

**IMPACT OF LARGE CLASS SIZE ON PUPILS' PERFORMANCE IN MATHEMATICS
IN MARACHA DISTRICT**

BY

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**RESEARCH REPORT SUBMITTED TO THE FACULTY OF SCIENCE AND
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UNIVERSITY**

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DECLARATION

I, Koreyo Annet declare that this dissertation titled “Impact of large class size on pupils’ performance in mathematics in Maracha District, a case of Yivu primary school” is my original work. It has never been presented in part or as a whole to University for any academic award. All persons, researchers and authors whose work was reviewed and used in the process of its development have been duly acknowledged and are henceforth referenced in the respective sections.

Signature

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Date

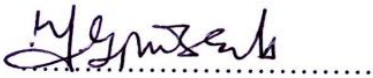
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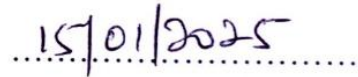
APPROVAL

This research report has been submitted for examination with my approval as the University Supervisor.

Signature

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Date

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MR. OPIO BENJAMIN.

DEDICATION

This research report is primarily dedicated to my dear husband Mr. Obeti Lawrence whose support and extreme generosity provided me an opportunity to study at Busitema University. I also dedicate this research to my lovely Father Mr. Asega Davis, to my sweet mother madam Ederu Milka, , and to my children Lynet, Cyrus and Almah, who on several occasions wished me success in my studies.

ACKNOWLEDGEMENT

To God be the glory, great things He has done. Life without God's Grace would have been Unbearable. I am extremely grateful to God for His guidance and provision.

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LIST OF ACRONYMS

UNESCO - United Nations Educational Scientific and Cultural Organization.

ABSTRACT

The main purpose of the study was to examine the impact of Large Class Size on Pupils' Performance in Mathematics in Maracha District, a case of Yivu Primary School. Specifically, the study looked at the problems faced by teachers in large classes, problems faced by pupils in large classes and the possible solutions to the problem of large class sizes, all in Yivu Primary School, Maracha District. The study sample size was 80 respondents. Data collection tool was survey questionnaires and analysis was done using Pearson correlation coefficient. The result of the analysis was a negative correlation coefficient (-1), which indicated that large class size affects performance of the pupils in Yivu Primary School, Maracha District in that as the number of pupils in class keeps on increasing , performance of the pupils in Mathematics declines.. It therefore recommended that government intervention in terms of regulating the number of pupils to be admitted per class in both government and private schools, giving allowances to teachers is necessary for hard work, which in turn boosts performance of the pupils. It is also recommended that further research should be carried out on how misbehaviour of the pupils and peer group influence as a result of large class size in Yivu Primary School, Maracha District affects their performance.

CHAPTER ONE: INTRODUCTION.

This chapter was comprised the background of the study, problem of the study, purpose of the study, objectives of the study, research questions, significance of the study and scope of the study which was broken down into time, geographical and content scope, and the conceptual framework.

1.1. Background to the Study.

The background to the study was categorized into historical, conceptual, contextual and theoretical background.

1.1.1. Historical background.

Maringe and Sing (2014) define large class as any class where the number of pupils or students poses both perceived and real challenges in the delivery of quality and equal learning opportunities to all learners in class. The definition of large class is subjective and varies depending on the context and expectations of the individual. Classes in excess of 60 pupils begin to poses unique challenges to the instructors. In some disciplines, a class of 60 students is considered a large class while in others, large classrooms could contain up to 1000 students or more

According to Rajesh Khanna (2018), there is no quantitative definition of a large class. Teachers in different disciplines have different perceptions of what they consider a large class to be. A class is considered large depending on how the teacher regards the class size in that specific situation, regardless of the exact number of students in it. A large class therefore can be defined as the one with pupils or students more than the teacher prefers to manage and available resources can support.

According to World vision (2022) History of education dates back to written records in ancient ages. In Asia, education was primarily rooted in the teaching of three major philosophical, religious traditions, Hinduism, Islam and Confucianism. .In Uganda, formal education was first

initiated by voluntary missionary Organizations during the colonial period around the 1880s. The government involvement in formal education began in the colonial period following a report in 1922 by the Phelps-Stokes Fund (Ssekamwa J C, 1997).

The amount of pupils in class matters to the educational learning of a child. Chen (2017) stated that there is inflexibility with large classes that they don't afford the teacher to employ different teaching methods which affects the academic performance of the pupils. According to Fauzia Shamim and Hywel Coleman (2018), large classes are wide spread around the world and reducing the size of class is expensive and brings uncertain benefits, therefore there is a need to switch off from their desire to reduce class size to finding alternative ways of improving teaching-learning quality.

According to Zhenzhen Miao (2018), effective teaching of mathematics in primary schools in China is affected by the class size. Smaller classes allow for better concentration of pupils with minimal misconduct as compared to large classes.

Large classes are proven to make it more difficult for teachers to set and enforce behavioral expectations, monitor students and pay individual attention to each student. Larger class sizes lead to more disorder in the classroom, which ultimately affects pupils' learning. This can lead to higher rates of failure, school violence and dropouts when left unchecked (Ginger Ackerman, 2022).

According to Ginger Ackerman (2022), when teachers have smaller classes, they have greater proximity to their pupils, they are able to work with pupils in small groups or one on one and they have more time to differentiate activities based on individualized needs, which all improves performance in class. Teachers however with larger classes will not have proximity to their pupils, which often results into lack of attention, disruptive behaviors and bullying.

In the United States, according to Christopher Jepsen (2015), much as small classes are associated with greater pupil achievement, there is need for other education policies such as tutoring, early child programs and improving teacher quality for better pupil performance despite the size of the class.

In Europe, the reduction in class size in grades four to six in the year 2013 was associated with an increase in test scores in Mathematics and Swedish, however, a study in eleven countries show a variation in the relationship between class size and student achievement with most countries having a small or no benefit from smaller class sizes (Christopher Jepsen, 2015).

In sub-Saharan Africa, class size and class organization are issues that are often debated in relation to education quality. It is generally recognized that large classes result in lower education achievement especially in the early years of schooling. Larger classes or multi-grade classes can be difficult for teachers to manage, may result into adoption of less effective methods of teaching and often limit the amount of individual attention and guidance pupils receive (UNESCO, 2011).

In Uganda, classroom crowding is considered a critical cause of poor learning outcomes. Large classes are common in government schools that are purely on a Universal Primary Education program and performance in such schools is very poor especially in Mathematics. This can be attributed to poor management of big number of pupils in class where a teacher cannot attend to their individual needs (Sam Jones, 2016).

1.1.2. Conceptual background.

The study was about large class size and its impact on pupils' performance in Mathematics. Large class size was the independent variable while pupils' performance in mathematics was the dependent variable. Poor attendance, off-task behaviors and limited concentration were considered as sub-variables under large class size, while retention rates, passing rates, and completion rates were considered as sub-variables under pupils' performance. The moderating variables were the environment, peer group influence and government intervention.

