

**THE CONTRIBUTION OF CLASS SIZE ON STUDENTS' ACADEMIC
PERFORMANCE IN SECONDARY SCHOOLS IN KARAGWE DISTRICT**

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CERTIFICATION

The undersigned certifies that has read and recommends for acceptance of a dissertation entitled: “*The Contribution of Class Size on Students’ Academic Performance in Secondary Schools in Karagwe District*” by the Open University of Tanzania in partial fulfillments for award of the degree of Masters of Education in Administration, Planning and Policy Studies.

.....

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.....

Date

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DECLARATION

I, **Sophia L. Kanyamwenge**, do hereby declare that this dissertation is my own original work for the Open University of Tanzania and has not been presented to any other university for the similar award.

.....

Signature

.....

Date

DEDICATION

I dedicate this work to my lovely husband Edison Mujwauzi, our lovely children Ellice Edison Elgiver Edison and Edlyn Edison. Their spiritual support and words of encouragement have strengthened me and made me not to despair, may the almighty God bless them all abundantly.

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ABSTRACT

The study investigated the contribution of the class size on students' academic performance in Karagwe District. This end was fulfilled through four major objectives namely: to find out the current class sizes in the selected secondary schools in Karagwe District; investigate the challenges facing teachers in teaching large class sizes in Karagwe District and to investigate the contribution of class size on enhancing students' academic performance. The study used descriptive design whereby both qualitative and quantitative approaches were the basis of data collection and data analysis. The data were collected through questionnaires, interviews, documentary review as well as observation. The findings revealed that large class size contribute significantly on the students' academic performance by lowering students' performance because they do not master the intended contents, competence and skills fully. This seemed due to the difficulties to get enough opportunity to practice the materials being taught in class. It was also learned that classes were congested with students ranging from 60 students to 80 students per stream. It was also learned that teachers have been facing many challenges such as difficulties in managing classes, limited time to mark students' works as well as less time to attend students concerns (problems) and needs. Basing on Education Policies (e.g., Education and Training Policy, 1995; Education Policy, 2014) the appropriate class size conducive for effective teaching and learning should be adhered for teachers' teaching endeavours and students' wellbeing during learning and performance in general.

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LIST OF ABBREVIATIONS AND ACRONYMS

BEST	Basic Education Statistics in Tanzania.
CSE	Certificate of Secondary Education
CSEE	Certificate of Secondary Education Examination
DSEO	District Secondary Education Officer
GER	Glossary of Education Reform
MOEVT	Ministry of Education and Vocational Training
PEDP	Primary Education Development Programme
SEDP	Secondary Education Development Programme
URT	United Republic of Tanzania
UNDP	United Nations Development Program

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Problem

Education in every sense is one of the fundamental factors of development. No country can achieve sustainable economic development without substantial investment in education. It enriches people's understanding of themselves and the world; it improves the quality of their lives and leads to broad social benefits to individual and the society. Education raises people's productivity, creativity and promotes entrepreneurship as well as technological advancements. In addition it plays a very crucial role in securing economic social progress and improving income distribution. Education is very important as it helps individual to convert economic resource into something valuable (Streeten, 2003). Education also makes people more ambitious and self confident; education is a weapon against feelings like shame and lack of hope (UNDP, 1990, p. 10).

Education is a basic right not a privilege as it is also an essential catalyst for the achievement of all other global goals. Academic achievement help students to get job opportunities as employers only hire those who graduate. It allows students to enter competitive fields and it helps a student interpret the world around them. The students' academic performance in secondary schools can drop or rise due to a number of factors some of them are:, teachers' competence and teachers commitments to work contributes to students' academic performance, the distribution of available resources among the available schools in the nation, socio- economic background of the student, economic status of a teacher due to low pay which lead to

low purchasing power, time in which students are in actual learning process, untaught parts of the intended curriculum, the national ideology, in adequate teaching and learning materials, learning environment, class size for instance classes which are big are likely to have negative impact on students' academic performance and availability of important infrastructures like classrooms, library, laboratories, teachers' houses as well as furniture (Babyegeya, 2002) .

The third world countries enrolment exceeds provision for secondary education in terms of adequate furnished classroom, hence the perennial problem of classroom congestion. The poverty level and low classroom utilization rate in these countries worsen the situation. Tanzania is one of the third world countries where the situation is not different. Secondary education has been poorly funded, hence most of secondary schools experience classroom congestions, low students-classroom-space and low classroom utilization rates. This situation affect secondary school students' academic performance as it does not favour effective academic learning (Babyegeya, 2002).

Currently, Tanzania's education quality has been decreasing whereby most of government and private secondary schools have been performing poorly compared to previous years. The secondary education graduates have been considered lacking important knowledge and skills for their socio-economic development. Moreover, the secondary school academic performance trends have marked consistently poor, Figure 1.1.

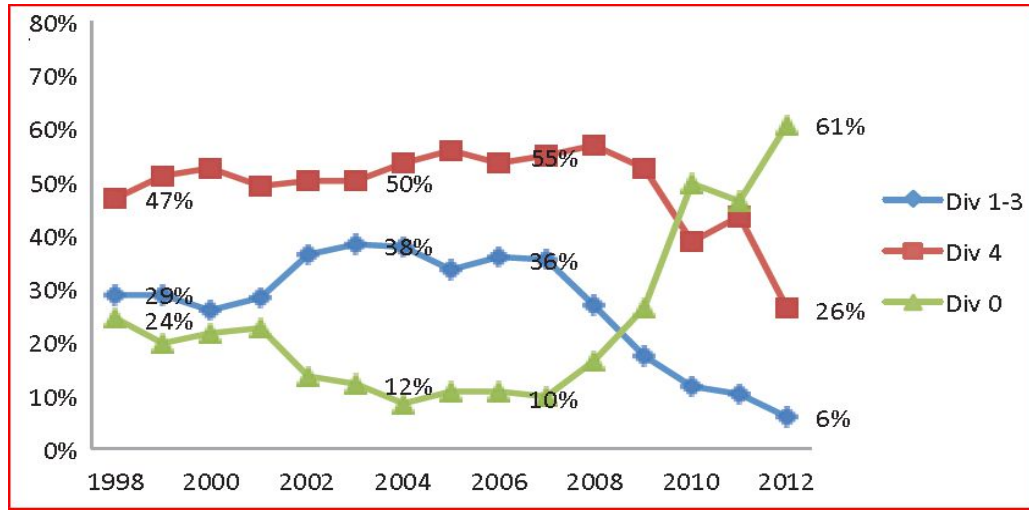


Figure 1.1 Performance of Secondary Education from 1998-2012

Source: MOEVT, Basic Education Statistics in Tanzania (BEST), 1998-2012 in Twaweza, (2013, p.2).

The literature associates many factors to the poor performance. Among others presented are: large classes, inappropriate number of teachers available in schools, teaching and learning environment, and teaching and learning materials. The factor that might contribute much among other factors is the issue of learning environment and class size in particular. However, the component has been rarely considered as important factor on the students' performance. This might be compared to the number of teachers allocated to serve them as well as teaching and learning facilities allocated.

Tanzania like any other country in the world accommodated the world's educational agenda of Education For All (EFA). This was done through promoting access to primary education for all school aged children through Primary Education Development Programme PEDP (PEDP I 2002-2006 and PEDP II 2007-2011) The

enrolment increase in primary schools necessitated the access opportunities also to secondary schools through Secondary Education Development Programme (SEDP) I (2004-2009) and SEDP II (2010-2014). Specifically, large classes in secondary schools in Tanzania therefore, started to be experienced in 2004 when the government introduced the Secondary Education Development Programme (SEDP). This is a program which was introduced to make sure that every student who completes standard seven gets the right to secondary education (Haki Elimu, 2004).

Large classes in Tanzania started to be experienced in Tanzania from 2004 when the government introduced the Secondary Education Development Programme (SEDP) a program which was introduced to make sure that every student who completes standard seven gets the right to secondary education (Haki Elimu, 2004). More enrollments of secondary school students started from 2005 whereby the government asked each ward to build a secondary school as a result many students were allocated to schools while there were no enough teachers and classrooms to equip them. The few secondary schools that had enough teaching staff at that time had low classroom utilization rates, yet, these students need to learn comfortably (Haki Elimu, 2004).

With the current-modern teaching methods (e.g., competence based technique) it has been difficult for the teachers to teach basing on learner centered. This requires interactions and large classes teachers find difficulties when teaching as they are not free to move around the class to check whether the students are really concentrating with the lesson or not. Students also find difficulties as their problems are not attended by teachers due to excessive number of students, for a teacher to attend individual student he/she need much time that cannot be obtained in real sense (GER,

2015). According to the research which was done by Fubunmi (2007) in Oyo state in Nigeria, shows that large classes have negative impact on both secondary school teacher productivity and student learning. Oguntoye (1983, as cited in Fabunmi 2007) in his own study found that class size had negative coefficient with examination performance of students. Not only African countries but also European countries started to experience the problem since 19th century whereby different researches were done; different researchers tried to find out whether class size affects students' performance. Partell (1997) found that increasing class size has a negative effect on students' achievement whereby large classes affect both students' performance and retention.

