
**THE INFLUENCE OF SCHOOL ENVIRONMENT IN THE TEACHING AND LEARNING
PROCESS OF MATHEMATICS IN SELECTED SCHOOLS IN BUSIA DISTRICT, UGANDA**

BY

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**A RESEARCH REPORT SUBMITTED TO THE DEPARTMENT OF MATHEMATICS IN
THE PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF A
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DECLARATION

I, ONYANGA RAYMOND hereby declare that this research report is my original work and has not been presented for any academic award to any other university or college.

Signature  Date 14/07/2024

ONYANGA RAYMOND

BU/UP/2021/1733

APPROVAL

This is to certify that the following research report entitled "**The influence of school environment in the teaching and learning process of mathematics in selected secondary schools in Busia District, Uganda**". A case study of four secondary schools in Busia District are to be conducted under my supervision.

Signature:



Date: 14/07/2024

Mr. Kadedesya Stephen

DEDICATION

This work is dedicated to my beloved mother Ms. Atai Stella and brother Mr. Omerikwa Rasmus but not forgetting my beloved guardians Ms. Achulang Patience and Ms. Akot Florence for the support given to me since childhood.

ACKNOWLEDGEMENT

First and Fore most, my gratitude goes to none other than the almighty God for giving me the grace to endure all the challenges faced during my study period.

I wish to extend gratitude to my supervisor Mr. Kadedesya Stephen for his cumulative effort in guiding giving instructions as to the writing of this research report.

Special thanks go to our family for their understanding, patience and support during my study period

God is awesome.

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ABSTRACT

The study was to examine the influence of school environment in the teaching and learning process of mathematics in selected secondary schools in Busia District, Uganda.

The study employed both qualitative and quantitative approaches with questionnaires being the main instrument of data collection in addition to interview guide and document review. The data collected was analyzed using descriptive statistics.

Results from the study showed that adequacy of physical facilities like enough classrooms and scholastic materials like text books improve student's academic achievement in mathematics. It was concluded that the presence of human resources like electricity had a significant influence on the students' academic achievement in mathematics.

The study recommended school administrators to properly and appropriately plan for available human resources and scholastic materials in secondary schools. Rewards need to be more pronounced and given enough awareness so as to enable students comprehend them better.

1. INTRODUCTION

1.1 Background of the study

The school environment plays a crucial role in shaping the teaching and learning of mathematics in secondary schools. Several factors within the school environment can significantly influence students' attitudes, motivation, and performance in mathematics. These factors include classroom resources, teacher-student interactions, school culture, and extracurricular activities. Understanding the influence of the school environment on mathematics education is essential for educators, policymakers, and researchers to enhance instructional practices and student outcomes,(Mahanta, 2014).

1.1.1 Classroom Resources

The availability and quality of classroom resources have a direct impact on the teaching and learning of mathematics. Adequate access to textbooks, manipulative, technology and other instructional materials can enhance students' understanding and engagement with mathematical concepts. Conversely, a lack of resources may hinder effective instruction and limit students' opportunities to explore mathematical ideas. Research has shown that well-equipped classrooms with appropriate resources contribute to improved academic achievement in mathematics,(Abdullahi & Sirajo, 2020).

1.1.2 Teacher-Student Interactions

The interactions between teachers and students within the school environment significantly influence students' attitudes towards mathematics. Positive teacher-student relationships, effective communication, and personalized support can foster a conducive learning atmosphere for mathematics education. Teachers who demonstrate enthusiasm for the subject and employ varied instructional strategies can inspire students to develop a positive attitude towards mathematics. Conversely, negative interactions or ineffective teaching approaches may lead to disengagement and reduced interest in learning mathematics,(Afari, 2013).

1.1.3 School Culture

The overall culture of the school, including its values, norms, and expectations, can shape students' perceptions of mathematics. A supportive and inclusive school culture that promotes academic excellence and celebrates mathematical achievements can positively impact students' motivation and confidence in learning mathematics. On the other hand, a negative or competitive school culture may create barriers to students' mathematical development and hinder their willingness to seek help or participate actively in mathematical activities,(Shultz, Florio, & Erickson, 1982).

