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Impact of Double-Intake Programmes on the Teacher Co-Efficient Determinant of Quality Education at the University of Nairobi, Kenya

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Abstract

This research was carried out in order to determine the impact of double-intake programmes on the quality of education in the University of Nairobi in Kenya using the teacher coefficient measure. It had one objective and one research question. Using descriptive survey research design the target population consisted of 61,000 regular students enrolled in 43schools/faculties, 5,900 students in their fourth year of study and 2,000 teaching staff. Calmorin and Calmorin (2007) formula for scientifically determining sample size yielded a total of 489 respondents. Simple random sampling was used to select 251 fourth year students while stratified random sampling was used to select 238 teaching staff as actual respondents. Data were collected using questionnaires, document analysis, observation and interview. Quantitative and qualitative data analysis methods were used with the aid of statistical package for social sciences (SPSS) version 26.The findings show that the number of students admitted overwhelmed both the academic and non-academic staff members who served them because the university accepted to engage in double intake programmes without considering an increase in the number of the staff members and this skewed student to faculty ratio led to degenerated service provision. Consequently, the research recommends that the university plans adequately for the number of staff required versus the anticipated students to be enrolled in future since a compromise in the student to faculty ratio will definitely have a negative impact on the quality of education.

1. Introduction

During the past few decades, research in both developed and developing nations has analysed the links between educational outcomes and school physical resources, teacher quality and children's demographic and family background. A quick review of the literature shows that research on teacher and school effects in developing countries has focused on the input factors in the education production function model of school outcomes such as human capital, economic resources and physical infrastructure, Fewer studies have focused on the transformation practices in the classroom that might be seen as important mechanisms of the production function, such as teaching style, the quality of teacher-student interactions and student academic engagement. For instance, in developing countries, a number of studies have found that teacher education and experience, as well as basic material resources do affect learning achievement, but other work has presented a mixed verdict on teacher and school effects. Too often, teacher quality has been conceptualised as easy-to-

measure background factors thought to be linked to productivity such as teacher education or training, teacher salary or teacher experience. While identifying a mix of easy-to-measure and easy-to-manipulate inputs have a great deal of theoretical and policy appeal, the lack of consistent findings suggests the value of exploring alternative approaches.

One potentially fruitful approach is to look for quality not in the background attributes of teachers, but in classroom (or school) environments that they have a hand in creating. Elsewhere Fuller and Clarke (1994); assert that there is a lack of studies of teacher effects in developing countries investigating the teaching behaviours or classroom environmental factors that promote favourable student outcomes. The few studies that do exist have found significant effects on achievement or attainment of classroom management, hours of instruction and classroom dynamics. Why this emphasis on teacher education, one might ask?

1.1. Importance of the Teacher Coefficient in Education Quality

Teachers are a key element to educational quality because they orchestrate instructional interactions with and between students around academic content, and these classroom interactions—in an ideal world— influence student learning. It is assumed, therefore, that teacher and the actions they take in the classroom fundamentally impact students and what they learn. Often we, as a community of education stakeholders, take this assumed relationship so far as to assert that educational systems are only as good as the quality of their teachers. However, as Nordstrum (2016) observed this nearly universal valuation of both teaching and teachers glosses over the realisation that individual teachers have differential effects on student learning. In other words, teachers are either more or less successful at facilitating their students' progress toward agreed-upon learning outcomes, and therefore fall somewhere along an idealized continuum of teacher effectiveness.

The effectiveness of teachers and their contribution in producing a high quality education has been studied by many researchers. In those studies, researchers have focused on teacher-student interaction as an important aspect of a good education and academic achievement (Graue, Rauscher, & Sherfinski, 2009). Among such researchers, Hamre, Pianta, Mashburn, and Downer (2007) and La Paro, Pianta, and Stuhlman (2004) viewed social and academic interaction between teachers and students as a crucial determinant of academic success. Additionally, the interaction between teachers and students is generally believed to be affected by characteristics of teachers and students. However, there are some other aspects that affect this interaction like the number of students per teacher in a school. Number of students per teacher is generally associated with class size and it is mainly believed that smaller classes provide a better teaching and learning environment. This belief has been shared by many countries like the United States of America, European countries, China, Japan, and many other countries which consequently, made policies to reduce their class sizes (Blatchford & Lai, 2012).