Also, Borden and Burton (as cited in Kwantlen, 2004) found that students in large classes (over 90 students) did not perform as well as students in small classes (5 to 30 students). They further found out that the negative impact of large classes was greater with lower ability students. Large class in Tanzania is a very big challenge to teachers especially on the selection of teaching methods and techniques to be used when teaching. Also the distribution of little resource available in Tanzania secondary schools have been a great challenge to most of Tanzanian teachers due to the fact that students are many compared to a number of books available and other teaching facilities. The findings of this study are very important in transforming Tanzanian's secondary education quality as who are concerned with education sector, policy makers will have the light on how to rectify this situation, improving students' academic standards since they will be aware of how students are being affected by large class size.

1.2 Statement of the Problem

In fulfilling EFA, the government of Tanzania has struggled much to increase the number of secondary schools; At least each ward is having a secondary school which is a good deal indeed! The educational programs were introduced such as SEDP. This aimed to provide opportunity to pupils who completed standard seven to join secondary schools. The number of students enrolled in those schools was big compared to available classrooms as well as the number of teachers employed to teach them. This has resulted into many students being put in one class so that they can all be taught by few teachers available in schools. The learning environment especially the classes seem to be forgotten as one of the important factor in accelerating students' academic performance (Babyegeya, 2002).

It should be noted that students need a free and conducive environment to ease their learning. A teacher is likely to attend students' problems timely when there are few students in the class. However in the case of a big class, it is very difficult for a teacher to deal with students' concerns, and managing assignments. Beside the effectiveness of any teacher is measured by the students' high academic performance. Likewise effective teaching lies on smooth management routines of discipline problems, careful planning, give supportive and positive feedback to students, help them figure out the right answer if they are wrong but on the right track.

In short, effective classroom management maximizes children's learning opportunities whereby a teacher is more of a guide, coordinator and facilitator (Woolfolk, 2001). It is very unfortunate that the class size in most cases has been not

connected with the students' academic performance though there has been very close relationship between the class size and the students' academic performance; It should also be noted that when the process of learning is not well facilitated students' academic performance will automatically be affected. Therefore, this study pointed out the contribution of class size on students' performance in secondary schools.

1.3 Purpose of the Study

The purpose of the study was to investigate the contribution of class size on students' academic performance in Karagwe District.

1.4 General Objectives of the Study

The study aimed at exploring the contribution of class size on students' academic performance in secondary schools.

1.5 Specific Objective of the Study

Specific objectives of the study were:

1. To find out the current class sizes in secondary schools in Karagwe District.
2. To investigate the challenges facing teachers' in teaching large class sizes in Karagwe District.
3. To investigate the contribution of class size on enhancing students' academic performance.

1.6 Research Questions

This study was guided by the following major questions:

- i. What are the current class sizes in secondary schools in Karagwe District?

- ii. What are the challenges facing teachers' in teaching large class sizes in Karagwe District?
- iii. What is the contribution of class size on enhancing students' academic performance?

1.7 Scope of the Study

This study focused on exploring the extent to which class sizes influence student learning and academic performance in general. The study was conducted in Karagwe district in Kagera region whereby three ordinary secondary schools were involved namely; Kayanga secondary school, Bugene secondary school and Kituntu secondary school. The selection of these schools based on the fact that they were all having large classes and some of their classes had small dimensions compared to others. Moreover, the researcher used a sample of 71 respondents. These were: two education officers, three heads of schools, eighteen teachers and forty eight students.

1.8 Significance of the Study

The findings of the study will be significant to the following;

- i. Government and other stakeholders will get to know how student's performance is much affected by large classes. Hence, they will be in a position to participate in solving this problem of large classes by investing much in improving teaching and learning environment. Therefore students' academic performance will be improved.
- ii. Other researchers and academicians. Through the results of this study other researchers and academicians will get to know that apart from other factors also class size especially large class size do affect students' academic performance.

They will be enlightened on what can be done in order to rectify or to solve the problem.

1.9 Limitation of the Study

Under this study the researcher encountered some limitations in the process of collecting data; these were: inconsistency on schedule for example some education officers were very busy with their normal official activities. However, when the researcher kept on insisting on the importance of their participation they participated and so the researcher got the necessary information concerning the study from them. Another challenge encountered was that some respondents were not ready to give information till when the researcher used a lot of explanations. These were especially the academic teachers, thank God that they understood and provided the needed data respectively.

1.10 Delimitation of the Study

This part in tells the demarcation of the study based on the study area, the title of the study, the sample and sampling techniques, as well as methodologies used in data collection and analysis (Nsubuga, 2000). This study confines itself in exploring the contribution of class size on students' academic performance in secondary schools, although there are other factors contributing on students' academic performance the class size is very vital for effective learning and teaching to take place accordingly.

The study covered three secondary schools in Karagwe District namely; Kayanga secondary school, Bugene secondary school, Kituntu secondary school. The major variables of this study were supported by social learning theory as well as socio-

cultural theory of learning. The study used social learning theory and socio-cultural theory of learning to explain the contribution of the class size on students' academic performance in secondary schools. The study used descriptive research design whereby both qualitative and quantitative approach were used as basis for data collection and data analysis.

Both primary and secondary data were used in this study. In order to obtain appropriate data; observations, interviews, questionnaires as well as documentary review were used as instruments for data collection. The target population for this study were District Educational Officers, heads of schools, teachers as well as students, the sample was randomly and purposively selected. The data was analyzed and presented using descriptive statistics, quotations, tables and figures.

1.11 Definition of Key Terms

Class Size: Refers to the number of students in a given course or classroom, specifically either (1) the number of students being taught by individual teachers in a course of or classroom or (2) the average number of students being taught by teachers in a school, district or education system (GER, 2015).

According to Shamim (1993), Class Size is often defined in numbers. However teachers and learners perception of a large class is determined not only by numbers of students but by several additional factors. These include physical conditions in the classrooms such as the amount of space available, teaching focus, teaching methodology and availability of resource. Hence while numbers may be necessary for defining large classes, numbers alone is not sufficient to arrive at a shared definition, even within one country.

Academic performance: This is defined as the outcome of education on the extent to which a student, teacher and institution have achieved educational goals and it is commonly measured by examination or continuous assessments (Annie, 1996). In this study academic performance is perceived as the degree of achievement by students in their class assessment tests, terminal examinations, annual examinations as well as the National examinations.

Classroom management: Refers to techniques used to maintain a healthy learning environment relatively free of behaviour problems (Woolfolk, 2010).

1.12 Conceptual Framework

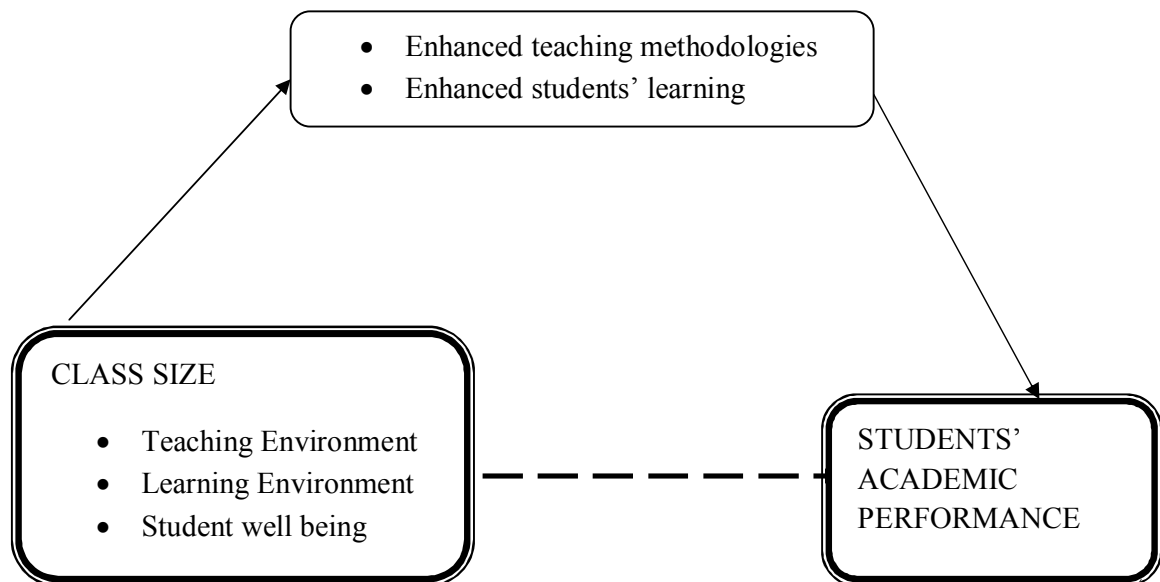


Figure 1.2: The Contribution of Class Size on Students' Academic Performance

Source: Adopted and modified from social learning theory (Bandura, 1997).

Figure 1.2 above shows the general assumptions of the contribution of class size on Students academic performance. The extraneous variables include enhanced teaching methodologies and enhanced students' learning. The major variables of this study

were supported by the social learning theory;- social learning theory states that, people learn within their social context (Bandura, 1997); -socio cultural theory of learning insists on classroom students' interaction (Vygotsky, 1978). It considers that people learn from one another, including such concepts as observational learning, imitation, and modeling (Abbott, 2007).

The above mentioned theories of learning were used because they all emphasize on interactions and social relationships in order for the process of learning to take place effectively. This study holds major assumption that students' academic performance depends on their effective learning and interactions in their environment e.g. teaching methodologies, and class size.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of various literature related to the study. It extensively looks at the theoretical framework and empirical literature review. It includes the summary of the knowledge based on the factors and the contribution of class size on students' performance as well as methods that currently are used to rescue the situation. It also identifies the gaps that have been filled by the study.