1.1.4 Extracurricular Activities

Extracurricular activities related to mathematics, such as math clubs, competitions, or enrichment programs, can enrich students' experiences beyond the traditional classroom setting. Engaging in these activities within the school environment provides opportunities for students to apply mathematical concepts in real-world contexts, collaborate with peers, and develop problem-solving skills. Participation in extracurricular math-related events can foster a deeper appreciation for mathematics and cultivate a sense of belonging within the school community,(Olszewski-Kubilius & Lee, 2004).

The school environment exerts a significant influence on the teaching and learning of mathematics in secondary schools. Classroom resources, teacher-student interactions, school culture,

and extracurricular activities collectively contribute to shaping students' experiences with mathematics education. Recognizing the impact of these factors is essential for creating supportive environments that promote mathematical proficiency and foster positive attitudes towards learning mathematics,(Opdenakker & Van Damme, 2007).

1.2 Statement of the problem

In Uganda, many secondary schools have been established at various places by government, private organizations or individuals. As a result, teaching and learning takes place under different environment. Every school has its location, facilities and also operates under different classroom condition, but all the students are expected to write the same standard examination (i.e. Senior Secondary Certificate Examination) at completion of secondary education. It may be reasonable to expect a uniform performance from all the candidates since they were taught using the same curriculum and syllabus but in most cases some schools seem outperform others in all respect. Frankly speaking, there must be a definite determinant that is really responsible for the constant failure or success of various schools. To find out this, it has become necessary to investigate the nature and pattern for secondary schools so as to evaluate the academic achievement in mathematics of students with respect to the learning environment.

1.3. Research objectives

The following were the research objectives.

1.3.1 Main objective

The broad purpose of this study was to investigate the influence of school environment on students' academic achievement in mathematics in selected senior secondary schools in Busia district.

1.3.2 Specific objective

1) To determine the extent at which school environment can affect performance in senior secondary school mathematics.

2) To determine the difference in school environment and its influence(s) on students' academic achievement in mathematics.

3) To identify factors within the school environment that affect students' academic achievement in mathematics.

1.4 Research questions

The researcher was of the opinion that an ideal learning environment should have moderate light and painting, good quality of natural air, comfortable seats and sequential sitting arrangement as well as relative cold climate. So the study seeks to answer the following research questions.

1) To what extent is the classroom painting and lighting being capable of affecting students' mathematics performance?

2) To what extent is the number of students per class room having an influence on students' academic achievement in mathematics?

3) To what extent is the school compound to favor all the school activities with the available number of students?

1.5 Significance of the study

The study will help stakeholders such as parents, students, teachers and the ministry of education and sports through NCDC to develop the curriculum that suits diverse cultural environment and design the measures, policies that can used to make students comfortable in schools to aid their

performance irrespective of their families they come from. And also, to inspire other researchers to conduct similar study so as to come up with new ideas and findings since the study is only limited to Busia District.

1.6. Scope of the study

A field study about the influence of school environment in the teaching and learning of mathematic was conducted at Busia District. A particular choice of schools for case study was done at an appropriate time. The study was confined to all the stake holders in the education sector which included the teacher, students and school administrators. Of which the above-mentioned stake holders were in position to explain clearly the cause of their poor and good performance in mathematics and suggest best measures of overcoming those causes. The researcher used a linear regression modal (method of least squares) to smooth the data that was collected, and also obtain the coefficient of determination (R^2) of the study. For appropriate use of this method, the classical least squares assumption such as the mean of the error term is zero must hold.

1.7. Limitation of the study

The researcher was limited by time which was not ably enough for me to carry out the research and exhaust the different resources in my reach. Shortage of funding to access the place of study as well as access resources. In accessibility to the school information by some school administrator of who made the research process difficult. Biasness by some respondents who were unwilling to provide the necessary and adequate information required.

2. LITERATURE REVIEW

There is a widespread stereotype that "Math is for men" and that mathematics is only for adult males in every culture in the world. This has led to the under representation of women in the fields of science, engineering, and mathematics. Children's educational interests and job choices have been influenced by this preconception,(Cho, 2018).