1.1.3. Theoretical background.

The study was carried out on the impact of large class size on pupils' performance in Mathematics in Yivu Primary School, with large class size as the independent variable and pupils' performance as the dependent variable. Theory plays a vital role in research by providing explanation, understanding and meaningfulness to research. Theory helps to predict facts and to identify unexplored areas of research. A theory is a rational type of abstract thinking about a

phenomenon or the result of such thinking. Research without a theory is less emphatic to establish the relationship between the variables. Pupils' performance in mathematics is greatly affected by the size of the class.

1.1.4. Contextual background.

Class size affects the way pupils learn. When the class is big, concentration of pupils is minimal which results into poor performance as compared to when the class is small. This study aimed at investigating the impact of large class size on pupils' performance in mathematics in Yivu primary school, Maracha District. It specifically looked at problems faced by teachers in large classes, problems faced by pupils in large classes and solutions to the problem of large class size.

1.2. Statement of the Problem.

Class size affects the way teachers teach pupils. Large classes are always associated with big number of pupils which hinders concentration of both pupils and teachers, leading to poor performance of pupils. Managing the class to the number that the teacher can manage to monitor and offer individualized guidance academically can improve mathematics performance. There has been little research carried out to investigate the impact of large class size on pupils' performance in mathematics in Yivu primary school, Maracha District and therefore the researcher seeks to fill the gap.

1.3. Purpose of the Study.

The purpose of the study was to examine the impact of large class size on pupils' performance in Mathematics in Yivu Primary School, Maracha District.

1.4. Objectives of the Study.

The study was guided by the following specific objectives

- i) To identify problems faced by teachers in large classes in Yivu primary school, Maracha district.
- ii) To identify problems faced by pupils in large classes in Yivu primary school, Maracha District.

- iii) To provide possible suggestions to problems of large class size in Yivu primary school, Maracha District.

1.5. Research Questions.

The study will be guided by the following research questions.

- i) What are the problems faced by teachers in large classrooms in Yivu Primary School, Maracha District?
- ii) What are the problems faced by pupils in large classrooms in Yivu Primary School, Maracha District?
- iii) What are the solutions to problems faced by mathematics teachers and pupils in large classrooms in Yivu Primary School, Maracha District?

1.6. Scope of the study.

The scope of the study was categorized into content scope, geographical scope and time scope.

1.6.1. Content scope.

The study was carried out on the impact of large class size on pupils' performance in mathematics in Yivu primary school, Maracha district. Large class size was the independent variable while pupils' performance was the dependent variable. Poor attendance, off-task behavior and limited concentration were the sub-variables under large class size, retention rates, passing rates and completion rates were the sub-variables under pupil performance while environment, peer group influence and government intervention were the moderating variable.

1.6.2. Geographical scope.

The study was carried out in Yivu Primary School, Maracha District.

1.6.3 .Time scope.

The study was carried out in Yivu Primary School, Maracha District.

The proposed study was conducted within a period of three months from March 2024 to June 2024 to effectively gather information that effectively meets the study objectives. This included the time for data collection, analysis, interpretation and preparation of the final report.

1.7. Significance of the study.

The significance of the study was as follows:

The study would increase on the existing literature on the impact of large class size on pupils' performance in mathematics in Yivu primary school, Maracha District where little research had been carried out, , hence creating more knowledge and information to future researchers and academicians.

The findings of the study would act as a benchmark to Maracha District because it would provide the district officials with crucial data about the impact of large class size on pupils' performance in mathematics and conclusions drawn for further research.

The study would help future researchers to form part of their reference material in the same or related research field.

The findings of the study would help the researcher to fully understand the underlying concepts of field research very well including; data collection, information compiling and gathering, and analysis skills.

The study would help the researcher to obtain Bachelors degree in Education, primary of Busitema University.

1.8. Justification of the study.

The study would be justified on the ground that crucial information concerning the impact of large class size on pupils' performance in mathematics in Yivu Primary School in Maracha District could be unveiled by the study.

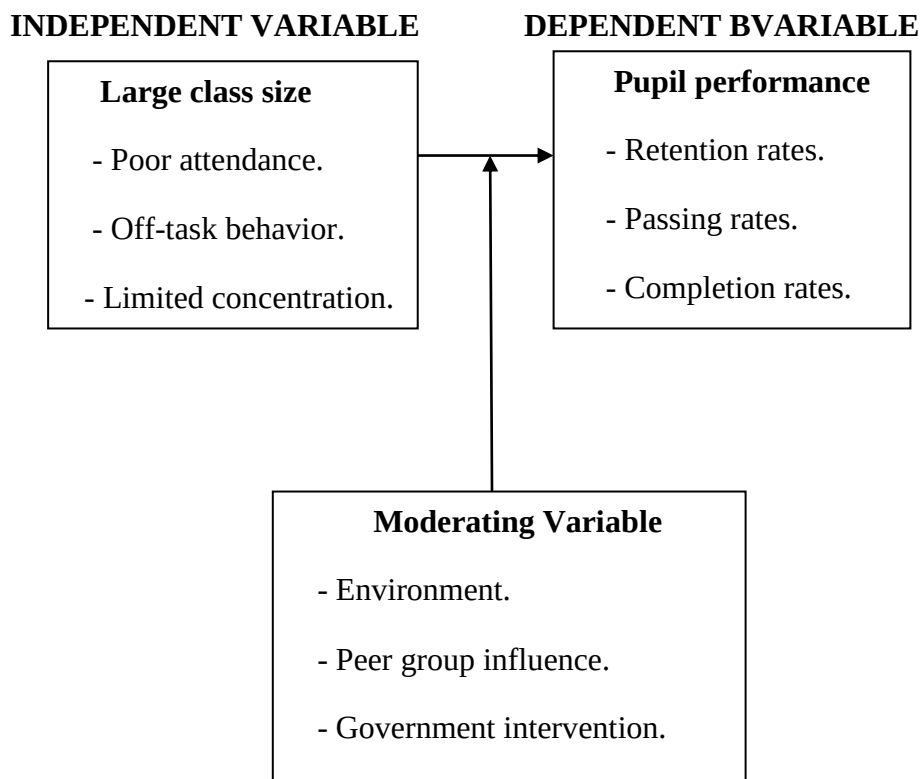
1.9. Limitations of the study.

Some of the respondents were not be willing to take part in the study. However, the researcher explained to them the purpose of the study.

Some of the respondents wanted some payment before taking part in the study. The researcher, however, explained to them that the study was for academic purpose and not for business.

The researcher also experienced delays from the respondents in filling the questionnaires. The researcher, however kept on reminding them until the questionnaires were fully filled.

10. The conceptual framework on large class size and pupils'' performance in mathematics.



CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction.

This chapter presented literature that is relevant to the study giving reference to the study objectives, sub-divided into three sections. The first section reviewed related literature on the problems faced by teachers in large classrooms, followed by the subsection which reviewed literature on the problems faced by pupils in large class rooms and the last sub section reviewed literature on the possible suggestions to problems of large class size.