2.2 Theoretical Framework

Various theories were used to explain the impact of large classes to students' academic performance. For the purpose of this study social learning theory and socio-cultural theory were used.

2.2.1 Social Learning Theory

Social learning theory states that, people learn within social context. The theory emphasize on the reciprocal determinism. Reciprocal determinism asserts that, personal behaviour, environment and the characteristics of a person influence each other (Bandura, 2007). The process of social determinism involves several steps. The first step is **attention**, which tells that, for an individual to learn something they must pay attention to the characteristics of the modeled behaviour. The second step is **retention which** means that an individual need to be able to remember details of the behaviour in order to learn and later produce the behaviour. The third step is **reproduction**, this is a process whereby an individual must organize his/her

responses in accordance with the model behaviour (Bandura, 1986). Social learning theory was used in this study because students when learning need to interact with one another. The complex webs of social relationships, students' experiences with peers and teachers as well as teaching and learning materials have greater influence on students' performance.

2.2.2 Socio-Cultural Theory of Learning

The socio-cultural theory of learning by Vygotsky was also used in this study;- Vygotsky believes that human activities take place in cultural settings and cannot be understood from these settings;- This simply highlights the importance of the learning environment that supports the whole process of learning. The theory also emphasizes that students learn better through interactions whereby social interactions create our cognitive structures and thinking processes;- This simply means our specific mental structures and processes can be traced to our interactions with others, higher mental processes such as problem solving are co-constructed during shared activities between one another (Woolfolk, 2010).

2.3 Empirical Literature Review

2.3.1 Class Size in Secondary Schools

It is very unfortunate that the Tanzanian educational policy is silent on the issue of class size only official documents given regularly are always insisting that a secondary school stream should have 40- 45 students. The fact is that most of the secondary schools in Tanzania exceeds the required number of students in a classroom. According to GER (2015), a variety of reform efforts have been focused on decreasing class sizes or the average class size in an education system as a strategy

for improving school and student performance. Smaller classes have positive effects on students' learning and academic achievement. The basic rationale is that if teachers have fewer students, they can devote more time and attention to each student, including more time diagnosing specific learning needs, critiquing work products and giving students one-on-one instruction and academic support, for example.

GER (2015), to understand how class size can affect teaching, consider the following hypothetical example. If a teacher has five classes with 20 students in each class, the teacher is responsible for 100 students. If each class is increased to 30 students, the teacher would then be responsible for 150 students—a 50 percent increase in the teaching workload. If a teacher with 20 students in each class spends only 15 minutes reading, analyzing, and responding to a written assignment (a short amount of time), the teacher will have to devote 300 minutes to the process for each class—or about five hours—while five classes given writing assignments would require 25 hours. For a teacher with 150 students, the time required would be 2,250 minutes—or nearly a full 40-hour workweek.

Class sizes have a contribution on students' academic performance. Few researches have been done on the impact of class size to students' academic performance at the secondary level; the available studies scholars have been finding out the extent to which class size affect students' performance mainly at the university level. According to the research done by Partell (1997), on class size, the results of the research shows that, the increasing class size has negative effects on students' achievement. It predicts that a student in a class of 5 students has a possibility of

receiving an A of 52. This is 2.4 times higher than a student in a class of 290 students. They further found out that increasing class size lowers students' achievement at a decreasing rate, this simply means adding 10 students to a class of 10 has a large negative impact on grades than adding 10 students to a class of 200 students. They concluded by saying that large classes adversely affect students' performance as well as students' retention.

Blatchford (2002), clarifies teachers in large classes were more formal and less personalized in their styles of teaching and they were forced to use different teaching methods to cope with pupils with different learning abilities. They added that finding time to mark pupils' work, planning and assessment is more of a problem in large classes. Teachers see this as a direct threat to quality of their teaching as they don't get enough time to adhere to students' personal needs, students with low abilities remain un helped as a result they don't perform to their best as they are always left behind.

They also found out that, pupils in large classes were found to have more passive role in contact with a teacher. Their systematic observation study showed that, two allied behaviour were more common in large classes. Times when a child is simply listening to the teacher and times when they are not singled out by the teacher they are one of the crowds. On the other hand, most parents, teachers and students have a strong belief that small group classes are preferable to large ones. As Bolton (1988), put it: "there is, after all, an orthodox tradition to the proposition that small classes are necessary for student achievement". In some of the experiments performed, Roe (1987)-, discovered that "in reading scores on individual tests, the smallest classes

were significantly higher and the largest classes were lowest of all". McKeachie (1986, as cited in Cuseo, 1994, p.181) argued that in large classes teachers are most likely to use lecture method and less likely to use discussion than in small classes. This naturally leads to the question of how learning outcomes achieved by courses taught with the lecture method – the dominant mode of instruction in large class settings- compared with outcomes achieved in smaller- sized class, where the discussion method is more likely to be employed. Researches on the lecture method strongly suggest that students' attention and concentration tend to drop off dramatically after 10-20 minutes of continuous instructor discourse.

As corollary to this, Smith (1980), indicates through meta-analyses that compare to large classes, small classes lead to higher pupil achievement, more favourable teacher effect (for example moral and attitude towards students) greater attempts in individual instruction, a better classroom climate and more favourable student effects (e.g. self concept and participation. Bandiera-, (2010)-, their research shows that the effect of class size on students' performance is as –expected- negative, students always do worse in big classes. To get a sense of magnitude of this effect, their estimates imply that one standard deviation increase in class size from the mean (that is going from the average class of 56 to a class of 89) would decrease the mark by 9% of observed variation in marks within a given student. These estimates, however, marks two forms of heterogeneity: (i) the impact of class size vary a cross the range of class sizes. (ii) the effect of class size vary a cross students that is to say the way a high achiever student is going to be affected in large class is quite different from how the low achiever student is going to be affected.

However, other studies have been carried out on class size and academic performance of students. Mc Daniel (1963), conducted a study on class size, the findings of the study revealed that class size whether large or small was not related to academic achievement of pupils in a standardized achievement test in mathematics, reading and language.

Edge (1980)-, identified two of the problems which large class poses, they are:-

- The provision of an opportunity for discussion or for any kind of oral input to the written work is difficult and
- The amount of marking involved can dissuade even the not enthusiastic teacher from setting the amount of written work that he feels would benefit the students.

Also, Burton (as cited in Kwantlen, 2004), found that students in large classes (over 90 students) did not perform as well as students in small classes (5 to 30 students or medium classes 31-90 students). They further found out that the negative impact of large classes was greater with lower ability students. According to the research done by Fubunmi (2007) in Oyo state in Nigeria shows that large classes have negative impact on both secondary school teacher productivity and student learning input hence secondary school student's academic. On the other hand, Oguntoye (1983, as cited in Fabunmi, 2007) in his own study found that class size had negative coefficient with examination performance of students.

2.4 Research Gap

The literature review identified the need for more studies on the effect of large classes on students' academic performance in secondary schools from both the

learners' and teachers' point of view. This is because few studies (eg. Blatchford, 2002) on the impact of large classes on students' performance exist, whereby most of the works (eg. Partell, 1997) on this factor have been done in the universities and not in lower classes where students need much attention and guidance. For that case therefore this factor needed to be studied keenly in lower levels of education as it is affecting many students' academic performance and it is broking opportunities for further advancement to most of the students.

Not only that but also strategies to combat this problem needed to be pointed out so that students in large classes can have an opportunity to perform better academically. This study therefore helped to fill the gap that elitist on the impact of large classes on students' academic performance specifically in secondary schools and it suggested appropriate teaching and learning strategies/ techniques to combat the problem.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was used, the research design, the area of the study, the population, sample size and sample procedures, sampling techniques, methods for data collection, validity and reliability issues, ethical consideration as well as data analysis and presentation methods.

3.2 The Research Design

According to Ary (2010), a research design is the researcher's plan for the study which include the method to be used, what data will be gathered, where, how and from whom? The research design shows the overall strategy chosen to integrate the different components of the study in a coherent and logical way that effectively addressed the research problem, it shows how the data was collection and analyzed .This study used descriptive design; according to Burns and Grove (2003:201) descriptive research design is designed to provide a picture of situation as it naturally happens, it may be used to justify current practice, make judgement and also develop theories. For the purpose of this study descriptive design was used to find out the current class size in secondary schools in Karagwe District. The descriptive design really enabled the researcher to study the current class size in secondary schools as well as challenges faced teachers and students in large classes. In addition to that descriptive research design was used due to the fact that it was appropriate to both qualitative data and quantitative data.

3.3 Research Approaches

This study employed both qualitative and quantitative approaches. These were the basis of data collection and analyses. The reasons for the use of mixed methods were to build on the strengths that exist between qualitative and quantitative research approaches. Mixed methods of research also helped in the deep understanding of the phenomenon than using one of the two alone, that is using either qualitative or quantitative methods alone. Not only that but mixed method was used in this study for the purpose of maximizing the strength and minimizing the weakness of each other (Gay, 2009). According to Lincoln (1985), both qualitative and quantitative research methods emphasize truth, consistency, applicability, and neutrality while taking different procedural approaches to ensure quality. This study used both qualitative and quantitative approaches in order to understand the nature and the effects of large classes on students' academic performance.