One of the most important subjects in our lives as humans is mathematics. Nothing in the world is possible without a strong foundation in mathematics. Today's mathematics is useful worldwide but useless locally. From the time of the ancients to the present, mathematics has been acknowledged as an essential part of formal education. Our history demonstrates that ancient scholars had practically to solve everyday problems in order to establish mathematics. Great shepherds in antiquity contributed to the development of mathematics. The body of knowledge in the field of science and technology is called mathematics. Math is a fascinating and attractive subject because it has its own symbols, language, words, technology, etc. The backbone of the human lifestyle is mathematics. Student academic performance has a direct impact on the social and economic growth of the nation,(Fasheh, 1982).

The performance of the students is crucial in creating the top graduates who will serve as good leaders and laborers for the nation, contributing to the economic and social development of that nation,(Education, 1983).

Student math achievement may be impacted by factors related to the school, including school resources, the discipline and safety of the school environment, parental involvement and support in school-related activities, the experience and education of the school principal, and the availability of library and instructional resources. According to studies, school resources have a good effect on students' academic progress and learning. The atmosphere at school may have a big effect on how well students learn and achieve in math or other Subjects,(Wardat et al., 2022).

This climate fosters a supportive environment in the classrooms, which may have an impact on students' academic performance. It also increases safety and student discipline. The academic achievement of students is also said to be significantly impacted by parental involvement in school,(Wardat et al., 2022).

Strong academic performance can be accomplished by working as a team with parents, motivating students, and motivating teachers to collaborate in order to achieve the shared objective of improving the quality of learning outcomes,(Ronfeldt, Farmer, McQueen, & Grissom, 2015). The learning environment at school has a significant impact on students' mathematics academic performance. The student can acquire better academic results in mathematics if the learning environment at school is more supportive. Classrooms, labs, libraries, playing grounds, and textbooks are just a few examples of teaching and learning tools. Physical resources do in fact contribute significantly to the development of favorable conditions that encourage successful teaching and learning. Academic success is influenced by a number of factors, such as the effectiveness of the teacher's communication, the learning environment, guidance and counseling, family stress, socioeconomic considerations, health status, discipline, user behavior, and study habits that can affect students' academic performance,(Gallahue & Donnelly, 2007).

When it comes to financial resources, research done to identify the factors affecting student performance has shown that the total school budgets as well as recurrent expenses at the school are the major factors affecting academic achievement. For instance, Figlio's (1997) study found that the amount of recurring spending at the school is a major factor in determining how well the school performs, with higher spending schools performing better than lower spending schools. Additionally, the overall income of the school is a significant factor in determining how well it performs, with higher income schools performing better than lower income schools, (Summers & Wolfe, 1977).

The main influence on the mood of the classroom setting is the teacher. The views that students have toward a subject are shaped by their teachers. Teachers create a welcoming environment in the classroom with the help of their students, encouraging them to feel comfortable and at ease while taking part in various teaching and learning activities. In the classroom, the teacher always has the final say. The classroom environment is shaped by the teacher's knowledge, personality, attitude, and abilities, (Cepic, Vorkapic, Loncaric, Andic, & Mihic, 2015).

A structured understanding of mathematical topics, reflective learning, critical thinking, and ultimately mathematical performance are all mapped out for students by competent math teachers (4). As change agents, teachers play an important role in advancing high standards of education in classrooms. To be able to participate locally and globally in decisions impacting their teaching environments, teachers at all levels of the educational system should have access to training and continual professional development, (Fraser, Kennedy, Reid, & McKinney, 2007).

Good teachers are committed to their subjects, lifelong learners themselves, and self-reflective about how they teach. Through effective communication, diagnostic abilities, comprehension of various learning styles and cultural influences, knowledge of child development, and the capacity to marshal a wide variety of techniques to meet student needs, they transfer knowledge of their subject matter and the learning process, (Bolhuis, 2003).

All five of the following strands should be strong points for a successful mathematics teacher:

Conceptual Understanding of the Core Knowledge Needed in the Practice of Teaching (Mills, 2016), Fluency in Performing Basic Instructional Routines (Binder, Haughton, & Bateman, 2002), Strategic Competence in Planning Effective Instruction and Solving Problems that Occur During Instruction (Pressley, Goodchild, Fleet, Zajchowski, & Evans, 1989); Adaptive Reasoning in Justifying and Explaining One's Instructional Practices and in Reflecting on One's Instructional Practices in Order to Improve Them.