The research behind class size is plenty since such studies started a couple of decades ago and has continued to this day as researchers do various studies about different sides of this topic in different academic levels. Class size is related to the issue of overcrowding. Teachers and students in many developing countries deal with the issue of overcrowding every day and feel its effects. Thus, over the past two decades, the topic of overcrowding in schools has piqued the interest of policy makers and researchers. Overcrowding has been defined by these researchers and policy makers in broad terms as a school that has enrolled more students than the facility was created to accommodate.

There is a large body of research on the relationship between class size and student learning. The most influential and credible study is the Student Teacher Achievement Ratio, or STAR, study which was conducted in Tennessee during the late 1980s. In summary, STAR researchers found positive effects of early and very large class-size reductions on academic achievement in school and college attendance, with the economic benefits of the programme outweighing the costs. Although these are important results from a very strong research design, some researchers have concluded that this academic achievement cannot solely be the result of the small class size. They suggest that number of students in a classroom has an influence on the classroom process, course activities, students' engagement and consequently students' learning. However, the real reason behind the academic achievement is that; a small class size actually gives teachers the opportunity to spend more time with each student which more directly affects their learning and academic success (Croll & Hastings, 1996). In fact, such judgments reveal that other than class size, the student teacher ratio is equally an important aspect to look at since that factor actually indicates the time a teacher can spend on each student.

1.2. The Student-Teacher Ratio Indicator of Quality

Student teacher ratio is understood by many as class size; though they are similar, they are not exactly the same thing. Class size is the number of students attending a class or in general terms, the average number of students in a classroom. Student teacher ratio is number of students per teacher or in other words the average number of students a teacher instructs in a school (Graue & Rauscher, 2009). The student/teacher ratio measures the number of students per teacher. It reflects teacher workload and the availability of teachers' services to their students. The lower the student/teacher ratio, the higher the availability of teacher services to students. So the student/teacher ratio has implications not only for the cost of education, but also for the quality. Therefore, a school with small class sizes may not always have a low student teacher ratio or vice

versa. For example, a teacher might teach in small size classes but can be assigned to teach in many classes. So in such a situation the class size may be small but the student teacher ratio is high. In schools with a smaller student teacher ratio, teachers can have more time to spend with each student and check the progress of every student whom they are responsible for. They also can provide more individualized teaching that is more suited to each student (Johnson, 2011). There are lots of studies about class size but not that much about student teacher ratio although student teacher ratio is at least as important as the class size.

Research in the area of student-teacher ratio and class size has focused on elementary and secondary school populations. In general, research indicates that smaller classes and lower student teacher ratios improve student acquisition of basic skills and understanding of subject matter (Hertling, Leonard, Lumsden, & Smith, 2000). Some researchers even suggest that smaller classes have a greater chance of benefiting younger students, disadvantaged students and exceptional students (Ellis, 1984). Though Ellis' research demonstrated that smaller classes improve student achievement in the elementary school years particularly in reading and mathematics, at the secondary level, class size has been shown to be related to only minimal differences in student achievement (Ellis, 1984).

1.3. Staff to Student Ratios in University Education

Ideas of good student-to-faculty ratios vary around the world, but a good student-to-faculty ratio in U.S. Colleges and universities would meet or exceed the national average of 18 students per faculty member, calculated by the National Center for Educational Statistics...Here in Kenya, a good student-to-faculty ratio in universities would meet or exceed the national standards per discipline area as laid down by the Commission for University Education(CUE) A student-to-faculty ratio is a simple calculation that determines how many faculty members are present on a university or college campus to teach students. As has been discussed elsewhere in this paper, class sizes may vary, so even if the student-to-faculty ratio is very low, one could enroll in a large lecture class or required course with a higher number of students than average. The number of faculty members devoted to teaching has traditionally been regarded as a good way to indicate whether or not a university will provide individual instruction to a student, or whether they will be a "little fish in a big pond" responsible for their own education.

According to Gichohi (2016) the expansion of university education in Kenya has not been adequately accompanied with requisite building infrastructure and teaching and learning resources. Furthermore, enrollment rates have gone high over the years with minimal funding of university education. This has translated to larger average class sizes, increasing reliance on contract professors and tutors and more online course delivery (Norrie & Lennon, 2013). It is assumed that these changes of high enrollment rates have led to diminished educational quality in university education outcome. Ndirangu and Udoto (2011) note that students have had to learn from congested environments while the academic staff has had to teach large classes. The exponential growth in student numbers has put heavy strain on facilities and human resource in the universities (The Star Newspaper, 2018).