2.1. Theoretical review.

The major variables of this study were the impact of large class size on pupils' performance in mathematics in Yivu Primary School, Maracha District, with large class size as the independent variable and pupils' performance as the dependent variable. These variables could best be explained and understood by referring to a theory. This study was guided by Walberg's theory of academic achievement. The Walberg's theory of academic achievement states that the psychological characteristics of individual students and their immediate psychological environment influence education outcomes. The Walberg's theory was developed by a sociologist called Walberg in 1992. The Walberg's theory of academic achievement is relevant to this study in that if the pupil's inner feelings are characterized by negative attitude towards the number of pupils in class, their performance will always be negatively affected than when their attitude towards large class is positive. The teacher's attitude towards large class impacts the way they teach. If the class is big, in most cases they cannot attend to individual needs of the pupils which affect performance.

2.2. Problems faced by teachers in large classrooms.

Dealing with a large class constitutes a real challenge to every teacher. Diversity of students, lack of flexibility, class management, difficulty of setting and enforcing classroom behavior. Minimum attention to pupils, limited monitoring of pupils' learning and difficulty in engaging

pupils to activities are all challenges that teachers face which affect the academic performance of pupils (Pauline Fortes & Abdellatif Tchantchane, 2020).

In the United Arab Emirates, Evaluating students' experience, need and expectations can lead to improvements in teaching performance and achieving learning outcomes, however this can be hindered by the large number of students in class. (Pauline Fortes & Abdellatif Tchantchane, 2020).

According to Pauline Fortes and Abdellatif Tchantchane (2020), Pupil's attitude towards mathematics in large classes is a real challenge which requires guidance and support of only not teachers but the government and other stakeholders. When issues of large class are left to teachers alone, performance will always be affected as teachers cannot attend to individual needs of each student.

In Philippine, large class size is an issue of concern. Teachers in large classes suffer psychological and emotional torture due to the number of students they are dealing with, which makes some teachers not to give much attention to pupils which is a prerequisite for better performance in class (Regie D Abila, 2021).

According to Regie D Abila (2021), the physical condition of the teachers is also affected by the amount of students in class. With large classes, there is need for teachers to speak loudly which harms their voices and makes some of them to develop health complications like headache. This is worsened by the teachers' endeavour to reach every student.

Teaching a large class can be challenging. Logical concerns like taking attendance registers, grading and providing frequent and detailed feedback can sometimes become unmanageable, which results in teachers using un productive teaching methods which negatively affects performance (NewmanWadesango, 2021).

The many students involved in large classes make it hard for teachers to give attention equally to all students and therefore, those seated at the front benefit, and in case of posing a question, the whole class cannot answer as it would take a lot of time and even some students can decide to move out of class or switch off their minds to doing something else (Newman Wadesango, 2021).

According to Hasha & wadesango (2021), it's very hard for a teacher to get to know all his students one by one with large classes, given the advantage of teacher -pupil interaction. Indiscipline cases are high with large classes and it may be very difficult for teachers to deal with discipline cases in large classes.

In Northern Nigeria, teachers face large class size that lead to challenges in successful teaching of children. Assessment of pupils in class is done on a group level rather than individual, teachers lack a detailed understanding of their pupils' reading development; classroom management and discipline are a major concern (Amina Adamu, 2022).

According to Emmanuel Kofi & Mintah (2014), Ghanaians Primary Schools are faced with the challenge of large classes with its associated outcomes like poor attendance. Teachers use inappropriate methods of teaching, in appropriate mode of assessment, stifled student creativity and limited teacher attention to students' problems, all which affects performance.

Understaffing, management of class discipline and heavy marking load are the major challenges faced by teachers in large classes in Uganda. Equipping teachers with new skills through in-service programmes and employment of more teachers to deal with large classes can help to solve the problem (Nakabugo Mary Goretti et al, 2014).

In conclusion, given the challenges that teachers face with teaching large classes, there is a need to regulate the size of classes for better delivery of lessons by teachers, however, emphasis should not be put on only reducing class size but rather improving teacher quality would mean a lot for pupils' performance (Newman Wadesango, 2021).

2.3. Problems faced by pupils in large classrooms.

The realities behind children not getting into their local or preferred school are extremely serious for both parents and teachers. The impact of increasing population in the UK is contributing to an unprecedented level of demand for school places, leading to overcrowding in classrooms (Newman Wadesango, 2021).

Keeping pupils engaged can be very difficult when the pupil-teacher ratio starts to rise and when the number of pupils in class keep on increasing, the teacher's role shifts from teaching to controlling the crowded classroom, students may not feel conformable to ask questions and to

seek the help they need in class. There is also a lot of noise with crowded classes which distracts concentration ((Newman Wadesango, 2021).

The more pupils in class, the more the noise and distraction increase, and so crowded classes hinder focus and concentration especially for pupils with needs such as dyslexia as they may not get the necessary attention they need (Regie D Abila, 2021).

There is a growing concern about South African learners' mathematics achievement, which is said to be poor due to large class sizes. With crowded classes, a stressful environment is inevitable which consequently negatively impacts the quality of teaching and learning. Learners who are taught by teachers who believe that they are many in class perform very poorly in mathematics compared to learners whose teachers do not have such a belief, and also due to crowded classes, learners do not interact with their teachers as expected, which affects performance (Marien Alet Graham, 2023).

Lower average test scores, misconduct, inadequate classroom discussions that are associated with larger classes affect the academic performance of mathematics pupils in South Africa. The chaos of large classes is a bad learning environment and student from large classes are not prepared for future educational systems (Marien Alet Graham, 2023).

Larger classes limit the opportunity for pupils to interact with their peers and teachers, reducing the overall quality of classroom discussions and collaborative learning experiences, and also with large number of pupils; it can be hard to actively engage everyone in discussions and activities, potentially leading to decreased participation and motivation (Amina Adamu, 2022).

In America, according to Ginger Ackerman (2022), large classrooms lead to more disorder in the class, which ultimately affects student learning. This can lead to higher rates of failure, school violence and dropouts if left unchecked. School administrators who continue to increase the number of students in class suffer the consequence as their teachers choose to leave their districts in favor of other schools that understand the benefits of smaller classes and enforce the value of working with each student to help them succeed.

The teaching and learning of Mathematics as a subject requires both the learner and the teacher to communicate effectively. In Kenya, poor performance is evidenced in Mathematics in

government primary schools and this is mainly attributed to overcrowding of pupils in class that makes teachers to use inappropriate teaching methods, pupils lack focus and concentration (Chebet Mulwa, 2015).

The problem of overcrowded classes is over alarming in Uganda, Giving a case of Uganda's Moslem founded schools. Performance of pupils in Uganda moslem founded schools is very poor not only in mathematics but also other disciplines and this is mainly attributed to overcrowding in classes, scarce learning materials, teacher-centered learning , lack of school meals, poor sanitation , which are increased by declining government spending on the education sector and rising household poverty (Muhammad Musoke et al 2023).