Productive attitude toward mathematics, teaching, learning and the improvement of Practice (Alnoor et al., 2007) Every institution or organization, including academic institutions, depends on the growth and performance of the administrators, (Miller, 2016).

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Academicians from all over the world, especially those who work in the education sector, such as in schools and higher education institutions, frequently discuss the subject of absenteeism. A person who consistently fails to show up for a program or event without a valid justification is said to be an absentee, and someone who is missing from a task in a personal capacity is referred to as an absentee,(Pryor, 2000).

In the academic world, absenteeism has been identified as a major risk factor for crime, injury, drug use, malnutrition, psychiatric disorders, and economic instability, all of which are linked to poor academic performance (Mawudeku & Ankumah, 2021). The final exam marks are anticipated to decrease by an average of 2.124% if the student misses one class,(Ahmad, Ul-Saufie, Mohamed, Ahmat, & Zahari, 2018).

According to studies, absenteeism is viewed as a type of dysfunctional behavior, along with violence, drug abuse, and related behaviors,(Kearney, 2008). In this method, absenteeism is viewed as one of the signs of a more

Effective mathematics teachers who utilize engaging pedagogies, promote student collaboration, and differentiate instruction significantly impact student outcomes,(Anthony & Walshaw, 2023).

Research suggests positive classroom climates characterized by support, challenge, and a growth mindset are linked to higher mathematics self-belief, enjoyment, and achievement,(Kroeper, Fried, & Murphy, 2022).

Research shows that students from lower socioeconomic backgrounds may face challenges in mathematics classrooms due to limited resources and support systems. School-level interventions aimed at equity and inclusion are crucial,(Bellibas, 2016).

Research consistently highlights the multifaceted influence of the school environment on mathematics teaching and learning. Creating positive classroom climates, ensuring strong teacher support, and providing adequate resources all contribute to student success. Emerging trends towards technology integration, SEL practices, and culturally responsive pedagogy offer promising avenues for further enhancing the learning experience,(Zynuddin, Kenayathulla, & Sumintono, 2023). In view of the above analysis, both arguments suggest that the teaching environment influences the teaching and learning of mathematics. However, they all concentrate on the influence of school environment on the teaching and learning of mathematics and our study is on the influence of school environment on students' academic achievement in mathematics in selected senior secondary schools in Busia district.

3. METHODOLOGY

This chapter consists of research design, study area, study population, sample size determination and, sampling procedures, data collection tools and methods to be used in study.

To achieve the main aim and objectives of this research study the research was conducted phenomenological using questionnaires, interviews, to find out the influence of school environment in the teaching and learning of mathematics in secondary schools in Busia district.

3.1. Research Design

This study involved the use of quantitative approaches and descriptive research design where by data collection tools that were used include questionnaire. A questionnaire is a form or tool with a series of questions and answers that participants fill out to provide the researcher with the data they need for the study (Acharya, 2010)

A descriptive survey research design was used utilizing both qualitative and quantitative approaches. This research design was the most desirable because the study is meant to describe the influence of school environment in the teaching and learning of mathematics in Busia District.

Surveys are well-known instruments that can be used to gather a lot of information in a short period of time. The study used both qualitative and quantitative research approaches. Qualitative approach was used as questions were asked and getting back feedback. I therefore recorded and presented in a descriptive way. Quantitative approach was used to reveal the numerical form of data such as statistics, percentages and so forth. It quantified the distribution and association of the variables

3.2. Target Population

The target population is generally regarded as individuals who are to participate in the study and they included women, men, teenage girls and boys who are students, teachers and Head teachers of selected schools in Busia District.

3.3. Sample Size

The total sample size of the study was got from four schools i.e Busia ss, Luma Eastern College, Busia Trust ss and Buhobe ss of which the sample size included 4 Head Teachers, 36 Teacher and 160 Students which gives a sample size of 200 respondents since they are among the best performing government and private schools in Busia district in Mathematics.

