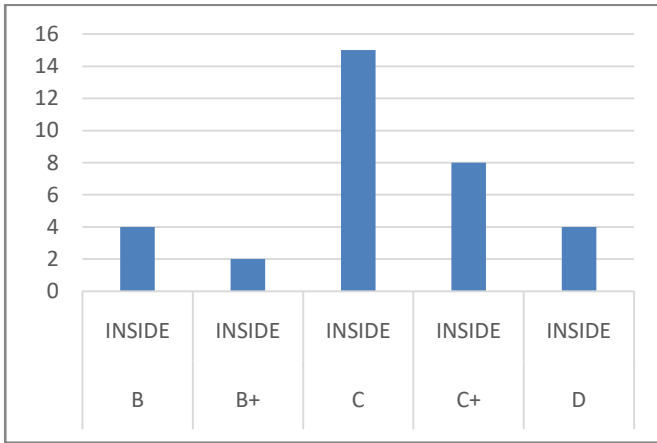


Figure 4.0.4: grades distribution for 33 students accommodated inside campus for 2015 intake sample collected

The bar chart showed that most of the students cleared with a grade of C, followed by C+ then B and B+ was the lowest grade having . Despite having these grades, the results and the performance were generally good because most of them passed CH110.

The results analysis of 248 students who were accommodated outside from the sample of 281 students collected from 2015 academic year.

Table 4.0.5. Results analysis by grade and percentage

| Grade | Number of students | Percentage representation |
|--------------|--------------------|---------------------------|
| A+ | 0 | 0.00% |
| A | 7 | 2.82% |
| B | 28 | 11.29% |
| B+ | 14 | 5.64% |
| C | 15 | 6.06% |
| C+ | 41 | 16.53% |
| D | 86 | 34.67% |
| Total | 248 | 100% |

The table above for 248 students who were accommodated outside from the sample of 281 that was collected from the 2015 intake showed the following.

- 86 students failed to pass CH110 and this representing a fail percentage of 34.67% compared to the fail percentage which was seen for inside accommodated students.
- 162 students passed CH110 and this was presented by 65.33% compared to the pass percentage for students who were accommodated inside.
- The difference between those who failed and those who passed was 65.33% compared to the difference of 76.68 that was obtained for students on campus

- The performance was not good because having 86 students failing out of 248 is worrisome to both students and lecturers.

Grades distribution for students accommodated on outside campus

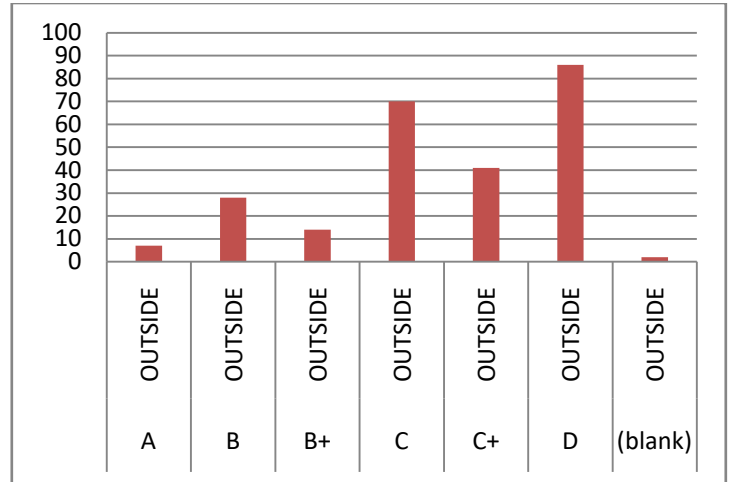


Figure 4.0.6: grades distribution for 248 students accommodated outside campus for 2015 intake sample collected

The bar chart showed that most of the students cleared with a grade of C, followed by C+ then B and B+ was the lowest grade having . Despite having these grades, the results and the performance were generally good because most of them passed CH110.

The bar chart shows the results analysis for both students who were accommodated inside and those accommodated inside within the sample of 281 students who were collected.