In Conclusion, given the value of education, there is need to increase pupils' achievement in mathematics and other disciplines as well. School administrators have to regulate the number of pupils in class so as to boost teacher -pupil interaction and also various governments have to increase their funding towards the education sector terms of scholastic materials, improve sanitation and provision of safe water for the pupils. This will make the learning environment better for pupils, increasing their performance (Muhammad Musoke et al 2023).

2.4. Possible suggestions to the problem of large class size.

Managing a classroom is one of the biggest parts of a teacher's role, and doing it well fosters strong learning environment. Managing a classroom becomes increasingly difficult as class size grows. Individual attention reinforces learning and helps manage classropom behavior. There is need therefore for teacher-pupil interaction especially for pupils who need it best and for best engagement, dividing the pupils into groups or teams is better. (Regie D Abila, 2021).

According to Regie D Abila (2021), minimizing dead time during class is very important as it often leads to disruption in large groups of students. Teachers must know what they need to accomplish for that particular day before going to class as well as the manner in which they intend to do it. Being prepared for lessons greatly improves teachers' ability to engage and occupy their students' busy minds. Trying to prepare notes to deliver to students while in class with them is enough for the students to become disorganized and switch off their minds to other things.

Establishing routines is also important to running a productive large classroom for example students learning to write their vocabulary words is twice before the teacher starts class keeps them occupied and productive as opposed to aimlessly talking to their friends, making noise and engaging in unnecessary fights. The use of seating assignments as a way of preventing students from talking and being disruptive while attending lessons is also a better routine to enforce order in a large class. Note has to be taken that an effective routine requires consistency and therefore once started, there is no need of deviating from it (Regie D Abila, 2021).

Teachers in large classes have to get knowledge of all the students in the class as interaction between student and teacher is crucial for best performance in class. During exchange with students, teachers ought to begin by asking students to identify themselves, promote active learning through incorporating a variety of teaching methods and encourage problem solving and critical thinking (Muhammad Musoke et al 2023).

According to Muhammad Musoke et al (2023), promoting class participation as a great remedy to a large class. Class participation can be promoted through asking of questions that require a show of hands, asking direct questions, Using surveys, use small groups and using the “think – pair –share technique. With think, the instructor poses a question and allows the students to think individually for a few second, Pair-the students discusses their thoughts about the subject with the person sitting next to them and Share-the pair share their response with the rest of the class. Participation promotes motivation which in turn boosts the performance of the students, not only in mathematics but also other subjects.

In many schools, teachers are expected to teach classes with 50 or more students and it can be hard to maintain order and keep everyone on task. Learning to manage large classrooms gives teachers a greater chance for success (Parina Parmar, 2022). Parina Parma (2022) argues that there is no definite answer regarding class size and its impact on students and teachers. Some people say that smaller classes are better because students can get more individualized attention from their teachers while others argue that larger classes are better because students learn to socialize and work together more. The following have to be kept in mind while handling large classes: Proper class organization and good time management, Students have to be kept engaged by using various methods and activities and Flexibility, coupled with adjustment of methods is highly recommended.

Teachers often experience a decrease in planning time because of the large number of students. Flexibility and creativity while planning lessons is needed especially planning lessons with students in mind. An effective plan considers all students' needs and allows for adjustment to students' abilities (Parina Parmar, 2022).

According to Parina Parma (2022), creating small groups of students that can work independently in larger classes is important for greater performance. These groups can then be expanded slowly under close supervision of the teacher. Creating an environment where all students are encouraged to work towards a common goal and learn to support each other through difficult times helps to solve the problem of indiscipline that is associated with larger classes.

Children need continuity over time to become proficient in new tasks. This is true for both larger and smaller classes. Students need to know that the teacher and the curriculum will not change, which encourages them to accomplish tasks confidently (Parina Parmar, 2022).

In conclusion, planning smart, using movement activities and creating an atmosphere of meeting discovery are key elements when dealing with large classes. Teachers who have to deal with large classes face unique challenges of managing a big number of students. One way to deal with issues of large class is by using time-sensitive materials and this includes things like pop quizzes, worksheets and tests, which must be completed in a short amount of time (Parina Parmar, 2022).

CHAPTER THREE

RESEARCH METHODOLOGY

3.0. Introduction.

This chapter consists of the research design, area of the study, study population, sample size, sample selection, sources of data, data collection instruments, procedure of data collection, data quality control, data processing and analysis, ethical consideration, and study constraints

3.1. Research Design.

The design of the study was descriptive research design. The choice of the design was to enable the researcher to provide an accurate description of the subject under study. The approach of the study was purely qualitative. The choice of qualitative approach was to enable the researcher gain deeper understanding of topic under study.

3.2. Study Population.

Population of the study was 100 respondents, who included pupils in upper primary in yivu Primary School, Oleba, Primary School, Ofude Primary sSchool and Anyivu Primary School, all located in Maracha District.

3.3. Sample Size Determination.

The sample size was 80 respondents and this was determined using the Morgan and Krejcie formula of sample size determination.

According to Krejcie and Morgan (1970), in their study about sample size determination, Business research methods, sample size is determined based on the following formula;

$$S = \frac{X^2 NP(1-P)}{d^2(N-1)} + X^2 P(1-P)$$

Where; S = required sample size.

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (0.05 = 3.841).

N = the population size.

P = the population proportion (assumed to be 0.50) since this would provide the maximum sample size.

d = the degree of accuracy expressed as proportion (0.05).

3.4. Sampling Techniques.

A convenience sampling technique was used to select the sample. A convenience sample is a type of non-probability sampling method where the sample is taken from a group of people easy to contact or to reach.

3.5. Sources of Data.

Primary data was used in this study. The researcher used self-administered questionnaires to collect data related the impact of large class size on pupils' performance in mathematics in Yivu primary school, Maracha district

3.6. Data Collection Instruments.

The researcher used questionnaires with open-ended questions to collect qualitative data on the impact of large class size on pupils' performance in mathematics in Yivu primary school, Maracha District.

3.7. Method of Data Collection.

The researcher used survey questionnaires to collect qualitative data. The questionnaires were given to the respondents and collected after an agreed period of time.

3.8. Procedure of Data Collection.

Ethically, the researcher obtained a letter of introduction from the Dean, Faculty of Education and Science, Busitema University, Nagongera Campus to conduct research. The letter was taken

to respective heads of the selected primary schools to give the researcher authority to collect data.

3.9.1. Validity.

Validity determines if the research instrument truly measures that which it is supposed to measure (Kothari, 2011). To ensure content validity, the tools developed were given to the expert judges to score the relevance of each question in providing answers to the study. After the expert opinion, a content validity index (CVI) was computed as indicated in the formula below;

$$\text{CVI} = \frac{\text{No of item declared valid by the judges}}{\text{Total No of items on the questionnaire}}$$

3.9.2. Reliability.

Reliability indicates the stability of measures administered at different times to the same individuals or using the same standard or the equivalence of sets of items from the same test or of different observers scoring a behavior or event using the same instrument (Saunders et al, 2009). Reliability was established by carrying out a pilot study to see if the instrument gives consistent results

3.10. Data Processing and Analysis.

The data was analyzed using the Pearson's correlation analysis. Pearson's Correlation analysis helped to test the strength and the direction of the relationship between the variables.