Student learning can be enhanced and made more effective when learning environment is made adequate and appropriate (Wanjala, 2014). Ipso facto the increase in admissions requires investment in staffing as well, but, although the number of staff who qualify to teach at university level has been growing, it does not match the student enrolment rate. In addition, most members of the teaching staff are not housed by the university or are forced to teach in many different campuses. They travel long distances taking a lot of time on the road and at times they reach class late (Ogeto, 2015). As was observed by Brint and Clotfelter (2016) effectiveness of operations can reduce when staff numbers decline below a critical threshold or when staff motivation declines due to overwork.

1.4. Statement of the Problem

In the year 2010 universities were forced to engage in double intake programmes or mass enrolment and as Tilak (2015) notes that expansion of university education has been unplanned. Quantitative leaps in number of universities and trending increase in student enrolment have created concerns on how to maintain quality in university education given the fact that the enrolment has not matched the teaching and learning resources (Kagondu & Marwa, 2017). To compound the situation, new students were joining university while the old students were still in session. This led to overcrowding and its attendant problems. Crush programmes have seen students being put on tight schedules limiting time for innovation and research since teaching and learning in this scenario aims at beating deadlines (Onsoti, 2014). A report on the status of reforms in public universities identified inadequate physical facilities to accommodate the large numbers of students and, thus, offer the ideal learning environment as well as inadequate academic staff as major challenges in public universities (Ouma, 2018). Thus the purpose of this research study was to investigate the impact of double intake programmes on the quality of education in the University of Nairobi in Kenya using the teacher coefficient measure.

2. Research Methodology

2.1. Research Design

The research design adopted for this study was descriptive survey with a focus on establishing the impact of double intake programmes on the quality of education in the University of Nairobi, Kenya. Descriptive survey design was considered the most suitable since it made it easy for us to collect data from the respondents by way of administration of questionnaires, observation, document study and interviews and use it to analyse the phenomenon that was of interest without manipulating any variables.

2.2. Target Population

The research was conducted in the University of Nairobi, Kenya between January and June 2019.At the time of the study, the university had about 61,000 regular or government sponsored students who were enrolled in 43 schools/faculties. Out of these, there were 5,900 students who were in their fourth year of study which was the final year of study for many of them since their programme cycle lasts four years. In addition, there were about 2,000 teaching staff in the university who also formed part of the population studied.

2.3. Sample Size and Sampling Techniques

For the purpose of getting a representative sample, the target population was grouped into two. Simple random sampling technique for teaching staff and stratified random sampling of the students was done. Calmorin and Calmorin (2007) provide the following formula for use in order to have a scientific determination of sample size.

$$S_s = \frac{NV + [Se^2 (1 - P)]}{NSe + [V^2 P(1 - P)]}$$

Where: Ss= Sample size.

N= Total number of population.

V= Standard value (2.58).

Se= Sampling error (0.01).

P= Largest possible proportion (0.50).

Since the target population in this study was 5,900 fourth year students and 2,000 members of the teaching staff the sample size in this study was as shown in Table 1.

Table-1. Sample size.

Target Population	Population	Sample size
Fourth year students	5,900	251
Members of the teaching staff	2,000	238
Total	7,900	489

2.4. Research Instruments

Four instruments were used for the data collection exercise. These are questionnaires, document study guide, observation and interview protocol. The questionnaires had both closed and open ended questions. Document study guide provided the required data on infrastructure, enrollment, staff employment and graduation status. We were able to directly observe and record the condition of the lecture halls while the interview protocol enabled us to have a smooth flow of questions and therefore save on time set aside for the interview. All in all, the four research instruments which were developed by us enabled collection of both qualitative and quantitative data.

2.4.1. Validity and Reliability of Research Instruments

The questionnaire and the interview protocol were tested for face and content validity. by way of employing the pre-testing method. The instruments were administered on five respondents before the main research to check for unclear wordings and ambiguity of the questions. Adequate preparation of the instruments was also done through guidance of the supervisor which helped to establish the content validity. In addition, a Pearson's moment correlation coefficient (r) formula test yielded a reliability co-efficient of about 0.8 which was sufficient enough to judge an instrument as reliable for use in conducting a study

2.5. Research Objectives and Research Question

The objective of this research study was, to:

1. Determine the impact of double intake programmes on the student to faculty ratios in pursuance of quality education at the University of Nairobi.

In order to achieve the said objective, the following research question was formulated:

1. What impact did double intake programmes have on student to faculty ratios in pursuance of quality education at the University of Nairobi?