The table shows grade comparison between the inside accommodated students to outside

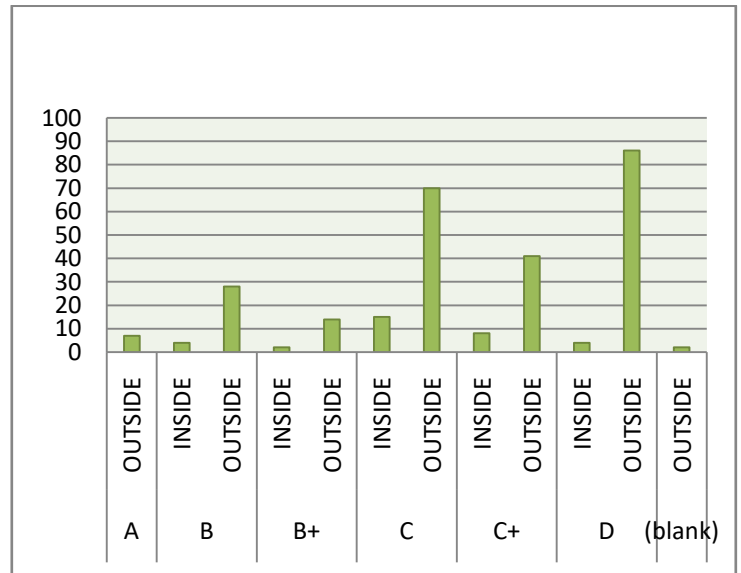


Figure 4.0.7

2015 data collected and analysis for 281 students showed the following results.

33 students were accommodated inside out of the total of 281 students used as a sample.

Table 4.0.3 and table 4.0.5 both suggests that the majority 86 (34.67%) from those (248) who were accommodated outside campus failed to clear CH110, while 4 (12.12%) from those (33) who were accommodated inside failed to clear CH110. This meant that most of those who fail to clear CH110 come from the students accommodated outside.

For other grades we still saw a trend that students inside have continued to perform better compared to students outside campus. Looking at table 4.0.3 and table 4.0.5 we saw that majority of the students performed better in all the grades when we look at both tables and to be specific on the percentages.

The obtained results from the SPSS version 23 setting alpha level of 0.05 and confidence level of 95% showed the following independent t-test tables and analysis.

Table 4.0.8: group statistics table showing means and standard deviation

| | ACCOMODATION | N | Mean | Std. Deviation | Std. Error Mean |
|-------|--------------|-----|------|----------------|-----------------|
| GRADE | INSIDE | 33 | 1.55 | 1.063 | .185 |
| | OUTSIDE | 248 | 1.33 | 1.356 | .086 |

The means for the students who were accommodated inside and outside are 1.55 and 1.33. This shows a mean difference of 0.22. The inside accommodated students was high showing that they performed better than the outside accommodated students.

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|-------|-----------------------------|---|------|------------------------------|-------|-----------------|-----------------|-----------------------|---|-------|
| | | F | Sig. | t | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| GRADE | Equal variances assumed | 3.160 | .077 | .880 | 277 | .380 | .216 | .246 | -.267 | .700 |
| | Equal variances not assumed | | | 1.058 | 47.18 | .295 | .216 | .204 | -.195 | .627 |

The p-value is 0.380 and therefore, the difference between the two means is not statistically significantly different from zero at the 5% (0.05 alpha level) level of confidence. There is an estimated change of 0.246 standard error. However, there is insufficient evidence (p=0.380) to suggest that accommodation location affects the student performance in CH110. The mean (1.33) for students accommodated outside was significantly lower compared to the mean (1.55) for students accommodated inside.

Hypothesis Analysis

With reference to the alternative and null hypotheses

H₀: There is no significant relationship between students' accommodation location on their academic performance (was be picked)

H₁: There is a significant relationship between students 'accommodation location on their academic performance (was rejected)

Independent Sample T-Test Analysis Of Results For 2015

We can conclude that the significant value (0.38) that was obtained from Levenes test at 95% confidence level and set alpha level at 0.05 was greater than the p-value of (0.05). This means that the null hypothesis will not be rejected. **There is no significant relationship between the students**

accommodation location on their academic performance in CH110. The other interpretation to the obtained results is that when the student is staying on campus or outside campus, the performance is just the same.