3.11. Ethical Consideration.

The researcher obtained informed consent from each research participant. This was obtained in writing after the participant had the opportunity to carefully consider the risks, benefits and to ask any pertinent question. Informed consent was seen as an ongoing process, not a singular event or a mere formality.

The researcher observed privacy and confidentiality of the respondents. In this case, the researcher agreed with the respondents on the appropriate time and a place convenient for the respondents so as to enhance free interaction. The respondents were assured that the responses that would be got from them would be treated with the utmost confidentiality it deserved and further that it would be strictly for academic purpose.

About the privacy of the data that was got from the respondents, the researcher made the best use of pseudonyms for the purpose of the study instead of the actual name of the respondents.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSION OF FINDINGS

4.0. Introduction.

In this chapter, analysis and discussion of findings was provided. The analysis was done using Pearson correlation coefficient. The chapter was organized as follows: Section 4.1 covered the response rate, Section 4.2 was on the demographic characteristics of the respondents, Section 4.3 presented results of the correlation coefficient

4.1. Response Rate for Questionnaires

The 80 questionnaires that were administered to the respondents were all filled and returned, obtaining a response rate of 100%, and therefore the researcher went ahead to analyze the data. The sampled schools were four and in each school, 20 questionnaires were distributed.

Table 4.1. Response Rate for Questionnaires.

Response	Frequency	Percentage (%)
Filled and returned questionnaires	80	100
Unreturned questionnaires	00	00
Total	80	100

Source: Primary data 2024.

4.2. Demographic Characteristics of the Respondents.

Respondents were asked to provide information regarding their demographic profile which included gender, class and occupation. The gender distribution of respondents was classified as male and female. The sampled classes were primary four to primary seven and occupation included teaching and non teaching staff.

Table 4.2.
Demographic Characteristics.

		Frequency	Percentage (%)
Valid	Category		
	Gender		
	Male	33	41.25
	Female	47	58.75
	Total	80	100
	Class		
	Primary four	16	20
	Primary five	15	18.75
	Primary six	14	17.5
	Primary seven	13	16.25
	Occupation		
	Teaching staff	14	17.5
	Non-Teaching staff	08	10
	Total	80	100

Source: Primary data (2024).

From table 4.2, results indicated that upon gender, female respondents formed the majority with a percentage of 58.75 and the rest were males (41.25%) across the four sampled schools. When it came to classes, primary four had the majority of respondents with a percentage of 20 (20%), followed by primary five which had 18.75% respondents. Primary six had 17.4% respondents and lastly primary seven was presented with the least respondents (16.5%). Teaching staff under occupation was presented with the largest respondents that formed 17.5% and the rest (10%) belonged to the non-teaching staff, and all these were across the four sampled schools namely Yivu primary school, Oleba primary school, Ofude primary school and Anyivu primary school.

4.3. Responses per question across the sampled four schools.

The way questions were answered was summarized in tables.

Table 4.3 (a) Responses per question in Yivu Primary School

Questions	Agreed	Disagreed	Total
a). Teaching large class makes teachers get exhausted and therefore desire to leave the job.	12	08	20
b). Teachers' health is affected by teaching a large class.	10	10	20
c). concentration of pupils is limited by their number in class.	10	10	20
d). psychological and emotional wellbeing of a teacher is affected by teaching a large class.	11	09	20
e). Big number of pupils in class affects their engagement with class activities	12	08	20
f). Big number of pupils in class results into a stressful environment for them to study	10	10	20
g). A big class size results into misbehavior of the pupils.	13	07	20
h). classroom discussion and interaction is affected by the big size of class.	10	10	20
Overall total	88	72	160
Average number of respondents	11	09	20

Source: Primary data (2024).

From table 4.3 (a), it was observed that majority of the respondents agreed that large class size affects performance as both teachers and pupils

From the table 4.3, it was observed that the people who were against the big number of pupils in class were eleven (average number of respondents), and those who were in support of large class size were nine (average number of respondents), which gave a total of 20 respondents (20 questionnaires) that were distributed in Yivu Primary School. Majority of the respondents therefore were of a view that large class size affects performance of the pupils.

Concerning the possible solutions to the problem of big class size, the majority of the respondents in Yivu Primary School suggested class participation through encouraging pupils to put up their hands while answering the asked questions by the teacher such that the teacher can know how each pupil can perform and also dividing the class into small groups during discussions and regular assignments to keep the pupils busy as a way of controlling the pupils from misconduct and noise making. This was in agreement with Muhammad Musoke, Badru Musisi & Matovu Kawewesi (2023), who argued in their article of Empowered School Environment for Effective Learning in Uganda's Muslim Founded Primary Schools, an interdisciplinary journal of Education class participation by pupils, division of the class into manageable small groups and increased knowledge of the pupils by the teacher help to motivate and encourage pupils to be committed to class work boosting performance. The findings also were too in agreement with Parima Parma (2022) who urged in his article of Strategies for successfully handling large classes that creating small groups of students that can work independently in a large class is vital for greater performance.

Table 4.3 (b). Responses per question in Oleba Primary School.

Questions	Agreed	Disagreed	Total
a). Teaching large class makes teachers get exhausted and therefore desire to leave the job.	15	05	20
b). Teachers' health is affected by teaching a large class.	12	08	20
c). concentration of pupils is limited by their number in class.	10	10	20
d). psychological and emotional wellbeing of a teacher is affected by teaching a large class.	14	06	20
e). Big number of pupils in class affects their engagement with class activities	10	10	20
f). Big number of pupils in class results into a stressful environment for them to study	13	07	20
g). A big class size results into misbehavior of the pupils.	10	10	20
h). classroom discussion and interaction is affected by the big size of class.	12	08	20
Overall total	96	64	160
Average number of respondents	12	08	20

Source: Primary data (2024).

From table 4.3 (b), it was observed the average number of respondents who voted against large class was 12 (twelve) and those who were in support of large class size were eight (08).

Therefore in Oleba Primary School, majority of the respondents did not agree with the big size of class, arguing that it affects performance of both the teacher and the pupils.

Concerning the possible solutions to the problem of large class size, majority of the respondents suggested the idea of keeping the pupils engaged through regular tests and assignments, proper lesson planning by the teachers such that the pupils are not given a lot of time to waste in noise making and other related misbehavior and also suggested motivation of the teachers by giving them allowances in terms of lunch, medication and transport such that they are encouraged to work hard. The respondents also suggested provision of lunch to pupils at school to prevent them from moving distances to look for food where by others may end up escaping and missing lessons which negatively affects their performance. These findings were in agreement with Regie D Abila (2021) in his article of Impact of Large Class Size on Teachers 'Emotional and Physical Conditions: An International Multi-Disciplinary Research Journal who asserted that establishing routines such as motivation of teachers, giving pupils assignments regularly before and after lessons, improves performance greatly.