3. Research Results and Discussion

Out of the 251 questionnaires administered to the students, 216 of them were duly completed and returned giving a questionnaire return rate of 86% In addition, 238 questionnaires were presented to faculty and 172 of them were duly completed and returned demonstrating a 72% response rate. Furthermore, the interview sessions had a near 90% attendance; while all the documents containing data on the numbers of students enrolled in year 4 of study as well as employment records of staff were easily produced from the student management and human resource management information systems respectively. Finally we were able to carry out a thorough observation of the infrastructural arrangements put in place to create a conducive teaching and learning environment. However, this return rate was considered representative enough and adequate for analyzing and reporting results.

3.1. Research Question 1: What Impact did Double Intake Programmes have on Student to Faculty Ratios in Pursuance of Quality Education at the University of Nairobi?

After data collection, data coding followed for the purpose of analysis which involved both the quantitative and qualitative procedures. Quantitative data analysis entailed descriptive and inferential statistics while qualitative data was analyzed thematically by way of understanding the meaning of the given responses their consistency to the subject. Analyzed data was presented using frequency distribution tables, percentages and inferential statistics.

The study sought to answer the question, 'What impact did double intake programmes have on student to faculty ratios in pursuance of quality education at the University of Nairobi?' The question was answered using the items that were in the questionnaires and other instruments of data collection. The data on this question was analyzed using descriptive statistics, frequencies and percentages and the results are as subsequently discussed.

3.1.1. Student Numbers Versus Non-Academic Staff Numbers

Data collected from respondents regarding this question was analysed by getting the frequencies and percentages of the responses that were given by the respondents. Responses on whether the university had enough number of the non-academic staff versus the number of students enrolled were as shown on Table 2 that follows.

Table-2. Student numbers versus non-academic staff numbers.

Responses	Frequency	Percentage
Strongly Disagree	48	12.4%
Disagree	75	19.3%
Undecided	75	19.3%
Agree	111	28.6%
Strongly Ag	79	20.4%
Total	388	100%

The responses in Table 2 show that majority of the respondents 28.6% (n=111) and 20.4% (n=79) agree and strongly agree that the non-academic staff of the university during the double intake enrollment were not proportional to the number of students. Those who were undecided over the issue were 19.3% (n=75) while a minority of the respondents 12.4% (n=48) and 19.3% (n=75) thought that the number of the non-academic staff was sufficient to serve the students at that time. The implication of these responses is that students could not be served well or in time whenever the need arose. For instance, queues could be very long at the university health centre and the cafeteria. Cleaning was hectic for the staff because the users of the available facilities were many hence continuously making the already cleaned areas dirty. Examples drawn from this were the staff cleaning the libraries, washrooms that were adjacent to the classrooms and the lecture halls. The findings were in agreement with Brint and Clotfelter (2016) who found out that effectiveness of the staff can reduce when their numbers are below the threshold. This impacted negatively on teaching and learning because the learners were exposed to an environment that was unsafe and unhealthy. The findings were also in agreement with Wanjala (2014) who said student learning can be enhanced and made more effective when teaching and learning spaces are made adequate and appropriate.

3.1.2. Student Numbers versus Academic Staff Numbers

The study also sought to assess the effect of double intake programmes on the increased number of students versus the available teaching staff here-in referred to as academic staff numbers. The responses given were as shown on Table 3.

Table-3. Student numbers versus academic staff numbers.

Responses	Frequency	Percentage
Strongly Disagree	36	9.3%
Disagree	64	16.5%
Undecided	56	14.4%
Agree	132	34.0%
Strongly Agree	100	25.8%
Total	388	100%

Data in Table 3 show that majority of the respondents 34.0% (n=132) and 25.8% (n=100) were of the opinion that the number of the academic staff was not sufficient enough to serve the students who were enrolled in the university. Those who were undecided were 14.4% (n=56) while a minority of the respondents 9.3% (n=36) and 16.5% (n=64) were of the opinion that the number of academic staff were sufficient enough to handle the large number of the students who were enrolled. These findings corroborate those in a study by Norrie and Lennon (2013) who also established that average class sizes in post-secondary educational institutions have become larger. In fact some class sizes were so large that the lecturers have to use microphones in order for every student to get want is being taught. The findings showed that microphones were used to project the voice of lectures to the big crowd of learners; which finding was in tandem with the studies done by Ogeto (2015).