The views leading to conclusion drawn from this research could be;

- ❖ Most of the first years are accommodated outside campus
- ❖ Mean scores shows that the inside accommodated students is higher than the outside accommodated students because of the high number of challenges faced by the students accommodated outside.
- ❖ From the sample of 2015 to 2017 it shows that the average 9.16% (71students)are accommodated yearly and 90.84%(704 students) are accommodated outside campus.
- ❖ The t-test from the three groups showed that the null hypothesis (H₀) dominated because the significant value from the two tailed tests was greater than the 0.05 alpha level.
- ❖ This explains that there was no significance difference between the students on campus and those living outside in CH110.

Results Analysis For 2016

The analysis for 2016 and 2017 also showed the same trend of results. Most of the students were accommodated outside compared to those accommodated inside. From the tables 4.0.1 and 4.0.2 we can tell from the ratios represented 2:17 for 2016 and 1:34 for 2017. This is clear that most of the students are accommodated outside campus.

Looking at the academic performance and the students who failed to clear CH110 for both 2016 and 2017, the results are similar to 2015. Most of the students who failed to clear CH110 came from outside campus.

Looking at the report from the sample independent t-test, the students accommodated on campus had a bigger mean (3.03) compared to students accommodated outside with a mean of (2.46). This showed that the students on campus performed better than the students outside campus.

Figure 4.1.1 shows the combined results for 295 students that were collected as a sample from 2016 academic intake. The analysis still showed the higher fail rate to students outside campus.

The results in the report table for independent sample t-test showed the inside accommodated students with the mean of 3.03 compared to the mean of 2.46 for the outside accommodated students. The mean difference is ...which showed that students accommodated on campus performed better than the students accommodated outside campus

The outside accommodated students for 2016 sample collected still agreed with the 2015 results obtained when comparisons were done between the inside accommodated students and outside accommodated students. We have a big number of failure in outside accommodated students compared to the inside accommodated students. The bars difference between the two groups is big

The sample independent t-test also reviews that the significant value was higher than the p-value of 0.05. This means that for both 2016 (sig value of 0.096) and 2017 (sig value of 0.52) was high which made the alternative hypothesis rejected and null hypothesis hold. According to the results obtained from both years, the conclusion was that, there is no significance relationship between the students' performance in CH110 and their accommodation location.

The students can stay outside campus or on campus and the results will be the same. The only issue is that outside accommodated students will face many challenges compared to inside accommodated students as stated by the respondents in the questionnaire. These challenges reduce their time of studying and forces them into extra activities that will help them find income to help them pay for extra expenses such as bills, rentals and transport

V. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the major findings, conclusions and recommendations as presented. The discussion, conclusions and recommendations are presented in accordance with the objectives of the study.

*5.2 Discussion of the Findings**5.2.1 Impact of students' accommodation location on their academic performances*

The results of the analysis showed that there was no relationship between students accommodation location their academic performance in General Chemistry. This meant that students accommodated on campus and outside can perform the same in General Chemistry. This view may differ with other scholar because the study areas, targeted population and course studied on may have been different too.

The conclusion was arrived at by comparing the sig-values for (2015, 2016 and 2017) that were obtained from independent sample t- test to the p-value of 0.05. In all the cases the sig value was bigger than the p-value of 0.05. The alternative hypothesis was rejected and the null hypothesis was considered.

The hypothesis conclusion was that;

- **Ho:** There is no significant relationship between students' accommodation location on their academic performance

These results obtained are in line with the author; who stated that accommodation location has no effect on students' performance

5.3 Ratio between the accommodated students and non-accommodated

The conclusion was drawn by looking at the analysis of the accommodation lists that were obtained from the academics department for 2015, 2016 and 2017. The average ratio for inside accommodated students to outside accommodated students according to the tables Table 4.0.0 and Table 4.0.1 showed 2: 8. This means that there are many students accommodated outside campus compared to inside campus. This may be different to the ratios reported in the literature review because the college size, enrolled students and size of rooms may in terms of the numbers.