3.4. Sampling Method

The researcher used questionnaires for simple random sampling that was given to each respondent in the school an equal chance to be chosen in the sample group.

3.5. Sampling procedure

The researcher was introduced to the administrators of the listed schools as soon as the researcher got into the field then used simple random sampling by requesting the people interested in giving relevant data to gather in one place. When their number becomes higher than required, the researcher rolled papers equivalent to their number but some of them possessed numbers equivalent to the sample size required from the respondents. Those who picked papers numbered, formed the group that represented the rest of the school. For the key respondents, the researcher judged following their availability and readiness to give information.

3.6. Data collection methods

In order to address the objectives of the research, the researcher used the following instruments in gathering and collecting data.

3.6.1 Interview method

This was done by researcher through face-to-face interaction or over the telephone, interviews were qualitative or quantitative. Qualitative involved open-ended questions following the order of the design, these questions were spontaneous, loosely structured and sometimes protocol (interview guide).

Quantitative involved standardized (some questions were asked to everyone) close ended questions and telephone interview protocol (questions were similar for different people but read by the interviewer online).

3.6.2 Recording method

Recording method involved the use of mechanical tools and devices like smart phone, note book, pen and pencil to collect data. The data was analyzed and edited to come up with conclusions concerning the influence of school environment in the teaching and learning of mathematics in Busia District.

3.6.3 Questionnaires method

Questionnaires were being issued to the selected respondents that included school administrators, teachers and students of the above selected schools and it was made up of open and closed ended questions. The questionnaires were self-administered amongst the respondents

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter presents the results of the analyses and interpretation of collected data. This chapter consists of the presentation, analysis, and interpretation of findings.

The biographic information was quantitatively presented, analyzed and interpreted while the research questions as per the objectives of the study were qualitatively presented, analyzed and interpreted to give a vivid meaning.

4.1 Sex of Respondent

Tabulation was used to analyze the data of the sex of respondents. Findings in table 4.1 below indicate that 115(57.5%) of the respondents were male and 85(42.5%) were female.