3.4 Area of the Study

The study was conducted in Karagwe District in Kagera Region. Karagwe is located in the North West part of Tanzania. It is bordered by Ngara, Bukoba, Misenyi, Muleba and Biharamulo Districts. It is also very close to Uganda and Rwanda. The most economic activity done in Karagwe is agriculture (both food crops and cash crops are grown). It has two rainy seasons in a year mainly September through early January and February through May. The schools that were engaged in this study were Kayanga Secondary School found in Kayanga ward, Bugene Secondary School found in Bugene ward as well as Kituntu Secondary School found in Kituntu ward. The reason for selection of these schools based on the truth that they all had large classes.

This was the issue under this study. Thus the researcher expected to learn much concerning the effect of class size. The researcher also expected to get reliable data and through observation the research observed how teachers were interacting with students during the lessons hence the researcher were able to explore the effects of large classes on students' academic performance. Another reason was these schools were located in different wards in Karagwe District so the researcher believed that the information collected would represent other schools in the district.

3.5 Population of the Study

Ary (2006), defines population as all members of any well – define class of people, even or objects. There are two types of population according to Gay (2009), which are target population as well as accessible population, target population is the population to which the researcher would ideally like to generalize study results and accessible population is the population from which the researcher can realistically select subjects. The target population for this study was secondary schools' students, teachers, head of Schools as well as Educational officers. The population of this study was chosen because the researcher believed that were affected directly or indirectly by the problem of large class.

3.6 Sample Size and Sampling Techniques

A sample is the smaller group that researchers study (Gall, 1996). Sample size is the number of observations in a sample (Evans, 2000). Because the researcher had planned to use mixed approaches (qualitative and quantitative methods) the sample used were relatively high to support generalization of data. The sample was randomly and purposely selected. This study used a sample of 71 respondents whereby 2

districts education officers (DSEO & DSAO), 3 heads of schools, and 18 teachers were purposely selected. Moreover, 48 students were randomly selected using ballots and draw method. The composition of the sample is presented in Table 3.1 below.

Table 3.1 The Summary of Distribution of Respondents

S/No	School	DSEO	H/M	Teachers	F.3 Students	F.4 Students	Total
1	Kayanga	-	1	06	06	10	23
2	Bugene	-	1	06	06	10	23
3	Kituntu	-	1	06	06	10	23
TOTAL		2	3	18	18	30	71

Source: Data obtained from field (Aug, 2016)

3.7 Methods of Data Collection

Data collection refers to the gathering of specific information aimed at proving some facts (Kombo & Tromp, 2006). In this study, both Primary and Secondary data were collected from the field. Primary data were obtained from respondents, whereby respondents' views, perceptions, experiences and attitudes towards the problem being studied were collected. Primary data collected helped the researcher to get the real and original information concerning the problem at hand/under study.

Also, Secondary data were also collected. Secondary data are information gathered from other previous studies, for example published material and information from internal sources such as raw data and unpublished summaries (TOUOT, 2012). Secondary data are used to supplement the primary data as it helps to plan the collection of primary data, in case it becomes necessary (Nkpa, 1997). Secondary data from different source were also used to give more clarification and additional

information to the questions that were not well clarified by the respondents; hence the research objectives were achieved. The sources of Secondary data used in this study included, number of classes in relation to the number of students in the sampled schools, Mock Examinations results, national examination results, admission and attendance registers, books, electronic sources like <http://www2.tulane.edu/som/ome> on comparison of Teaching methodologies, <http://www.oecd.org/edu/school> on Teaching strategies for instructional Quality, www.waikat.ac.nz/tdu on Teaching Strategies to promote the Development of Students , reports as well as previous research reports. The following instruments were used in this study.

3.7.1 Questionnaires

Koul (1984) defines a questionnaire as a device consisting of a series of questions dealing with some psychological, social and educational topics sent or given to an individual or a group of individuals with the objective of obtaining data with regard to some problem under the investigation. Questionnaires are appropriate because they are economical and can ensure anonymity, particularly when dealing with a large sample (Nardi, 2003 & Punch, 1998). Not only that but also questionnaires allow the research to collect large amounts of data in a relatively short amount of time (Gay, 2009). Both closed-ended and open-ended questions were used to tape information on the current class size in secondary schools, the contribution of class size on students' academic performance, the challenges facing teachers in teaching large class size as well as the strategies and measures on combating the problem from student. Close-ended questions were used because they were easy to score and can be answered quickly especially when several items are involved or when sample is large (Macmillan, 2001, Schumacher, 2001 and Neuman, 2000). Open – ended questions

were used to provide a free chance to respondents for the purposes of getting their views, opinions and attitude on the effects of large classes on students' academic performance. Open-ended questions also provided respondents with an opportunity to suggest solutions towards the problem at hand.

3.7.2 Interview

According to Gay (2009), an interview is a purposeful interaction in which one person obtains information from another. Interviews consist of oral questions by the interviewer and oral responses by the research participant (Gall, 1996). Not only that but also the researcher used interviews to collect data because is a free response method whereby the researcher had an opportunity to ask extra questions as a result more information were obtained. The interview guide was prepared to direct the researcher during the face to face interview. The interviews were administered to Heads of schools, teachers as well as District Education officers.

3.7.3 Documentary Review

Documentary review involves the review and analyzing accurate information which is recorded or published in reaction to the area of the study (Omari, 2011). Documentary review was used to help the researcher to get the insight of the existing information regarding the impact of large classes on student's academic performance. Through different documents like records of Mock and National Examination results, the researcher got the picture of student's academic performance; this helped to support participants' views, opinions and suggestions concerning the problem at hand.

3.7.4 Observation

According to Nworgu (1991), observation is the method of data collection involving watching people, events, situations or phenomenon in order to obtain first-hand information about a particular phenomena. Observational check list was used to collect data during direct observation in the classroom setting whereby the researcher observed the way students were learning and integrating during the lesson, the way they shared their experiences with other students in the classroom during the lesson, the way the teachers were facilitating lessons in large classes. The researcher got other issues beyond those that were covered in the questionnaires and interviews.

3.8 Validity and Reliability of the Instruments for Data Collection

According to Petrinovich (1976), a valid measurement is one that measures what it is supposed to measure. On the other hand reliability is the consistency of a measurement, or the degree to which an instrument measured the same way each time it is used under the same condition with the same subjects (Trochim, 2002). In order to ensure the validity and reliability of the instruments, a pilot study was carried out. In doing so 20 students, 5 teachers, 01 head of the school as well as one education officer were given questionnaires and were interviewed. The schools for pilot study were Nyabiyonza Secondary School in Nyabiyonza ward as well as Ndama Secondary School in Ndama ward both were found in Karagwe District. The participants' feedback in the pilot study confirmed the assumptions that were made by the researcher. Not only that, but also helped the researcher to review and modify the questions before interviewing the participants this helped the researcher to obtain the relevant information concerning the problem at hand. Also the information obtained

in the pilot study helped to ensure the reliability of the instruments of this study, the researcher used various tools which included documentary review, questionnaires, interviews and observation check lists.

3.9 Methods of Data Analysis

Data analysis means the treatment of data so that they become summarized or reduced to a point they can be meaningfully interpreted (Ali, 1996). In this study, the responses of quantitative data which were collected using questionnaires and observation check lists were analyzed using descriptive statistics (frequency counts and percentages). Qualitative data from interviews and documentaries that is respondents' ideals opinions and suggestions were recorded using hand writings and some ideas and opinions were recorded using audio tapes. Later the recorded scripts were selected, coded, categorized and compiled. The data gained from qualitative and quantitative approaches were presented using quotations, tables and figures. Descriptive statistics were used because it gave numerical and graphic procedures to summarize collected data in a clear and understandable way (Seena, 2012).

3.10 Ethical Considerations

Issues of ethical, confidentiality and privacy of personal rights of students, teachers, Heads of Schools, and Education officers were protected. Not all the information was recorded to avoid adverse effects of disclosure. The researcher sought permission from relevant authorities before going to the field for the purpose of collecting data. The objectives of the study were explained verbally and participants were assured that all information obtained during the study was kept confidential.

CHAPTER FOUR

4.0 DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter deals with data presentation, data analysis and discussion of the findings of the research based on the specific objectives of the study. The purpose of this study was to investigate the contribution of class size on students' academic achievement in Karagwe District. In order to obtain appropriate information during the process of data collection, the researcher formed questions from the specific objectives. The findings are tabulated, analyzed and interpreted against the background of the literature review.

The specific objectives of this study were:

- i. To find out the current class sizes in secondary schools in Karagwe District.
- ii. To investigate the challenges facing teachers' in teaching large class sizes in Karagwe District.
- iii. To investigate the contribution of class size on enhancing students' academic performance.