Table 4.3 (c). Responses per question in Ofude Primary School.

Questions	Agreed	Disagreed	Total
a). Teaching large class makes teachers get exhausted and therefore desire to leave the job.	16	04	20
b). Teachers' health is affected by teaching a large class.	11	09	20
c). concentration of pupils is limited by their number in class.	13	07	20
d). psychological and emotional wellbeing of a teacher is affected by teaching a large class.	15	05	20
e). Big number of pupils in class affects their engagement with class activities	10	10	20
f). Big number of pupils in class results into a stressful environment for them to study	14	06	20
g). A big class size results into misbehavior of the pupils.	16	04	20
h). classroom discussion and interaction is affected by the big size of class.	17	03	20
Overall total	112	48	160
Average number of respondents	14	06	20

Source: Primary data (2024)

From the table above (table 4.3 (c)), it was still observed that the people who disagreed with the idea of having large classes due to the disadvantages they associated with them were the majority with an average number of 14 respondents out of 20 questionnaires

that were distributed In Ofude Primary School. The rest of the respondents (06), agreed with the idea of having large classes, arguing that if properly managed, performance of the pupils cannot be affected.

Concerning the management of large class size, majority of the respondents in Ofude Primary School suggested a restricted number of pupils who are admitted in a given class and also dividing a big class into streams such that interaction between the teacher and the pupils can be made easy which helps the teacher to understand areas of weakness per pupil and consequently finds out a way of helping the weak pupils, which service is impossible with a large size of class. This finding was in agreement with Parina- Parma (2022) in his article of Strategies for successfully handling large classes who argued that creating small groups of students that can work independently in large class is important for greater performance. The above finding was also in agreement with Regie D Abila (2021) in his article of Impact of Large Class Size on Teachers 'Emotional and Physical Conditions: An International Multi-Disciplinary Research Journal who emphasized the idea of increased interaction between the pupils and their teachers such that the teachers can understand best the areas of weakness per pupil and therefore find a way of helping such pupils.

Table 4.3 (d). Responses per question in Anyivu Primary School.

Questions	Agreed	Disagreed	Total
a). Teaching large class makes teachers get exhausted and therefore desire to leave the job.	14	06	20
b). Teachers' health is affected by teaching a large class.	17	03	20
c). concentration of pupils is limited by their number in class.	13	07	20
d). psychological and emotional wellbeing of a teacher is affected by teaching a large class.	15	05	20
e). Big number of pupils in class affects their engagement with class activities	18	02	20
f). Big number of pupils in class results into a stressful environment for them to study	16	04	20
g). A big class size results into misbehavior of the pupils.	12	08	20
h). classroom discussion and interaction is affected by the big size of class.	15	05	20
Overall total	120	40	160
Average number of respondents	15	05	20

Source: Primary data (2024)

From table 4.3 (d), it was observed that majority of the respondents in Anyivu Primary School were of a view that a big size of class affects the way pupils learn and how teachers teach with an average number of fifteen respondents (15) and the rest of the respondents (05) agreed with

the idea of having a large class, arguing that performance of pupils is not determined by the size of the class but depends on the determination of the pupils and the way teachers plan their lessons and teaching methods being used.

In Anyivu Primary School, majority of the respondents suggested the idea of dividing the big classes into streams and also keeping the pupils busy through regular tests and assignments and rewarding the best performing pupils in each class in order to encourage them to read hard as ways of managing and keeping good performance in large classes. The respondents also suggested the promotion of a convenient environment for studying through increased motivation of teachers by providing for them lunch at school and giving them transport and medical care allowances, arguing that when teachers are motivated, they can keep time and make proper lesson plans such that what is to be covered in a particular term is completed. The provision of lunch to pupils at school was also suggested by respondents in Anyivu primary school as away o preventing pupils from moving long distances to look for what to eat, that may be stressing, leading to their less concentration in class and therefore poor performance. These findings were in agreement with Parina Parma (2022), who emphasized in his article of Strategies for successfully handling large classes that keeping pupils engaged through timely tests, proper class organization and good time management by teachers as a way of managing large classes for better performance. The findings were also in agreement with Regie D Abila (2021) in his article of Impact of Large Class Size on Teachers ‘Emotional and Physical Conditions: An International Multi-Disciplinary Research Journal who encouraged minimizing dead time in class through proper lesson planning by teachers, recruitment of qualified and competent teachers, accomplishing the day task and generally teachers being prepared for lessons with full knowledge of what they are going to deliver to the pupils as a way of improving pupils’ performance greatly.

Table 4.3 (e). Total of the responses across the sampled four schools.

School	Agreed	Disagreed	Total
Yivu Primary School	09	11	20
Oleba Primary School	08	12	20
Ofude Primary School	06	14	20
Anyivu Primary School	05	15	20
Total	28	52	80

Source: Primary data (2024).

From table 4.3 (e), it was observed that a response rate of 100% was obtained. The 80 questionnaires that were administered across the sampled schools were all filled and returned. The respondents that argued that large class size does not affect performance of the pupils and teachers were in general twenty eight (28) and those that agreed that large class size affects the performance of both teachers and pupils were fifty two(52), which gave a total of eighty (80) respondents (questionnaire).

4.4. Pearson correlation coefficient on large class size and Pupils Performance in Mathematics in Yivu Primary School.

In order to test the direction and strength of the relationship between Large Class Size and Pupils' Performance in mathematics in Yivu Primary School, a correlation was run. The dependent variable was Pupils' Performance in Mathematics (responses against large class size) denoted by Y and the independent variable was Large Class Size (responses in support of large class size) denoted by X as indicated in the table below 4.4 (a) below.

Table 4.4 (a). Pearson Correlation Coefficient on Large Class Size and Pupils' Performance in Mathematics in Yivu Primary School.

x	y	$x-\bar{x}$	$y-\bar{y}$	$(x-\bar{x})^2$	$(y-\bar{y})^2$	$(x-\bar{x})(y-\bar{y})$
8	12	-1	1	1	1	-1
10	10	1	-1	1	1	-1
10	10	1	-1	1	1	-1
9	11	0	0	0	0	0
8	12	-1	1	1	1	-1
10	10	1	-1	1	1	-1
7	13	-2	2	4	4	-4
10	10	1	-1	1	1	-1
$\Sigma=72$	$\Sigma=88$	$\Sigma=0$	$\Sigma=0$	$\Sigma=10$	$\Sigma=10$	$\Sigma=-10$

Source: Primary data (2024). Pearson correlation coefficient = -1

The figures in table 4.4 (a) gave a Pearson correlation coefficient of negative one (-1), which showed that there was a perfect negative relationship between large class size and pupils' performance in mathematics. This means that as the size of the class increases, performance of the pupils in mathematics declines and performance of the pupils increases with a reduction in the size of the class respectively. This was in agreement with Sarah Thomas (2022), who stressed in her article titled "A guide to Understand Negative Correlation Coefficient: Its Definition, how to determine it, and differences between positive and zero correlations" that a negative correlation which is also known as an inverse correlation describes a relationship between two variables that tend to move in opposite directions. Sarah Thomas (2022) therefore argued that when two variables are negatively correlated, a higher value of one is associated with a lower value of the other and vice versa.