This is what was expected because looking at the number of the university hostels compared to the number of students who are attached to Copperbelt University, the ratio is 1: 7 The University has 2187 hostels compared to over 12000 students who are attached to the institution.

5.4 Areas where students reside if not accommodated on campus.

According to the questionnaire's results obtained after analysis, most of the students prefer to be near the university despite not being accommodated on campus. The most pronounced answer to the question that was more concerned with areas where students reside if not accommodated on campus was Riverside which had 91.5% score compared to Musonda Compound with 8.5%. The students gave that answer and prefer to be in Riverside area because it's nearer to the university compared to other areas that were given.

5.5 Performance of the students on campus and those outside campus

The questionnaire analysis showed that, most of the students can perform better if accommodated on campus than being accommodated outside the campus. That is the reason most of the students (93%) answered inside accommodation than outside accommodation on question 16(a).

The main reasons that were given for inside accommodation being better and promoting good results were as follows:

The cost of living outside campus is expensive compared to someone accommodated inside the school. The payment of electricity and water bills makes life expensive and pressure mounts on many students outside campus. Instead of concentrating on studies alone, students have to look for extra source of income to help them pay bills and transport. This was arrived at by looking at how students answered question 16(b) in the questionnaire.

The other reasons why students on campus happen to perform better are on the accessibility to library, free Wi-Fi internet and short distance to cover. Looking at the support answers from question 16(f) of the questionnaire, 127(63.7%) stated that living outside have more challenges compared to inside students.

The results obtained also showed the same picture as the questionnaire's results. The high fail rate of CH110 come from students living outside campus.

Table 4.0.5 shows the results for 2015 with 34.76% representing 86 students out of 248 students who were accommodated outside from the sample that was collected. The 34.76% of the failed students can be compared to 12.12% of the fail percentage for students accommodated on campus.

The conclusion for these findings is that students accommodated outside campus happen to have a high fail rate of CH110 compared to students accommodated inside.

5.6 To suggest ways in which learners outside the campus can be made to fully have access to facilities that students accommodated on campus have access to.

Looking at the responses from the questionnaire, most of the students gave the following suggestions:

Library: students from outside the campus should be given a longer period of time to return the books they borrow from the library. This will enable the students outside the campus to have materials to study from their rooms if not using books in the library

Internet: The Copperbelt University should improve or upgrade their Wi-Fi to mobile internet so that students accommodated outside the campus can have access to free internet enjoyed by students who are accommodated on campus 24/7

Long distances and transport: The Copperbelt University should provide a university bus that can be picking students from different bus stations and charge a minimal fee.

Accommodation allowance: The bursaries should be giving accommodation allowance to students accommodated outside so that it can help them to pay rentals. The rentals range from K400 to K750 per month and this is expensive to some students to pay. The pressure is created and most of the students engage themselves in businesses that take their time for studies.

The students' "opinion on accommodation location and academic performance in General Chemistry concurred with Turner's (1962) idea that accommodation location is vital in enhancing student proper rest and learning". This was supported by many lecturers from various institutions during the interview who strongly recommended accommodation on campus for better performance of students. Further, the results also revealed that students accommodated outside, happen to dodge classes and force lecturers to change the time takes to suit their time.

The findings on accommodation location at the university also revealed that students happen not to enjoy the outside accommodation because rules and regulations given by the owners of the boarding houses may be difficult to follow by all the students. One good example that was given concerning time was; the latest time to be by the boarding house. Some students would want to study up to 23hrs from the university classes if the boarding house is near the university. This may be impossible if the owner of the boarding houses want students to be by the boarding house before 20hrs.

Discussion on the Effect of Students' Accommodation on Academic Performance in CH110 at the Copperbelt University

Like in the previous objectives, the findings of the hypothesis also indicated that inside accommodation has a significant effect on the academic performance of students and in universities where accommodation facilities are good and inside, the performance of students is also high compared to schools where accommodation facilities are outside and poor. The findings indicated that most inside accommodated students at the Copperbelt University perform better because of having enough time to dedicate to their studies. It was also

noted that students living outside have poor accommodation facilities and lacks proper security.