4.2 Demographic Information of the Research Participants

Table 4.1 here under represents the summary and the characteristics of the participants in this study

Table 4.1 Distribution of Demographic

CATEGORIES		DSEO	HEADS OF SCHOOL	TEACHERS	STUDENTS	TOTAL
Sex	Female	1 50%	0 0%	9 50%	24 50%	34 47.9%
	Male	1 50%	3 100%	9 50%	24 50%	37 52.1%
	Total	2 100%	3 100%	18 100%	48 100%	71 100%
Age	15-25	-	-	-	48 100%	48 67.6%
	26-35	-	-	6 33.3%	-	6 8.5%
	36-45	-	1 33.3%	8 44.4%	-	9 12.7%
	46-55	2 100%	2 66.7%	4 22.2%	-	8 11.3%
	Total	2 100%	3 100%	18 100%	48 100%	71 100%
	Total	2 100%	3 100%	18 100%	48 100%	71 100%
Marital Status	Married	2 100%	3 100%	13 72.2%	-	18 25.4%
	Single	-	-	5 27.8%	48 100%	53 74.6%
	Total	2 100%	3 100%	18 100%	48 100%	71 100%
Experience	0-5	-	-	2 11.1%	-	2 8.7%
	10-15	-	1 33.3%	8 44.4%	-	9 39.1%
	15+	2 100%	2 66.7%	8 44.4%	-	12 52.2%
	Total	2 100%	3 100%	18 100%	-	23 100%
Educational level	Diploma	-	1 33.3%	6 33.3%	-	7 30.4%
	Degree	2 100%	2 66.7%	12 66.7%	-	16 69.6%
	Total	2 100%	3 100%	18 100%	-	23 100%
Grand Total	2 100%	3 100%	18 100%	48 100%	71 100%	

Source: Analysis of demographic information of DSEOs, heads of schools, teachers as well as students who responded to the questionnaires and participated in interview sessions.

Looking at table 4.1, majority of participants were male (37, 52.1%). In terms of age 48 (67.6%) out of 71 (100%) were having the age between 15-25 years; 6 (8.5%) out of 71 (100%) were of age category 26-35 years; 9 (12.7%) out of 71 (100%) their age fell in the age category of 36-45 while 8 (11.3%) were of the age category 46-55 years. Moreover, on the marital status 18 (25.4%) out of 71 (100%) were married while 53 (74.6) out of 71 (100%) were single. Also majority of participants had a teaching experience of 15 years above (12, 52.2%). Not only that but also on the level of education a good number of participants hold degree in education (16, 69.6%) out of 23 (100%).

4.3 The Current Class Sizes in Secondary Schools in Karagwe District

The first objective under this study aimed at finding out the current class size in secondary schools in Karagwe District. The researcher sought to find out the size of classes available in secondary schools. The guiding questions were “How many students are in one form and each stream”, “Is there any school in your district having large classes”, “How many students are in your class”. These questions were posed to students, teachers, heads of schools and DSEO through questionnaires and interview respectively. Also document analysis was done with the assistance of the class teachers and academic teachers as it was requested by the school heads.

Table 4.2 Current Class Size in Secondary Schools

Item	Category	Frequency	Percentage
The number of students in a stream	75 – 80	38	53.5
	60 – 65	33	46.5
	Total	71	100

Source: Data obtained from field (Aug, 2016)

Table 4.2 indicates that out of 71 respondents 38 respondents which is equal to 53.5% revealed that the number of students in classes ranges from 75 students to 80 students which makes the average of 7.5 students per stream 33 respondents equal 46.5% of the data collected revealed that number of students in classes ranged from 60-65 students which makes an average of 62.5 student per stream. The data shows clearly that 53.5% of the available students in the sampled schools were placed in classes with the average of 77.5 students; while 46.5% of the students available in the sampled schools were in classes with the average of 62.5 students.

Very similar results emerged through observation. Classes in this case revealed to have large number of students which couldn't allow free movement as well as free interaction of Students. Documentary review also revealed the same, whereby majority of the available students were placed in classes ranging from 75-80 students while other classes 46.5% of the available classes were having students ranging from 60-65.

Table 4.3 Number of Students at Kituntu Secondary School

Form/Class	No. of Registered Students	No. Students in a Stream
I	250	80
II	221	75
III	206	65
IV	175	60

Source: Data obtained from field (Aug, 2016)

Table 4.3 shows the number of students at Kituntu Secondary School whereby there were an average of 80 students in each stream in form one, form two had the average of 75 students in each stream, in form three there were an average of 65 students in

each stream and the form four classes had the average of 60 students. The data in table 4.3 which was obtained from the students attendance registers and other academic records revealed that the class sizes in lower classes that is form one and form two were big having students between 75-80 in each of the stream whereby higher classes; form four and form three had 60-65 students per streams this was due to the fact that the number of students in form one classes were big compared to the number of students in form three and form four according to the data in table 4.3 there were 250 students in form One, 221 students in form two, 206 students in form three as well as 175 students in form four the number of student in a class determined the number of students to be allocated in one stream.

Table 4.4 Number of Students at Kayanga Secondary School

Form/Class	No. of Students Registered	No. Students in a Stream
I	350	80
II	327	80
III	280	75
IV	245	65

Source: Data obtained from field (Aug, 2016)

Table 4.4 shows the number of students at Kayanga Secondary School whereby there were an average of 80 students in each stream in form one, form two had the average of 80 students in each stream, in form three there were an average of 75 students in each stream and the form four classes had the average of 65 students. The data in table 4.4 which was obtained from the students attendance registers and other academic records revealed that the classes sizes in lower classes that is form one and form two were big having students 80 in each of the stream whereby higher classes; form four and form three had 75-65 students per streams this was due to the fact that

the number of students in form one and two classes were big compared to the number of students in form three and form four according to the data in table 4.4 there were 350 students in form One, 327 students in form two, 280 students in form three as well as 245 students in form four the number of student in a class determined the number of students to be allocated in one stream.

Table 4.5 Number of Students at Bugene Secondary School

Form/Class	No. of Students Registered	No. Students in a Stream
I	280	70
II	256	65
III	215	65
IV	162	60

Source: Data obtained from the field (Aug, 2016)

Table 4.5 shows the number of students at Bugene Secondary School whereby there were an average of 70 students in each stream in form one, form two had the average of 65 students in each stream, in form three there were an average of 65 students in each stream and the form four classes had the average of 60 students. The data in table 4.3 which was obtained from the students attendance registers and other academic records revealed that the classes sizes in lower classes that is form one and form two were big having students between 65-70 in each of the stream whereby higher classes; form four and form three had 60-65 students per streams this was due to the fact that the number of students in form one classes were big compared to the number of students in form three and form four according to the data in table 4.5 there were 280 students in form One, 256 students in form two, 2015students in form three as well as 162 students in form four the number of student in a class determined

the number of students to be allocated in one stream. The data in table 4.3, 4.4, 4.5 shows clearly that all schools had large classes whereby the lower classes that is form one and form two were more crowded than classes in form three and form four, though Kituntu and Kayanga had bigger classes than Bugene secondary School respectively. Kayanga secondary school had a total number of 1202 students, Bugene secondary school 913 and Kituntu secondary had 852 students. The numbers of students were the determinants of the size of the classes/stream at school this simply means students were distributed according to the total number available in the respective class so that they can be accommodated in available classrooms.

Through observation the researcher witnessed most of classes in the sampled schools being full of students. There were no free chances that could allow easy movements. Students and teachers couldn't move so easily from one place to another, students had to remain at their respective places while teachers were limited to stand in front of the classes. The real situation shows that students were not free; the classroom situation was not so much conducive and supportive to students to learn as it was difficult to interact and share ideas and talents. In addition to that the DSEO involved in this study confirmed the class size to be big in some schools in Karagwe District. She said:

“Some schools in my district are having many students compared to the infrastructures available at those schools as the result we are forced to allocate many students in each classroom. We are supposed to have classes of 40 to 45 students but the situation isn't, so in some schools due to inadequate infrastructures specifically classrooms”.

The current situation in classes especially in the sampled schools is similar to the one which was described and distinguished by Haki Elimu (2004) whereby many students

were allocated to school while there were no enough teachers and classroom to equip them. Classrooms are too congested while students need to learn comfortably for their academic performance. Also the findings of this study are supported by Babyegeya (2002), who found that some schools in Sub-Saharan Africa had few classrooms whereby several streams of the same grade were combined to form one class which is very large for effective teaching and learning.

4.4 The Challenges Facing Teachers in Teaching Large Class Size

The second objective of this study aimed to explore the challenges facing teachers in teaching in large class sizes in Karagwe District. In order to know the challenges facing teachers when teaching large class sizes the researcher administered interviews to 18 teachers, 3 head of schools as well as 2 DSEOs. Also the observation checklists were also used to find out the challenges facing teachers when teaching large classes. The results are presented in table 4.6

Table 4.6 Challenges Facing Teachers in Teaching Large Class Sizes

Challenges	Frequency	Percentage
Difficult to manage a class	7	9.86%
Teaching material are not enough	13	18.31%
Teaching strategies	6	8.45%
Time for marking students work	25	35.21%
Less special attention to the needy	20	28.17%

Source: Data obtained from field (Aug, 2016)

Table 4.6 indicates that out of 71 respondents 35% of the respondents said that a very big challenge that the teachers are mostly facing when having many students in

classes is shortage of time to mark students' work. This is due to the fact that when students are many in class it is not easy for a teacher to manage marking of students' activities. Some teachers said that even when they are forced to give exercises to students they give few questions so that they can be able to mark student's activities in time. Moreover, 28.17% of respondents said that teachers when teaching are unable to attend students who are in need of teachers' close attention and help. These remain unattended. This was seen as a challenge not only to the side of teachers but also to students. They have been learning in different styles because they have different abilities; This cause teachers not to achieve fully their lessons objectives. The situation was linked to poor performance in the national examinations results whereby a good number of students do not perform better.