According to Sarah Thomas (2022), a negative correlation does not imply that one variable causes a change in the other. While this could be the case, it could also be that some other third variable explains the correlation. This is very true with the respondents who argued that large class size does not affect performance of the pupils.

Figure 4.4 (a). Formula used to derive the Pearson correlation coefficient for data collected from Yivu Primary School.

$$r = \frac{\sum (x-\bar{x}) (y-\bar{y})}{\sqrt{\sum (x-\bar{x})^2 \sum (y-\bar{y})^2}}$$

$$r = \frac{-10}{\sqrt{= 10 \times 10}}$$

$$r = \frac{-10}{\sqrt{100}}$$

$$r = \frac{-10}{10}$$

$$r = -1$$

Pearson correlation coefficient was used to establish the relationship between the independent variable (large class size) and the dependent variable (pupils' performance in mathematics) across the sampled four schools. The dependent variable (responses against large class size) was denoted by Y and the independent variable (responses in support of large class size) was denoted by X as indicated in the table 4.4 (b) below.

Table 4.4 (b). Pearson correlation coefficient on Large Class Size and Pupils' Performance in Mathematics across the sampled four Primary Schools of Yivu, Oleba, Ofude and Anyivu

Name of the school	x	y	$x-\bar{x}$	$y-\bar{y}$	$(x-\bar{x})^2$	$(y-\bar{y})^2$	$(x-\bar{x})(y-\bar{y})$
Yivu primary school	9	11	2	-2	4	4	- 4
Oleba primary school	8	12	1	-1	1	1	-1
Ofude primary school	6	14	-1	1	1	1	-1
Anyivu primary school	5	15	-2	2	4	4	- 4
$\Sigma =$	28	52	0	0	10	10	-10

Source: Primary data (2024). Pearson correlation coefficient = -1

The figures in table 4.4 (b) gave a Pearson correlation coefficient of negative one (-1), which showed that there was a perfect negative relationship between large class size and pupils' performance in mathematics across the sampled four schools. This meant that as class size increases, performance declines while performance increases with a decline in the size of the class. This finding was in agreement with Sarah Thomas (2022) who argued that when two variables are negatively correlated, a higher value of one is associated with a lower value of the other and vice versa.

Figure 4.4 (b). Formula used to derive the Pearson correlation coefficient for data collected from the four sampled primary schools.

$$r = \frac{\sum (x - \bar{x}) (y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}}$$

$$r = \frac{-10}{\sqrt{= 10 \times 10}}$$

$$r = \frac{-10}{\sqrt{100}}$$

$$r = \frac{-10}{10}$$

$$r = -1$$

4.5. Coefficient of determination of the collected data.

The researcher used the coefficient of determination to find the variance in the dependent variable that could be caused by the independent variable from the data collected from Yivu primary school specifically and across the sampled four schools and the results were summarized in table 4.5 (a) and table 4.5 (b) respectively

The coefficient of determination is a number that tells how well the independent variable in a statistical model explains the variation in the dependent variable. It goes from zero to one (0-1), where one (1) explains a perfect fit of the model to the data (Jason Fernando, 2024).

Table 4.5 (a). Coefficient of determination of the collected data from Yivu Primary School.

x	Y	$x-\bar{x}$	$y-\bar{y}$	$(x-\bar{x})^2$	$(y-\bar{y})^2$	$(x-\bar{x})(y-\bar{y})$	$\hat{y}$	$\hat{y}-\bar{y}$	$(\hat{y}-\bar{y})^2$
8	12	-1	1	1	1	-1	12	1	1
10	10	1	-1	1	1	-1	10	-1	1
10	10	1	-1	1	1	-1	10	-1	1
9	11	0	0	0	0	0	11	0	0
8	12	-1	1	1	1	-1	12	1	1
10	10	1	-1	1	1	-1	10	-1	1
7	13	-2	2	4	4	-4	13	2	4
10	10	1	-1	1	1	-1	10	-1	1
$\Sigma=72$	$\Sigma=88$	$\Sigma=0$	$\Sigma=0$	$\Sigma=10$	$\Sigma=10$	$\Sigma=-10$	$\Sigma=88$	$\Sigma=0$	$\Sigma=10$

Source: Primary data (2024). Coefficient of determination= 1 (100%)

The coefficient of determination of 1, expressed as a percentage (100%), showed that performance of the pupils in mathematics in Yivu Primary School is perfectly influenced by the size of the class. This is true according to Jason Fernondo (2024) who asserted in his article of “R- Squared: Definition, calculation, formula, uses and limitations” that while correlation explains the strength of the relationship between an independent and a dependent variable, the coefficient of determination (R^2) explains the extent to which the variance of one variable explains the variance of the second variable.

Table 4.5 (b). Coefficient of determination of the collected data from the four sampled primary schools.

x	Y	$x-\bar{x}$	$y-\bar{y}$	$(x-\bar{x})^2$	$(y-\bar{y})^2$	$(x-\bar{x})(y-\bar{y})$	$\hat{y}$	$\hat{y} - \bar{y}$	$(\hat{y} - \bar{y})^2$
9	11	2	-2	4	4	- 4	11	-2	4
8	12	1	-1	1	1	-1	12	-1	1
6	14	-1	1	1	1	-1	14	1	1
5	15	-2	2	4	4	- 4	15	2	4
$\Sigma=28$	$\Sigma=52$	$\Sigma=0$	$\Sigma=0$	$\Sigma=10$	$\Sigma=10$	$\Sigma=-10$	$\Sigma=52$	$\Sigma=0$	$\Sigma=10$

Source; Self developed, 2024. Coefficient of determination= 1 (100%)

The results in table 4.5 (b) produced a coefficient of determination of one (1), which indicated that the independent variable (large class size) perfectly leads to a great change in the independent variable (pupils’’ performance in mathematics) in the four sampled schools of yivu, Ofude, Oleba and Anyivu and this was true with Jason Fernondo (2024) who explained in his article of “R- Squared: Definition, calculation, formula, uses and limitations” that the R-squared (coefficient of determination) indicates the percentage of the variance in the dependent variable that the independent variable explains collectively. Jason Fernondo (2024) further argued that the coefficient of determination measures the variation in the dependent variable which is caused by the independent variable on a convenient 0-100% scale, where by the R-squared of 100% (1) indicates a perfect fit of the model to the data.

Figure 4.5. Formula used to calculate the coefficient of determination.

Coefficient of determination (R^2) was calculated using the formula below:

$$R^2 = \frac{\sum (\hat{y} - \bar{y})^2}{\sum (y - \bar{y})^2} \times 100$$

Where, $\hat{y} = \hat{a} + \hat{b}x$

$$\hat{a} = \bar{y} - \hat{b}\bar{x}$$

$$\hat{b} = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sum (x - \bar{x})^2}$$

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0. Introduction.