Table 1: Sex of the Respondents

SEX	FREQUENCY	PERCENTAGE
Females	85	42.5%
Males	115	57.5%
Total	200	100

Source: Primary data

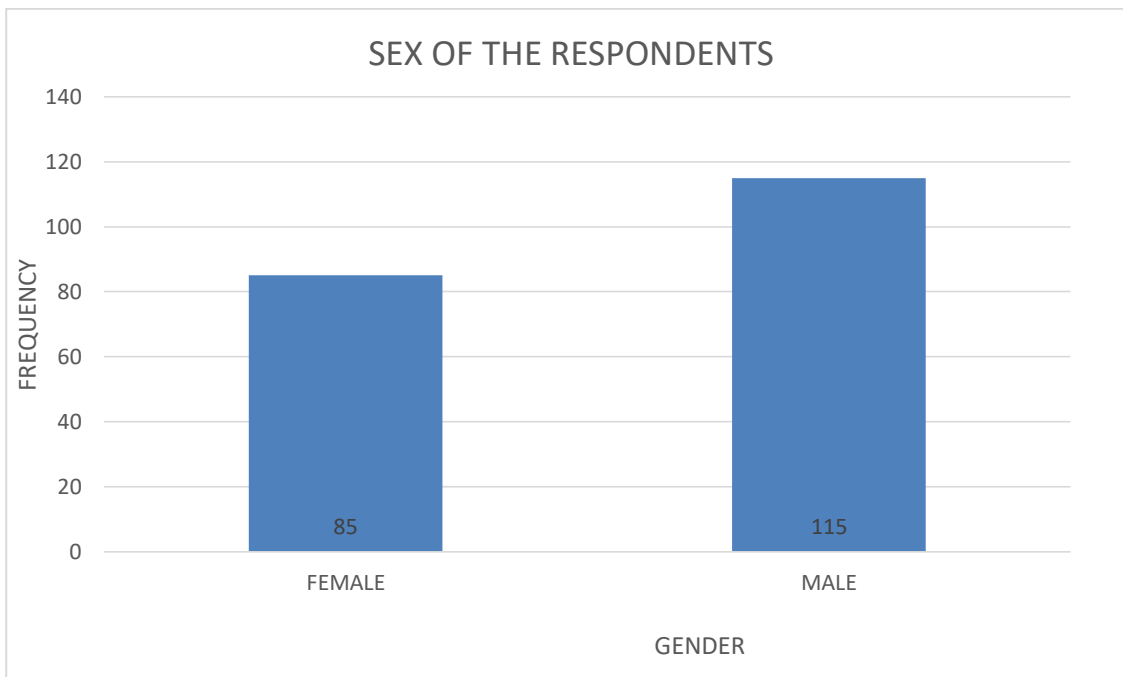


Figure 1: Sex of the respondents

Therefore, the majority of the respondents were males represented by 115(57.5%) from both the teachers and student's population as seen from table and figure above.

4.2 Marital Status of Respondents

Tabulation was used to analyze the data of the marital status of respondents.

Table 2: Marital Status

MARITAL STATUS	FREQUENCY	PERCENTAGE
Single	170	85%
Married	30	15%
Total	200	100%

Source: Primary data

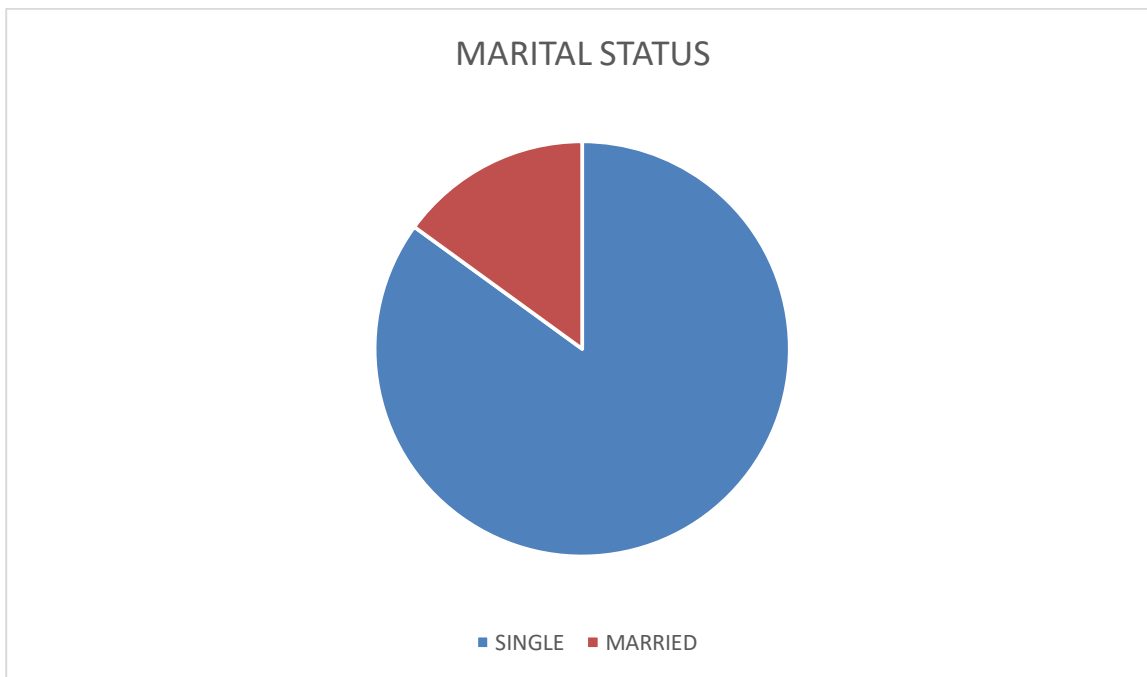


Figure 2: Marital Status

From the table 4.2 above, of the 200 respondents, 30(15%) were married while 170(85%) were still single. These results imply that the majority of the respondents were still single and active with the knowledge of the study variables.

4.3 Education Level

Respondents were asked whether they had the necessary qualifications and knowledge to understand the study variables. Tabulation was used to analyse the data about academic background of respondents.