The data also shows that 18.31% of the respondents said that due to the excessive number of students in a class teaching and learning materials available are not enough, teachers are using a lot of calories to explain different concepts to students something that would have easily been done using aids, for instance science teachers said that; it is not easy to conduct practical's accordingly when you have many students in a class as it is not easy to acquire and purchase chemicals regularly. Seven respondents out of 71 which is 9.86% said that teachers are also facing difficulties in managing students while teaching, they said sometime some students are found doing other business when teachers are teaching. This was also proved through observation whereby some students in some classes were chatting with their friends even when they were asked to discuss with their fellow they were not so serious with the business at hand as it was supposed to be when a teacher was at a certain corner other students were doing other things as the teacher couldn't manage to keep eyes to most

of students in a class. The data also shows that 8.45% of the respondents pointed out that teachers face problems when choosing strategies and techniques suiting a big number of students in a class as it is very challenging to hold participatory techniques in a class with many students. Classroom observations made by the researcher also revealed that majority of teachers were monopolizing the teaching and learning processes instead of facilitating the learning process;. However, students need to be given opportunities to participate in the process of learning. It is proved that students learn better by doing. When the teachers were asked the reason to why they don't give students the opportunity to participate fully in the lesson, they claimed that it is not easy to allow full participation in a class having many students.

This finding is supported by the research done by GER 2015 which stated that: a variety of reform efforts have been focused on decreasing class sizes or the average class size in an education system as a strategy for improving school and student performance. Smaller classes have positive effects on students' learning and academic achievement. The basic rationale is that if teachers have fewer students, they can devote more time and attention to each student. This would include more time diagnosing specific learning needs, critiquing work products and giving students one-on-one instruction and academic support. GER (2015) contends that in order to understand how class size affects teaching, consider the following hypothetical example: If a teacher has five classes with 20 students in each class, the teacher is responsible for 100 students. If each class is increased to 30 students, the teacher would then be responsible for 150 students—a 50 percent increase in the teaching workload. If a teacher with 20 students in each class spends only 15 minutes reading, analyzing, and responding to a writing assignment (a short amount of time), the

teacher will have to devote 300 minutes to the process for each class—or about five hours—while five classes given writing assignments would require 25 hours. For a teacher with 150 students, the time required would be 2,250 minutes—or nearly a full 40-hour workweek. The findings of this study also agrees with Blatchford (2002), who found that teachers in large classes were not able to engage students fully to the lessons and it was very difficult for teachers to find time to mark pupils' activities.

4.5 The Contribution of Class Size on Students' Academic Performance

The third objective aimed to investigate the contribution of class size on enhancing students' academic performance. Respondents were asked to indicate the contribution of the size of the class to the students' academic performance. The researcher wanted to know if the class size has an impact or any contribution to the students' academic performance. To learn this therefore, the researcher administered interviews to the teachers, head of schools as well as DSEOs. Moreover, questionnaires were administered to students and the documentary reviews were done Hereunder, we present and analyze the findings basing on the respective themes.

4.5.1 Respondents' Awareness on the Impact of Class Size on Students' Academic Performance

Respondents were asked to indicate whether the class size has the impact on students' academic achievement. The results appear on the table below.

Table 4.7 The Impact of Class Size on Students' Academic Performance

Item	Category	Respondents frequency	Percentage
Class size has impact on students' academic performance.	Yes	57	80.2%
	No	14	19.7%
	Total	71	100

Source: Data obtained from the field (August, 2016)

From table 4.7 it was observed that majority of the respondents were aware of the impact of class size on students' academic performance as 80.2% of the respondents said that the size of the class has an impact to students' academic performance. Students on their side reacted by saying that being in large class they are not attended very well by their teachers as teachers cannot manage and attend each student during the lesson hence students especially slow learners remain un helped something which affect their academic performance negatively.

In additional to that students also said that they are not given enough exercise and tasks wonderful enough they are sometimes not given exercise, so due to lack of exercises they don't get opportunities to practice the contents taught as a result they don't master well the subject contents taught to them and hence they don't perform very well academically especially in their national examinations. Students also said that they are not given enough opportunities to share and discuss the content being taught, only few students are given opportunities to participate in the lesson, they further said "we need to interact with our fellow students in the cause of learning but it is very unfortunate that we don't get that chance" this simply means it is very difficult for them to master what is being taught to them if they don't get opportunity

to share and practice what is being taught as they learn more better through interaction. Teachers on their side said that the size of the class has a contribution to the students' academic performance for instance when the class is big teachers normally don't give assignments on regular basis because it is very difficult to mark them as the result teachers don't understand learning abilities of some students in their classes. Not only that but also students misconceptions are not corrected and students who need great attention most of the time remain confused especially with abstract concepts and this affects much students academic performance.

The academic teachers and head of schools when responding to this said that it is hard to control and manage classes with many students as it is very possible to find some students who are misbehaving (in disciplinary cases) which most of the time disturb students' who are always eager to learn. Some students do not concentrate much with what is being taught instead they may concentrate with other business out of what is being taught and learnt as teachers can't see what every student is doing while teaching. They insisted that the environment in a class with many students is not very much conducive as it is not favoring good teaching and learning, this automatically affect students academic performance because for effective learning to take place students needs to learn comfortably. This finding is supported by the findings of Vygotsky, (1978) who identified that social interaction, cultural tools and activity shapes individual development and learning. It emphasizes on interaction and social relationships in order for the process of learning to effectively take place, students' academic performance depend much on their effective learning and interactions in their environment. Also this finding concur with the findings of Blatchford (2002), who clarified that teachers in large classes were more formal and less personalized in

their styles of teaching and they were forced to use different teaching methods to cope with pupils with different learning abilities. They added that finding time to mark pupils work, planning and assessment is more of a problem in large classes. Teachers see this as a direct threat to quality of their teaching as they don't get enough time to adhere to students' personal needs, students with low abilities remain unhelped as a result they don't perform to their best as they are always left behind. Also Babyegeya (2002), found that teachers in small size classes are able to understand their students and parents which assist in building the home-school relationships that foster teaching and learning.

Not only that but also other study conducted by Smith (1980), shows that small classes and better classroom climate lead to higher pupils' performance. The study done by Partell (1997), on class size clearly shows that the increasing class size has negative effects on student's achievements.

4.5.2 Students' Academic Performance

Students' academic performance for three years were checked out through documentary review whereby the researcher passed through academic documents and compared the students performance for three years the researcher used two samples that is form four national examinations results as well as form two national examination results for 2013,2014, and 2015. The results are presented in table number 4.8, 4.9, 4.10 and 4.11.

Table 4.8 Form Four National Examination Results for Kayanga Secondary School

DIVISION	2013	2014	2015	Percentage %
Div. I	04	00	02	1.24%
Div. II	06	06	16	5.79%
Div. III	18	14	31	13.04%
Div. IV	59	44	119	45.90%
Div. O	62	64	38	33.90%
Total	149	128	206	100%

Source: Data obtained from the field, (August 2016)

From table 4.8 the data shows that in 2013 only 04 students (2.68%) out of 149 scored division one; 06 students (4.02%) out of 149 scored division two; 18 students (12.08%) out of 149 scored division three; 59 students (39.59%) out of 149 students scored division four and 62 students (41.61%) out of 149 scored division zero. From the data in 2014 there were no student (0%) out of 128 students scored division one; 06 students (4.68%) out of 128 students scored division two; 14 students (10.93%) out of 128 scored division three; 44 students (34.37%) out of 128 students scored division four and 64 students (50%) scored division zero.

The data also shows that 2015 only 02 students (0.97%) out of 206 students scored division One; 16 students (7.76%) out of 206 scored division two; 31 students (15.04%) out of 206 scored division three; 119 students (57.76%) out of 206 scored division four and 38 students (18.44%) score division zero. The data revealed that for three years consecutively only 1.24% of the students who graduated (483) scored division one; 5.79% students scored division two; 13.04% of the students scored

division three; 45.90% of the students scored division four and 33.90% scored division zero. From the data it was noticed that very few students (20.7%) scored division I, II and III while the majority (79.93%) scored division IV and 0 respectively.

Table 4.9 Form Four National Examination Results for Kituntu Secondary

School				
Division	2013	2014	2015	Percentage %
Div. I	01	00	01	0.43%
Div. II	04	05	04	2.83%
Div. III	12	15	25	11.35%
Div. IV	38	36	78	33.18%
Div. O	100	74	65	52.1%
Total	155	130	173	100%

Source: Data obtained from the field, (August 2016)

From table 4.9 the data shows that in 2013 only 0 student (0.64%) out of 155 scored division one; 04 students (2.58%) out of 155 scored division two; 12 students (7.74%) out of 155 scored division three; 38 students (24.51%) out of 155 students scored division four and 100 students (64.51%) out of 155 scored division zero. From the data in 2014 there were no student (0%) out of 130 students scored division one; 05 students (3.84%) out of 130 students scored division two; 15 students (11.53%) out of 130 scored division three; 36 students (27.69%) out of 130 students scored division four and 74 students (56.92%) scored division zero. The data also shows that 2015 only 01 student (0.57%) out of 173 students scored division One; 04 students (2.31%) out of 173 scored division two; 25 students (14.45%) out of 173 scored division three; 78 students (45.08%) out of 173 scored division four and 65 students (37.57%) score division zero.

The data revealed that for three years consecutively only 0.43% of the students who graduated (458 students) scored Division One; 2.83% students scored Division Two; 11.35% of the students scored Division Three; 33.18% of the students scored Division Four and 52% scored Division Zero. From the data it was noticed that very few students (14.61%) scored division I, II and III while the majority (85.39%) scored division IV and 0 respectively.