The purpose of this chapter was to summarize and present the main conclusions of this study. In addition, recommendations of the study were discussed. The chapter ended with suggestions for future research.

5.1. Summary of the Findings.

The study sought to examine the impact of large class size which was the independent variable on pupils' performance in mathematics which was the dependent variable in Maracha District, a case of Yivu Primary School. Data was collected from four sampled Primary Schools, namely Yivu, Oleba, Ofude and Anyivu and the following were the findings:

5.1.1. Impact of Large Class Size on Pupils' Performance across the four sampled Primary School.

It was found out that in Yivu Primary School, 55% of the respondents agreed that large class size affects performance, while 45% of the respondents disagreed, in Oleba Primary School, 60% of the respondents were in support of large class size while the remaining 40% did not support the idea of having large classes. In Ofude Primary School, 70% of the respondents were against large class size while 30% argued that large class size has no impact on performance of the pupils and teachers, and in Anyivu Primary School, 25% of the respondents were in support of large classes while 75% disagreed with the idea of keeping large classes. Across the four sampled Primary Schools therefore, majority of respondents were of a view that large class size has a negative impact on the performance of pupils in mathematics.

5.1.2. Problems faced by teachers in large classes

The major problems faced by teachers in large classes were getting exhausted at the end of the day, failure to be motivated by the school administrators which demoralizes them and therefore

don't deliver what is necessary to the pupils, Psychological and emotional wellbeing of teachers is also affected especially by issues they are supposed to handle in large classes such as indiscipline of the pupils, regular assessments in a bid to enforce greater performance of the pupils and also difficulties in monitoring pupils' learning and engaging them to class activities.

5.1.3. Problems faced by pupils in large classes.

The major problems faced by pupils in large classes were noise making, limited attention from teachers, improper teaching methods by some teachers and failure by teachers to make proper lesson plan that makes pupils not to achieve what is necessary for a given term or (and) year.

5.1.4. Solutions to the problem of large class size.

The major solutions to the problem of large class size were increased participation of pupils in class, motivation of teachers, division of the class into small manageable groups, making proper lesson plans and increased interaction between the pupils and the teachers.

5.2. Conclusion.

The purpose of this study was to examine the impact of large class size on pupils' performance in mathematics in Maracha District, a case of Yivu Primary School. The study was qualitative in nature and employed a descriptive research design. The sample size of the study was 80 respondents. Data was collected with the help of survey questionnaires and analysis of the data collected was done using the Pearson correlation coefficient.

5.2.1. Pearson correlation coefficient of the collected data.

The Pearson correlation coefficient was used to test the strength and direction of the relationship between the independent variable (large class size) and dependent variable (performance of the pupils in mathematics).

The Pearson correlation coefficient of the data collected from Yivu Primary School was negative one (-1), meaning that there was a perfect negative relationship between large class size and pupils' performance in mathematics. This meant that as the size of the class increases,

performance of the pupils in mathematics declines and performance of the pupils in mathematics increases with a reduction in the size of the class respectively.

The Pearson correlation coefficient of the data collected across the four sampled primary schools of Yivu, Ofude, Oleba and Anyivu was still negative one (-1), which still indicated that performance of the pupils increases with a reduction in the size of the class and vice versa.

5.2.2. Coefficient of determination (R- squared) of the collected data.

The coefficient of determination was used to determine the variation in the dependent variable that is caused by the independent variable. Data collected from both Yivu Primary School and data collected from all the four sampled schools produced a coefficient of determination of 1 (100%), which meant that there was 100% variation in the performance of the pupils in mathematics in Yivu Primary School, Maracha District that is caused by the big number of pupils in class. This therefore meant that large class size greatly affects performance of the pupils.

5.3. Recommendations.

Based on the findings of this study, following recommendations were made.

Large class size that greatly affects the performance of the pupils has to be checked through regulating the number of pupils admitted per class in a given year.

The school administrators have to recruit competent teachers who work in time and are capable of making clear lesson plans which helps to boost the performance of the pupils.

The teachers in large classes have to be motivated through providing for them lunch at school, giving them transport allowances and medical allowances and if possible avail them with accommodation at school. This can help to create a convenient environment for teachers to teach with a clear peace of mind, despite the size of the class.

Teachers should also set the targets they need to achieve such as high performance levels, accomplishment of the syllabus in time. This helps them to make proper lesson plans and also engage the pupils to class work, leaving no gap for time wasting those results into misconduct of the pupils.

5.4. Areas for Future Research.

This study's emphasis was on how large class size affects performance of the pupils in mathematics in Yivu Primary School, Marachs District. Issues such as poor attendance, off-task behavior and limited concentration arise as a result of having big number of pupils in class, which in turn affects performance. Given the fact that the independent variable studied contributed to 100% of pupils' performance in mathematics in Yivu Primary School, Maracha District, further research should be carried out to assess in depth how much the problem of large class size could be managed in Yivu Primary School, Maracha Distrtict.

Lastly, further research should be carried out on how the environment and peer group influence can contribute to the poor performance of the pupils in mathematics in Yivu Primary School, Maracha District.

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APPENDIX 1: The Questionnaire.

SECTION A: Demographic information.

Please tick (✓) where applicable

A1. Gender

1) Male ☐

2) Female ☐

A2. Class

1)primary 4 ☐

2) Primary 5 ☐

3)Primary six ☐

4) Primary 7 ☐

A3. Occupoation.

1) Teacher ☐

2) non teaching staff ☐

SECTION B: Large Class size.

Please fill in the space provided and explain where necessary.

Question 1: problems faced by teachers in large classes.

- a) Does teaching large class make teachers get exhausted and therefore desire to leave the job?
.....
- b) Is a teacher's health affected by teaching a large class?
.....
- c) Concentration of pupils in class is limited by the number of pupils in class, do you agree?
.....

If yes, explain how

- d) How is the psychological and emotional wellbeing of a teacher affected by teaching a large class?
.....
.....
.....

Question 2: Problems faced by pupils in large classes.

- a) How do a big number of pupils in class affect their engagement with class activities
.....
.....
- b) Does a big number of pupils in class result into a stressful environment for them to study?
.....
.....
- c) How does a big class size result into misbehavior of the pupils?
.....
.....
- d) How is classroom discussion and interaction affected by the big size of the class?

.....

.....

Question 3. Possible suggestions to the problem of large class size

Explain six possible ways of managing and solving problems of large class size.

.....

.....

.....

.....

.....

.....

APPENDIX 2: The budget.

PARTICULARS	QUANTITY	UNIT COST IN UGX	TOTAL COST IN UGX
Typing and printing			600, 000
Reams of paper	5	20,000	100, 000
Pens	12	500	6000
Transport			200,000
Field research Expenses			700,000
Binding proposal	5	3,000	15,000
Binding report	5	12,000	60,000
Miscellaneous			600, 000
TOTAL			2,281,000

Source: self-developed.

Map of Maracha District.