The study findings also indicate that assessment of these huge numbers of students attached to a single lecturer was a problem. There were cases reported of missing marks by the students probably because their answer sheets were misplaced or got mixed up with others. Lecturers felt that teaching and marking of this large number of students' work was overwhelming. It was noted that class attendance was almost impossible to monitor with this large student numbers. Findings were in line with Wanjala (2014) that the large number of students attached to a lecturer made the learning environment less effective. The diminished educational quality in university education outcome can be attributed to these study findings which in essence implied that the situation did not comply with the standards set by the UNESCO (1979).

3.1.3. Use and Improvisation of ICT Facilities

We went ahead to try and determine the extent to which the lecturers were using the ICT facilities in learning or improvising in cases of the lecture halls without the ICT facilities. Table 4 shows the responses that were given.

Table-4. Use and improvisation of ICT Facilities.

Responses	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Total
Frequency	73	65	99	94	57	388
Percentage	18.8	16.8	25.5	24.2	14.7	100

As indicated most of the respondents 24.2 percent (n=94) and 14.7 percent (n=57) agree and strongly agree respectively that lecturers embrace the use of ICT to make learning interesting and captivating. Nevertheless, Table 5 also indicates that 25.5 percent (n=99) were undecided about whether the lecturers make use of the ICT facilities when teaching while to some extent, 18.8 percent (n=78) and 16.8 percent (65) strongly disagree and disagree respectively that lecturers use the ICT facilities when teaching. The findings imply that the lecturers agree with Clark (2008) and Vazquez and Estrada (2014) who say that when PowerPoint is used as a presentation tool in university lectures, it is pedagogically effective only while it provides variety and stimulates interest in the learning environment. Large student numbers could not favour the students who sat at the back of the lecture theatres, especially when demonstrations were being done using laptops. Some lecture halls did not have inbuilt projectors and displays and in cases where the lecturers wanted to use the portable projectors with their laptops, it took time to set up the devices hence wasting part of the time meant for learning.

3.1.4. Student Access to Individual Attention from their Lecturers

This study also sought opinion regarding the individual attention accorded to the students in the whole process of teaching and learning. A majority of the respondents 38.1% (n=148) and 24.7% (n=96) did not think that the students were getting individual attention from their lecturers. On the other hand, 7.2% (n=28) were undecided of whether students get the individual attention or not. Respondents who thought that students get individual attention were 16.5% (n=64) and 13.4% (n=52). These findings were attributed to the large student numbers versus a single lecturer attached to them. The finding were in line with thoughts by Ndirangu and Udoto (2011) to the effect that lecturers experienced a huge work load and at the same time, the number of students who could want to see them was huge and therefore not all could get the time to consult.

3.1.5. Students Missing Out Some Concepts Due to Large Class Numbers

We also went ahead to test the relationship between the large numbers of students and their ability to understand and gain mastery of the concepts taught during lectures. The responses on the impact of large number of students in lecture halls on some students missing out some concepts from lecturers were as shown in Figure 1.
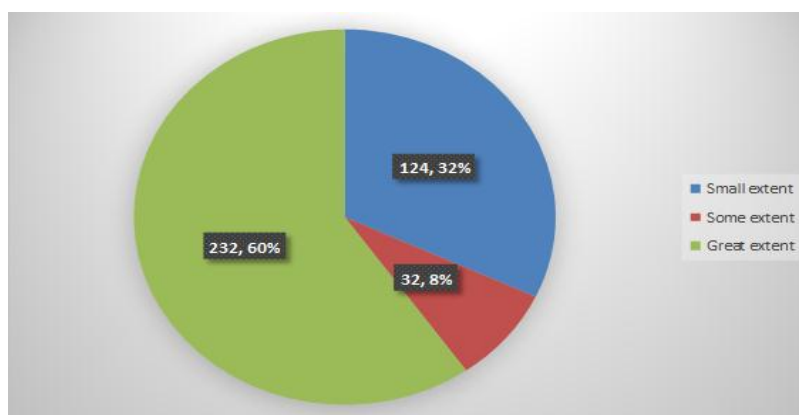

Figure-1. Students missing out some concepts due to large class numbers.

From the data recorded in Figure 1, it is clear that a majority 60% (n=232) of the respondents were of the opinion that to a great extent some students missed out on some concepts due to large student numbers in the lecture halls. On the contrary, 32% (n=124) thought that to a small extent learners missed on some concept, and 8% (n=32) thought it was to some extent. The findings showed the same scenario to what Ellison (2016) had in mind when he stated that a learning space should ideally have four attributes; easily accessed, able to be used for a range of activities, allow learners to socialize and lastly make learners comfortable with a sense of belonging. The study findings alluded to the fact that these basic specifications of the learning spaces were not met when the double intake programmes took place hence affecting the learning outcomes. These findings agreed with the studies by Wanjala (2014); Wood, Warwick, and Cox (2012) to the effect that the learners in this kind of physical environment cannot be motivated to be attentive during the lectures.