Table 4.10 Form Four National Examination Results for Bugene Secondary School

DIVISION	2013	2014	2015	Percentage %
Div. I	00	01	03	0.76%
Div. II	05	03	04	2.29%
Div. III	21	27	38	16.40%
Div. IV	44	48	68	30.65%
Div. O	82	102	76	49.80%
Total	152	181	189	100%

Source: Data obtained from the field, (August 2016)

From table 4.8, the data shows that in 2013 no student (0%) out of 152 scored Division One; 05 students (3.28%) out of 152 scored Division Two; 21 students (13.81%) out of 152 scored Division Three; 44 students (28.94%) out of 152 students scored Division Four and 82 students (53.94%) out of 152 scored Division Zero. From the data in 2014 there were only one student (0.55%) out of 181 students scored Division One; 03 students (1.65%) out of 181 students scored Division Two; 27 students (14.91%) out of 181 scored Division Three; 48 students (26.51%) out of 181 students scored Division Four and 102 students (56.35%) scored Division Zero. The data also shows that 2015 only 03 students (1.58%) out of 189 students scored Division One; 04 students (2.11%) out of 189 scored Division Two; 38 students (20.10%) out of 189 scored Division Three; 68 students (37.56%) out of 189 scored

Division Four and 76 students (40.21%) scored Division Zero. The data revealed that for three years consecutively only 0.76% of the students scored Division One; 2.29% students scored division two; 16.40% of the students scored division three; 30.65% of the students scored division four and 49.65% scored division zero. From the data it was noticed that very few students (19.45%) scored division I, II and III while the majority 80.55% scored division IV and 0 respectively.

Table: 4.11 Form two National Examination results

Name of the school	Students who passed 2013	Student who passed 2014	Student who passed 2015
Kayanga	266/291	302/354	323/354
Kituntu	176/226	184/209	214/252
Bugene	199/239	170/212	221/259

Source: Source: Data obtained from the field, (August 2016)

Table 4.11 shows that in 2013, 266 students (91.40%) out of 291 students passed their Form two nation examination at Kayanga secondary school while 8.59% of the students failed; at Kituntu secondary 176 students (77.87) out of 226 students passed their for two examination while 50 students (22.12%) failed whereby at Bugene secondary school 199 students (83.26%0 out of 239 passed their Form two national examination while 40 students (16.73%) failed. The data in table 4.11 revealed that 2014 students at Kayanga secondary school passed at 85.31% (302 students) whereby 14.68% (52 students) failed; at Kituntu secondary school 134 students (88.03%) out of 209 passed their form two national examination whereby 25 students (11.97) failed; at Bugene secondary school 170 students (80.18%) out of 212 students passed their national examination whereby 42 (19.81%) failed. From table 4.11 it was

observed that in 2015; at Kayanga secondary school 323 students (91.24%) out of 354 students passed form two national examination whereby 31 (8.75%) failed; at Kituntu secondary school 214 (84.92%) out of 252 students passed their form two examination whereby 38 students (15.07%) failed; the data also showed that 221 students (85.32%) at Bugene they passed their form two national examination whereby 38 students (14.67%) failed form two national examination.

The data revealed that for three consecutive years students in all sampled schools didn't passed their form two examinations at 100% If a student cannot perform better at that lower level he/she is not expected to perform better in the higher levels as the way they go higher lessons become more complicated. Generally, the good academic performance most of the time is the measure of effective teaching and learning; It is very difficult for someone to explain that the process of learning took place effectively when students' academic results are not good enough to prove what is being said. According to the data above obtained from the field really shows that students in most of the schools do not perform better as it is expected. The DSEOs when asked to explain on the reasons that might have made students to perform the way they are performing said that; "It is true that our students in some of our schools do not perform to the expectation, the major reason is students in our schools are not attended accordingly, they are not given much activities to make them practice what they are learning as practice makes perfect" from that response it is clearly proved that a class size has a contribution to students' academic performance. This finding concur with finding done by Bandiera (2010) who showed that the effect of class size on students' performance is as expected negative, students always do worse in big classes. They further came up with two forms of heterogeneity: (i) the impact of class

size vary across the range of class size. (ii) the effect of class size varies across students that is to say that the way the high achiever student is going to be affected in large class is quite different from how the low achiever is going to be affected. Also this finding is supported by the finding of Babyegeya (2002), who explained that large class size have a negative impact on students' achievement.

4.6 Instructional Classroom Strategies for Large Class Sizes

The findings revealed the existing of large classes in the selected secondary schools in Karagwe district. This can be the case also in other parts of Tanzania. This seemed still a factor that hinders students' academic performance. This is due to the fact that majority of the developing countries have been committed to the goal of education for all, thus the increase in enrollment in schools. This seemed does not go simultaneously with the resources available in schools. It was sincerely learned that without enough human resources, Infrastructures and other necessary resources, like teaching and learning materials it is not easy to reduce the class sizes. Therefore, it is much better while waiting for the commitment to increase resources proportional to the number of students to find possible strategies that can help students learn better in large classes. The following are the strategies obtained from the field as well as the secondary data; a teacher teaching in large class should do the following to facilitate effective teaching and learning:

- Write learning objectives for each individual lesson and base your active learning strategies on those objectives. Focus on the most important content and spend your time designing activities related to those essential concepts.

- Make the materials relatable to students by showing them how it applies to their everyday lives. This simply means connect students' learning to real world applications.
- Use pair and group work to increase students' involvement; use a group of no more than 6 students as when they are many some tend to be passive. Set tasks that require group members to interact and work collaboratively together, to ensure the smooth running of groups assign roles to different group member e.g. the chairperson and the secretary. If a tight classroom space won't allow for quick trials or quad grouping use elbow partners – two students in close proximity groups help students to get involved with their own learning, it also helps students to teach each other and address any misconceptions.
- Use questions and answers effectively by asking thoughtful questions. It is important that all students are involved clearly in a large class not all students will be able to respond to the question but techniques can be used to ensure that all students think about the question before the teacher selects the students who will respond. Be fair and encourage participation from different parts of the class, give students time to think about the answer before asking a student to respond. Also give students opportunity to ask question on the specific content being learnt.
- Check understanding frequently by asking appropriate questions.
- Use visual media/aids, hand outs, problem solving based activities to facilitate active and effective learning.

- Use a variety of activities that is use classic active learning strategies for instance think/pair/share, role plays, problem – solving activities, demonstrations, think breaks, buzz groups and many others are great ways to get your students actively involved in the learning process and help set a precedent for the classroom in fact they make students more responsible.
- Teachers are encouraged to walk around the classroom as they teach with a purpose and reduce students' anonymity. Don't stand at a single point. This will help students concentrate with the lesson and activities provided.
- The assessments should base on the overall course outcomes and the learning objectives for individual subjects.
- Engage students in peer feedback, which is getting them to comment on/mark one another's work might reduce the marking burden for the teacher significantly. At the same time it might encourage students to take great responsibility for their own learning. Assessment criteria should be clear to all learners, be fair, transparent and time conscious. Monitor the process by checking out some assessments and the scoring and awarding procedures this will alert the students to be very much keen when doing the exercise.
- During interview a student commented:

“Teachers most of the time do not mark our work. When they mark we don't understand the way they distribute marks....seems not appropriate”.

This reveal malpractice on the side of teachers, especially in assessing students works. The practices are not appropriate in enhancing effective teaching and learning important for enhancing academic performance. In support the teacher said:

“It is very hard for me to give and award students with actual mark..... as I have about 65 students in one stream. It is impossible to make thorough concentration on students’ assignments while I do teach more than four streams in a day”.....

- Give students a lot of exam directed problems in class on the content taught to know students’ problem. This gives students opportunities to apply what they have learnt; it also helps the teacher to know students’ Individual problems. Please give them feedbacks to make the exercise/activity meaningful.
- Give regular pop or announced quizzes that count towards the annual grade it can be done at the beginning of the lesson.
- Use multiple choice or True/false responses, they help to evaluate students understanding and they are easy to score. To avoid cheating construct/prepare many different papers testing the same content to be done at a time. Do it regularly.
- Use enough supplemental illustrations examples that students cannot get from any other place other than in class; this will motivate them and make them more committed to the lesson.
- Try your best to encourage effective note-taking and study habits in your students as practices makes perfect.
- Monitor closely to symptoms of boredom particularly by the fast learners. Try to have an additional, more challenging questions or tasks for those who finish quickly.
- Use case studies, case studies help students to apply what they have learnt to real situation or to analyze a situation build inquisitive spirit to your learners.

Generally, all students whether in small classes or in large classes have the right to learn.; Therefore, it is the obligation of the teacher to use a variety of strategies to let this right be fully achieved. We call for the teachers to help their students, be committed and responsible by creating activities that will automatically motivate students to participate fully and joyful in the lesson this will help the specific objectives of the lesson or course be effectively achieved.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the study and provides a summary, conclusion as well as recommendations. It is divided into three sections: section one gives the summary, section two provides a conclusion of the findings and section three provides general recommendations.