Table 3: Education level

EDUCATION LEVEL	FREQUENCY	PERCENTAGE
Secondary	160	80%
Tertiary	40	20%
Total	200	100%

Source: Primary data

From the table 4.3 above, of the 200 respondents, 160(80%) had attained secondary education while 40(20%) had attained university education. These results imply that the majority of the respondents had little knowledge of the study variables.

4.3.1 Availability of well painted and lighting class rooms and student's academic performance in mathematics.

Table 4: Availability of well painted and lighting classrooms

RESPONSE	SA	A	NS	SD	D
There is absence of enough lighting in the class rooms in our school	86(43%)	62(31%)	08(04%)	24(12%)	20(10%)
There is poor supply of reliable for lighting in our class rooms	88(44%)	58(29%)	10(05%)	22(11%)	22(11%)
There is poor painting of our class rooms which makes the studying of mathematics difficulty especially during the evening hours	85(42.5%)	62(31%)	11(05.5%)	28(14%)	14(07%)

Source: Primary data

The findings in table 4.4 above show that 86(43%) Strongly Agreed, 62(31%) Agreed, 08(04%) were Not Sure, 24(12%) Strongly Disagreed and 20(10%) Disagreed that there is absence of enough lighting in their class rooms.

Similarly, 88(44%) Strongly Agreed, 58(29%) Agreed, 10(05%) were Not Sure, 22(11%) Strongly Disagreed and 22(11%) Disagreed that there is poor supply of reliable electricity for lighting in the class rooms.

Also 85(42.5%) Strongly Agreed, 62(31%) Agreed, 11(05.5%) were Not Sure, 28(14%) Strongly Disagreed and 14(07%) Agreed that there is poor painting of the class rooms which makes the study of mathematics difficulty especially during afternoon hours.

According the above findings of the study, it was established that well class room painting and lighting has a great influence on the teaching and learning of mathematics in the selected secondary schools in Busia district.

The findings were also supplemented with the results from the interview responses. When the respondents were asked whether it is necessary for proper painting and lighting of the class rooms in

the school, one of the teachers acknowledged that a well painted and lighting class gives comfort during the teaching and learning of mathematics at the secondary schools. The respondents also revealed that proper lighting and painting allows both the learner and teacher to concentrate in class since they are comfortable due to the available conditions

4.3.2 Influence of the number of students per classroom on the teaching and learning of mathematics in senior secondary schools.

Table 5: Students' number per class influence on the teaching and learning of mathematics

Response	SA	A	NS	SD	D
There are more students compared to the number of classrooms in this school.	93(46.5%)	74(37%)	06(03%)	17(08.5%)	10(05%)
There is shortage of enough reading rooms for the students in this school.	90(45%)	78(39%)	05(02.5%)	15(07.5%)	12(06%)
The number of students per classroom has got a great influence in the teaching and learning of mathematics in senior secondary schools.	88(44%)	58(29%)	10(05%)	22(11%)	22(11%)

Source: Primary source

The findings in the table 4.5 above shows that 93(46.5%) Strongly Agreed, 74(37%) Agreed, 06(03%) were Not Sure, 17(08.5%) Strongly Disagreed and 10(05%) respondents Disagreed that there are more students compared to the number of classrooms in their schools

Similarly 90(45%) Strongly Agreed, 78(39%) Agreed, 05(02.5%) were Not Sure, 15(07.5%) Strongly Disagreed and 10(05%) Disagreed that there is shortage of enough reading rooms for the students in the selected senior secondary school.

Also 88(44%) Strongly Agreed, 58(29%) agreed, 10(05%) were Not Sure, 22(11%) Strongly Disagreed and 22(11%) Disagreed that the number of students per classroom has got A great influence in the teaching and learning of mathematics in senior secondary school.

In an interview, respondents were asked to provide their responses on how the number of students per class influences the teaching and learning of mathematics in secondary schools and one of the teachers from Busia ss (Mr. Okiru Valentine) a teacher of mathematics acknowledged that the few the number of learners per each class make the assessment of the level of the learner in mastery of the mathematics concepts other than too many learners in the class. Some of the respondents also revealed that when the learners are few in mathematics classes, it becomes easier for the learners to form small discussion groups which helps to also uplift the poor performing learners in mathematics. This shows that the government schools have limited number of classrooms compared to their their population than private school. Thus generally the number of students per classroom has greatly influenced the teaching and learning of mathematics in senior secondary schools.