Further statistical tests were carried out to test this phenomenon. The results are as discussed in Table 4 and Table 5. A Chi-Square test was used to test the influence of students versus academic staff numbers on the extent of students missing out on concepts during lectures. .

Table-5. Relationship between Academic Staff Numbers and Students Mastery of Concepts during Lectures.

	Value	Df	Asymptotic significance (2-sided)
Pearson Chi-Square	4.311[a]	8	.828
Likelihood Ratio	4.249	8	.834
Linear by Linear Association	.501	1	.479
N of Valid Cases	388		

Note: a. 2 cells (13.3%) have expected count less than 5. The minimum expected count is 2.97.

Table 4 shows a Chi-Square value of $x^2 = 4.311$ at significance level 0.828. Since the Chi-Square test indicates that the P-value .828 is greater than the $\alpha = .01$. it can be interpreted that, statistically when the number of students is not in line with the recommended number of the academic staff numbers the students will miss out on the concepts that are taught during the lectures which will affect their mastery of the subject content taught.

In addition, the Pearson's correlation coefficient was also used to determine the relationship between the students versus academic staff numbers on the extent of students missing out on concepts during lectures. The findings are as shown in Table 6.

Table 5 shows the Spearman's Rank Order correlation run to determine the relationship between the library capacity and the level of satisfaction of access and use of ICT facilities as $r_s = 0.036$ and $p = 0.480$. It can be interpreted to mean that there is a strong positive correlation between the student academic staff ratios and the extent of missing out on concepts while attending lectures. Therefore, this means that the university should ensure that the lecturers handle a standard number of students to avoid compromising the quality of university education.

Table-6. Correlation between Academic Staff –Student Ratio and Mastery of Concepts during Lectures.

		Students versus Academic Staff numbers	**Extent of missing concepts during lectures**
Students versus Academic Staff numbers	Pearson Correlation	1	.036**
	Sig. (2-tailed)		.480
	N	388	388
Extent of missing concepts during lectures	Pearson Correlation	.036**	1
	Sig. (2-tailed)	.480	
	N	388	388

4. Conclusions and Recommendations

4.1. Conclusion

A student-teacher ratio expresses the relationship between the number of students enrolled in an education **system** and the number of "full-time equivalent" teachers employed by the system. Nevertheless, "ideal" student-teacher ratios will depend on a wide variety of complex factors, including the age and academic needs of the students represented in the ratio as well as the experience, skill, and effectiveness of the teachers in question. Could it be that younger children or higher-need student populations typically require more time, attention, and instructional support from teachers? Could it also be that highly skilled teachers may be able to achieve better academic results with larger classes than less skilled teachers with smaller classes? Ipso facto what impact did double intake programmes have on staff student ratios in pursuance of quality education at the University of Nairobi? The responses that were given indicate that majority of the respondents thought that the number of the academic staff was not sufficient enough to serve the students who were enrolled in the university during the same period. In addition, majority of the respondents did not think that the students were getting individual attention from their lecturers due to the large student numbers versus a single lecturer attached to them. In fact the findings of the study indicate that some of the students were unable to achieve mastery of the concepts taught during lectures because of overcrowding in the lecture halls caused by skewed student to faculty ratio due to large student numbers in the lecture halls. The number of students admitted overwhelmed both the academic and non-academic staff members who served them because the university accepted to engage in double intake programmes without considering an increase in the number of the staff members and this led to degenerated service provision.

4.2. Recommendations

Because student-faculty ratios are a general way to measure teacher workloads and resource allocations in public schools, as well as the amount of individual attention a learner is likely to receive from lecturers student-faculty ratios are often used as broad indicators of the overall quality of a university in terms of improving learning outcomes and enhancing academic performance of students This research recommends the following:

- Problem of overcrowding has many different causes and implications. Growing class size is just one symptom of overcrowding. Because overcrowding can be a costly problem to address, its effects warrant more investigating.
- Whenever there is an increase in the student numbers the university must ensure a relative increase in the number of both the academic and non-academic staff where necessary.
- Compromise in the ratios of the students to faculty will always have a negative impact on the quality of education. Therefore, the university must always plan on the number of staff required versus the anticipated students to be enrolled.

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