5.2 Summary

This study was carried out in Karagwe District found in Kagera region whereby three Secondary Schools were involved namely Kayanga Secondary School, Bugene Secondary School and Kituntu Secondary School. The objectives of this study were to find out the current class sizes in Secondary Schools, to investigate the challenges facing teachers' in teaching large class sizes, to investigate the contribution of the class size on enhancing students' academic performance as well as establishing utilization classroom strategies which would be used to solve the problem in large class size in secondary schools. In order to achieve the above objectives questions were made which guided the proper conduction of the study. Questions were formulated in questionnaire, interview, observation and documentary reviews based on the research questions and were administered to the selected samples in the study area. Total of 71 samples were randomly and purposively selected. The respondents were students, teachers, Heads of schools as well as District Secondary Education officers. The data collected were analyzed using descriptive statistics and presented in tables and figures. From the analysis of the data, the following were revealed:-

The number of students in most of the classes observed were big it ranged from 60-80 students; the recommended number of students per a classroom in Tanzania is 40-45 students. Classes were congested to the extent that teachers and students were not free to move while in the class. The biggest challenges that faced teachers were teaching strategies suitable for large class sizes, Teachers were claiming of not having enough time to mark students activities, Management of classes, Less special attention to the needy, Teaching and learning materials were not enough due to the excessive number of students as well as in sufficient students involvement during the lessons as a result it was difficult to know students' abilities and disabilities.

Class sizes have a great contribution to the students' academic performance. Students in large class sizes were not served as it was required due to the fact that their individual problems were not attended timely, their misconceptions were not regularly corrected, they were also not given enough activities that could help them practice what they were learning not only that but also the interaction in classes with big number of students were not so high which seem to affect students' performance. This proves that when a class size decreases students' achievements/performance increases. For better understanding students need conducive environment for learning. Instructional strategies for large class sizes were Identified which are believed to help students learn more better as all students whether in small classes or in large class sizes have the right to learning concussively and accordingly.

5.3 Conclusions

Class size is a very vital factor for the achievement of the education objectives. Students need a free and conducive environment to enable and easy their learning.

Also for the effective teaching to take place teachers need favorable environment and reasonable number of students. That they can be in a position to manage as effective classroom management maximizes students learning opportunities. It should be noted that there's a very close relationship between the class size and the students' performance this is due to the fact that when the process of learning is not well facilitated students' academic performance will automatically be affected. As it was observed from the field most of students in large class sizes perform fairly and poorly (division III, IV and zero). This simply means these students will not actively perform their future role for the nation development. So the factor of class size should be looked upon and dealt sensitively.

5.4. Recommendations

5.4.1 Recommendations for Action

From the findings of the study the researcher came out with the following recommendations for action:-

- **The Government**

The government should invest much in improving teaching and learning environment. This can be done by particularly building classrooms and providing necessary teaching and learning resources proportional to the number of students enrolled at a particular school. For instance, appropriate number of human resources (teachers respectively), and so having appropriate teacher/students ratio at schools. Accordingly, teachers' workload would be appropriate which gives teachers ample time to deal with students' needs and problems. This seems important in enhancing students' academic performance. Basing on Education Policies (e.g., Education and Training Policy, 1995; Education Policy, 2014) the appropriate class size conducive

for effective teaching and learning should be adhered for teachers' teaching endeavours and students' wellbeing during learning and performance in general

- **The School Leadership**

Heads of schools should work hand in hand (collaboratively) with other education stakeholders so that school infrastructures can be improved and new can be added this can help to reduce the problem of classroom congestion.

In addition to that heads of schools should supervise and coordinate the available teachers so that they don't use the class size as a ticket for not attending students respectively, despite of the situation teachers should try their best to teach students as students have the right to be taught.

- **Teachers**

Teachers have to try their best to achieve the best for the students, teachers should know that students are most of the time eager to learn and they can perform wonderfully if they can be closely assisted by their teachers.

Not only that but also teachers should not be rigid, they should be flexible and try their best to select better and reasonable teaching and learning strategies and techniques suitable for large class sizes let teachers explore and focus on what can be done well in large classes.

- **Tanzanian Community**

The whole Tanzanian community should keep in mind that students need to be loved, need good and conducive learning environment and they need to be given all

necessary support so that they can be developed holistically. So let us join our hands and work together for the betterment of our children's future and the nation at large.

Sincerely speaking, this study cannot claim that have exhaustively covered all that could have been said about students academic performance in secondary schools.

There are still many other factors that affect students' academic performance which can form interesting topics for future scholars; these include incompetent teachers' globalization as well as home factor. The investigation of these factors and many others will help in improving and modifying students' academic performance in Tanzanian Secondary Schools.

5.4.2 Recommendations for Further Studies

The researcher recommends the following studies to be carried out:

- Similar studies should be carried out in other Tanzanian secondary schools so that best ways to improve the class size for the enhanced students' academic performance can be determined.
- Studies on the impact of home factor on students' academic performance in secondary schools should not be ignored and thus be done, so that the academic performance in Tanzanian secondary schools is improved.

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APPENDICES**APPENDIX 1****QUESTIONNAIRE FOR STUDENTS**

Dear respondents,

My name is Sophia Kanyamwenge, a master student from the Open University of Tanzania. I am conducting research in order to investigate the contribution of class size on students' academic performance. Your fully participation in administering this instrument will help education stakeholders to understand better the relationship between class size and students' achievements. Responses will only be used for academic purposes and will be treated with utmost confidentiality as the entire instrument is anonymous. Please take your time and complete this questionnaire according to your own perceptions. Thank you very much for your time and positive considerations may the almighty God bless you exceedingly!

1. How many students are in your class? _____
2. Is your class big, medium or small? _____
3. Do you really feel free during the lesson? YES / NO (circle the answer)
4. Do you always participate fully during the lessons? YES / NO (circle the answer)
5. Do all students in your class get equal opportunity to participate in the lesson?
YES / NO (circle the answer)
6. Are you given time/ opportunity to ask questions for clarifications during lessons? YES / NO (circle the answer)

7. Do the number of students in a class limit the teachers from assisting and attend students' academic problems during the lesson? YES / NO (circle the answer)
8. Do teachers' pay attention to all of you when teaching? YES / NO (circle the answer) what do you think might be the reason? _____

9. Do the teachers give you exercise and assignments in each lesson they teach? YES / NO (circle the answer) if your answer is NO, do this affect your academic performance?

10. Do the teachers mark the exercises and assignments given to you? YES / NO (circle the answer)
11. Do teachers make corrections of the works given to you? YES / NO (circle the answer)
12. Do you think students in small classes perform better in academic than students in large class? YES / NO (circle the answer)
13. Do you think if you would have been in a small class you would perform better than now? YES / NO (circle the answer)
14. Suggest the size of the class you think you can learn more better _____

APPENDIX II

INTERVIEW GUIDE FOR TEACHERS AND HEADS OF SCHOOLS

Dear interviewee,

My name is Sophia Kanyamwenge, a master student from the Open University of Tanzania. I am conducting research in order to investigate the contribution of class size on students' academic performance. Your fully participation in administering this instrument will help education stakeholders to understand better the relationship between class size and students' achievements. Responses will only be used for academic purposes and will be treated with utmost confidentiality as the entire instrument is anonymous. Please take your time and complete this questionnaire according to your own perceptions. Thank you very much for your time and positive considerations may the almighty God bless you exceedingly!

1. How many students do you have at your school? _____
2. How many students are in one form and in each stream _____, _____
3. Do the infrastructures available equivalent to the number of students enrolled at your school?
4. How many teachers do you have at school? ____ . What is the teacher students' ratio at your school? ____ and which students' teacher- ratios do you suggest?
5. What strategies do you use in teaching?
6. Which teaching strategies do you think suit better in large classes?
7. Do you face any problem when teaching in a big class?
8. Which size of the class do you like most? Why?

9. Do you give students exercises and assignment after each lesson? Do you mark them timely?
10. What is the academic performance of your students'? Is it Good, average or not satisfactory? Why?
11. What do you think should be done to improve students' academic performance basing on class size?
12. Which size of the do you recommend for effective achievement of the students? Please suggest the number.
13. (a) Do you think the size of the class has an impact on student's performance?
(b) Is there any relationship between the class size and students' academic performance in secondary schools?

APPENDIX III**INTERVIEW GUIDE FOR DISTRICT EDUCATION OFFICERS**

Dear interviewee,

My name is Sophia Kanyamwenge, a master student from the Open University of Tanzania. I am conducting research in order to investigate the contribution of class size on students' academic performance. Your fully participation in administering this instrument will help education stakeholders to understand better the relationship between class size and students' achievements. Responses will only be used for academic purposes and will be treated with utmost confidentiality as the entire instrument is anonymous. Please take your time and complete this questionnaire according to your own perceptions. Thank you very much for your time and positive considerations may the almighty God bless you exceedingly!

1. (a) Is there any school in your District having large classes?
 - (b) What may be the causes of large classes in some schools?
 - (c) Do students perform better in those school compared to schools with small Class sizes?
 - (d) What is a recommended number of students per class?
2. Do you think the size of the class can have any impact on students' academic performance?
3. Which strategies do you suggest to be used in large classes?
4. What do you think the education stakeholders should do to improve students' performance in large classes?

APPENDIX IV

OBSERVATION CHECKLIST

1. The number of students in a class
2. Students participation in a lesson
3. Teaching methods and strategies used by teachers during classroom sessions
4. Class management
5. Physical facilities in classrooms.

APPENDIX V

DOCUMENTARY REVIEW GUIDE

1. Records of students enrollment in each class/stream
2. Tests and Examinations results records
3. Students exercise books. (to check if students are given exercises)
4. To find out teaching and learning strategies suitable for large classes.