4.3.3: How the school compound favors school and mathematics activities with the available number of students.

Table 6: School compound’s influence on mathematics activities with the available number of students.

Response	SA	A	NS	SD	D
There is absence of enough instructional space in our school.	90(45%)	79(39.5%)	07(03.5%)	12(06%)	12(06%)
There is noise pollution in the near areas surrounding the school.	85(42.5%)	62(31%)	11(05.5%)	14(07%)	28(14%)
There is shortage of tree plantation at our school which improves on the aeration of our classrooms providing favorable conditions for the teaching and learning of mathematics in our school.	78(39%)	64(32%)	14(07%)	28(14%)	16(08%)

Source: Primary data

The finding in the above table 4.6 shows that 90(45%) respondents Strongly Agreed, 79(39.5%) Agreed, 07(03.5%) were Not Sure, 12(06%) Strongly Agreed and 12(06%) respondents Disagreed that there is absence of enough instructional space in their schools.

Similarly 85(42.5%) Strongly Agreed, 62(31%) Agreed, 11(05%) were Not Sure, 14(07%) Strongly Disagreed and 28(14%) respondents Disagreed that there is noise pollution in the nearby areas surrounding their schools.

Also 78(39%) Strongly Agreed, 64(32%) Agreed, 14(07%) were Not Sure, 28(14%) Strongly Disagreed and 16(08%) respondents Disagreed that there is shortage of enough tree plantation with in their school compound which improves on the aeration of their classrooms providing a favorable condition for teaching and learning of mathematics.

According to the above findings, it was established that the school compound plays a crucial role in the teaching and learning of mathematics in secondary schools.

The findings were also supplemented with the results from the interview responses. When the respondents were asked whether the school compound influences the teaching and learning of mathematics in secondary schools, one of the students acknowledged that a well-organized school compound provides them a conducive atmosphere for learning of mathematics which increases on their level of concentration in mathematics classes. Also from the findings, it showed that private schools have got a conducive compound that favors the teaching and learning of mathematics in those schools than government schools.

5. CONCLUSION AND RECOMMENDATION

In this chapter a summary of what has been done in the study is given, direction and some guiding questions for further research are also suggested.

5.1 Conclusion

On the basis of the discussion of the findings on each of the objectives, the following conclusions were made.

- a). The students of the selected private schools in Busia District perform better than their counterparts of public secondary schools in mathematics final exams. This doesn't come randomly, as they are well prepared from the early classes. Though having the same mathematics teachers of almost the same qualification and students of almost the same back ground, private schools motivate more their teachers than public schools do through various ways: conducive environment for teaching mathematics and so many other ways.
- b). In Uganda, students of the high ranked politician and other officials are more enrolled in private schools than in public schools. This gives a view that even the politician and other officials recognize the low quality of private secondary schools compared to private ones.
- c). On the third objective, the study concluded that other factors such as adequacy of mathematics teaching equipment has a bearing on the students' academic performance in mathematics and students studying in private schools where mathematics text books are adequately available perform better than students in some public schools where there are inadequate good books.

5.2. Recommendations

The following recommendations were made to different stake holders of the education sector.

5.2.1. School administration

The Head Teachers of government schools should use the available resources in their respective schools efficiently to increase on the mathematics performance of their students in general.

5.2.2. Government/ Ministry of Education and Sports

The government under the Ministry of Education and Sports should reduce on its bureaucracy in public school administration allowing them to diversify their sources of funding, increasing the number of teacher and classrooms to reduce the student-teacher ratio, as this would improve on the performance of government schools as compared private schools in Mathematics.

5.2.3. Uganda National Examination Board (UNEB)

UNEB should conduct a study on the other factors that are responsible for the performance in mathematics in public schools and use its results to advise the government and to revise the way USE are prepared and administered

5.3. Suggestions for further study

The researcher suggested the following areas for further research.

1. The relationship between educational resources and students' academic performance of mathematics in secondary schools of Uganda.
2. The role of parents on the academic performance in mathematics of secondary school students in Uganda.

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