The findings of this study are in conformity with those of previous scholars like Madras (1955) as cited by Nabawanuka (1997) that accommodation is a vital factor in enhancing students' learning. In support of this, Brook (1965) also affirms that good accommodation and more especially inside accommodation, offers students with excellent opportunities for learning and social interaction with fellow students from varying social backgrounds. In fact, when students interact they learn new ideas which help them to develop all the three domains of psychomotor, affective and cognitive domain. This helps them to widen their capacity to learn, takes away the fear to learn thus making students ready to learn and even consult lecturers or those with knowledge about the course. In light of this, it's true as the findings in attitude questionnaire which revealed that students from outside accommodation are more congested in dormitories compared to students on campus and this affects their academic performance also. The findings thus indicate that living in a quiet, tidy environment lead to better academic performance.

Lyons (1990) observed that noisy and overcrowded residences with inadequate security and lighting at night are common examples of physical environment that undermine students' ability to engage in their studies. Acola (1992) sums it up by noting that for students to study well, their living places should have basic facilities like enough rooms, tables and chairs. This eventually enhances academic excellence.

VI. CONCLUSIONS

From the discussion, the following conclusions were drawn:

Accommodation crisis at the Copperbelt University is one of the major contributing factors to poor performance of students in General Chemistry. The students accommodated outside the campus fail to settle in good time compared to inside accommodated students. They spend more time moving from one place to the other looking for a cheaper and good accommodation when inside accommodated students are settled and getting ready to attend classes. The accommodation location is said to have no relationship with academic performance according to sample independent t-test because the evidence was not enough to make the significance level lower than 0.05 of the p-value. The questionnaire interview provided adequate information and evidence to explain how outside students are disadvantaged in relation to having access to university facilities like the inside accommodated student do.

In a nutshell, the following can be summaries as

- The location of accommodation has no impact on students' performance because the significance value was greater than the p-value of 0.05. The null hypothesis was not rejected.

- The ratio between the accommodated students on campus and those accommodated outside was 1: 7. Which means that the university has more outside accommodated students to inside accommodated students.
- When students are not accommodated on campus, they find it easy to rent a boarding house riverside or musonda compound. Riverside and musonda compound are near to the university
- The obtained results showed that students residing outside fail more compared to students accommodated on campus due to high number of challenges they face.
- The given suggestions for equating the facilities between the accommodated students and outside accommodated students was mainly based on building more hostels, provision of mobile internet to students outside and to give allowances to students off campus.

VII. RECOMMENDATIONS

To change the above trend, the following were recommended;

1. The Copperbelt University should work hand in hand with the Ministry of Higher Education to build more hostels at the Copperbelt University to reduce the ratio of inside accommodated students to outside accommodated students at the Copperbelt University. This will reduce on the ratio between the accommodated on campus to students accommodated outside campus.
2. The Copperbelt University work hand in hand with the bursary committee to see how they can help students accommodated outside campus with extra allowance to help them pay for extra expenses such as the electricity and water bills that were mentioned in the questionnaires respondents. Other expenses include the rentals, transport and payment for Wi-Fi or buying of bundles. This is proposed in order to help students to be free from pressure of looking for money to pay for accommodation which is expensive.
3. The Copperbelt University should come up with free mobile internet that will allow students accommodated outside to research on access YouTube for further research, download files and also to study like inside accommodated students use free Wi-Fi the all day. This will outside accommodated students to have equal internet access with students accommodated inside.
4. The students should be allowed to borrow books from the library and if possible allow them to stay with book for one academic term to avoid issues of lacking materials to study at night when they move out of the campus.

Areas For Further Research

1. After the study was carried out at the Copperbelt University on how accommodation location affects students' performance in General Chemistry, it was further recommended that there is a need to carry out a study on;
2. The study can be carried out to know how accommodation location affects the students in all the courses they take at first year that includes Biology, Mathematics, Physics, Communication skills.
3. The other study that should be done is to find out the ratio of male accommodated students to females. This study is important because the rate at the females are being enrolled is high compare to previous years.
4. The study on how the students from outside campus live or relate with owners of boarding houses in relation to security and sanitation can be under taken to know how they get affected.

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